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# cXML Solutions Guide

## SAP Business Network

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# cXML Solutions Guide

This guide describes application-specific implementations of cXML to support procurement, sourcing, and invoicing solutions from SAP Ariba. It supplements documentation for the public cXML DTDs available at [cxml.org](http://cxml.org).

This guide applies to:

- SAP Ariba cloud solutions

## Related Guides

[Getting Started with cXML](#) ➔

[cXML Reference Guide](#) ➔

[cXML Release Notes](#) ➔

# Introduction to cXML Solutions

SAP Ariba applications map data to and from documents using commerce eXtensible Markup Language (cXML). cXML is an open language defined by public Document Type Definitions (DTDs). These DTDs define cXML so that it is extremely flexible.

SAP Ariba provides cXML solution guidelines and recommendation to supplement the general description of cXML provided by the [cXML Reference Guide](#) available at <http://www.cxml.org>.

[cXML Recommended Usage \[page 14\]](#)

[About Data Mapping \[page 14\]](#)

[Maximum Document and Attachment Size \[page 15\]](#)

[About cXML Versions \[page 16\]](#)

## cXML Recommended Usage

SAP Ariba applications use a specific implementation of the cXML language. To interact successfully with SAP Ariba applications through cXML, you must understand the cXML behavior of those applications.

In particular you need to understand and work with the external cXML behavior of SAP Business Network and your procurement or invoicing solution from SAP Ariba.

## About Data Mapping

cXML is a general-purpose language for conveying commerce-related information. Organizations use it to communicate business data between diverse applications through SAP Business Network using data mapping.

For example, trading partners use cXML for communicating purchase orders. When buying organizations generate cXML purchase orders, they include data from their Enterprise Resource Planning (ERP) systems and procurement systems. They route these purchase orders to their suppliers through SAP Business Network. Suppliers then extract data from the purchase orders and use that data within their order-fulfillment systems.

Trading partners' back-end systems must be able to map data either to or from the cXML documents. The default configurations of these external systems do not always have the data or formatting necessary for the cXML protocol. Even if messages are well-formed cXML, the actual data within these elements might have many variations. This inconsistency affects both buying organizations and suppliers, and can lead to longer integration times.

Use the Ariba guidelines and recommendations to implement consistent data between trading partners. They provide best practices for the conversion of back-end-system data to cXML to help prevent variation in the data transferred between trading partners.

# Maximum Document and Attachment Size

## Maximum Document Sizes

The maximum size of a cXML order, ship notice, order confirmation, or invoice document is 40 MB or 10,000 line items. All other cXML documents are limited to a maximum size of 4 MB or 1,000 line items. These maximums do **not** include the size of any attachments.

The maximum size of an Excel file created by running an **Upload/Download** job for a planning process job type is 40 MB or 10,000 rows.

## Maximum Attachment Sizes

Attachment maximums are for the combined total size of all attachments to the same document.

### Note

During attachment upload, original attachment files are converted to plain ASCII text, using base64 encoding. This conversion increases the file size by approximately 35%. Therefore, the actual file size limit is 65% of the configured maximum limit.

For example, if the maximum allowed limit is set to 10,000 KB (10 MB), then the actual total attachment file size that users can add is 6,500 KB. If you attempt to upload an attachment that exceeds this limit, SAP Business Network displays an error and doesn't allow the upload.

With the exception of one document type, 10 MB is the default setting for the maximum size of attachments. The highest possible setting is 100 MB.

For users enabled for the quality collaboration component under SAP Business Network for Supply Chain, a quality review document has by default a maximum attachment size of 100 MB. The highest possible setting is 200 MB.

To change the maximum size of attachments, buyers can ask their Designated Support Contact to log a service request. An SAP Ariba Support representative follows up to make the change. The buyer's maximum attachment size applies to all documents that are sent between that buyer and their suppliers.

## Size Limits in the SAP Business Network User Interface

The SAP Business Network user interface doesn't display a document that is larger than 1 MB (or 2 MB for buyers and suppliers enabled for SAP Business Network for Supply Chain) or that has more than 1,000 line items.

If a document exceeds the limit, you can see only the header of the document when you open it; the line item details aren't shown. To review the complete document, you can open it and then download the file in CSV format. If these size limits prevent the SAP Business Network user interface from handling a document, you can use an alternative method such as the integrated channel.

# About cXML Versions

New versions of cXML are periodically released as the cXML standard is enhanced. cXML-enabled applications must be able to detect the cXML version of received documents and process those documents appropriately.

## Notification of cXML Changes

SAP Ariba notifies you about new cXML releases and changes in cXML behavior through SAP Business Network and SAP Ariba Support. Look in your SAP Business Network account for notices of new cXML versions. Also, make sure the notification email addresses in your SAP Business Network account are up-to-date.

## Additional References

- cXML Release Notes on <http://www.cxml.org> 

# cXML Data Conventions

Use cXML data conventions to ensure data consistency among multiple trading partners. cXML provides data conventions for numbers, money elements, units of measurement, names, postal addresses, telephone numbers, data and time, and extrinsic elements.

[Number Format \[page 17\]](#)

[Money Element \[page 18\]](#)

[UnitOfMeasurement Element \[page 19\]](#)

[Name Formats \[page 21\]](#)

[PostalAddress Element \[page 21\]](#)

[TelephoneNumber Element \[page 23\]](#)

[Date and Time Format \[page 25\]](#)

[Handling Special Characters in Documents \[page 25\]](#)

[Extrinsic Elements \[page 27\]](#)

## Number Format

The World Wide Web Consortium (W3C) XML Data Proposal defines data types used by cXML.

For more information about the W3C proposal, see (<http://www.w3c.org/TR/1998/NOTE-XML-data-0105> ).

W3C provides the following information about numeric data:

“A number, with no limit on digits, may potentially have a leading sign, fractional digits, and optionally an exponent. Punctuation as in US English.”

Numbers in cXML use “punctuation as in US English.” Other restrictions and options are:

- Do not include symbols such as “\$” or “%”.
- Use only a period (.) as the decimal separator.
- You can optionally use commas (,) as thousands separators.
- Scientific notation is not allowed.

**Correct** examples:

```
<Discount>23</Discount>
<Discount>4.01</Discount>
<Discount>3001.01</Discount>
<Discount>3,001.01</Discount>
```

**Incorrect** examples:

```
<Discount>1.34%</Discount>
```

Should not include the percent symbol (%).

```
<Discount>1234,00</Discount>
```

Decimal separator must be a period (.).

```
<Discount>123.567.890</Discount>
```

Thousands separators are optional and if used, they must be commas (,).

## Money **Element**

The money element describes the data format to use for monetary values. It also provides attributes for specifying an alternate currency and amount.

### Example

```
<Money currency="USD">1.34</Money>
```

Specify currency with three-letter ISO 4217 currency codes. For a list of these codes, see [Currency Codes \[page 414\]](#).

## Money **Format**

cXML follows the W3C XML recommendation to use "punctuation as in US English." Do not include currency symbols, such as "\$."

**Correct** examples:

```
<Money currency="USD">1234.00</Money>  
<Money currency="USD">1,234.00</Money>
```

**Incorrect** examples:

```
<Money currency="USD">$1.34</Money>
```

Should not include the dollar symbol (\$).

```
<Money currency="US dollar">1.34</Money>
```

Incorrect ISO currency code.

```
<Money currency="USD">1234,00</Money>
```

Decimal separator must be a period (.).

## Note

Although “XXX” is a valid currency code in ISO 4217, SAP Business Network does not support the use of “XXX” as the currency code.

## alternateCurrency and alternateAmount Attributes

For cXML documents involving countries that use different currencies, you might need to include alternate currency and amount information.

cXML provides the `alternateCurrency` and `alternateAmount` attributes for this describing alternate currency information.

### Example

```
<Money currency="USD" alternateCurrency="EUR" alternateAmount="14.28">12.34 </Money>
```

You might also need to use these attributes to specify a “local” currency in invoices. For more information, see [Mandatory Buyer VAT ID and Supplier VAT ID \[page 317\]](#).

Ariba Buyer 7.0 and later implements these attributes.

## UnitOfMeasurement Element

Use United Nations Units of Measure (UNUOM) codes to describe how items are packaged or delivered.

The following table lists frequently used UNUOM codes:

UNUOM Code	Meaning
EA	each
BX	box
DZN	dozen
GRO	gross
HUR	hour
KGM	kilogram
LBR	pound
M4	monetary units
RO	roll

UNUOM Code	Meaning
RL	reel
PR	pair
PK	pack

For more information, see [Unit of Measure Codes \[page 414\]](#).

SAP Business Network can translate documents between cXML and Electronic Data Interchange (EDI). cXML and EDI UN EDIFACT both use the UNUOM standard, so SAP Business Network performs no code translation between them. However, EDI X12 uses the ANSI UOM standard, so SAP Business Network must translate UOM codes. Some UOM codes are the same in both standards, some codes are different, and some codes appear in both standards but mean different units of measurement.

It is vital that trading partners use UOM codes that map correctly. Do not use custom UOM codes, because the translation behavior is unknown and might produce inappropriate codes.

Some commonly encountered UOM mapping problems are:

- Buying organizations might want to convey “so much money’s worth of time” in labor requisitions. They should implement purchase orders to order by hour (HUR) or by units of money (M4). The code M4 means “monetary units” in both UNUOM and ANSI UOM.
- Trading partners might want to use the illegal code DOL or \$ to mean “US dollars.” To measure items in units of money, use code M4.
- Many buying organizations use ANSI UOM codes in their internal systems. If they accidentally allow ANSI UOM codes to appear in cXML documents, and SAP Business Network translates those documents to X12 EDI, some codes might work, but others will produce incorrect data. To prevent confusion, they must use UNUOM codes in cXML.

For example, the code RL means “reel” in UNUOM and “roll” in ANSI. If a buying organization erroneously orders using RE for reel, the resulting X12 EDI purchase order happens to use the correct ANSI code for reel. The supplier might recognize that the item is sold in rolls and reject the purchase order. Or, the supplier might accept the purchase order and generate an X12 EDI invoice using the incorrect ANSI code RO for roll. SAP Business Network translates RO to D65, which would cause an invoice-to-purchase-order mismatch.

The following table shows the mapping for RL and RO:

UNUOM Code	ANSI UOM Code	Meaning
RL	RE	reel
RO	RL	roll
D65	RO	round

**Correct** examples:

```
<UnitOfMeasure>EA</UnitOfMeasure>
<UnitOfMeasure>M4</UnitOfMeasure>
<UnitOfMeasure>HUR</UnitOfMeasure>
```

**Incorrect** examples:

```
<UnitOfMeasure>$</UnitOfMeasure>
<UnitOfMeasure>DO</UnitOfMeasure>
<UnitOfMeasure>DOL</UnitOfMeasure>
<UnitOfMeasure>HOUR</UnitOfMeasure>
```

## Name **Formats**

Procurement system implementations should parse name strings and determine how they are formatted. The code performing this parse must know whether a name is a personal name, a company name, or something else.

```
<Name xml:lang="en-US">Workchairs, Inc.</Name>  
<Name xml:lang="en-US">Smith, Bob</Name>
```

Personal name formats should match the national locale specified in the `Name` element by the `xml:lang` attribute. For English names, use “last, first [middle].”

Prefixes, such as Dr., should appear after the first name. Suffixes should appear after the last name: “last [suffix], first [prefix].” For example, Dr. Bob Smith III would be:

```
<Name xml:lang="en-US">Smith III, Bob Dr.</Name>
```

## PostalAddress **Element**

The cXML specification defines the data requirements for `Name`, `DeliverTo`, and `Street` portions of a `PostalAddress` element loosely. It makes a relatively clear distinction between `DeliverTo` and `Street` information. Describe delivery data as an end point known to delivery services such as the Postal Service.

An address can be directed to a specific person, identifying that person in either the `Name` or first `DeliverTo` element of the `PostalAddress` element. In common usage, an address might appear as:

John Smith  
c/o Acme, Inc.  
1565 Charleston Rd., M/S B.1  
Mountain View, CA 94043

or

Acme, Inc.  
Attn: John Smith  
1565 Charleston Rd., M/S B.1  
Mountain View, CA 94043

cXML supports both forms. It puts the first line into a `Name` element, the second into a `DeliverTo` element and the third into a `Street` element. The resulting cXML documents contain addresses with personal names in either the `Name` or `DeliverTo` element.

Many organizations do not include the company name at all. However, they should consistently use one format and include the company name in all addresses. When mail stop is included it should appear in the second `DeliverTo` element.

## Example

```
<Name xml:lang="en">Acme, Inc</Name>
<PostalAddress name="Headquarters">
  <DeliverTo>John Smith</DeliverTo>
  <DeliverTo>M/S B.1</DeliverTo>
  <Street>1565 Charleston Rd.</Street>
  <City>Mountain View</City>
  <State>CA</State>
  <PostalCode>94043</PostalCode>
  <Country isoCountryCode="US">United States</Country>
</PostalAddress>
```

## Multiple Lines in `Street` Element

Split `Street` elements where a comma might appear into additional `Street` elements. SAP Business Network supports four `Street` elements per address.

For example, 1565 Charleston Rd., Suite 45 should appear as two `Street` elements:

```
<Street>1565 Charleston Rd.</Street>
<Street>Suite 45</Street>
```

For information about transformations performed on the `Street` element by SAP Business Network see [cXML Transformations on SAP Business Network \[page 408\]](#).

## Country, State, and `PostalCode` Elements

A `PostalAddress` element requires that you provide a `Country` element with an `isoCountryCode` attribute. Without the `Country` element, a `PostalAddress` element is incomplete.

The `Country` value is a human-readable country/region name.

For the `isoCountryCode` attribute value, use ISO 3166-1 two letter codes. For more information, see [Country Codes \[page 415\]](#).

If `isoCountryCode="US"`, then the `State` element is required and must be a valid US Postal Service two-letter state abbreviation; for example, TX for Texas. `PostalCode` is also required and it must be a valid five- or nine-digit US Postal Service zip code. If using nine-digit zip codes, do not include a dash separator.

If `isoCountryCode="CA"`, then the `State` element is required and must be a valid Canada Post two-letter province abbreviation; for example, QC for Quebec. `PostalCode` is required and must be a valid six-character Canada Post Postal Code. The format must be A9A9A9, with no space or separator.

The `PostalCode` element should never contain a dash (-). It is up to the receiving application to format the postal code for display. For example, a U.S. purchase order might contain:

```
<PostalCode>940431234</PostalCode>
```

Applications should display it for users as:

94043-1234

**Correct** example:

```
<State>FL</State>
<PostalCode>342300001</PostalCode>
<Country isoCountryCode="US">United States</Country>
```

**Incorrect** example:

```
<State>FLA</State>
<PostalCode>34230-0001</PostalCode>
<Country isoCountryCode="USA">United States</Country>
```

"FLA" is not a valid US Postal Service state code. Postal codes should not contain dashes. "USA" is not a valid ISO 3166-1 country code.

### Note

Do not confuse the `Country` element with the `CountryCode` element. Use `Country` in postal addresses and `CountryCode` in telephone numbers.

## TelephoneNumber **Element**

Complete telephone numbers consist of three elements: country code, area or city code, and dialed number.

cXML `TelephoneNumber` elements have the following format:

```
<TelephoneNumber>
  <CountryCode isoCountryCode="US">1</CountryCode>
  <AreaOrCityCode>650</AreaOrCityCode>
  <Number>9306200</Number>
</TelephoneNumber>
```

Example of a London phone number:

```
<TelephoneNumber>
  <CountryCode isoCountryCode="UK">44</CountryCode>
  <AreaOrCityCode>20</AreaOrCityCode>
  <Number>78628500</Number>
</TelephoneNumber>
```

## CountryCode **Element**

The `CountryCode` element contains an ISO 3166-1 two letter country code and an ITU dialing code.

For ISO 3166-1 Country Codes, see [Country Codes \[page 415\]](#). For ITU dialing codes, see [Dialing Codes \[page 418\]](#).

### Note

The ITU dialing code is not an ISO 3166-1 numeric country code (the United States has the value “840” in that system.)

**Correct** examples:

```
<CountryCode isoCountryCode="US">1</CountryCode>
<CountryCode isoCountryCode="CA">1</CountryCode>
<CountryCode isoCountryCode="FR">33</CountryCode>
<CountryCode isoCountryCode="MC">377</CountryCode>
```

### Note

A single ISO Country Code can address multiple countries.

**Incorrect** examples:

```
<CountryCode isoCountryCode="US">US</CountryCode>
```

Contains no ITU dialing code.

```
<CountryCode isoCountryCode="US">011</CountryCode>
```

Contains “011”, which is the escape code for international dialing from the United States, instead of the ITU dialing code.

### Note

Do not confuse the `Country` element with the `CountryCode` element. Use `Country` in postal addresses and `CountryCode` in telephone numbers.

## AreaOrCityCode and Number Elements

Area and city codes have different lengths depending upon the locality. Dialing “escape” codes and country codes sometimes also appear in the `Number` element.

Do not add “1” in the `AreaOrCityCode` element.

Do not use punctuation such as “(800) 555-5555” in the `Number` element.

**Correct** example:

```
<AreaOrCityCode>800</AreaOrCityCode>
<Number>5555555</Number>
```

**Incorrect** examples:

```
<AreaOrCityCode>1800</AreaOrCityCode>
<Number>5555555</Number>
```

Contains a “1” before the area code.

```
<AreaOrCityCode>800</AreaOrCityCode>
```

```
<Number>555-5555</Number>
```

Telephone number should not contain punctuation.

## Date and Time Format

Use ISO 8601 format for date and time values. The format is `YYYY-MM-DDThh:mm:ss-hh:mm`.

For example:

```
<OrderRequestHeader orderID="3333" orderDate="2001-12-20T09:25:57+01:00" type="new">
```

The “+01:00” component means one hour ahead of UTC (Coordinated Universal Time). Do not convert the time component to UTC time; leave it as local time.

**Incorrect** examples:

```
19990817T233535Z  
2000-3-18T11:33:32
```

Both examples lack the required timezone information.

### timestamp **Attribute**

The SAP Business Network treats the `cXML@timestamp` attribute differently for different types of documents.

- Documents posted by Buyers (for example, Orders): The SAP Business Network does not validate the `timestamp` value for documents posted by buyers. The `timestamp` can be any string, including a null string.
- Documents posted by Suppliers (for example, Invoices): The SAP Business Network requires a valid `timestamp` value in ISO 8601 format for all documents posted by suppliers. By default, the SAP Business Network uses the system date and time zone of the host (Pacific Standard Time) for the `timestamp` value. If the selected date is not the current date, the timestamp will be set to noon of that day.

## Handling Special Characters in Documents

In cXML, as in XML, not all characters can be typed from the keyboard. Others, such as `<` and `&`, have special meaning to XML. These characters must be encoded using character entities.

XML defines the following built-in character entities:

Entity	Character
<code>&amp;lt;</code>	<code>&lt;</code>

Entity	Character
<code>&amp;gt;</code>	<code>&gt;</code>
<code>&amp;amp;</code>	<code>&amp;</code>
<code>&amp;quot;</code>	<code>"</code>
<code>&amp;apos;</code>	<code>'</code>

For characters outside of the encoding you use, use the Unicode number of the character (decimal or hexadecimal), preceded by pound (#). For example, `&#174;` and `&#xAE;` represent a registered trademark symbol, ®.

For example,

```
<Description xml:lang="en-US">The best prices for software®</Description>
```

could be encoded as

```
<Description xml:lang="en-US">The best prices for software &#174;</Description>
```

Single (') or double (") quotation marks must be escaped only within attribute values that are quoted using that delimiter. Best practice is to use only single quotes to delimit attributes, unless the content will never contain quotes.

To handle special characters in documents:

1. Use a template that only uses single quotes to delimit attributes.
2. Add values to the template by doing one of the following:
  - If the document is a `PunchOutOrderMessage` to be transmitted by the `cxml-urlencoded` hidden field, fill the values in the template using US-ASCII encoding. This encoding requires XML character entities for all characters beyond that encoding. For example, enter the registered trademark symbol (®), which is not available in US-ASCII, as `&#174;`.
  - Otherwise, fill the values in the document using UTF-8 encoding. UTF-8 should be used for all documents sent by HTTP Post directly, or embedded in a `cXML-base64` hidden field. UTF-8 includes all of US-ASCII.
3. XML escape attribute values and element content as you create the cXML document. Characters that must be escaped are `&`, `'`, `<` and `>`.  
The following steps are required if you are transmitting the document in a `PunchOutOrderMessage`.
4. Pay attention to all characters that browsers interpret:
  - If you are using a `cxml-urlencoded` hidden field, convert all double quotes to `&#34;`.
  - Further (for the `cxml-urlencoded` field), escape all ampersands that appear in contexts significant to HTML with `&amp;`. To be safe, you can escape all ampersands. For example, escape ampersand (&) as `&amp;` and apostrophe (') as `&apos;`. Escape the registered trademark symbol (®) as `&#174;`.
  - Otherwise, if you are using a `cxml-base64` hidden field, base64 encode the entire cXML document.
5. Embed the document in the HTML form with double quotes around the string value.

For more information about special characters in cXML, see the [cXML Reference Guide](http://www.cxml.org) available at <http://www.cxml.org>.

## Extrinsic **Elements**

Extrinsic elements define additional information that falls outside more standard commerce interactions, but which may be valuable to some organizations for their transactions. SAP Ariba supports some extrinsics by default.

Ariba Buyer 6.1 and 7.0 include a different set of extrinsics. By default, Ariba Buyer 6.1, includes the extrinsics "User" and "CostCenter". By default, Ariba Buyer 7.0 includes the extrinsics "UniqueName" and "UserEmail". Any additional extrinsics would have to be agreed upon between the buying organization and the supplier.

### Note

For older Ariba Buyer installations, it is recommended that buying organizations change "User" to "UniqueName" and notify their suppliers.

For a list of transformations performed on extrinsics by SAP Business Network, see [cXML Transformations on SAP Business Network \[page 408\]](#).

# Document Addressing and Security

cXML documents travel between geographically disparate applications through corporate intranets and the public Internet. To keep business data confidential and to protect against unauthorized access, cXML-enabled applications support secure communication.

[Document Security \[page 28\]](#)

[HTTPS Connections \[page 29\]](#)

[cXML Document Authentication \[page 31\]](#)

[Digital Certificates \[page 34\]](#)

[cXML Credentials \[page 37\]](#)

[Required Credentials \[page 42\]](#)

[End Points Integration with SAP Business Network Adapters \[page 50\]](#)

[Quick Enablement \[page 53\]](#)

## Document Security

Secure communication is made possible through two mechanisms: document encryption and document authentication.

## Document Encryption

Applications encrypt cXML documents before transmission by sending them through HTTPS connections.

HTTPS is a secure form of HTTP (HyperText Transfer Protocol) that is supported by most Web servers and Web browsers. It protects network communication by encrypting data so that unauthorized parties are unable to interpret it.

For more information about HTTP, see [HTTPS Connections \[page 29\]](#).

## cXML Document Authentication

Applications authenticate received cXML documents to check their validity. Authentication ensures that each document is from a recognized organization.

Because cXML-enabled applications communicate through the Internet, they must perform authentication on all received cXML documents to prevent unauthorized access.

For more information about document authentication, see [cXML Document Authentication \[page 31\]](#).

## HTTPS Connections

SAP Business Network is a service available on the public Internet. All cXML documents it receives or sends travel on the Internet. To ensure secure document transmission through the Internet, SAP Business Network requires all incoming and outgoing connections to be established through HTTPS.

HTTPS connections allow web servers and clients to encrypt cXML documents for safe transmission over the Internet.

SAP Business Network does not initiate or accept plain HTTP connection requests. Therefore buying organizations, cXML-enabled suppliers, and service providers must support HTTPS.

HTTPS relies on encryption provided by a cryptographic protocol called Transport Layer Security (TLS). TLS adds cryptological enhancements to TCP/IP (Transmission Control Protocol/Internet Protocol), the communications protocol of the Internet.

- **To receive cXML documents from SAP Business Network**, external Web servers (including the Ariba Buyer 8.1 or later PunchIn site) must accept HTTPS connection requests and create HTTPS connections. You must install an TLS Web server certificate from a trusted certificate authority on your Web server. For more information about these certificates, see [Overview of Digital Certificates \[page 35\]](#).
- **To send cXML documents to SAP Business Network**, all cXML-enabled applications must be able to initiate HTTPS connection requests.

All URLs entered in SAP Business Network accounts must have values that begin with `https://`.

SAP Business Network members must perform specific tasks to support HTTPS communications.

[HTTPS for Buying Organizations \[page 29\]](#)

[Checking URLs in SAP Business Network Accounts \(Collaborative Invoicing PunchIn Sites\) \[page 30\]](#)

[HTTPS for Suppliers and Service Providers \[page 30\]](#)

[Enabling HTTPS on Web Servers \[page 30\]](#)

[Checking URLs in Your SAP Business Network Account \[page 31\]](#)

## HTTPS for Buying Organizations

You must configure Ariba Buyer and SAP Ariba Sourcing to send documents to SAP Business Network URLs prefaced with HTTPS.

Ariba Buyer and SAP Ariba Sourcing can successfully initiate HTTPS connections with SAP Business Network because they come with a preinstalled CA certificate that enables them to recognize the issuer of SAP Business Network's TLS certificate.

If you use the collaborative invoicing PunchIn site, it must be enabled to accept HTTPS communication from SAP Business Network. Also, you must ensure all URLs entered in your SAP Business Network account specify HTTPS in web addresses.

## Related Information

[SAP Ariba Security Guide](#)

# Checking URLs in SAP Business Network Accounts (Collaborative Invoicing PunchIn Sites)

If you use a collaborative invoicing PunchIn site, check that your URLs use HTTPS.

## Procedure

1. Sign in to your SAP Business Network account.
2. In the Configuration area of your account, ensure the cXML ProfileRequest URL uses "https://".

## Results

SAP Business Network caches your cXML profile. You can clear this cache by clicking the **Reset Profile** button in your account. For more information, see [Using the Profile Transaction \[page 66\]](#).

# HTTPS for Suppliers and Service Providers

Enable HTTPS on Web servers connected to your cXML applications, and ensure all URLs entered in your SAP Business Network account specify `https://` addresses.

# Enabling HTTPS on Web Servers

Web servers used by your cXML applications must support HTTPS.

## Procedure

1. Ensure that your Web server is capable of supporting Transport Layer Security (TLSv1.2 or TLSv1.3).
2. Ensure that your Web server is configured for DNS (Domain Name Service).
3. Purchase and install an SSL Web server certificate. For more information, see [Obtaining a Digital Certificate \[page 36\]](#).

- Follow your Web server's instructions for installing the certificate.
4. Ensure you send proper HTTPS headers in responses.
  5. (Optional) Configure your Web server to disallow non-secure cXML HTTP requests.

## Checking URLs in Your SAP Business Network Account

Set up your ProfileRequestURL, PunchOutSetupRequest, and OrderRequest URLs to support HTTPS.

### Procedure

1. Log on to your SAP Business Network account.
2. In the Configuration area of your account, ensure all cXML URLs use "https://". You can configure the following cXML URLs in your account:
  - ProfileRequest URL
  - PunchOutSetupRequest URL
  - OrderRequest URL
3. If you support the cXML Profile transaction, ensure your ProfileResponse returns https URLs.

SAP Business Network caches your cXML profile; you can clear this cache by clicking the **Reset Profile** button in your account. For more information, see [Using the Profile Transaction \[page 66\]](#).
4. If you support the cXML PunchOut or ProviderSetup transactions, it is strongly recommended that you return https URLs in your PunchOutSetupResponse or ProviderSetupResponse documents.

## cXML Document Authentication

Ariba Buyer, SAP Ariba Sourcing, SAP Business Network, and cXML-enabled sites (such as PunchOut sites) are all applications that send and receive cXML documents. These applications authenticate all cXML documents they receive to ensure they are from valid organizations.

[Available Authentication Methods \[page 32\]](#)

[Certificate Authentication Set Up \[page 33\]](#)

[Installing Your Certificate on SAP Business Network \[page 33\]](#)

[Changing Your SAP Business Network URLs \[page 34\]](#)

[Authenticate SAP Business Network's Certificate \[page 34\]](#)

# Available Authentication Methods

When you configure your SAP Business Network account, you select from two available cXML authentication methods: shared secret, or digital certificate.

- **Shared Secret: (default)** You enter a confidential text string into your SAP Business Network account and configure your cXML application with that same string (if the shared secrets do not match, documents cannot be delivered). Then, those applications insert the shared secret string in cXML documents they generate. Each application authenticates received cXML documents by comparing the shared secret in them to the one it knows.

Shared secret authentication is simple to set up, it is free, and it requires little maintenance. To learn how to specify your shared secret, see the [Configuring Document Routing](#) (for suppliers) or the [SAP Business Network Buyer Administration Guide](#) (for buying organizations).

## Note

SAP Integration Suite, managed gateway for spend management and SAP Business Network does not support shared secret in the cXML payload. If suppliers send shared secret, SAP Integration Suite, managed gateway for spend management and SAP Business Network will remove this information before sending the document to SAP Business Network.

- **Digital Certificate:** You purchase and maintain a client digital certificate from a trusted certificate authority. Then, you enter that certificate into your SAP Business Network account. SAP Business Network and your application refer to that digital certificate for authentication. The certificate does not appear in the cXML document or attached to the document; instead, the TLS protocol exchanges it before the document exchange takes place.

Digital certificate authentication requires more setup, certificates cost money, and they expire over time. However, it might be more compatible with your organization's security strategy.

## Note

Buying organizations that use digital certificate authentication cannot use the Ariba Buyer Collaboration PunchIn site. The PunchIn site supports only shared secret authentication.

# Certificate Authentication Set Up

Organizations can set up digital certificates as an alternative to shared secrets for authenticating cXML documents. To set up digital certificate authentication, obtain a signed client certificate, install it in your SAP Business Network account, and change the URLs to which you post documents.

## Installing Your Certificate on SAP Business Network

To set up certificate authentication on SAP Business Network you must install a digitally signed certificate.

### Procedure

1. Obtain a signed digital certificate from a Certificate Authority trusted by SAP Ariba.
2. Sign in to your SAP Business Network account. You must have account administrator privileges.
3. Choose ► **Account settings** ► **Manage Profile** ►.
4. On the **Configuration** page, click **cXML Setup**.
5. Set **Authentication Method** to "Certificate".
6. On your computer, open the signed certificate keystore file from the certificate authority in a text editor, such as Notepad.
7. Copy the text, starting with "-----BEGIN CERTIFICATE-----" and ending with "-----END CERTIFICATE-----".
8. Paste the text into the Certificate text box on SAP Business Network.

#### Note

You can also use a backup digital certificate. SAP Business Network uses the backup certificate if your primary certificate becomes invalid. Backup certificates are useful when your primary certificate expires or when you need to perform certificate maintenance

9. Click **Save**.

### Next Steps

Digital certificates expire after a predetermined period of time. It is your responsibility to periodically obtain updated certificates from your certificate authority and install them on SAP Business Network.

# Changing Your SAP Business Network URLs

Configure your cXML-enabled application to use the cXML Profile transaction to obtain the SAP Business Network URLs for posting documents.

SAP Business Network has a different set of URLs for shared-secret-authenticated and certificate-authenticated cXML documents. For example:

Data Center	Authentication Method	Legacy SAP Business Network URL	Integration Only SAP Business Network URL
US	shared secret	<a href="https://service.ariba.com/service/transaction/cxml.asp">https://service.ariba.com/service/transaction/cxml.asp</a>	<a href="https://service-2.ariba.com/service/transaction/cxml.asp">https://service-2.ariba.com/service/transaction/cxml.asp</a>
	certificate	<a href="https://certservice.ariba.com/service/transaction/cxml.asp">https://certservice.ariba.com/service/transaction/cxml.asp</a>	<a href="https://certservice-2.ariba.com/service/transaction/cxml.asp">https://certservice-2.ariba.com/service/transaction/cxml.asp</a>

## Note

SAP Ariba recommends that you use TLS 1.2 or TLS 1.3 and the integration only SAP Business Network URLs for cXML traffic. The Legacy SAP Business Network URL is then used as the browser URL for SAP Ariba applications.

The certificate URL works for both certificate- and shared-secret-based authentication.

The Profile transaction is the best way to look up the latest URLs for posting cXML documents.

## Note

Suppliers cannot use self-signed certificates, but can use HTTPS to connect to SAP Integration Suite, managed gateway for spend management and SAP Business Network for cXML.

# Authenticate SAP Business Network's Certificate

If your cXML application authenticates SAP Business Network by verifying SAP Business Network's client certificate, verify certificate fields that do not change, such as Subject Distinguished Name and Issuer Distinguished Name. Do not verify certificates based on fields that regularly change, such as validity period or serial number.

# Digital Certificates

Digital certificates are integral to secure cXML communication. They are used both for enabling HTTPS connections and for authenticating cXML documents.

[Overview of Digital Certificates \[page 35\]](#)

[Client and Server Certificates \[page 35\]](#)

[Trusted Certificate Authorities \[page 36\]](#)

[Encryption Strength \[page 36\]](#)

[Domain Name in Server Certificates \[page 36\]](#)

[Obtaining a Digital Certificate \[page 36\]](#)

## Overview of Digital Certificates

Digital certificates use public key cryptography, which is a form of cryptography that uses two keys called a matched keypair. The matched keypair consists of a private key, which is known only to the owner of the keypair, and a public key, which is available to anyone.

The components of the matched keypair are related mathematically so that the encrypted text created using one component of the keypair can be decrypted by using only the other component of the keypair.

You obtain a signed certificate by sending a certificate signing request signed with your private key and containing your public key to a trusted certificate authority, which sends back a signed certificate containing your public key and signed with their private key.

### Note

Digital certificates expire after a predetermined period of time. When they expire, HTTPS connection requests to your Web servers are rejected, and certificate-based cXML document authentication fails. You are responsible for renewing your certificates in a timely manner.

## Client and Server Certificates

Server certificates are used for TLS, which is required for accepting HTTPS connection requests. These certificates are also called Web server certificates, secure server certificates, and secure server IDs. Client certificates are used for “certificate-based cXML document authentication.”

For more information about HTTP, see [HTTPS Connections \[page 29\]](#). For more information about cXML authentication, see [cXML Document Authentication \[page 31\]](#).

You can use a single certificate as both a server and a client certificate, depending on the information the certificate authority includes:

- If X.509v3 or Netscape extended key usage sections **are present**, the certificate cannot be used for any purpose not specified by the certificate (for example, server or client).
- If X.509v3 or Netscape extended key usage section **are not present**, the certificate can be used for any purpose (including server and client).

If you plan to use a single certificate for both TLS and certificate based authentication, ask your certificate authority to issue one that is both a server and a client certificate.

## Trusted Certificate Authorities

You can use a signed digital certificate issued by any issuing organization. It must reference a root certificate from a Certificate Authority (CA) trusted by SAP Ariba. To get information about the CAs currently trusted by SAP Ariba or to register a CA to be trusted by SAP Ariba, contact SAP Ariba Support.

## Encryption Strength

SAP Ariba recommends use of 128-bit encryption or greater.

Common encryption strengths are 40, 56 and 128 bits; The greater the encryption bit width, the stronger the encryption, and the more secure the TLS connection.

Note that “128-bit certificates” are not necessary to support 128-bit encryption. Most “40-bit certificates” support 128-bit encryption or greater. “128-bit certificates” enable server-gated cryptography, which SAP Business Network does not use. In most cases, you can use less expensive “40-bit certificates”; consult with your certificate authority about supported encryption strengths.

## Domain Name in Server Certificates

The CN (Common Name) field in server certificates for HTTPS must be a fully qualified DNS domain name of a Web server. For example, a fully qualified DNS domain name takes the form "https://www.example.com".

You must enter the same name in the transactive URL fields the Configuration area of your SAP Business Network account and the name contained in your `cXML ProfileResponse`. Do not use IP addresses, because you cannot enter IP addresses in your SAP Business Network account.

Use a separate certificate for each DNS name that clients will attempt to connect to. Certificate names do not specify Web server ports, so multiple Web server instances on different ports can use the same certificate. However, multiple Web servers cannot share a single certificate.

## Obtaining a Digital Certificate

Obtain a signed digital certificate from a Certificate Authority trusted by SAP Ariba.

### Procedure

1. Use your Web server or a third party tool, such as `keytool` or `ikeyman`, to generate a Certificate Signing Request (CSR). This is a file for describing your organization to a certificate authority.
2. Submit the CSR to an SAP Business Network trusted certificate authority and request a **Base64-encoded X.509 V3 Class 3 signed digital certificate**.

Request a server certificate for TLS or a client certificate for certificate based authentication. You might be able to obtain a certificate that works for both purposes; for more information, see [About Client and Server Certificates \[page 35\]](#)

3. The certificate authority returns a signed certificate.

Digital certificate files can be in binary Distinguished Encoding Rules (DER) format or base64-encoded Privacy-Enhanced Mail (PEM) format.

The contents of the file must begin with:

```
----- BEGIN CERTIFICATE -----
```

Likewise, the file must end with:

```
----- END CERTIFICATE -----
```

## Next Steps

- To use the certificate to enable HTTPS, see [HTTPS Connections \[page 29\]](#).
- To use the certificate for cXML document authentication, see [cXML Document Authentication \[page 31\]](#).

# cXML Credentials

`cXML Credential` elements in the header of each cXML document identify the sender and receiver organizations.

[Supported ID Domains \[page 37\]](#)

[Multiple Credentials \[page 39\]](#)

[Case Sensitivity \[page 40\]](#)

[Domain Changes \[page 40\]](#)

[NetworkID and Older Versions of Ariba Buyer \[page 41\]](#)

[DigitalSignature Element \[page 42\]](#)

[Test Accounts \[page 42\]](#)

## Supported ID Domains

SAP Ariba applications use a number of domains for cXML credential IDs.

- `NetworkID`—A unique alphanumeric value assigned to every organization registered on SAP Business Network; for example, AN01000000123. Organizations can see their own and their trading partners' NetworkIDs by logging on to SAP Business Network.
- `DUNS`—A unique number assigned to organizations by Dun & Bradstreet; for example, 942888711. To request a Dun & Bradstreet D-U-N-S® number or to see if your organization already has one, go to <http://www.dnb.com>.

- `AribaNetworkUserId`—A login name of an SAP Business Network user. These names typically have the format of an email address; for example, `judy@workchairs.com`. This domain is not preferred, because if users change their login names, cXML documents might fail to route.
- `PrivateId`—(for quick enablement or supplier connectivity only) A unique alphanumeric value defined by a buying organization for a particular supplier; for example, `Supplier123`. When SAP Business Network receives documents from buying organizations, it maps these IDs to `NetworkID`. When SAP Business Network sends documents to buying organizations, it maps suppliers' `NetworkID`, `DUNS`, and `AribaNetworkID` to `PrivateId`. Suppliers cannot use this domain.
- `ProviderId`—(for quick enablement only) A unique alphanumeric value defined by a service provider for a particular supplier; for example, `Supplier123`. When SAP Business Network receives invoices from service providers, it attempts to map these IDs to `NetworkID` or `PrivateId`. If it cannot map IDs, it sends the invoices to the buying organization's **Unassigned Invoices** page. Buying organizations and suppliers cannot use this domain.
- `VendorID`—Supplier unique name, which is the supplier ID in a buyer's ERP system. It is an alphanumeric value. The combination of `VendorID` and `VendorSiteID` forms the vendor compound key, which uniquely defines a supplier. SAP Business Network can use the vendor compound key for quick enablement. When SAP Business Network receives documents from buying organizations, it maps these IDs to `NetworkID`. Suppliers cannot use this domain. This domain is applicable to buyers using on-demand SAP Ariba Procurement solutions or SAP Business Network Commerce Automation.
- `VendorSiteID`—Supplier location site ID and supplier location contact ID. Includes two `IdReference` domains, `SiteID` and `SiteAuxID`. These values come from the buyer's ERP system. This alphanumeric value is part of the vendor compound key. (See `VendorID` for more information.) Suppliers cannot use this domain. This domain is applicable to buyers using on-demand SAP Ariba Procurement solutions or SAP Business Network Commerce Automation.
- `SystemID`—(for supplier connectivity only) A unique alphanumeric value defined by a buying organization for a particular business application; for example, `SAP1`. When SAP Business Network receives documents containing this ID domain, it associates them with the business application and Bill To addresses configured in the buyer's account.
- `SSPPrivateID`—(On-demand SAP Ariba Procurement solutions only) An automatically generated supplier location private ID (called the SAP Business Network Private ID in SAP Ariba Procurement solutions). This ID is generated in SAP Ariba Procurement solutions for each supplier location. It uniquely identifies a supplier location. Prior to release 12s2, this value was sent using the `PrivateID` domain. To ensure proper routing of legacy documents that use `PrivateID` for specifying this auto-generated value, SAP Business Network uses both `SSPPrivateID` and `PrivateID` to find matching suppliers in documents sent from the SAP Ariba solution. Outbound documents do not include the `SSPPrivateID` domain. They use the `PrivateID` domain to include the supplier location private ID value. Suppliers cannot use this domain.
- `ChildSystemId`—Identifies child realms in a multi-ERP configuration.

For more information about `PrivateId`, `ProviderId`, `VendorID`, and `VendorSiteID`, see [quick enablement \[page 53\]](#).

## Multiple Credentials

The `From`, `To`, and `Sender` elements can each optionally contain multiple `Credential` elements. The purpose of supplying multiple credentials is to identify a single organization using different domains. For example, an organization might be identified by including both a D-U-N-S number and a NetworkID number.

### Example

```
<To>
  <Credential domain="partition-oracle107">
    <Identity>1001134</Identity>
  </Credential>
  <Credential domain="DUNS">
    <Identity>123456789</Identity>
  </Credential>
  <Credential domain="NetworkID">
    <Identity>AN1000000123</Identity>
  </Credential>
</To>
```

### Example

Here is an example of the `To` credential from SAP Ariba Procurement solutions, which includes `VendorID` and `VendorSiteID`:

```
<To>
  <Credential domain="NetworkId">
    <Identity>AN01000252747</Identity>
  </Credential>
  <Credential domain="PrivateID">
    <Identity>v2034</Identity>
  </Credential>
  <Credential domain="SSPPprivateID">
    <Identity>sid498__1000195__1000027</Identity>
  </Credential>
  <Credential domain="VendorID">
    <Identity>v2034</Identity>
  </Credential>
  <Credential domain="VendorSiteID">
    <Identity>
      <IdReference domain="SiteID" identifier="MainSite">
        <IdReference domain="SiteAuxID" identifier="contact2">
          </Identity>
        </Identity>
      </Identity>
    </Credential>
  </To>
```

The receiving system should validate all credentials with domains it recognizes, and it should reject the document if any credentials with recognized domains do not match an organization it knows. It should also reject the document if any two credentials in the same `From`, `To`, or `Sender` section appear to refer to different entities.

The receiving system should reject the document if there are multiple credentials in a `To`, `From`, or `Sender` section that use different values but use the same domain.

## Note

SAP Ariba Cloud Integration Gateway does not support multiple credentials in the header of the message, and the sender or receiver credentials must be ANIDs.

## Case Sensitivity

The case sensitivity of credential data depends on the credential domain. `NetworkID` and `DUNS` values are case-insensitive; `AribaNetworkUserId`, `PrivateId`, `ProviderId`, `VendorID`, `VendorSiteID`, and `SSPPrivateID` values are case sensitive.

For example, applications should not distinguish between the `NetworkID` values “an1234” and “AN1234.”

Applications should treat the domain names themselves (`NetworkID`, `DUNS`, and `AribaNetworkUserId`, `PrivateId`, `ProviderId`, `VendorID`, `VendorSiteID`, and `SSPPrivateID`) as case insensitive, so for example, `DUNS` and `duns` are the same.

## Domain Changes

SAP Business Network might change credential domains in documents routed to suppliers. In any cXML document routed to suppliers, SAP Business Network changes `AribaNetworkUserId` to `NetworkID` in `From` credentials.

For example, as a `PunchOutSetupRequest` document routes from a buyer to a supplier, SAP Business Network changes

```
<From>
  Credential domain="AribaNetworkUserId">
    <Identity>tom@abcd.com</Identity>
  </Credential>
```

to

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN01000000123</Identity>
  </Credential>
```

## NetworkID and Older Versions of Ariba Buyer

Some suppliers might not have D-U-N-S numbers. If they have customers using earlier versions of Ariba Buyer, those suppliers must be able to interpret NetworkID values used in the DUNS credential domain in `PunchOutSetupRequest` and `OrderRequest` documents.

### For Buying Organizations Using Earlier Versions of Ariba Buyer

Administrators using earlier versions of Ariba Buyer must load new suppliers using the NetworkID value in the DUNS domain, if that is the only value provided by the suppliers.

### For Suppliers with Customers Using Earlier Versions of Ariba Buyer

cXML-enabled suppliers can receive a mismatched domain value pair, where the domain is always DUNS, but the value could be NetworkID or DUNS, depending on what buying organizations have configured for suppliers.

cXML-enabled suppliers without D-U-N-S numbers that have customers on earlier versions of Ariba Buyer must be able to interpret NetworkID values in credentials, regardless of the domain. (For the greatest level of compatibility, cXML-enabled suppliers should interpret NetworkID and DUNS values, regardless of the domain in the `To Credential`.)

For example:

```
<To>
  <Credential domain="DUNS">
    <Identity>AN01000000123</Identity>
  </Credential>
</To>
```

or

```
<To>
  <Credential domain="NetworkID">
    <Identity>AN01000000123</Identity>
  </Credential>
</To>
```

or

```
<To>
  <Credential domain="DUNS">
    <Identity>123456789</Identity>
  </Credential>
</To>
```

To avoid having to implement this workaround, cXML-enabled suppliers should obtain D-U-N-S numbers, enter them into their SAP Business Network accounts, and communicate them to their customers for use within Ariba Buyer.

## DigitalSignature Element

The cXML specification defines an element named `DigitalSignature` in the `Sender` element. SAP Ariba applications do not use this element.

### Note

Do not insert this element in cXML documents.

To authenticate documents, use either shared secrets or digital certificates. For information about authentication of documents passed between applications and SAP Business Network, see [cXML Document Authentication \[page 31\]](#).

## Test Accounts

cXML applications should support both SAP Business Network production accounts and SAP Business Network test accounts. Test accounts are used by organizations during development of their applications to keep test data separate from production data.

SAP Ariba applications consider test accounts to be completely separate from production accounts.

To denote organization IDs for test accounts, append “-T” to the ID string.

### Example

```
<Credential domain="DUNS">
  <Identity>942888711-T</Identity>
</Credential>
<Credential domain="NetworkID">
  <Identity>AN6565656565-T</Identity>
</Credential>
```

Applications should not distinguish between “-T” and “-t”; they should be case-insensitive.

## Required Credentials

Every cXML document routed to a cXML server must contain specific credentials in the `Header` section. Credentials are specified in the `From`, `To` and `Sender` elements. They allow receiving systems to identify, authenticate, and authorize parties.

As cXML documents travel to their destinations, intermediate nodes (such as SAP Business Network) change the `Sender` element. The `Sender` element always specifies the most recent node in the transmission chain.

[Ariba Buyer Credentials \[page 43\]](#)

[Ariba Marketplace, Standard Edition \[page 45\]](#)

[Service Providers \[page 46\]](#)

[Supplier Credentials \[page 47\]](#)

## Ariba Buyer Credentials

Credentials are required in transactions between Ariba Buyer, suppliers, and SAP Business Network.

### Buyer to Supplier

- OrderRequest
- PunchOutSetupRequest

Element	Content
From	Ariba Buyer
To	Supplier
Sender	Ariba Buyer

For more information about credential restrictions of older versions of Ariba Buyer, see [NetworkID and Older Versions of Ariba Buyer \[page 41\]](#).

### Example

```
<From>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@acme.com</Identity>
  </Credential>
</From>
<To>
  <Credential domain="DUNS">
    <Identity>942888711</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@acme.com</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Buyer 7.0.6</UserAgent>
</Sender>
```

## Buyer to SAP Business Network

- GetPendingRequest

- ```
SubscriptionContentRequest
SubscriptionListRequest
SubscriptionStatusUpdateRequest
SupplierListRequest
SupplierDataRequest
OrderStatusSetupRequest
```

| Element | Content              |
|---------|----------------------|
| From    | Ariba Buyer          |
| To      | SAP Business Network |
| Sender  | Ariba Buyer          |

### Example

```
<From>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@acme.com</Identity>
  </Credential>
</From>
<To>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@ariba.com</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@acme.com</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Buyer 7.1</UserAgent>
</Sender>
```

## Supplier PunchIn

Ariba Buyer 8.1 and later with the Supplier PunchIn Portal accepts cXML ProfileRequest documents sent by SAP Business Network.

- ProfileRequest

Element	Content
From	SAP Business Network
To	Ariba Buyer

Element	Content
Sender	SAP Business Network

## Example

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN1000001</Identity>
  </Credential>
</From>
<To>
  <Credential domain="NetworkID">
    <Identity>AN10000123</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN1000001</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Network</UserAgent>
</Sender>
```

## Ariba Marketplace, Standard Edition

Credentials are required in transactions between Ariba Marketplace, Standard Edition (AM-SE), suppliers, and SAP Business Network.

### Supplier to Marketplace

- ProviderSetupRequest during configuration
- OrderStatusSetupRequest

Element	Content
From	Supplier
To	SAP Business Network
Sender	Marketplace

### Marketplace to Supplier

- PrivateOrganizationRequest

Element	Content
From	Marketplace
To	SAP Business Network
Sender	Marketplace

## Example

```

<From>
  <Credential domain="NetworkID">
    <Identity>AN6565656565</Identity> <!-- identity of the marketplace -->
  </Credential>
</From>
<To>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@ariba.com</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN6565656565</Identity>
    <SharedSecret>abracadabra</SharedSecret>
    <!-- shared secret of marketplace -->
  </Credential>
  <UserAgent>Ariba Marketplace 7.5</UserAgent>
</Sender>

```

The order is forwarded to the supplier by SAP Business Network using PunchOut.

## Service Providers

Credentials are required in transactions between service providers, suppliers, and SAP Business Network.

### Supplier to Service Provider

- `ProviderSetupRequest` during configuration

Element	Content
From	Supplier
To	Service provider
Sender	SAP Business Network

## Example

```
<From>
  <!-- Supplier's identity -->
  Credential domain="NetworkID">
    <Identity lastChangedTimestamp="2000-03-12T18:39:09-08:00">
      AN01333333333
    </Identity>
  </Credential>
</From>
<To>
  <!-- Service provider's identity -->
  Credential domain="NetworkID">
    <Identity>AN0122222222</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>admin@ariba.com</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Network v20</UserAgent>
</Sender>
```

## Supplier Credentials

Credentials are required in transactions between suppliers and SAP Business Network.

## Supplier to SAP Business Network

- GetPendingRequest
- ProfileRequest
- CatalogUploadRequest

Element	Content
From	Supplier
To	SAP Business Network
Sender	Supplier

## Example

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN10000000123</Identity>
  </Credential>
</From>
```

```

<To>
  <Credential domain="NetworkID">
    <Identity>AN01000000001</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN10000000123</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Our order-receiving system 3.0</UserAgent>
</Sender>

```

## SAP Business Network to Supplier

- ProfileRequest initiated by SAP Business Network

Element	Content
From	SAP Business Network
To	Supplier
Sender	SAP Business Network

### Example

```

<From>
  <Credential domain="NetworkID">
    <Identity>AN01000000001</Identity>
  </Credential>
</From>
<To>
  <Credential domain="NetworkID">
    <Identity>AN10000000123</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN01000000001</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Network</UserAgent>
</Sender>

```

## Buyer to Supplier

- ProfileRequest initiated by buyer
- OrderRequest
- StatusUpdateRequest

- PaymentRemittanceRequest
- TimeCardRequest

Element	Content
From	Buyer
To	Supplier
Sender	SAP Business Network

## Example

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN01000000456</Identity>
  </Credential>
</From>
<To>
  <Credential domain="NetworkID">
    <Identity>AN10000000123</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN01000000001</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Network</UserAgent>
</Sender>
```

## Supplier to Buyer

- ConfirmationRequest
- ShipNoticeRequest
- InvoiceDetailRequest
- TimeCardRequest

Element	Content
From	Supplier
To	Buyer
Sender	Supplier

## Example

```
<From>
```

```

    <Credential domain="NetworkID">
      <Identity>AN1000000123</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN01000000456</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN1000000123</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our order-receiving system 3.0</UserAgent>
  </Sender>

```

## End Points Integration with SAP Business Network Adapters

The cXML Adapter supports end points integration for the following solutions for SAP Business Network Adapter for Oracle® Fusion Middleware, SAP Business Network Adapter for SAP NetWeaver®, SAP Business Network Transport Adapter, SAP Ariba Buying and Invoicing™, and SAP Ariba Buying™.

The SAP Business Network Adapters allow data exchange between your external ERP system and SAP Business Network. If you have configured an end point for your external ERP system in SAP Business Network, then you must maintain the end point information in the channel configuration file of the respective SAP Business Network Adapter.

### Note

An end point is applicable only to outbound documents that are sent from your ERP system to SAP Business Network.

When your SAP Business Network Adapter receives an outbound document from your external ERP system, the network adapter appends the end point information to the cXML and then posts the document to SAP Business Network. For example, when creating the cXML header for a purchase order, your network adapter checks if the end point information is maintained in the channel configuration file.

If you create a purchase order using an Ariba procurement solution and send that to a supplier through SAP Business Network, the end point information is appended to the cXML and the document is then posted to the SAP Business Network. SAP Ariba checks to see if the end point information is maintained as part of your site profile.

Note: If you configure an end point for your SAP Ariba procurement solution in SAP Business Network, be sure to work with your SAP Ariba Support representative to maintain the end point information as part of your organization's Site Profile.

The network adapter or procurement solution includes the end point in the cXML header as part of the From element as explained below:

```

<Header>
  <From>
    <Credential domain="NetworkId">
      <Identity>AN02000076701</Identity>

```

```

    </Credential>
    <Credential domain="SystemID">
      <Identity>ARB2</Identity>
    </Credential>
    <Credential domain="EndPointID">
      <Identity>ERPEndPoint1</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN02000076720</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN02000076701</Identity>
      <SharedSecret>sharedsecret</SharedSecret>
    </Credential>
    <UserAgent>Buyer</UserAgent>
  </Sender>
</Header>
<Request>
  OrderRequest>.....

```

ERPEndPoint1 is the value that you have configured in the communication channel in SAP NetWeaver or channel configuration file.

### Note

In a single ERP configuration, you do not need to include System ID in the `<From>` credential.

[Setting an Endpoint Configuration Parameter for SAP Business Network Adapters \[page 51\]](#)

[Enabling End Point Integration for Outbound Documents \[page 52\]](#)

[Enabling End Point Integration for SAP Business Network Adapter for SAP NetWeaver \[page 52\]](#)

[End Points Integration in a Multiple ERP Setup \[page 52\]](#)

## Setting an Endpoint Configuration Parameter for SAP Business Network Adapters

A configuration parameter named `endpoint` can be added to the channel configuration file to capture the end point information you configured in SAP Business Network for your external ERP system. This parameter is optional. Set it only if you have configured an end point for your external ERP system in SAP Business Network.

### Note

This procedure is applicable only to the SAP Business Network Adapter for Oracle Fusion Middleware and SAP Business Network Transport Adapter.

# Enabling End Point Integration for Outbound Documents

You can enable end point integration for outbound documents.

## Procedure

1. Open the channel configuration file for the respective adapter.
2. Specify values for the relevant parameters.
3. Save the channel configuration file.

## Enabling End Point Integration for SAP Business Network Adapter for SAP NetWeaver

In the **Model Configurator**, open the communication channel relevant to the outbound transaction you are configuring. Under **Communication Channel**, `doublERPEndPoint1` is the value that you have configured in the communication channel in SAP NetWeaver or channel configuration file.

### Note

In a single ERP configuration, you do not need to include System ID in the <From> credential.

## End Points Integration in a Multiple ERP Setup

If your account has been enabled for multiple external ERPs and end point support in SAP Business Network, then you must create system IDs corresponding to the different ERP systems, as well as an end point for each system ID.

For documents that are sent from SAP Business Network to the ERP, the network adapter uses the system ID to identify the ERP systems that receive those documents. Therefore, it is sufficient to create only one end point with the same name for all system IDs.

When creating the cXML header for a purchase order, your network adapter checks if the end point information is maintained in the channel configuration file or communication channel in SAP NetWeaver. If it is, then the network adapter includes the end point in the cXML header along with the system ID.

## Example

```
<Header>
  <From>
    <Credential domain="NetworkId">
      <Identity>AN02000076701</Identity>
    </Credential>
```

```

    <Credential domain="SystemID">
      <Identity>ARB2</Identity>
    </Credential>
    <Credential domain="EndPointID">
      <Identity>ERPEndPoint1</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN02000076720</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN02000076701</Identity>
      <SharedSecret>welcome1a</SharedSecret>
    </Credential>
    <UserAgent>Buyer</UserAgent>
  </Sender>
</Header>
<Request>
  <OrderRequest>.....

```

**ERPEndPoint1** is the value that you have configured in the communication channel in SAP NetWeaver or channel configuration file and **ARB2** is the system ID.

## Order Routing for Child Realms in a Multi-ERP Configuration

Organizations with child realms in a multi-ERP configuration that route purchase orders to an ERP and from the ERP to Spot Buy must add a `ChildSystemID` credential in the `From` tag in the purchase order cXML.

Credentials must be placed in the following order: `NetworkID` at the top, followed by `SystemID` and then `ChildSystemId`.

Example:

```

<From>
  <Credential domain="NetworkID">
    <Identity>AN01427018393-T</Identity>
  </Credential>
  <Credential domain="SystemID">
    <Identity>Q01CLNT600</Identity>
  </Credential>
  <Credential domain="ChildSystemId">
    <Identity>[child_ID]</Identity>
  </Credential>
</From>

```

`child_ID` is the `systemID` for the child site that created the requisition.

## Quick Enablement

SAP Business Network quick enablement allows buying organizations and invoice conversion service (ICS) providers to create new SAP Business Network accounts on behalf of suppliers.

The buyers create these accounts by specifying the supplier's company information in a `Correspondent` element in the header of purchase orders, invoices, payment proposals, CC invoices (invoices sent from the SAP Ariba

procurement solution or the ERP system), and collaboration requests to the supplier or invoices from the supplier. SAP Business Network uses this information to create the supplier's account.

Buying organization or service provider accounts must be enabled for quick enablement. ICS quick enablement must be enabled by SAP Ariba Support. SAP Business Network ignores the `Correspondent` element for accounts that have not been enabled.

The `Correspondent` element is available in cXML 1.2.016 or later. It specifies the supplier's company information with a `Contact` element and it can optionally use a `preferredLanguage` attribute to specify the supplier's preferred language. Any documents SAP Business Network sends to the supplier will be in that language, if it is supported. If `preferredLanguage` is not specified or if it specifies a language that is not supported, SAP Business Network sends documents to the supplier in English.

Following are the types of documents that can be used for quick enablement:

- Purchase orders (see [Quick Enablement Using Purchase Orders \[page 54\]](#))
- Invoices (see [Quick Enablement Using ICS Invoices \[page 56\]](#))
- Payment proposals (see [Quick Enablement Using Payment Proposals \[page 58\]](#))
- CC Invoices (invoices sent from the Ariba procurement solution or the ERP system) (see [Quick Enablement Using CC Invoices \[page 60\]](#))
- Request for Quotations (see [Quick Enablement Using Request for Quotations \[page 62\]](#))
- Tax IDs (see [Quick Enablement Using Tax IDs \[page 64\]](#))

## Quick Enablement Using Purchase Orders

Procurement applications add the `Correspondent` element in purchase orders to create SAP Business Network accounts for suppliers and to send them the purchase orders through email or fax.

The following example shows the header of a purchase order for quick enablement:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.2.016/cXML.dtd">
<cXML payloadID="125xyzkjlkw" timestamp="2006-04-20T23:59:45-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN2000000123</Identity> <!-- ID of buyer -->
      </Credential>
    </From>
    <To>
      <Credential domain="PrivateId">
        <Identity>SupplierABC</Identity> <!-- ID of new supplier-->
      </Credential>
      <Correspondent preferredLanguage="en-US">
        <Contact role="correspondent">
          <Name>ACME Supply, Inc.</Name>
          <PostalAddress name="default">
            <Street>123 Main Street</Street>
            <Street>Suite 101</Street>
            <City>Beamont</City>
            <State>TX</State>
            <PostalCode>77705</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
          <Email name="routing">orders@acme.com</Email>
          <!-- Email address for routing the PO -->
        </Contact>
      </Correspondent>
    </To>
  </Header>
</cXML>
```

```

    <Phone name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1</CountryCode>
        <AreaOrCityCode>650</AreaOrCityCode>
        <Number>1234567</Number>
      </TelephoneNumber>
    </Phone>
    <Fax name="routing"> <!--Fax number for routing the PO -->
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1</CountryCode>
        <AreaOrCityCode>650</AreaOrCityCode>
        <Number>5555555</Number>
      </TelephoneNumber>
    </Fax>
  </Contact>
</Correspondent>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN20000000123</Identity> <!-- ID of buyer -->
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Our Procurement App V2.0</UserAgent>
</Sender>
</Header>

```

## How Buying Organizations Specify Supplier IDs

Buying organizations use the `PrivateID` domain in the `To Credential` to identify the supplier. Buying organizations using SAP Ariba Procurement solutions also use the `VendorID`, `VendorSiteID`, and `SSPPprivateID` domains.

SAP Business Network assigns the supplier a `NetworkID` (AN-ID), but the buying organization can continue to use the [other domains \[page 37\]](#) in subsequent documents.

## How Buying Organizations Specify Routing

Buying organizations include either the supplier's email address or fax number in the `Contact` element to instruct SAP Business Network how to route the purchase order. The `Email` or `Fax` element must have a `name="routing"` attribute.

SAP Business Network rejects purchase orders that do not provide the `name="routing"` attribute.

### Note

If buying organizations provide both `Email` and `Fax` elements, SAP Business Network rejects the purchase orders due to conflicting routing information.

## Taking Ownership of Accounts

SAP Business Network routes the purchase order to the supplier along with an invitation to sign in and complete the registration process. SAP Business Network encourages suppliers to take ownership of these accounts.

If the buying organization uses the SAP Business Network standard account capability to enable suppliers, the supplier registers a standard account on SAP Business Network. If the buying organization doesn't use the standard account method, the supplier registers an enterprise account.

### Note

Quick enablement purchase orders sent to standard accounts aren't subject to supplier fees. Quick enablement purchase orders sent to enterprise accounts are subject to supplier fees. For enterprise accounts, if suppliers don't register and pay the necessary fees if they become chargeable, SAP Business Network rejects purchase orders addressed to them. For more information about supplier fee thresholds, see the [subscriptions and pricing page](#).

SAP Business Network uses the data in the `Contact` element to populate fields in the supplier's account. The `Name`, `Street`, `City`, and `Country` elements in the `Contact` element are required.

After the supplier logs in and takes ownership of the account, SAP Business Network ignores any `Correspondent` element in subsequent purchase orders sent to that supplier, because the supplier might have set account values such as preferred routing method, company name, or company address.

## Quick Enablement Using ICS Invoices

Invoice conversion service providers add the `Correspondent` element in invoices to create SAP Business Network accounts for suppliers.

### Note

For detailed information on ICS invoices and the invoice conversion process, see the *SAP Business Network guide to invoice conversion*.

The following example shows the header of an ICS invoice for quick enablement:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.2.016/InvoiceDetail.dtd">
<cXML payloadID="125xyzkjlkw" timestamp="2006-04-20T23:59:45-07:00">
  <Header>
    <From>
      <Credential domain="ProviderId">
        <Identity>supplier123</Identity> <!-- ID of new supplier -->
      </Credential>
      <Correspondent preferredLanguage="en-US">
        <Contact role="correspondent">
          <Name>ACME Supply, Inc.</Name>
          <PostalAddress name="default">
            <Street>123 Main Street</Street>
            <Street>Suite 101</Street>
            <City>Beaumont</City>
            <State>TX</State>
            <PostalCode>77705</PostalCode>
          </PostalAddress>
        </Contact>
      </Correspondent>
    </From>
  </Header>
</cXML>
```

```

        <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
    <Email name="routing">sales@acme.com</Email>
    <!-- Email address for routing the Invoice-->
    <Phone name="work">
        <TelephoneNumber>
            <CountryCode isoCountryCode="US">1</CountryCode>
            <AreaOrCityCode>650</AreaOrCityCode>
            <Number>1234567</Number>
        </TelephoneNumber>
    </Phone>
    <Fax name="work">
        <TelephoneNumber>
            <CountryCode isoCountryCode="US">1</CountryCode>
            <AreaOrCityCode>650</AreaOrCityCode>
            <Number>1234567</Number>
        </TelephoneNumber>
    </Fax>
    </Contact>
</Correspondent>
</From>
<To>
    <Credential domain="NetworkID">
        <Identity>AN2000000123</Identity> <!-- ID of buyer -->
    </Credential>
</To>
<Sender>
    <Credential domain="NetworkID">
        <Identity>AN200000777</Identity> <!-- ID of service provider -->
        <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Nifty Invoice Scanning V2.0</UserAgent>
</Sender>
</Header>

```

## How Service Providers Specify Supplier IDs

Service providers identify suppliers with the `PrivateId` or `ProviderId` domain in the `From` element.

- The `PrivateId` domain is used if the supplier already exists.
- The `ProviderId` domain is used if the service provider cannot match the supplier on the paper invoice to a supplier on the buying organization's PO report or vendor master file. The first time the service provider is uses a particular provider ID, SAP Business Network sends the invoice to the **Unassigned Invoices** page of the buying organization's SAP Business Network account. SAP Business Network uses the quick enablement process to create a private supplier account for the supplier.

## Taking Ownership of Accounts

Suppliers must contact SAP Ariba Support to take ownership of quick enablement accounts created through invoicing.

If the buying organization uses the SAP Business Network standard account capability to enable suppliers, the supplier registers a standard account on SAP Business Network. If the buying organization doesn't use the standard account method, the supplier registers a full-use account.

SAP Business Network uses the data in the Contact element to populate fields in the supplier's account. The Name, Street, City, and Country elements in the Contact element are required.

## Quick Enablement Using Payment Proposals

Procurement applications use the Correspondent element in payment proposals to create SAP Business Network accounts for suppliers and to send them the payment proposals through email.

### Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.2.016/cXML.dtd">
<cXML payloadID="125xyzkjlkw" timestamp="2006-04-20T23:59:45-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN20000000123</Identity> <!-- ID of buyer -->
      </Credential>
    </From>
    <To>
      <Credential domain="PrivateId">
        <Identity>SupplierABC</Identity> <!-- ID of new supplier-->
      </Credential>
      <Correspondent preferredLanguage="en-US">
        <Contact role="correspondent">
          <Name>ACME Supply, Inc.</Name>
          <PostalAddress name="default">
            <Street>123 Main Street</Street>
            <Street>Suite 101</Street>
            <City>Beamont</City>
            <State>TX</State>
            <PostalCode>77705</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
          <Email name="routing">payment@acme.com</Email>
          <!-- Email address for routing the Payment Proposal -->
          <Phone name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode>650</AreaOrCityCode>
              <Number>1234567</Number>
            </TelephoneNumber>
          </Phone>
        </Contact>
      </Correspondent>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN20000000123</Identity> <!-- ID of buyer -->
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Our Procurement App V2.0</UserAgent>
    </Sender>
  </Header>
```

## How Buying Organizations Specify Supplier IDs

Buying organizations identify suppliers with the `PrivateID` domain in the `To Credential`. Buying organizations using SAP Ariba Procurement solutions also use the `VendorID`, `VendorSiteID`, and `SSPrivateID` domains.

SAP Business Network assigns the supplier a `NetworkID` (ANID), but the buying organization can continue to use the [other domains \[page 37\]](#) in subsequent documents.

## How Buying Organizations Specify Routing

Buying organizations can include only the supplier's email address in the `Contact` element to instruct SAP Business Network how to route the payment proposal. The `Email` element must have a `name="routing"` attribute.

SAP Business Network rejects purchase orders that do not provide the `name="routing"` attribute.

### Note

- SAP Business Network does not support the `Fax` element for payment proposal.
- If buying organizations provide both the `Email` and `Fax` elements, SAP Business Network rejects the payment proposals due to conflicting routing information.
- If the supplier declines to take ownership of the account, the buying organization can't send additional payment proposals to this supplier through SAP Business Network.
- SAP Business Network supports only cXML version 1.2.016 and later for quick enablement payment proposals.
- SAP Business Network does not support attachments in payment proposals. If a payment proposal contains an attachment, SAP Business Network ignores it, but processes the payment proposal.

## How Private Suppliers Take Ownership of Accounts

SAP Business Network routes an invitation to the private supplier to sign in and complete the registration process. SAP Business Network encourages private suppliers to take ownership of these accounts.

If the buying organization uses the SAP Business Network standard account capability to enable suppliers, the supplier registers a standard account on SAP Business Network. If the buying organization doesn't use the standard account method, the supplier registers an enterprise account.

Once the private supplier logs in and takes ownership of the account, the supplier can view the payment proposal. All subsequent notifications for the payment proposals are sent to the supplier through email.

SAP Business Network uses the data in the `Contact` element to populate fields in the supplier's account.

Quick enablement payment proposals are not subject to supplier fees. For more information about supplier fee thresholds, see the [subscriptions and pricing page](#).

# Quick Enablement Using CC Invoices

A CC invoice is a cXML copy request document that contains an attached invoice sent from SAP Ariba Procurement solutions or the ERP system. The quick enablement through CC invoices must be enabled on the buyer's SAP Business Network account.

SAP Business Network stores a copy of the invoice originating from the ERP system. Suppliers can then log into their SAP Business Network account and view the status of their invoices and monitor the progress of the invoice through your invoice reconciliation process.

External systems use the `Correspondent` element in CC invoices to create SAP Business Network accounts for suppliers who are not yet registered on the SAP Business Network and send them the welcome letters through email.

## Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.2.016/cXML.dtd">
<cXML payloadID="125xyzkjlkw" timestamp="2006-04-20T23:59:45-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN20000000123</Identity> <!-- ID of buyer -->
      </Credential>
    </From>
    <To>
      <Credential domain="PrivateId">
        <Identity>SupplierABC</Identity> <!-- ID of new supplier-->
      </Credential>
      <Correspondent preferredLanguage="en-US">
        <Contact role="correspondent">
          <Name>ACME Supply, Inc.</Name>
          <PostalAddress name="default">
            <Street>123 Main Street</Street>
            <Street>Suite 101</Street>
            <City>Beamont</City>
            <State>TX</State>
            <PostalCode>77705</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
          <Email name="routing">payment@acme.com</Email>
          <!-- Email address for routing the CC Invoice-->
          <Phone name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode>650</AreaOrCityCode>
              <Number>1234567</Number>
            </TelephoneNumber>
          </Phone>
        </Contact>
      </Correspondent>
    </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN20000000123</Identity> <!-- ID of buyer -->
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our Procurement App V2.0</UserAgent>
```

```
</Sender>  
</Header>
```

## How Buying Organizations Specify Supplier IDs

Buying organizations identify suppliers with the `PrivateID` domain in the `To Credential`. Buying organizations using SAP Ariba Procurement solutions also use the `VendorID`, `VendorSiteID`, and `SSPPriVateID` domains.

SAP Business Network assigns the supplier a `NetworkID` (ANID), but the buying organization can continue to use the [other domains \[page 37\]](#) in subsequent documents.

## How Buying Organizations Specify Routing

Buying organizations can include only the supplier's email address in the `Contact` element to instruct SAP Business Network how to route the CC invoice. The `Email` element must have a `name="routing"` attribute.

SAP Business Network rejects purchase orders that do not provide the `name="routing"` attribute.

### Note

- SAP Business Network does not support the `Fax` element for CC invoices sent from SAP Ariba Procurement solutions or the ERP system.
- If buying organizations provide both the `Email` and `Fax` elements, SAP Business Network rejects the CC invoices due to conflicting routing information.
- If the supplier declines to take ownership of the account, the buying organization cannot send additional CC invoices to this supplier through SAP Business Network.
- SAP Business Network supports only cXML version 1.2.016 and later for quick enablement CC Invoice.
- SAP Business Network supports attachments in CC invoices sent from SAP Ariba Procurement solutions or ERP systems.
- Buying organizations must customize their CI applications if they want to use CI for transmitting attachments with CC invoices.

## How Private Suppliers Take Ownership of Accounts

SAP Business Network routes an invitation to the private supplier to sign in and complete the registration process. SAP Business Network encourages private suppliers to take ownership of these accounts.

If the buying organization uses the SAP Business Network standard account capability to enable suppliers, the supplier registers a standard account on SAP Business Network. If the buying organization doesn't use the standard account method, the supplier registers a full-use account.

Once the private supplier logs in and takes ownership of the account, the supplier can view the CC invoices sent from the SAP Ariba Procurement solutions or the ERP system. All subsequent notifications on the CC invoices are sent to the supplier through email.

SAP Business Network uses the data in the `Contact` element to populate fields in the supplier's account.

Quick enablement CC invoices sent from SAP Ariba Procurement solutions or the ERP system are subject to supplier fees only when the private supplier has taken ownership of a full-use account on SAP Business Network. Private suppliers who have not yet taken ownership of their account can continue to receive CC invoices without being charged for them. For more information about supplier fee thresholds, see the [subscriptions and pricing page](#).

## Quick Enablement Using Request for Quotations

Procurement applications add the `Correspondent` element in the `quoteRequest` document to create SAP Business Network accounts for suppliers.

### Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/schemas/cXML/1.2.025/Quote.dtd">
<cXML payloadID="123@jnk" timestamp="2013-11-19T11:50:11+00:00" version="1.2.025">
<Header>
  <From>
    <Credential domain="NetworkId">
      <Identity>AN02000533043</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkId">
      <Identity>AN02000533043</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN02000533043</Identity>
      <SharedSecret>sharedsecret</SharedSecret>
    </Credential>
    <UserAgent>Procurement App 2.0</UserAgent>
  </Sender>
</Header>
<Request deploymentMode="production">
  <QuoteRequest>
    <QuoteRequestHeader
      requestID="2021.2215" requestDate="2014-03-06T23:25:01.000-07:00"
      type="new" openDate="2014-03-10T23:13:49.000-07:00" currency="USD"
      xml:lang="en" loseDate="2014-03-17T00:00:00.000-07:00"
      quoteReceivingPreference="winningOnly" >
      <SupplierSelector matchingType="invitationOnly">
        <SupplierInvitation>
          <OrganizationID>
            <Credential domain="VendorID">
              <Identity>2210</Identity>
            </Credential>
          </OrganizationID>
          <Correspondent>
            <Contact>
              <Name xml:lang="en">New Inv Inc</Name>
              <PostalAddress>
                <DeliverTo>922 West</DeliverTo>
```

```

        <Street>15th Avenue</Street>
        <City>California</City>
        <State>CA</State>
        <PostalCode>93504</PostalCode>
        <Country isoCountryCode="US"></Country>
    </PostalAddress>
    <Email>vp@abc.com</Email>
    <Phone>
        <TelephoneNumber>
            <CountryCode isoCountryCode="US"></CountryCode>
            <AreaOrCityCode>ca</AreaOrCityCode>
            <Number>2342344</Number>
        </TelephoneNumber>
    </Phone>
    <URL></URL>
</Contact>
</Correspondent>
</SupplierInvitation>
</SupplierSelector>
<Description xml:lang="" >Quote for AS1</Description>
<ShipTo>
    <Address isoCountryCode="US" addressID="409" >
        <Name xml:lang="en" >P2- Los Angeles</Name>
        <PostalAddress name="P2- Los Angeles" >
            <Street>1022 Sepulveda Blvd</Street>
            <Street>Suite 1000Address2</Street>
            <Street>Address3</Street>
            <City>El Segundo</City>
            <State>California</State>
            <PostalCode>90245</PostalCode>
            <Country isoCountryCode="US" >United States</Country>
        </PostalAddress>
        <Phone>
            <TelephoneNumber>
                <CountryCode isoCountryCode="US" />
                <AreaOrCityCode/>
                <Number/>
            </TelephoneNumber>
        </Phone>
        <Fax>
            <TelephoneNumber>
                <CountryCode isoCountryCode="US" />
                <AreaOrCityCode/>
                <Number/>
            </TelephoneNumber>
        </Fax>
    </Address>
</ShipTo>
</QuoteRequestHeader>
</QuoteRequest>
</Request>

```

## How Buying Organizations Use Supplier Organization IDs

Buying organizations use the `Correspondent` element to store the contact information of the supplier. SAP Business Network uses the `OrganizationID` in the `quoteRequest` document to identify if the supplier is a new or existing supplier.

For SAP, Oracle, and PeopleSoft domains, buying organization identify suppliers using the `NetworkID` or `VendorID`, `VendorSiteID`, and `SiteAuxID` domains.

If the supplier does not exist on SAP Business Network, the contact information is used to send the quote letter inviting the supplier to register and respond to the request for quote (RFQ) posting on SAP Business Network Discovery.

For more information about `Credentia1` domains, see [Supported ID Domains \[page 37\]](#).

## How Buying Organizations Specify Email Routing

Buying organizations can include the supplier's email address in the `Contact` element to instruct SAP Business Network Discovery where to route the quote letter invitation to the supplier.

### Note

- SAP Business Network supports cXML version 1.2.025 and later for quick enablement through requests for quotation.
- SAP Business Network supports attachments and comments in the RFQ document.

## How SAP Business Network Discovery Invites Private Suppliers to Take Ownership of Accounts

If the supplier does not exist, SAP Business Network Discovery sends the quote automation invitation to the private supplier to complete the registration process.

Once the private supplier logs in and takes ownership of the account, the supplier can sign in to view the request for quote (RFQ) posting from the buyer. All subsequent notifications for the RFQ document are sent to the supplier through email.

SAP Business Network uses the data in the `Contact` element to populate fields in the supplier's account.

## Quick Enablement Using Tax IDs

Tax IDs are applicable only to buyers and suppliers that are set up for quick enablement through Tax IDs using XML invoices sent from Brazil. To enable this feature, a buyer must contact SAP Ariba Support and configure their Tax IDs.

Once configured, buyers can view the TaxIDs for their organization from their SAP Business Network account.

A supplier sends an NFe, CTe, and CCe invoice to a buyer through SAP Business Network in an XML format. These invoices can be sent through an email or posted to SAP Business Network where they are converted to the cXML file. For more information on sending these invoices, please contact SAP Ariba Support.

### Note

- SAP Business Network accepts and processes the NFe invoices only if the buyer has a configured TaxID on SAP Business Network.

- Once the NFe invoice is successfully processed on SAP Business Network, suppliers can send the TaxID in the domain for the cXML credential element.

## How SAP Business Network Uses $\text{TaxID}$ to Identify Buyers

SAP Business Network identifies buyers using the TaxID domain.

When a supplier sends an NFe invoice, SAP Business Network verifies that the Tax ID for the buyer is configured on SAP Business Network. If the Tax ID exists, SAP Business Network also verifies that the buyer has an active trading relationship with the supplier using the information on the NFe invoice.

SAP Business Network creates a new private supplier if the supplier does not exist on SAP Business Network. Buyers can invite the supplier (vendor) by starting supplier enablement for the vendor on SAP Business Network.

### Note

Buyers must verify the supplier email address before starting supplier enablement for them. For more information about supplier enablement, see *Enabling suppliers on SAP Business Network*.

## How Suppliers Can Take Ownership of Accounts

Suppliers can use the trading relationship invitation letter to sign in to SAP Business Network and register as a new supplier or use an existing account on SAP Business Network.

Quick enablement through Tax ID is not subject to supplier fees. For more information about supplier fee thresholds, see the [subscriptions and pricing page](#).

For more information about invoices from Brazilian suppliers, see the *SAP Business Network guide to invoicing*.

# Profile Transaction

Every cXML server must accept the Profile transaction. This transaction allows cXML clients to find out which cXML requests servers support and their URLs. It enables applications to obtain the latest transaction URLs automatically without requiring manual intervention.

[Using the Profile Transaction \[page 66\]](#)

[ProfileRequest Document \[page 68\]](#)

[ProfileResponse Document \[page 70\]](#)

[ProfileResponse Implementation Hints and Restrictions \[page 70\]](#)

## Using the Profile Transaction

SAP Business Network, suppliers, and service providers send and receive `ProfileRequest` documents. Buying organizations send `ProfileRequest` documents, and they receive them if they use the Ariba Collaboration PunchIn site or SAP Ariba Sourcing.

[Sending ProfileRequest Documents \[page 66\]](#)

[Receiving ProfileRequest Documents \[page 67\]](#)

[From Credential Element \[page 67\]](#)

[Query Frequency \[page 68\]](#)

## Sending `ProfileRequest` Documents

All cXML applications obtain SAP Business Network's URLs by sending a `ProfileRequest` document to a predetermined URL.

To find out SAP Business Network's URLs, post a `ProfileRequest` document to the URL for cXML transactions. SAP Business Network has a different set of URLs for shared-secret-authenticated and certificate-authenticated cXML documents. For example:

Data Center	Authentication Method	Legacy SAP Business Network URL	Integration Only SAP Business Network URL
US	shared secret	<a href="https://service.ariba.com/service/transaction/cxml.asp">https://service.ariba.com/service/transaction/cxml.asp</a>	<a href="https://service-2.ariba.com/service/transaction/cxml.asp">https://service-2.ariba.com/service/transaction/cxml.asp</a>
	certificate	<a href="https://certservice.ariba.com/service/transaction/cxml.asp">https://certservice.ariba.com/service/transaction/cxml.asp</a>	<a href="https://certservice-2.ariba.com/service/transaction/cxml.asp">https://certservice-2.ariba.com/service/transaction/cxml.asp</a>

## Note

SAP Ariba recommends that you use TLS 1.2 or TLS 1.3 and the integration only SAP Business Network URLs for cXML traffic. The Legacy SAP Business Network URL is then used as the browser URL for SAP Ariba applications.

Each trading partner could have a different set of URLs on SAP Business Network. For each of your trading partners, send a `ProfileRequest` document to SAP Business Network to obtain SAP Business Network's URLs for that organization. Cache these URLs for up to 24 hours and use them for all communication to that trading partner. You can reduce communication overhead by querying for a trading partner's URLs only if you have documents to send to that organization.

To obtain SAP Business Network's URLs, use SAP Business Network's ID (`NetworkID: AN01000000001`) in the `To` credential of the `ProfileRequest` document. To obtain a trading partner's URLs on SAP Business Network, use that partner's ID in the `To` credential of the `ProfileRequest` document.

## Receiving `ProfileRequest` Documents

SAP Business Network queries cXML applications to find out their supported transactions and their URLs.

The following table lists where SAP Business Network sends `ProfileRequest` documents for each type of application:

Application	SAP Business Network Queries Its cXML Profile By...
Supplier cXML Sites	Posting <code>ProfileRequest</code> documents to suppliers' cXML-enabled sites (such as PunchOut sites) by using the URL suppliers enter in the <b>Profile URL</b> field in their SAP Business Network accounts.
Ariba Buyer 8.0 and earlier	Not supported.
Ariba Buyer 8.1 and later	Posting <code>ProfileRequest</code> documents to the Ariba Collaboration PunchIn site using the URL that buying organizations enter in the <b>Profile URL</b> field in their SAP Business Network accounts.
SAP Ariba Sourcing	Posting <code>ProfileRequest</code> documents to SAP Ariba Sourcing using the URL that sourcing organizations enter in the <b>Profile URL</b> field in their SAP Business Network accounts.

## Note

If the **Profile URL** field for your account is empty, SAP Business Network routes cXML documents to one of the following destinations, in this order:

- An end point destination configured for your account
- For orders: a cXML routing method configured for your account

## From `Credential` Element

In `ProfileRequest` documents sent by SAP Business Network, the `From` credential identifies the initiating trading partner.

cXML servers (such as supplier PunchOut sites) should not use this `From` credential to decide which services and URLs to provide. SAP Business Network caches only one profile per cXML server, and it uses that profile for all

requests to that server, regardless of the requesting organization. For example, SAP Business Network stores only one profile per PunchOut site, not one profile for each buying organization that uses it.

## Query Frequency

SAP Business Network queries cXML applications for their profiles when users request services from those sites. SAP Business Network caches profiles for up to 24 hours. cXML applications should query SAP Business Network for its profile once every 24 hours.

For example, when Ariba Buyer initiates a PunchOut session, SAP Business Network immediately queries the supplier's PunchOut site for its profile and SAP Business Network uses this profile information for all subsequent transactions it initiates to that site over the next 24 hours.

Each account on SAP Business Network has a **Reset Profile** button that clears the organization's cXML profile cached on SAP Business Network. The next time SAP Business Network needs to send the organization a cXML document, it queries the site for its cXML profile instead of using the cached profile, which can be up to 24-hours old. This function is helpful when integrating applications with SAP Business Network.

## ProfileRequest Document

A cXML application's transaction URLs can periodically change due to requirements of internal configuration, reliability, and load balancing. Use the Profile transaction to look up SAP Business Network's and your trading partners' current URLs.

Your application posts a `ProfileRequest` document to SAP Business Network with the `To` credential set to SAP Business Network's ID (`NetworkID: AN01000000001`), and SAP Business Network responds with a `ProfileResponse` document that lists all the cXML transactions it supports and the URLs for those transactions. For each of your trading partners, your application also posts a `ProfileRequest` document to SAP Business Network with the `To` credential set to the ID of the trading partner, and SAP Business Network responds with a `ProfileResponse` document that lists all the cXML transactions that partner supports and the URLs for those transactions.

The following listing shows an example `ProfileRequest` you send to SAP Business Network to obtain SAP Business Network's URLs. It is a simple `Request` that contains an empty `ProfileRequest` element.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="456778-199@acme.com" xml:lang="en-US"
timestamp="2001-03-12T18:39:09-08:00">
<Header>
  <From>
    <Credential domain="NetworkID">
      <Identity>AN0100000123</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN01000000001</Identity>
    </Credential>
  </To>
  <Sender>
```

```

    <Credential domain="NetworkID">
      <Identity>AN0100000123</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our Download Application, v1.0</UserAgent>
  </Sender>
</Header>
<Request>
  <ProfileRequest></ProfileRequest>
</Request>
</cXML>

```

Use your ID in the `From` and `Sender` credentials and SAP Business Network's ID in the `To` credential. The NetworkID AN0100000001 always represents SAP Business Network.

If your customer uses different procurement applications for their business organizations, specify the procurement application's System ID in the `To` credential. This ID helps SAP Business Network identify the procurement application using the Bill To address associated to it.

The following listing shows an example `ProfileRequest` containing the System ID. This is a simple `Request` that contains an empty `ProfileRequest` element.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://svcdev.ariba.com/schemas/cXML/1.2.017/cXML.dtd">
<cXML payloadID="1189597956670-4363355987563302335@10.10.13.240"
  timestamp="2007-09-12T04:52:36-07:00" >
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN0100000123</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN0100000001</Identity>
      </Credential>
      <Credential domain="SystemID">
        <Identity>SAP001</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN0100000123</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Supplier</UserAgent>
    </Sender>
  </Header>
  <Request>
    <ProfileRequest />
  </Request>
</cXML>

```

## ProfileResponse Document

A ProfileResponse document is returned by SAP Business Network in response to a ProfileRequest.

### Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="9949494-189@ariba.com" xml:lang="en-US"
timestamp="2001-03-12T18:39:10-08:00">
  <Response>
    <Status code="200" text="OK"/>
    <ProfileResponse effectiveDate="2001-03-12T18:39:10-08:00">
      <Transaction requestName="ConfirmationRequest">
        <URL>https://service.ariba.com/service/transaction/cxml.asp</URL>
      </Transaction>
      <Transaction requestName="PunchOutSetupRequest">
        <URL>https://service.ariba.com/service/transaction/cxml.asp</URL>
      </Transaction>
      <Transaction requestName="InvoiceDetailRequest">
        <URL>https://svcorns.ariba.com/service/transaction/cxml.asp</URL>
      </Transaction>
      .
      .
      .
    </ProfileResponse>
  </Response>
</cXML>
```

This example lists only three transactions (ConfirmationRequest, PunchOutSetupRequest, and InvoiceDetailRequest); the actual ProfileResponse lists many more transactions. Your application caches this information and uses these URLs for all communication with SAP Business Network or the trading partner for the next 24 hours.

Possible status codes in the response are:

- 200: Success
- 4xx: Unrecoverable Error
- 5xx: Temporary Error. Client should retry this request

## ProfileResponse Implementation Hints and Restrictions

For successful creation of ProfileResponse documents use HTTPS URLs, select the correct options for OrderRequest, and test your implementation before deployment.

[HTTPS URLs \[page 71\]](#)

[Options for OrderRequest \[page 71\]](#)

[SAP Business Network Test URLs \[page 71\]](#)

## HTTPS URLs

SAP Business Network requires your `ProfileResponse` documents to return URLs with "https://" prefixes.

For more information about HTTPS, see [HTTPS Connections \[page 29\]](#).

## Options for `OrderRequest`

The cXML specification provides `attachments` and `changes` options for `OrderRequest` in `ProfileResponse` documents.

```
<Option name="attachments">Yes</Option>
<Option name="changes">Yes</Option>
```

The `ProfileRequest` generated by SAP Business Network does not contain these options, although SAP Business Network does accept order attachments and change orders.

Similarly, SAP Business Network does not interpret these options if they appear in `ProfileRequest` documents from suppliers.

## SAP Business Network Test URLs

SAP Business Network has three test URLs you can use to exercise your cXML application's handling of permanent errors (4xx) and temporary errors (5xx). Use these URLs as negative test cases.

- <https://service.ariba.com/ANCXMLDispatcher.aw/ad/cxml400Test%E2%80%A8> This URL returns a random 4xx status, regardless of your cXML document. Use this URL to test your cXML application's handling of permanent errors.
- <https://service.ariba.com/ANCXMLDispatcher.aw/ad/cxml500Test%E2%80%A8> This URL returns a random 5xx status, regardless of your cXML document. Use this URL to test your cXML application's handling of temporary errors.
- <https://service.ariba.com/ANCXMLDispatcher.aw/ad/cxmlUniqueTest%E2%80%A8> This URL returns a 200 status half of the time and a 5xx status half of the time. Use this URL to test your cXML application's retry capability.

# PunchOut Site Planning

PunchOut allows you to offer products and services with live pricing and company-specific customization. PunchOut offers a Web shopping experience that static catalogs cannot offer, but it requires more development effort.

By following the methodology suggested here, you can plan and promote a solution for one customer than can scale easily to additional customers.

[PunchOut Versus Static Catalogs \[page 72\]](#)

[PunchOut Site Implementation Methodology \[page 73\]](#)

[PunchOut Site Planning \[page 73\]](#)

[PunchOut Site Design \[page 76\]](#)

[PunchOut Site Development \[page 79\]](#)

[PunchOut Site Testing \[page 81\]](#)

[PunchOut Site Deployment \[page 84\]](#)

[Retrofitting an Existing Website to Support PunchOut \[page 84\]](#)

[PunchOut for Services \[page 85\]](#)

[Writing a PunchOut Deployment Guide \[page 87\]](#)

## PunchOut Versus Static Catalogs

Ariba Buyer displays both static and PunchOut catalog items in the local customer catalog hierarchy, enabling users to choose items and insert them in requisitions. Static catalog content resides completely in Ariba Buyer, and PunchOut catalog content is hosted by your website.

## Customer Catalog Hierarchy and Requisition Line Items

While static catalogs populate both the customer catalog hierarchy and requisition line items, PunchOut uses separate vehicles to populate the customer catalog hierarchy and requisition line items.

PunchOut first requires you to provide a PunchOut index customer catalog that your customer loads into Ariba Buyer. Second, your PunchOut site sends cXML messages to Ariba Buyer to populate requisitions with line items.

## Deciding Whether to Use PunchOut

Development of a PunchOut site can be time-consuming and costly. Consider that if you retail only a small number of products, a static catalog might be more appropriate than a PunchOut site.

Also consider whether your customers will use PunchOut. Customers can configure Ariba Buyer to allow or disallow PunchOut. Consult your customers to see whether they allow it.

## PunchOut Site Implementation Methodology

Implementing a PunchOut site spans from initial evaluation of your existing e-commerce system to development, and then to deployment. The more effort you spend in the early stages of implementation, the more likely you will be able to deploy your PunchOut site on time with the desired functionality.

The steps for creating a PunchOut site are:

- [PunchOut Site Planning \[page 73\]](#)
- [PunchOut Site Design \[page 76\]](#)
- [PunchOut Site Development \[page 79\]](#)
- [PunchOut Site Testing \[page 81\]](#)
- [PunchOut Site Deployment \[page 84\]](#)

## PunchOut Site Planning

In the planning phase, you create a high-level vision of the integration between Ariba Buyer, SAP Business Network, your PunchOut site, and your order processing system. In this step, you develop an estimate of the project plan and required resources.

[Analysis of Current and Future States \[page 74\]](#)

[Outsourcing Versus Internal PunchOut Site Development \[page 74\]](#)

[Key Participants for PunchOut Integration \[page 75\]](#)

[Determining the Level of PunchOut Site Support Needed \[page 76\]](#)

# Analysis of Current and Future States

Before developing a PunchOut site, perform an in-depth analysis of your current e-commerce and order processing systems to find out how you need to modify them.

## Evaluate Your Current Site

Evaluate your current site for e-commerce, XML integration, electronic order processing, connection with your accounting system, integration with customers' control data, and ability to deliver custom pricing.

- Do you have an existing e-commerce site?
- Does your site have XML integration enabled?
- Do you currently receive orders electronically through XML or EDI?
- How is integration performed with your accounting systems?
- Do you use your customers' control data (for example, ship location IDs) to identify pricing and shipping of orders?
- Does your site currently have the ability to deliver custom pricing or content based on the customer ID?

## Plan for the PunchOut Site

Evaluate your process flow from shopping to order placement and fulfillment, how much customization you want to provide per company, and how you will model a "shopping cart," among other considerations.

- What is the process flow from shopping through order placement and fulfillment?
- How much customization per company do you want to provide?
- Can a single product line be selected for an initial pilot of your PunchOut site?
- Will you need to interface with multiple XML-based procurement applications?
- How will you model a "shopping cart" in requisition line items?

## Outsourcing Versus Internal PunchOut Site Development

Review the resources you have available for implementing your PunchOut site. Building a PunchOut site requires programming expertise, which you can develop within your organization or outsource.

Some key factors to take into account are:

- Does your technical staff have the skills to implement a PunchOut site?
- Do you have an existing Web infrastructure that can be leveraged to use cXML?
- Do you have an approved budget for e-commerce initiatives, in particular, PunchOut enablement?
- Have you evaluated the process flow with PunchOut to verify that it fits into your business model? PunchOut can be used for both products and services.

# Key Participants for PunchOut Integration

The SAP Ariba PunchOut integration process is a collaborative effort that leverages your in-house and external resources. There are three potential key participants: technical developer, integration manager, and SAP Ariba supplier services.

## Technical Developer

Identify a team member who will be the PunchOut site technical developer. This person acts as the primary owner of the PunchOut process and assumes responsibility for a number of tasks.

The following is a role description for the technical developer:

- Reads PunchOut documentation available from the following websites:  
<http://supplier.ariba.com>  
[www.cXML.org](http://www.cXML.org)
- Becomes familiar with SAP Business Network methodology, and develop or possesses a strong working knowledge of customer catalog formats, including:
  - CIF (Catalog Interchange Format)
  - cXML
  - PunchOut
- Tests the PunchOut site with SAP Business Network and with customers
- Manages the SAP Business Network supplier account for all PunchOut-related matters
- Performs ongoing maintenance of the PunchOut site

## Integration Manager

Identify a team member who will be the PunchOut site integration manager. This person is the point of contact for non-technical, business issues relating to PunchOut.

The following is a role description for the Supplier Integration Manager:

- Verifies the ANID (**Ariba Network ID**) or Dun & Bradstreet D-U-N-S (Data Universal Numbering System) number for your company
- Manages PunchOut relationships with customers, resolving issues such as:
  - Identifying targeted commodities for PunchOut
  - Supplying commodity codes for PunchOut products to the customer
  - Defining the purchase order and invoice processes with the customer
- Creates a project plan and implementation time line
- Defines additional resource requirements and makes appropriate assignments

## SAP Ariba supplier services

SAP Ariba provides targeted support with specific tasks such as SAP Business Network registration, customer catalog creation, PunchOut site development, and integration testing. SAP Ariba supports suppliers at any level of technical expertise.

# Determining the Level of PunchOut Site Support Needed

Your business requirements, order volume, amount of desired automation, and team expertise determine the level of support you need.

Answering the following questions can help determine what you need.

- **Does your team have a solid understanding of XML and cXML?**  
XML provides the building blocks of all cXML documents. cXML documents provide a way for buyers, suppliers, and SAP Business Network to communicate with each other across the Internet. cXML documents are constructed based on Document Type Definition (DTD) files, which are used to define a content model for a cXML document. DTDs include the specifications for the allowed elements, their order, and attributes data types.
- **Do you currently have any transactive, XML-enabled Web-based e-commerce applications?**  
Technical developers must have a fundamental understanding of how to create, receive, transmit, parse, and query XML data to and from a remote source. An XML parser is the basic tool that developers use to process XML messages. Free tools are available to familiarize the technical team with XML and cXML.
- **Do you currently have a catalog index file?**  
A catalog index file is a cXML or CIF document you create that the customer loads into Ariba Buyer to create entries in the customer catalog hierarchy. The file defines how you and your products appear in the Ariba Buyer customer catalog user interface. The customer catalog entry for PunchOut items is similar to static items, except that it contains a clickable URL link to your PunchOut site instead of a unit price. When users select a PunchOut item, Ariba Buyer formats and sends a cXML `PunchOutSetupRequest` document to SAP Business Network, which initiates the PunchOut session.

## PunchOut Site Design

During the design phase, you analyze the overall design of your PunchOut site and decide how to integrate it with your order processing system.

CIF, cXML, or PunchOut catalog formats might be better for certain commodities and customer business rules, so discuss their use with your customers to understand their requirements. You must analyze the following areas:

[Supplier PunchOut Site Requirements \[page 77\]](#)

[Customer PunchOut Site Requirements \[page 77\]](#)

[Learning About cXML and PunchOut \[page 78\]](#)

# Supplier PunchOut Site Requirements

The PunchOut protocol is flexible enough to allow you to differentiate your PunchOut site from those from other suppliers. Several factors, such as schedule, budget, and desired appearance will influence how you approach these supplier specifics and you should review all of them as part of your design process.

## Branding

Branding is the process you use to make your PunchOut site unique. You can personalize the appearance and functionality of the site based on customer authentication.

You are encouraged to personalize your PunchOut site and leverage the look and feel of your existing websites. However, PunchOut sites do not require typical e-commerce site functions, such as input fields for manual login, links to exit the current shopping session, or access to external sites.

## Publishing the Index Catalog

PunchOut index catalogs are published on SAP Business Network like other customer catalog types. You can make the customer catalog public (available to all customers) or private (available only to specific customers).

Customers select customer catalogs based on their description and on details about the supplier. Publishing a PunchOut index catalog on SAP Business Network is the quickest way to let customers know that you have a PunchOut site available.

# Customer PunchOut Site Requirements

Meet with your customers to determine their business and technical requirements. Ideally, you collect this information from each customer that wants to use your PunchOut site.

## Business Requirements

Talk with your customers about which products to make available on your PunchOut site. For the best user experience, you should understand the high-level business requirements of your customers.

- Analyze your customers' current and future procurement practices.
- Determine your customers' content-specific requirements by commodity.
- Identify any reporting considerations or requirements.
- Assign ownership across your team to resolve open issues.

## Technical Requirements

Find out your customers' technical requirements for product content and transactions. Develop the processes for addressing the issues that arise when two organizations enter into a trading relationship.

Some of the issues that should be discussed are:

- Content and pricing, including national versus regional contracts
- Commodity codes and Unit of Measure (UOM) encoding
- International issues, such as multi-language and currency
- Freight, shipping methods, and taxes
- How to initiate payment, such as PCard or invoice
- Issuing credits and returns
- Non-catalog (ad-hoc) purchase orders
- Changed and cancelled orders
- Additional information required for documents and cXML requests, such as cost center, department, requester, and supplier account code
- How to handle conflicts with existing sales channels, such as distributors
- Updating order status on SAP Business Network

## Security

Your PunchOut site must communicate through HTTPS (Hyper Text Transfer Protocol Secure). HTTPS protects all parties in PunchOut sessions: your customer, SAP Business Network, and your PunchOut site.

For more information, see [HTTPS Connections \[page 29\]](#).

## Learning About cXML and PunchOut

You need to document the transaction process flow into and out of your PunchOut site and identify which messages need to be coded. SAP Ariba has documentation available to assist in defining the process.

The technical developer should read the following guides, available on SAP Business Network.

Guide	Describes
<a href="#">Configuring Document Routing</a>	How to set up advanced configuration, including cXML configuration
<a href="#">Creating and Managing Customer Catalogs</a>	How to upload, test, and publish static and PunchOut catalogs
<a href="#">Customer Catalog Format Reference</a>	Catalog features and the syntax of CIF and cXML catalogs

# PunchOut Site Development

Development involves the implementation of each step in the PunchOut process. This process can be described through message flow.

## PunchOut Message Flow

A PunchOut session is comprised of various cXML messages that pass between Ariba Buyer, SAP Business Network, and your PunchOut site.

cXML messages for a PunchOut session include:

1. **User Login**

A user at a buying organization first logs in to Ariba Buyer and creates a requisition. This step is important, because it means the user has been authenticated by the buying organization. During PunchOut, SAP Business Network authenticates the buying organization, not the user.

2. **PunchOut Site Selection**

Next, the user searches for products and services in the procurement application and selects your PunchOut item. Depending on what you include in your PunchOut index catalog, users experience store-, aisle-, shelf- or product-level PunchOut. If you offer aisle-, shelf-, or product-level PunchOut, the user punches out to a page on your site that describes the aisle, shelf, or product. If you offer store-level PunchOut, the user punches out to see all your products by selecting your company name. Store-level PunchOut usually requires your site to have a search mechanism so users can find items they need.

3. **PunchOutSetupRequest**

Ariba Buyer generates a cXML `PunchOutSetupRequest` document and sends it through an HTTP Post to SAP Business Network. SAP Business Network authenticates it and forwards it through an HTTP Post to your PunchOut site.

When the buying organization registers on SAP Business Network, it configures a `SharedSecret`.

`PunchOutSetupRequest` documents sent to SAP Business Network identify the customer based on the `Identity` element in the `From` element and populate the `Credential` domain with the customer's NetworkID. Each buying organization has its own NetworkID.

When SAP Business Network determines who the request is from and who it is to, it deletes the customer's shared secret and uses the one from your SAP Business Network account. This shared secret allows the `PunchOutSetupRequest` to effectively sign in to your PunchOut site. You never see your customer's `SharedSecret` and do not have to maintain a separate password/login for each user or customer. The end user can be identified in `Contact` and `Extrinsic` elements.

In addition to the authentication and identification parameters, the `PunchOutSetupRequest` document contains a `BuyerCookie`. The `BuyerCookie` changes between concurrent PunchOut sessions, thereby allowing you to track which screen a particular user is on during the shopping process. An edit operation on an existing order usually results in a new buyer cookie for that particular session. To be more specific, Ariba Buyer guarantees that the buyer cookie is unique among all values used by simultaneously initiated PunchOut sessions. The value might, for example, correspond to a session identifier in that application. To link a specific order to a user, use the `SupplierPartAuxiliaryID` (supplier cookie) element.

4. **PunchOut authentication**

When your PunchOut site receives the `PunchOutSetupRequest` document, it performs the following tasks:

- Authenticates SAP Business Network based on the `Sender` and `SharedSecret`

- Verifies the `From` identification  
You can now initiate a session because the user's organization is a certified SAP Business Network member. Your `PunchOut` site can generate a shopping page for the `PunchOut` session.

#### 5. **PunchOutSetupResponse**

Your `PunchOut` site redirects the user. It issues a `PunchOutSetupResponse` document to SAP Business Network with your `StartPage URL`, which is the shopping page of your `PunchOut` site. SAP Business Network forwards the `PunchOutSetupResponse` to Ariba Buyer.

#### 6. **Shopping**

Ariba Buyer opens your `PunchOut` site in a new window using the `StartPage URL` you supplied. The user selects and configures products or services. Selecting an item adds it to a shopping cart or basket on your site.

#### 7. **PunchOutOrderMessage**

When done selecting items on your `PunchOut` site, the user clicks a **Checkout** link. Your site issues a `PunchOutOrderMessage` document to Ariba Buyer (in an HTML hidden form field) that lists the contents of the user's shopping cart.

The window displaying your `PunchOut` site disappears and the description of the `PunchOut` items appears in the user's requisition. This information acts as a quote, not an actual order. When the quote is approved in Ariba Buyer, it generates a purchase order.

To alleviate user confusion, your checkout process should use the following sequence of buttons:

1. Add item to cart
2. Checkout

The checkout process should not require the user to enter credit card information or ship-to address details. This data is maintained in Ariba Buyer.

In Ariba Buyer 6.1 and earlier, because your site appears in a new browser window, there is a final screen that the user sees containing the requisition number and a **Close Browser** button. This returns the user to Ariba Buyer.

To allow users to return to the `PunchOut` site and make changes to it, the `PunchOutOrderMessage` document should have the `operationAllowed="edit"` attribute.

#### 8. **Requisition Approval**

Ariba Buyer submits the requisition for approval within the buying organization. It does not update you on the progress of the requisition until after it has received all required approvals and has been turned into a purchase order.

If managers in the approval chain deny a requisition, they can use `PunchOut` to go to your site to remove line items or delete the requisition. You should reach an agreement with customers about how canceled requisitions should be handled.

#### 9. **OrderRequest**

Upon approval of the requisition, Ariba Buyer generates an `OrderRequest` document and transmits it to you through SAP Business Network. This document contains the purchase order details required for processing.

## Related Information

[Purchase Orders \[page 135\]](#)

## Extrinsics and Supplier Cookies

Ariba Buyer uses extrinsic data to further identify a user to you. The standard extrinsics sent from Ariba Buyer in `PunchOutSetupRequest` documents are `User` and `CostCenter`. Customers determine the naming and population of all extrinsic elements, so indicate any additional data you need.

Reliance on extrinsic data is discouraged, because it makes using your PunchOut site with other customers more difficult.

The `SupplierPartAuxiliaryID` element, or “supplier cookie,” allows you to transmit additional data, such as a quote number from your PunchOut site to the purchase order. Ariba Buyer passes it back to you in any subsequent `PunchOutSetupRequest` “edit” or “inspect” sessions, and any resulting `OrderRequest` document. Suppliers often use the cookie to associate items in a requisition with the corresponding items in a PunchOut session shopping cart.

## PunchOut Site Testing

The PunchOut testing phase ensures that your site is configured properly and that it effectively communicates with Ariba Buyer. Testing involves two steps: self-testing on SAP Business Network, and subsequent testing with customers.

### Note

You must ensure that your PunchOut website’s use of cookies and online tracking is compliant with the General Data Protection Regulation (GDPR) and the ePrivacy Regulation (ePR).

SAP Ariba recommends that you use appropriate tools to test your site to ensure that it is GDPR and ePR compliant. These tools might indicate you to make changes such as, removing all external http references, and having a single cookie policy for site visitors.

[Self-Testing the PunchOut Site on SAP Business Network \[page 81\]](#)

[Testing the PunchOut Site with Customers \[page 82\]](#)

## Self-Testing the PunchOut Site on SAP Business Network

Your SAP Business Network account has a parallel account called a test account. Test accounts have a built-in catalog tester that allows you to check static catalogs, PunchOut sites, and order routing.

Use the catalog tester to test your PunchOut site and to send simple purchase orders to yourself. It has a single-step feature, allowing you to edit each PunchOut document before transmission.

### Note

The catalog tester is useful for debugging your PunchOut site and demonstrating the site to potential customers. For information about using your test account and the catalog tester, see [Using Test Accounts on SAP Business Network](#).

# Testing the PunchOut Site with Customers

The final phase of testing is to exercise your PunchOut site with your customers.

You should confirm that your customers have enabled their SAP Business Network test accounts and have added your test account as a supplier. Then, you can publish your index catalog to them to confirm that it meets their criteria, allow them to exercise your PunchOut site, receive test orders, and you can observe those orders in your order-entry system.

Specific scenarios to run through when testing with customers include authentication, basic testing from Ariba Buyer.

## Authentication

Your PunchOut site must perform authentication through the domain, buyer identity, and shared secret. You cannot deploy it if it performs authentication any other way, for example with a user ID or with a user-entered password.

## Basic Tests from Ariba Buyer

There are a number of scenarios to test your PunchOut site, including testing PunchOut items, simulating a lost connection, testing multiple line items, non-catalog purchases, functionality of service items, and contract pricing,

- Testing the PunchOut item  
Create a requisition in Ariba Buyer. Select your PunchOut item from the customer catalog hierarchy.  
**Expected behavior:** Ariba Buyer connects to your PunchOut site. The user can shop, place items in a cart, and return the cart to the Ariba Buyer requisition.
- Simulating a lost connection  
Create a requisition in Ariba Buyer. Select a PunchOut item. Ariba Buyer displays your PunchOut site. Close the PunchOut site before “checking out.”  
**Expected behavior:** The user session returns to Ariba Buyer and displays the Ariba Buyer first page.  
Select the PunchOut item again.  
**Expected behavior:** Return to your PunchOut site, where the shopping cart is empty.
- Testing multiple line items on a requisition  
Create a requisition with two line items from the same PunchOut site shopping cart. After the cart returns to the requisition, select one item to initiate the edit functionality.  
Expected behavior: Both items appear in the cart upon return to your PunchOut site.  
Remove both items from your PunchOut site’s cart and check out again.  
Expected behavior: The requisition must not contain any of the items selected during the PunchOut session.
- Testing a non-catalog purchase  
You must agree with your customer how to handle and route non-catalog (ad hoc) purchases. Create a requisition with non-catalog items and see how it appears in your order entry system.
- Testing the basic functionality of service items  
If your PunchOut site lists services, test it like a user would:
  1. Go to your PunchOut site and provide configuration data to purchase a service. The PunchOut site returns a line item.

2. Use a PunchOut edit session to bring back a line item with pricing. After generating a purchase order, try to PunchOut with both edit and inspect.

- Testing contract pricing

If your pricing is determined by the buying organization's ID, make sure the correct price is displayed.

1. Go to your PunchOut site and provide configuration data. You receive a line item back including contract pricing.
2. Submit the requisition and initiate the workflow and approval process.
3. After the requisition is approved, use an edit PunchOut session to select the product. You can also use an inspect PunchOut session.

# PunchOut Site Deployment

For deployment, move the tested site to production. You should coordinate this action with your customers.

## Configuration Management

To make the build-and-deploy process manageable and repeatable, it is recommended that you use a configuration management system. You can script the process of deployment, including creating new websites, moving files, and generating customer-specific content and pricing.

## Customer Service

Confirm that your Customer Service organization is ready to support the new PunchOut site and any new policies and procedures.

## Sanity Check

Immediately after going live, have the buying organization perform a few test PunchOut sessions and create several test orders to validate connectivity in the production environment. Finally, closely monitor your SAP Business Network account to ensure that purchase orders route properly.

# Retrofitting an Existing Website to Support PunchOut

You might have an existing website that you want to modify to support PunchOut. For business or technical reasons, it can make sense to use an existing e-commerce site.

## Leverage an Existing Site

When users interact with a typical B2B site, they sign in directly, search for items, configure commodities, select shipping options, enter credit card information, and place orders. However, these sites are really B2C applications: they treat users as consumers.

B2B sites, however, have dynamic workflow, approvals, saved shopping carts, and contract pricing. Your customer should calculate payment and shipping information. Existing processes, such as dynamic workflow or collection of shipping and payment information, will not be needed for PunchOut.

The model to adopt when creating a PunchOut site is quote and purchase. Users perform PunchOut for product selection, configuration, and to obtain a quote. Ariba Buyer generates the purchase order separately. The process flow is as follows:

1. A requisitioner in Ariba Buyer uses PunchOut to go to your PunchOut site and select products.
2. At checkout, the PunchOut site brings back the fully configured items to Ariba Buyer.
3. In Ariba Buyer, the user selects logistic information, including bill-to, ship-to, shipping method, and need-by date.
4. The user submits the requisition for approval. Parties in the buying organization can inspect, edit, approve, or deny the requisition depending on each approver's role and their permissions.
5. When the requisition is fully approved, Ariba Buyer submits a purchase order, with shipping, billing, and need-by date.

## Quick Retrofitting

You can take steps to modify an existing e-commerce site to support PunchOut as rapidly as possible.

### Procedure

1. Remove all non-configuration related processes.

Ariba Buyer authenticates users and SAP Business Network authenticates buying organizations.

2. Adapt a model where you provide a quote and receive a purchase order.

If your current site does not support the purchase order model, leverage the existing code base and build a new site with new processes.

3. Remove or deactivate payment, shipping, and workflow.

Ariba Buyer handles payment, shipping, and workflow according to the customers' specific business processes.

4. Clean up the user interface.

Remove all links to outside websites. A PunchOut user should not be able to exit the PunchOut site through site navigation.

## PunchOut for Services

Your PunchOut site can offer permanent or temporary services. Developing a PunchOut site for services requires a good understanding of the PunchOut process, and possibly, coordinating services procurement with your customers.

Procuring services through Ariba Buyer is very different from procuring commodities. For commodities, the approval workflow and access control lists are in Ariba Buyer. There is no preliminary product configuration

required and offerings do not dynamically change based on market conditions. Any commodity that does not follow the above principles lends itself to PunchOut, where the customer catalog is maintained at your site.

## Services Exchange

You can create a PunchOut site that supplies services or contract work. This is called a services exchange, because requisitioners request services and configure settings that describe the work they need done.

Users follow two steps to procure services from services exchanges:

1. Open a position
2. Engage a candidate to fulfill the opened position

You can model these steps with two PunchOut operations. The first step is a “create” session that partially populates a requisition line item. The second step is an “edit” session that adds more detail to form a complete line item. The create session opens a contract worker position; the edit session engages a candidate to fill the opened position.

## Create Session

The create session PunchOut operation defines a contract worker. This session might be subject to an approval flow in Ariba Buyer if it returns estimates for requested services.

Your PunchOut site can temporarily stop the workflow by withholding a key field, such as Unit of Measure (UOM). It can send an email notification to the user to return to the site and continue with the process. These messages cannot automatically trigger an event in Ariba Buyer.

If opening a position requires pre-approval in Ariba Buyer, then you need to arrange a custom double approval chain for the service-specific commodity. The buying organization must send you a notification of approval or denial of a request through email notifications.

## Edit Session

The edit session PunchOut operation further describes a previously “created” service. The user enters missing data (such as the UOM), making the requisition complete and ready for the start of the approval process in Ariba Buyer.

After the approval process is complete, Ariba Buyer sends the purchase order to your services exchange. The contract worker starts on the negotiated start date and enters time worked into time sheets. The accounting system linked to Ariba Buyer processes the invoices and pays against them accordingly.

# Writing a PunchOut Deployment Guide

After implementing a PunchOut site, SAP Ariba recommends that you create a "PunchOut Deployment Guide" which explains your policies, capabilities, and processes, and give it to Ariba Buyer implementors to help them integrate with our site and adhere to your business policies.

Your "PunchOut Deployment Guide" should contain the following sections:

[PunchOut Site Connectivity Overview \[page 87\]](#)

[PunchOut Site Authentication and Identification \[page 87\]](#)

[PunchOut Site Required Extrinsic \[page 87\]](#)

[PunchOut Site Content Requirements/Specification \[page 88\]](#)

[PunchOut Site Address Information \[page 88\]](#)

[PunchOut Site Accounting Structure \[page 89\]](#)

[PunchOut Site Commodity Code Description \[page 89\]](#)

[PunchOut Site Transactions Supported \[page 90\]](#)

## PunchOut Site Connectivity Overview

Describe the PunchOut process flow and the integration to Ariba Buyer. You can copy the explanation from the "PunchOut Event Sequence" section of the *cXML reference guide*.

Include any application-specific processes in the integration. For example, document RFQ (Request For Quote) or service requisitioning where a second PunchOut might be required to receive the pricing of selected services.

## PunchOut Site Authentication and Identification

Explain how you perform authentication of PunchOut sessions.

Include any additional information used to identify the user, such as `PunchOutSetupRequest` extrinsics, or `Contact` or `Address` elements. Describe your PunchOut site's ability to use this information to present custom content.

## PunchOut Site Required Extrinsic

Indicate whether your site requires extrinsic information to initiate customized PunchOut sessions. Keep the use of extrinsic elements to a minimum, because they increase implementation lead time.

Different versions of Ariba Buyer use different default extrinsic elements:

- Ariba Buyer 6.1 and earlier (cXML 1.0) use `User` and `CostCenter` elements. However, customers might name these extrinsics differently, so find out the exact names.

- Ariba Buyer 7.0 and later (cXML 1.1) use the `CONTACT` element, obsoleting the extrinsic elements `USER` and `COSTCENTER`.

In purchase orders, extrinsics are often used to send additional information from the customer at the line item level, such as Company Code and Contract Number. Describe any line item extrinsics you accept.

## PunchOut Site Content Requirements/Specification

Describe your content specification process and capabilities. Describe your process for selecting the categories of products shown to users. Describe whether you have the capability to limit access to items to certain users in the organization.

If you display both contract and non-contract items, describe how these are shown and who can see them. For instance, you might allow typical users to see only contract items, but allow purchasing agents to see all your items. In this case, describe how your PunchOut site determines users' roles.

Provide your PunchOut index catalog (either CIF or cXML) to customers so the appropriate links appear in Ariba Buyer. Also, if you support the `SELECTEDITEM` attribute (available in cXML 1.1), describe how you use it.

## PunchOut Site Address Information

Describe address format clearly and carefully so Ariba Buyer can integrate with your order processing application.

Some customers use the `ADDRESSID` attribute of the `ADDRESS` element to identify a predefined ship-to or bill-to address. If you use this attribute, describe the process of loading and maintaining your customer's address data. Also, discuss how you handle exceptions, such as the user drop-shipping the delivery to a location not already in Ariba Buyer, or the user adding a new address not known to you. In the first case, the `ADDRESSID` is null, in the second case the `ADDRESSID` might be a number you do not have.

If you do not use the `ADDRESSID` attribute, tell customers what to send you in their address elements. This data includes the `DELIVERTO` elements, which are often the most problematic, because some customers implement them differently. Most commonly, they contain a person's name and their building, floor, or mailstop. Typically, there are two occurrences of that element in the order, but some customers send only one. Collect the information your customer plans to send with these before implementation so you can map them into your system.

Similarly, you must also note the format and content of the `STREET` elements. Determine the data format your customers put in these elements before implementation. The format varies on a number of factors, including the ERP system used. The following table is useful for capturing this information for discussion.

Element	#	Customer		Supplier	
		Description	Max Length	Description	Max Length
DeliverTo	1				
DeliverTo	2				
Street	1				
Street	2				

Street	3
Street	4

## PunchOut Site Accounting Structure

Customers have different formats for accounting information they send in purchase orders and receive in invoices. This difference is due to a number of factors, including the ERP system used and the customer's general ledger design.

Collect this information during implementation and describe your ability to capture and return this information for invoicing and Pcard reconciliation. You can use the following table for collecting this information from your customers:

Parameter	Customer Data			Return on Invoice?
	Segment Type	Format / Length	Description	
Reporting Center	Cost Center	Alpha / 5	ID	Y
Reporting Account	Account	Integer / 6	Account	N
Reporting Business	Company	Alpha / 4	ID	N

## PunchOut Site Commodity Code Description

Describe the commodity code standard you support for PunchOut and the level of granularity of the data that you return. Include an appendix that lists all the distinct commodity codes you send, so customers can perform any required mapping.

Ask your customers to specify commodity codes that they use to control workflow or approvals.

The UNSPSC (United Nations Standard Product and Service Code) standard is preferred. For more information, see [Commodity Codes \[page 413\]](#).

# PunchOut Site Transactions Supported

Describe the electronic transactions that you support, the method you use to process orders, how you handle orders not supported electronically, and how you process exceptions.

## Change/Cancel Orders

SAP Business Network provides a separate method for routing change and cancel orders. Describe how you route and process these orders. For example, you might route change/cancel orders directly to your shipping department.

For more information, see [Cancel Orders and Change Orders \[page 175\]](#).

## Non-Catalog (Ad-Hoc) Items

Non-catalog orders sent to you come with a `SupplierPartID` of "Not Available" or with an `isAdHoc` flag. Describe whether you process these line items.

For more information, see [Non-Catalog Items \[page 183\]](#).

## Orders Containing Static and PunchOut Items

If you have both static catalogs and a PunchOut catalog, you might receive purchase orders that contain both types of items. Your order-receiving system needs to be able to process them.

One difference between these two line item types is the content of the `SupplierPartAuxiliaryID` element. For PunchOut line items, you receive the value your PunchOut site generates. For static catalog orders, you receive the value from the static catalog, or no data for catalogs without this information.

## Copied Requisitions

Ariba Buyer allows users to make copies of their requisitions for repeat orders. When it copies requisitions, it copies the contents of entire line items, except for the `SupplierPartAuxiliaryID` element.

This exception preserves the integrity of your PunchOut site, because that element is in your control. Because the `supplierPartID`, `quantity`, and `price` are all in the copied line item, you should be able to process it. Describe in this section whether you will process purchase orders generated from copied requisitions.

## Changes in Price

Prices can change between the time the PunchOut session occurs and the time the purchase order is sent. Describe how you process these exceptions.

## Third-Party Suppliers

If you are a product aggregator, your PunchOut site lists other suppliers' products, and you route purchase orders you receive to those suppliers. Use the third-party suppliers' NetworkIDs or D-U-N-S numbers to populate the `SupplierID` element at the line item level.

These IDs must be registered on SAP Business Network and in Ariba Buyer. Before sending a purchase order to SAP Business Network, Ariba Buyer determines which supplier the `OrderRequest` is for and populates the `To` element in the header with the ANID or D-U-N-S number of that supplier (extracted from the NetworkID or D-U-N-S number at the item or requisition level).

In your , list the third-party suppliers and their IDs.

## Quotes Split into Multiple Orders

Customers that pay with PCards or assign your products to multiple general ledger accounts might split quotes among several orders. While customers always approve or reject the entire quote as a unit, this split might cause exceptions in your order entry system.

Describe whether this situation will cause exceptions. If you cannot process these orders, describe the process for these exceptions.

### ⓘ Note

The frequency of these situations depends on the products you offer, how they are classified, and your customers' accounting processes.

# PunchOut Transactions

PunchOut transactions determine how your PunchOut site integrates with SAP Business Network and procurement applications.

- [PunchOut Index Catalog \[page 92\]](#)
- [PunchOutSetupRequest Document \[page 94\]](#)
- [PunchOutSetupResponse Document \[page 99\]](#)
- [PunchOutOrderMessage Document \[page 101\]](#)
- [PunchOut URL \[page 109\]](#)
- [URL vs. SelectedItem Elements \[page 111\]](#)
- [Level 2 PunchOut \[page 111\]](#)
- [Level 2 PunchOut Requirements \[page 115\]](#)
- [Example Index Catalogs \[page 117\]](#)
- [Shelf-Level PunchOut \[page 120\]](#)
- [Uploading Index Catalogs \[page 121\]](#)
- [PunchOut Session Timeout \[page 122\]](#)
- [ASP Examples \[page 122\]](#)

## PunchOut Index Catalog

A PunchOut index catalog is a file created by the supplier that the buying organization loads into their procurement application to create a PunchOut link in the customer catalog hierarchy. The file defines how the PunchOut catalog or the PunchOut items appear in the procurement application's customer catalog.

Ariba Buyer and SAP Ariba Buying and Invoicing accept both CIF and cXML PunchOut index catalogs.

- [SupplierID Element \[page 93\]](#)
- [URL Element \[page 93\]](#)
- [Classification Element \[page 93\]](#)
- [PunchoutLevel Attribute \[page 93\]](#)
- [Example PunchOut Index File \[page 94\]](#)

## SupplierID Element

The `SupplierID` element identifies the supplier that hosts the PunchOut catalog. Suppliers use NetworkID or Dun & Bradstreet D-U-N-S® numbers to identify themselves.

- Your NetworkID appears on the Home page of your SAP Business Network account
- You can find information on D-U-N-S numbers at <http://www.dnb.com> 

## URL Element

In previous releases of SAP Business Network, the `URL` element identified the supplier's PunchOut website. Now, the URL comes from the supplier's cXML profile or from the supplier's SAP Business Network account.

The `URL` element must still be included, but it is no longer used by SAP Business Network.

Ariba Buyer passes this value in the `PunchOutSetupRequest` document, so the supplier can use it to further identify the PunchOut item.

For more information, see [PunchOut URL \[page 109\]](#).

## Classification Element

PunchOut items in the procurement application must be classified to map to the customer catalog hierarchy. The recommended commodity classification system is UNSPSC (United Nations Standard Products and Services Code).

For more information, see [Commodity Codes \[page 413\]](#).

## PunchoutLevel Attribute

Use the optional `punchoutLevel` attribute to tell SAP Ariba Buying and Invoicing where to place your offerings in the catalog displayed to end-users. This attribute is available only for SAP Ariba Buying and Invoicing (cXML 1.2.016 or later). It is available for both cXML and CIF PunchOut index catalogs.

The `punchoutLevel` attribute can have the following values:

Value	Use	Example
<code>store</code>	A search page that offers all of your products or services. SAP Ariba Buying and Invoicing users punch out directly without displaying item details. These items display at the top of categories, above products.	ACME Hardware Store
<code>aisle</code>	Pages that group your items into a small number of categories. SAP Ariba Buying and Invoicing users punch out directly without displaying item details.	Cutting Tools

Value	Use	Example
shelf	Pages for similar products from which customers would choose when shopping. SAP Ariba Buying and Invoicing displays item details and allows users to punch out.	Handsaws
product	A page for each of your offered items or SKUs. SAP Ariba Buying and Invoicing displays item details and allow users to punch out.	Cuts-a-Lot 14-inch Handsaw

You can provide a mixture of items that have different `punchoutLevel` values. For example, you might offer users one store-level PunchOut item and a product-level PunchOut item for each of your 50 most popular products. If you do not include this attribute, SAP Ariba Buying and Invoicing considers the item to be a store-level item.

Your PunchOut site can interpret the `SelectedItem` element in the `PunchOutSetupRequest` document to determine which aisle, shelf, or product users select. Shelf-level and product-level PunchOut are especially useful if you implement Level 2 PunchOut. See [Level 2 PunchOut \[page 111\]](#).

## Example PunchOut Index File

When you create your own PunchOut Level 2 index files, create them in cXML format to keep file size low. An example PunchOut file is provided as guidance.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Index SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.016/cXML.dtd">
<Index>
  <SupplierID domain="DUNS">1234567</SupplierID>
  <Comments xml:lang="en-US">Sample cXML Index Catalog</Comments>
  <IndexItem>
    <IndexItemPunchout>
      <ItemID>
        <SupplierPartID>123456</SupplierPartID>
      </ItemID>
      <PunchoutDetail punchoutLevel="store">
        <Description xml:lang="en-US">Workchairs, Inc.</Description>
        <URL>http://www.workchairs.com</URL>
        <Classification domain="UNSPSC">88888889</Classification>
      </PunchoutDetail>
    </IndexItemPunchout>
  </IndexItem>
</Index>
```

## PunchOutSetupRequest Document

To initiate PunchOut sessions, requisitioners select PunchOut items in their procurement application. The procurement application generates a cXML `PunchOutSetupRequest` document and sends it to SAP Business Network, which forwards it to the PunchOut site. The `PunchOutSetupRequest` document authenticates the buyer for the supplier.

[Credential Elements \[page 95\]](#)

[UserAgent Element \[page 96\]](#)

[PunchOutSetupRequest Operation Attribute \[page 96\]](#)

[BuyerCookie Element \[page 97\]](#)

[Extrinsic Element \[page 97\]](#)

[BrowserFormPost Element \[page 98\]](#)

[SupplierSetup Element \[page 98\]](#)

[SelectedItem Element \[page 98\]](#)

[Example PunchOutSetupRequest Document \[page 98\]](#)

## Credential **Elements**

Like other cXML documents, `PunchOutSetupRequest` documents contain `From`, `To`, and `Sender` credentials.

### From **Credential**

This element identifies the originator of the `PunchOutSetupRequest` (the buying organization).

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN01000002792</Identity>
  </Credential>
</From>
```

### To **Credential**

This element identifies the supplier (the destination of the `PunchOutSetupRequest`.)

```
<To>
  <Credential domain="DUNS">
    <Identity>942888711</Identity>
  </Credential>
</To>
```

For more information about credential restrictions of older versions of Ariba Buyer, see [NetworkID and Older Versions of Ariba Buyer \[page 41\]](#).

### Sender **Credential**

When a procurement application creates the `PunchOutSetupRequest` document, the `Sender` credential specifies the identity and shared secret of the buying organization. When SAP Business Network forwards the document to the supplier, it changes the `Sender` credential to specify the identity of SAP Business Network and uses the supplier's `SharedSecret`.

This example shows a `PunchOutSetupRequest` that has passed through SAP Business Network.

```
<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>sysadmin@ariba.com</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Ariba Buyer 7.1</UserAgent>
</Sender>
```

### Note

If the `PunchOutSetupRequest` document comes from Ariba procurement solutions, the `Sender` credentials is `NetworkID`.

## UserAgent Element

The `UserAgent` element identifies the originating application. It consists of the software company name, product name and version. Version details can appear in parentheses.

```
<UserAgent>Ariba Buyer 8.2</UserAgent>
```

## PunchOutSetupRequest Operation Attribute

The `operation` attribute specifies the type of PunchOut session to initiate: `create`, `edit`, or `inspect`.

Operation	Description
<code>create</code>	Punch out to add a new PunchOut item to a requisition
<code>edit</code>	Punch out to modify an existing PunchOut item
<code>inspect</code>	Punch out to inspect (read-only) an existing PunchOut item

For example:

```
<PunchOutSetupRequest operation="create">
```

Suppliers can restrict the editing of later PunchOut sessions by using the `operationAllowed` attribute in the `PunchOutOrderMessage` document. For more information, see [operationAllowed Attribute \[page 102\]](#).

## BuyerCookie Element

The `BuyerCookie` element transmits information that is opaque to the PunchOut site, but must be returned to the originator for all subsequent PunchOut operations. It enables the procurement application to match multiple, outstanding PunchOut requests. It is unique per PunchOut session.

### Note

When this element passes through SAP Business Network from Ariba Buyer 7.0 (cXML 1.1), the supplier actually receives a session ID number, not the alphanumeric value in the `PunchOutSetupRequest` from the procurement application to SAP Business Network.

## Example

```
<BuyerCookie>1TF5JRP11S3W9</BuyerCookie>
```

## Extrinsic Element

The optional `Extrinsic` element is used for any additional data that the requestor wants to pass to the PunchOut site. In cXML 1.0, the extrinsics `User` and `CostCenter` elements often provided contact information.

### Note

In cXML 1.1, the `Contact` element obsoletes the `User` Extrinsic and a few others commonly included in cXML 1.0 documents.

Ariba Buyer 6.1 and 7.0 include a different set of extrinsics. By default, Ariba Buyer 6.1, includes the extrinsics `User` and `CostCenter`. By default, Ariba Buyer 7.0 includes the extrinsics `UniqueName`, `UserEmail`, and `CostCenter`. Any additional extrinsics would have to be agreed upon between the buying organization and the supplier.

The following example passes the department of the user initiating the PunchOut operation.

```
<Extrinsic name="CostCenter">450</Extrinsic>  
<Extrinsic name="UniqueName">jsmith</Extrinsic>
```

In cXML 1.1 or later, use the `Contact` element in the body of the request to uniquely identify the user (for example, John Smith in Finance at acme.com) instead of using extrinsic elements. The buying organization can configure their procurement application to insert `Contact` and extrinsic data.

## Example

```
<Contact role="endUser">  
  <Name xml:lang="en-US">Mr. Burns</Name>
```

```
<Email>mburns@springfield.com</Email>
<Phone name="Office">
  ...
</Phone>
</Contact>
```

## BrowserFormPost Element

The `BrowserFormPost` element contains the URL where the PunchOut site returns the `PunchOutOrderMessage` at the end of the PunchOut session.

```
<BrowserFormPost>
  <URL>http://procure.bigbuyer.com:3377/punchout</URL>
</BrowserFormPost>
```

## SupplierSetup Element

In early cXML releases, the `SupplierSetup` element provided the only way to specify a PunchOut site's URL. Beginning with cXML 1.1, suppliers configure SAP Business Network with the URLs of their PunchOut sites and use the new `SelectedItem` element to specify store-, aisle-, shelf- or product-level PunchOut.

The `SupplierSetup` element has been deprecated. PunchOut sites must still accept it until all Ariba Buyer installations recognize and send the `SelectedItem` element. For more information, see [PunchOut URL \[page 109\]](#).

## SelectedItem Element

The `SelectedItem` element contains the item selected by the user from a customer catalog and identifies the supplier's part number. Starting with cXML 1.1, procurement applications use the `SelectedItem` element to specify store-, aisle-, shelf-, or product-level PunchOut.

```
<SelectedItem>
  <ItemID>
    <SupplierPartID>55555</SupplierPartID>
  </ItemID>
</SelectedItem>
```

## Example PunchOutSetupRequest Document

The example `PunchOutSetupRequest` document demonstrates how a request travels from SAP Business Network to the supplier's PunchOut site. It contains the supplier's shared secret.

```
<?xml version="1.0"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxm.org/schemas/cXML/1.2.014/cXML.dtd">
```

```

<cXML payloadID="958075346970@www.bigbuyer.com "
timestamp="2005-06-14T12:57:09-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN01000002792</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="DUNS">
        <Identity>12345678</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="AribaNetworkUserId">
        <Identity>sysadmin@ariba.com</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Ariba Buyer 8.2</UserAgent>
    </Sender>
  </Header>
  <Request>
    <PunchOutSetupRequest operation="create">
      <BuyerCookie>1J3YVWU9QWMTB</BuyerCookie>
      <Extrinsic name="CostCenter">610</Extrinsic>
      <Extrinsic name="User">jpicard</Extrinsic>
      <BrowserFormPost>
        <URL>http://bigbuyer.com:3377/punchout</URL>
      </BrowserFormPost>
      <SupplierSetup>
        <URL>https://punchout.workchairs.com/PunchOutServlet</URL>
      </SupplierSetup>
      <ShipTo>
        <Address addressID="001">
          <Name xml:lang="en">BigBuyer Headquarters</Name>
          <PostalAddress>
            <DeliverTo>Jean Picard</DeliverTo>
            <Street>1565 Pine, MS A.2</Street>
            <City>New York</City>
            <State>NY</State>
            <PostalCode>01043</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Address>
      </ShipTo>
      <Contact>
        <Name>jpicard</Name>
      </Contact>
      <SelectedItem>
        <ItemID>
          <SupplierPartID>54543</SupplierPartID>
        </ItemID>
      </SelectedItem>
    </PunchOutSetupRequest>
  </Request>
</cXML>

```

## PunchOutSetupResponse **Document**

After suppliers receive PunchOutSetupRequest documents, they return PunchOutSetupResponse documents to SAP Business Network through the same HTTPS connection as the PunchOutSetupRequest.

[Overview of the PunchOutSetupResponse Documents \[page 100\]](#)

[Status Element \[page 100\]](#)

[StartPage URL Element \[page 100\]](#)

[Example PunchOutSetupResponse Document \[page 100\]](#)

## Overview of the `PunchOutSetupResponse` Documents

The `PunchOutSetupResponse` document indicates whether PunchOut initiation was successful, and it provides the procurement application with a redirect URL to the supplier's website start page.

SAP Business Network has a 30-second timeout for receiving `PunchOutSetupResponse` documents. If suppliers do not send a response within that time limit, the PunchOut session initiation fails.

### Status **Element**

The `Status` element conveys the success or failure of a request operation. It is comprised of a `code` attribute and a `text` attribute, and an optional `xml:lang` attribute.

The `code` attribute follows the HTTP status code model. In general, a 2xx series code indicates a successful client-server communication, a 4xx series code indicates a client error status code, and a 5xx series code indicates a server error code. The `text` attribute and optional `xml:lang` attribute allow for a text description of the status returned in a response. Suppliers should put the XML parsing or application error in the body of the `Status` element.

### StartPage **URL Element**

The `PunchOutSetupResponse` document contains a `URL` element that specifies the start page URL to pass to the user's browser for the interactive browser session.

## Example `PunchOutSetupResponse` Document

The example `PunchOutSetupResponse` document demonstrates a successful request operation.

```
<?xml version="1.0"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML xml:lang="en-US" payloadID="933694607739"
timestamp="2017-03-14T12:59:09-07:00">
  <Response>
    <Status code="200" text="success"></Status>
    <PunchOutSetupResponse>
      <StartPage>
        <URL>https://punchout.workchairs.com/Servlet/sessionid=7006</URL>
      </StartPage>
    </PunchOutSetupResponse>
  </Response>
```

```
</cXML>
```

## PunchOutOrderMessage Document

The `PunchOutOrderMessage` document sends the contents of the PunchOut site's shopping basket to the procurement application user's requisition. It provides product details and prices to procurement applications. Suppliers can also send supplier cookies to associate items with a specific shopping session.

The `PunchOutOrderMessage` provides a quote for the requested items, but suppliers have not yet received a purchase order, so the order cannot yet be booked.

Suppliers send `PunchOutOrderMessage` documents directly to the procurement application, not to the SAP Business Network. Procurement applications do not interpret the `Sender` element in these documents, so suppliers should duplicate the information from the `From` element in the `Sender` element.

### Example

```
<From>
  <Credential domain="NetworkID">
    <Identity>AN01012345678</Identity>
  </Credential>
</From>
<To>
  <Credential domain="NetworkID">
    <Identity>AN01000002792</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN01012345678</Identity>
  </Credential>
  <UserAgent>Our PunchOut Site V4.2</UserAgent>
</Sender>
```

Suppliers should not send a shared secret, because that value is confidential between each supplier and the SAP Business Network.

- [operationAllowed Attribute \[page 102\]](#)
- [cxml-base64 and cxml-urlencoded \[page 102\]](#)
- [BuyerCookie Element \[page 102\]](#)
- [Total Element \[page 103\]](#)
- [ItemIn Element \[page 103\]](#)
- [ItemID Element \[page 104\]](#)
- [ItemDetail Element \[page 105\]](#)
- [Example PunchOutOrderMessage Document \[page 107\]](#)

## operationAllowed **Attribute**

The `operationAllowed` attribute controls whether procurement applications can initiate a later `PunchOut` session containing data from this `PunchOutOrderMessage` document. This attribute can be assigned a value of `create`, `inspect`, or `edit`.

If `operationAllowed="create"`, procurement applications can generate only an `OrderRequest` document. Otherwise, the procurement application can inspect or edit the shopping cart, initiating subsequent `PunchOutSetupRequest` documents with the appropriate operations and the `ItemOut` elements corresponding to the `ItemIn` list returned in a `PunchOutOrderMessage` document. Support for `edit` implies support for `inspect`.

## cxml-base64 **and** cxml-urlencoded

The `cxml-base64` and `cxml-urlencoded` attributes of the HTML `input` element identify the hidden form field that stores the cXML `PunchOutOrderMessage` document. The supplier must encode the `PunchOutOrderMessage` document using either base64 or URL encoding and indicate which encoding is used in the form field name attribute.

### Example

```
<input type="hidden" name="cxml-base64" value="
"
    Entire text of base64-encoded cXML PunchOutOrderMessage document
">
```

or

```
<input type="hidden" name=" cxml-urlencoded" value="
"
    Entire text of URL-encoded cXML PunchOutOrderMessage document
">
```

Suppliers can use `cxml-urlencoded` in cXML 1.1 and later.

## BuyerCookie **Element**

The `BuyerCookie` element is used by procurement applications to associate a given `PunchOutOrderMessage` with its originating `PunchOutSetupRequest`. `PunchOut` sites must return this element whenever it appears. The `PunchOutOrderMessage` document must contain the same `BuyerCookie` that was used in the `PunchOutSetupRequest` document for this `PunchOut` session.

Do not use the `BuyerCookie` to track `PunchOut` sessions, because it changes for every session, from `create`, to `inspect`, to `edit`.

## Example

```
<BuyerCookie>1TF5JRP11S3W9</BuyerCookie>
```

Ariba Buyer discards the cookie after it is used.

### Note

The `BuyerCookie` value might expire while the user is navigating your site. Suppliers might want to support re-creation of a specific user's last shopping cart. If provided, this must be an option and for only that user.

## Total Element

The `Total` element contains the total value for order: quantity \* price without shipping and tax.

## Example

```
<Total>
  <Money currency="USD">100.23</Money>
</Total>
```

For more information about the `Money` element, see [Money Format \[page 18\]](#).

## ItemIn Element

The `ItemIn` element passes PunchOut item details back to the requisition.

## Example

```
<ItemIn quantity="1">
  <ItemID>
    <SupplierPartID>1234</SupplierPartID>
    <SupplierPartAuxiliaryID>ARB-65-1</SupplierPartAuxiliaryID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">2.10</Money>
    </UnitPrice>
    <Description xml:lang="en">3M POST-IT Cube, printed logo in 2 colors on
      side. 1 3/8 x 2 3/4 post-it cube of white paper. Approximately 345
      sheets.
      (Refill)
    </Description>
```

```
<UnitOfMeasure>EA</UnitOfMeasure>
  <Classification domain="UNSPSC">14111514</Classification>
</ItemDetail>
</ItemIn>
```

This element can also contain the `itemType` and `parentLineNumber` attributes for an item group having child line items. For more information, see [ItemOut Element \[page 161\]](#).

## Related Information

[Customer Catalog Format Reference](#)

## ItemID Element

The `ItemID` element contains `SupplierPartID` and `SupplierPartAuxiliaryID`.

Suppliers can use the `SupplierPartAuxiliaryID` element as a supplier cookie to transport complex configuration and bill-of-goods information to identify the item when presented in the future. If `SupplierPartAuxiliaryID` contains special characters, such as additional XML elements not defined in the cXML protocol, they must be escaped properly.

Buying organizations do not display the `SupplierPartAuxiliaryID` element; instead they pass it back in `OrderRequest` documents for use by suppliers.

## Example

```
<ItemID>
  <SupplierPartID>1234</SupplierPartID>
  <SupplierPartAuxiliaryID>ARB-65-1</SupplierPartAuxiliaryID>
</ItemID>
```

### Note

Procurement applications use `SupplierPartAuxiliaryID` as part of the unique identifier for items, so PunchOut sites should not change this value during `edit` or `inspect` PunchOut sessions.

## ItemDetail Element

The `ItemDetail` element contains detailed properties of a line item, such as unit price, description, UOM (Unit Of Measure), and `PriceBasisQuantity`.

### Example

```
<ItemDetail>
  <UnitPrice>
    <Money currency="USD">0.10</Money>
  </UnitPrice>
  <Description xml:lang="en">ACME Push Pins; Clear; Box Of 20</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <PriceBasisQuantity quantity = "2" conversionFactor = "0.10"
    <UnitOfMeasure>BX</UnitOfMeasure>
    <Description xml:lang = "en">This field specifies that 1 Box is equivalent
to 10 EA
    and the unit price is for 2 Boxes</Description>
  </PriceBasisQuantity
  <Classification domain="UNSPSC">4412210601</Classification>
  <ManufacturerPartID>ISBN-23455634</ManufacturerPartID>
  <ManufacturerName>Acme Manufacturing USA, Inc.</ManufacturerName>
  <LeadTime>4</LeadTime>
</ItemDetail>
```

## UnitPrice Element

The `UnitPrice` element contains the unit price of the item.

`UnitPrice` is required by the `PunchOutOrderMessage` for further processing by procurement applications. The user should be able to "edit" a requisition even if `UnitPrice` is not passed back.

## Description Element

The `Description` element contains the item description.

## UnitOfMeasure Element

The `UnitOfMeasure` element contains the item Unit of Measure code as defined by the United Nations UOM standard.

For more information, see [Recommended Coding Systems \[page 413\]](#).

## PriceBasisQuantity Element

The `PriceBasisQuantity` element contains the quantity-based pricing for a line item. Quantity-based Pricing is commonly also referred to as Price-Based Quantity or PBQ. Quantity-based pricing allows the unit price of an item to be based on a different price unit quantity than 1.

In addition to quantity-based pricing, Unit Conversion Pricing allows unit of measure conversion in the pricing calculation, when the unit of measure on the order differs from the pricing unit of measure.

The `PriceBasisQuantity` is populated in the target cXML only if the string length of the `PriceUnit` element is greater than zero.

### Example

```
<ItemOut isAdHoc = "yes" lineNumber = "1" quantity = "10" requestedDeliveryDate =
"2012-03-07">
  <ItemID>
    <SupplierPartID>N160INSTLL</SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency = "USD">14.00000</Money>
    </UnitPrice>
    <Description xml:lang = "en">N160INSTLL</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <PriceBasisQuantity quantity = "2" conversionFactor = "0.10">
      <UnitOfMeasure>BX</UnitOfMeasure>
      <Description xml:lang = "en">This field specifies that 1 Box is
equivalent to 10 EA
and the unit price is for 2 Boxes</Description>
    </PriceBasisQuantity>
    .
    .
    ,
  </ItemDetail>
```

## Classification Element

The `Classification` element contains the UNSPSC commodity code. Ariba Buyer 8.0 and later and SAP Ariba Buying and Invoicing recognize an optional UNSPSC version number.

### Examples

```
<Classification domain="UNSPSC">4412210601</Classification>
<Classification domain="UNSPSC_V7.1">4412210601</Classification>
```

For more information, see [Recommended Coding Systems \[page 413\]](#).

## LeadTime Element

Ariba Buyer 8.2 (cXML 1.2.011) and later and SAP Ariba Buying and Invoicing can interpret a `LeadTime` element in the `ItemDetail` element. PunchOut sites can include `LeadTime` to indicate how many business days it will take from receiving the purchase order to product delivery.

## Example PunchOutOrderMessage Document

The `PunchOutOrderMessage` example illustrates how the document is hidden inside a `cxml-urlencoded` form field.

```
<input type="hidden" name="cxml-urlencoded" value=
"!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="958074737352&www.workchairs.com"
timestamp="2004-06-14T12:59:09-07:00">
  <Header>
    <From>
      <Credential domain="DUNS">
        <Identity>12345678</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000002792</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="www.workchairs.com">
        <Identity>PunchoutResponse</Identity>
      </Credential>
      <UserAgent>Our PunchOut Site V4.2</UserAgent>
    </Sender>
  </Header>
  <Message>
    <PunchOutOrderMessage>
      <BuyerCookie>1J3YVWU9QWMTB</BuyerCookie>
      <PunchOutOrderMessageHeader operationAllowed="edit">
        <Total>
          <Money currency="USD">14.27</Money>
        </Total>
      </PunchOutOrderMessageHeader>
      <ItemIn quantity="2">
        <ItemID>
          <SupplierPartID>3171 04 20</SupplierPartID>
          <SupplierPartAuxiliaryID>ContractId=1751
            ItemId=417714 </SupplierPartAuxiliaryID>
        </ItemID>
        <ItemDetail>
          <UnitPrice>
            <Money currency="USD">1.22</Money>
          </UnitPrice>
          <Description xml:lang="en">ADAPTER; TUBE; 5/32";
            MALE; #10-32 UNF; FITTING
          </Description>
          <UnitOfMeasure>EA</UnitOfMeasure>
          <Classification domain="UNSPSC">21101510</Classification>
          <ManufacturerName>Dogwood</ManufacturerName>
        </ItemDetail>
      </ItemIn>
      <ItemIn quantity="1">
```



```
MZWFkVG1tZT4NCiAgICAgICAgICAgIDwvSXRLbURldGFpbD4NCiAgICAgICAgICAgIDxTdXBwbG11ck1EIGR  
vbWFPbj0iRFVUyI+MDIyODc4OTc5PC9TdXBwbG11ck1EPg0KICAgICAgICAgPC9JdGVtSW4+DQogICAgICA  
8L1B1bmNoT3V0T3JkZXJNZNzYwd1Pg0KICAgPC9NZNzYwd1Pg0KPC9jWE1MPg=" >
```

## PunchOut URL

SAP Business Network receives PunchOut requests from buyers and routes them to suppliers' PunchOut sites.

There are three methods suppliers can use to specify the URLs of their PunchOut sites. In order of preference, they are:

- [URL Specified on the Supplier's PunchOut Site \[page 109\]](#)
- [URL Specified on SAP Business Network \[page 109\]](#)
- [URL Specified in the Supplier's Index Catalog \(Deprecated\) \[page 110\]](#)

## URL Specified on the Supplier's PunchOut Site

All cXML 1.1 (and later) PunchOut sites should specify their PunchOut URL through the cXML Profile transaction.

Suppliers specify their ProfileRequest URL in the **Configuration** area of their SAP Business Network accounts and SAP Business Network periodically sends `ProfileRequest` documents to query these sites. The sites respond with a `ProfileResponse` document listing URLs for all the cXML requests they support, including the URL for PunchOut requests. SAP Business Network forwards `PunchOutSetupRequest` documents to that URL. This method is recommended, because suppliers can change their URLs without having to sign in to SAP Business Network. For more information about cXML profiles, see [Profile Transaction \[page 66\]](#).

If suppliers do not specify a profile URL on SAP Business Network, it uses the method described in [URL Specified on SAP Business Network \[page 109\]](#) to determine their PunchOut URLs.

## URL Specified on SAP Business Network

If suppliers do not support the cXML Profile transaction, SAP Business Network checks whether they have entered a URL in their account. Suppliers can specify the URL of their PunchOut site in the **Configuration** area of their SAP Business Network accounts.

If no URL is available from either the supplier's cXML profile or the supplier's SAP Business Network account, the PunchOut request fails.

## URL Specified in the Supplier's Index Catalog (Deprecated)

The URL specified in the Supplier's Index catalog method for specifying a PunchOut URL is no longer supported. PunchOut index catalogs must continue to specify this URL, but SAP Business Network does not use it as the `PunchOutSetupRequest` destination.

This URL is generated from the `storeFrontURL` or the `PunchoutDetail` URL, depending on where the requisitioner is when they punch out. In either case, this value appears in the `PunchOutSetupRequest`.

Previous releases of SAP Business Network forwarded cXML `PunchOutSetupRequest` documents to the URL contained in those documents. For improved security, SAP Business Network now ignores these URLs. SAP Business Network now forwards `PunchOutSetupRequest` documents to the URL specified in the receiving organization's cXML Profile or in its SAP Business Network account.

### Example

The URL from the index catalog appears in the `SupplierSetup` element for the `PunchOutSetupRequest` document. The following examples shows both cXML and CIF index catalogs and the resulting `PunchOutSetupRequest`:

cXML index catalog:

```
<PunchoutDetail>
  <Description xml:lang="en-US">Desk Chairs</Description>
  <URL>https://www.workchairs.com/punchout.asp</URL>
  <Classification domain="UNSPSC">5136030000</Classification>
</PunchoutDetail>
```

CIF index catalog:

```
CIF_I_V3.0
CODEFORMAT: UNSPSC
COMMENTS: This is an example of a PunchOut catalog item
FIELDNAMES: Supplier ID, Supplier Part ID, Manufacturer Part ID, Item Description,
SPSC Code, Unit Price, Unit of Measure, Lead Time, Manufacturer Name, Supplier URL,
Manufacturer URL, Market Price, PunchOut Enabled
CURRENCY: USD
DATA
762311901,A2C-311F,C-311F,"Desk Chairs",11116767,,,,,https://www.workchairs.com/
punchout.asp,,,t
ENDOFDATA
```

Resulting `PunchOutSetupRequest` segment:

```
<SupplierSetup>
  <URL>https://www.workchairs.com/punchout.asp</URL>
</SupplierSetup>
```

## URL **vs.** SelectedItem Elements

Depending on the cXML version used by PunchOut sites, the `PunchOutSetupRequest` might also contain a `SelectedItem` element specifying the item the user is punching out for.

- Ariba Buyer 6.1 and earlier (cXML 1.0) does not use `SelectedItem`. So, URLs from PunchOut index catalogs are the only ways to specify items to punch out for.
- Ariba Buyer 7 and later and SAP Ariba Buying and Invoicing (cXML 1.1 and later) use `SelectedItem` to specify items to punch out for. `SelectedItem` uses Supplier Part ID and Supplier Part Auxiliary ID to identify the item. PunchOut sites can ignore the URL in the `PunchOutSetupRequest`, so suppliers can use made-up URLs in their index catalogs.

## Level 2 PunchOut

Level 2 PunchOut enables buying organizations to search for and find PunchOut items within their procurement application, instead of having to search each suppliers' site directly.

Buying organizations want improved customer catalog searching capability and quality when using the search interface in Ariba Buyer and SAP Ariba Buying and Invoicing to find PunchOut catalog items. They want the best results when searching local CIF catalogs as well as supplier-managed PunchOut catalogs.

Level 2 makes suppliers' products more accessible to buying organizations, increases the visibility of suppliers' products, and increases visits to suppliers' PunchOut sites. It is supported in Ariba Buyer and SAP Ariba Buying and Invoicing.

### Note

If your customers use SAP Ariba Buying and Invoicing, use the `punchoutLevel` attribute in your index catalogs to indicate where to place your items in the procurement application catalog. For more information, see [punchoutLevel Attribute \[page 93\]](#).

[Item Display and Search \[page 112\]](#)

[Level 2 PunchOut Mechanism \[page 112\]](#)

[Level 2 PunchOut Ongoing Shopping Session Mechanism \[page 113\]](#)

[Level 2 PunchOut Format \[page 114\]](#)

## Related Information

[PunchOutLevel Attribute](#)

# Item Display and Search

To understand the benefits of Level 2 PunchOut, you need to know how buying organizations find products.

With Level 2 PunchOut, users learn the semantics of the basic search mechanism in their procurement application, instead of having to learn the best means to search in each supplier's PunchOut site.

If the buying organization uses an SAP Ariba procurement application, suppliers can optionally include hierarchical attributes to specify how to display the PunchOut item in the procurement system catalog. The `punchoutLevel` attributes `store`, `aisle`, `shelf`, or `product` cause the item to be displayed differently in the catalog. For example, the attributes `aisle` and `shelf` point to groups of related items. These items display at the top of categories, above products. If the supplier does not specify a `punchoutLevel` attribute, procurement applications consider the item to be a store-level item.

Users can find the PunchOut items using a keyword or supplier search. The following keywords are searchable:

- Item Description
- Short Name
- Supplier Name
- Buyer Part ID
- Supplier Part ID
- Manufacturer Part ID

## Level 2 PunchOut Mechanism

Once an item has been found, the user accesses the supplier's PunchOut site to get more detailed product information, current pricing, and to configure products.

The user must be presented with the option (a one-click button) to add the viewed item to the requisition and immediately be returned to the SAP Ariba application. Suppliers should also add a **Browse** button to allow users to shop for additional items at the supplier's site.

The following steps illustrate a typical user experience:

1. A user creates a requisition and searches for products. The procurement system displays all matching content.
2. The user chooses one of the supplier's products and clicks **Buy from Supplier**.
3. The supplier's PunchOut site displays more product details and current pricing for the specific item.
4. The user enters the quantity on the supplier's PunchOut site and clicks either **Add to Requisition and Return to Ariba** or **Browse** to [continue shopping on the PunchOut site \[page 113\]](#).

Depending on the user's choice, the PunchOut site either immediately returns the user and the selected item to the requisition in the SAP Ariba application, or the user continues browsing the site.

## Level 2 PunchOut Ongoing Shopping Session Mechanism

Users often purchase several items during a shopping session. The level 2 PunchOut solution allows users to access multiple items during their shopping session before returning back to the SAP Ariba application to complete a requisition.

To support the ongoing shopping experience, suppliers need to add a **Browse** button to allow users to shop for additional items at the supplier's PunchOut site. They also need to support the ongoing shopping session mechanism described below.

The following steps illustrate a typical ongoing shopping session:

1. A user creates a requisition and searches for products. The procurement system displays all matching content.
2. The user chooses one of the supplier's products and clicks **Buy from Supplier**.
  1. The first `PunchOutSetupRequest` contains `operation="create"` and the `SelectedItem` element contains the `SupplierPartID` from the item selected (see [Resulting PunchOutSetupRequest \[page 118\]](#)).
  2. The `SelectedItem` element is validated, and the user is routed to the item in the catalog at the specified PunchOut level: aisle, shelf, or product.
3. The supplier's PunchOut site displays more product details and current pricing for the specific item.
4. The user enters the quantity on the supplier's PunchOut site and clicks **Browse** to continue shopping on the PunchOut site.
  1. The site transfers the contents of the shopping cart back to the user's requisition in the SAP Ariba application.
  2. When the supplier allows editing of the shopping cart, the `PunchOutOrderMessage` document contains `operationAllowed="edit"`. The user can initiate a later PunchOut session containing data from this `PunchOutOrderMessage` document. See page [Level 2 PunchOut \[page 111\]](#).
5. The user continues shopping, selects another item in their SAP Ariba application, and clicks **Buy from Supplier**.
  1. The second `PunchOutSetupRequest` contains `operation="edit"` to reopen the previously created shopping cart for modification. The `SelectedItem` element in the `PunchOutSetupRequest` contains the `SupplierPartID` from the second item selected.
  2. The `SelectedItem` element is validated, and the user is routed to the item in the catalog at the specified PunchOut level: aisle, shelf, or product.
  3. The item(s) in the `ItemOut` element are moved to the shopping cart in their SAP Ariba application.
6. The user enters the quantity for the second item on the supplier's PunchOut site and clicks **Add to Requisition** and **Return to Ariba Buyer**.

The PunchOut site returns the user and the selected item(s) to the requisition in the SAP Ariba application.

### Example of a `PunchOutSetupRequest` for an Ongoing Shopping Session

```
<Request>
  <PunchOutSetupRequest operation="edit">
    <BuyerCookie>I2OKSTKFBYJM</BuyerCookie>
    <Extrinsic name="UniqueName">Bjorn</Extrinsic>
    <Extrinsic name="UserEmail">email@email.com</Extrinsic>
    <Extrinsic name="CompanyCode">1095</Extrinsic>
    <BrowserFormPost>
      <URL>https://s1-eu.ariba.com/Buyer/punchout?</URL>
    </BrowserFormPost>
  </PunchOutSetupRequest>
</Request>
```

```

<SupplierSetup>
  <URL>https://xmlgateway</URL>
</SupplierSetup>
<ShipTo>
  <Address addressID="0234">
    <Name xml:lang="en">234</Name>
    <PostalAddress>
      <DeliverTo>Bjorn</DeliverTo>
      <Street>Punter 1234</Street>
      <City>Amsterdam</City>
      <PostalCode>28832</PostalCode>
      <Country isoCountryCode="NL">Netherlands</Country>
    </PostalAddress>
  </Address>
</ShipTo>
<SelectedItem>
  <ItemID>
    <SupplierPartID>4131178</SupplierPartID>
    <SupplierPartAuxiliaryID/>
  </ItemID>
</SelectedItem>
<ItemOut quantity="1" lineNumber="1">
  <ItemID>
    <SupplierPartID>4117011</SupplierPartID>
    <SupplierPartAuxiliaryID>0000018RHI</SupplierPartAuxiliaryID>
  </ItemID>
</ItemOut>
</PunchOutSetupRequest>
</Request>

```

### Note

When suppliers don't allow users to edit the shopping cart, the `PunchOutOrderMessage` document contains `operationAllowed="create"` and the `PunchOutSetupRequest` doesn't have `ItemOut` elements. For details, see [PunchOutOrderMessage Document \[page 101\]](#).

## Related Information

[PunchOut Session Timeout \[page 122\]](#)

## Level 2 PunchOut Format

Static catalogs, store-level PunchOut index catalogs, and a Level 2 PunchOut index catalogs have required and optional fields.

The following fields should be provided, but only the indicated fields are required. See the Ariba Catalog Format Reference for additional information.

	Field Name	CIF	Store Level	Level 2	Field Requirements
1	Supplier ID	X	X	X	String: 255 chars
2	Supplier Part ID	X	X	X	String: 255 chars

	Field Name	CIF	Store Level	Level 2	Field Requirements
3	Manufacturer Part ID				String: 255 chars
4	Item Description	X	X	X	String: 1000 chars
5	SPSC Code	X	X	X	String: 40 chars
6	Unit Price	X			Decimal
7	Units of Measure	X			String: 32 chars
8	Lead Time				Integer
9	Manufacturer Name				String: 255 chars
10	Supplier URL		X	X	String: 255 chars
11	Manufacturer URL				String: 255 chars
12	Market Price				Decimal
13	Short Name				String: 50 chars
14	Image				String: 255 chars
15	Thumbnail				String: 255 chars
16	PunchOut Enabled		X	X	Boolean: TRUE, FALSE
17	PunchOutLevel			X	store, aisle, shelf, or product
18	Supplier Part Auxiliary ID				String: 255 chars
19	Parametric Name				String: 255 chars
20	Parametric Data				String: 255 chars

## Level 2 PunchOut Requirements

Level 2 PunchOut include CIF and cXML index content and site requirements.

[CIF and CXML Index Content Requirements \[page 116\]](#)

[Level 2 PunchOut Site Requirements \[page 116\]](#)

# CIF and CXML Index Content Requirements

CIF and cXML index content includes both required and optional fields.

## Required Fields

- `PunchOutLevel` attribute (store-, aisle-, shelf-, or product-level items)
- Unique Supplier Part ID/Supplier Part Auxiliary ID combination (key identifier for the selected index item; values are included in the `PunchOutSetupRequest` document)
- Rich Item Description (searchable product name, product attributes, and so on; for store-, aisle-, and shelf-level items, only the first 50 characters are displayed)
- UNSPSC code (use detailed levels for shelf- and product-level items)
- Supplier URL (required for compatibility with Ariba Buyer 8.x; a dummy URL is sufficient)

Additional information that is also recommended:

- Manufacturer and Manufacturer Part ID
- Parametric data (as applicable)

## Optional Fields

- `Short Name` (if you use this field, then `Item Description` is not displayed except for product-level items)
- `Image` link (image is displayed as a thumbnail only for product-level items)
- `Unit Price Or Market Price` provides an estimated price only for product-level items (cannot be used for other item levels)

## Level 2 PunchOut Site Requirements

There are certain minimum site requirements for Level 2 PunchOut as well as other possible requirements.

### Minimum Requirements

- Direct access to the item or shelf specified in the Index catalog
- Immediate one-click **Return to Ariba Buyer** button to post the items from the supplier site to the SAP Ariba application
- Support for PunchOut edit to allow the user to return to the shopping session and modify an item quantity, remove an item, or add an item
- Support for PunchOut inspect so that requisitioners and approvers can view the shopping cart but will not have the ability to modify the items in the cart

- Option to continue shopping in PunchOut site, rather than return immediately with item selected

For Shelf Level, additional refinement should not be required to select an item after the associate reaches the site. The site should present a short list of items immediately.

## Other Requirements

- You must be able to provide timely updates for the PunchOut index as changes occur (updates mostly depend upon frequency of changes in index; once a quarter is best practice).
- Optionally, you can upload an updated PunchOut index to SAP Business Network programmatically, using the `CatalogUploadRequest` transaction (see [CatalogUploadRequest Element \[page 376\]](#) for more details). This is a good way to reduce workload.
- You must be able to support orders from multiple PunchOut sessions to the site. (The supplier cookie stored in the `SupplierPartAuxiliaryID` method traditionally used to match PunchOut sessions to orders is more difficult to support with Level 2 PunchOut than site-level PunchOut).

## Example Index Catalogs

You can specify Level 2 PunchOut items in CIF or cXML index catalogs. For the smallest file, create the index catalog in cXML format instead of CIF. Both example index catalogs are in cXML format.

[Store-Level PunchOut Index Catalog \[page 117\]](#)

[Level 2 PunchOut Index Catalog \[page 118\]](#)

[Resulting PunchOutSetupRequest \[page 118\]](#)

[Level 2 PunchOut Index Catalog \[page 119\]](#)

## Store-Level PunchOut Index Catalog

The example index catalog example below shows store-level PunchOut with one PunchOut item.

```
CIF_I_V3.0
LOADMODE: F
CODEFORMAT: UNSPSC_V13.5
COMMENTS: Store-Level PunchOut
SUPPLIERID_DOMAIN: NETWORK_ID
ITEMCOUNT: 1
TIMESTAMP: 2006-02-18 00:00:00
FIELDNAMES: Supplier ID, Supplier Part ID, Manufacturer Part ID, Item Description,
SPSC Code, Unit Price, Unit of Measure, Lead Time, Manufacturer Name, Supplier URL,
Manufacturer URL, Market Price, PunchOut Enabled
DATA
AN100000123,A2C,C-311F,"ACME Garden Supply",27112000,,,,,,,,,t
ENDOFDATA
```

## Level 2 PunchOut Index Catalog

The index catalog example shows Level 2 PunchOut, with expanded product descriptions.

```
CIF_I_V3.0
LOADMODE: F
CODEFORMAT: UNSPSC_V13.5
COMMENTS: Level 2 PunchOut
SUPPLIERID_DOMAIN: NETWORK_ID
ITEMCOUNT: 198
TIMESTAMP: 2006-02-18 00:00:00
FIELDNAMES: Supplier ID, Supplier Part ID, Manufacturer Part ID, Item Description,
SPSC Code, Unit Price, Unit of Measure, Lead Time, Manufacturer Name, Supplier URL,
Manufacturer URL, Market Price, PunchOut Enabled, PunchoutLevel, Image
DATA
AN100000123,A2C,C-311F,"Lawn Maid 4 HP side discharge lawnmower. Briggs and
Stratton 4.0 hp engine delivers the power for any property. Side Discharge
model with a 22" Quick Mulch Deck. 6" rear wheels for easy mowing. For flat
terrain.",27112014,,,,,,t,product,https://www.acme.com/images/A2C.jpg
AN100000123,A3C,C-312F,"Lawn Maid 6 HP self-propelled side discharge lawnmower.
Briggs and Stratton 6.0 hp engine delivers the power for any lawn. Side
Discharge model with a 24" Quick Mulch Deck. 6" rear wheels for easy
mowing.",27112014,,,,,,t,product,https://www.acme.com/images/A3C.jpg
AN100000123,A4C,C-316F,"Lawn Maid Post Hole Digger. Drills down to 4 feet.
Chromemolly",27112013,,,,,,t,product,https://www.lawnsRUs.com/images/A4C.jpg
AN100000123,X7H,52429,"Precision Touch 12-amp Electric Blower. 2-speed blower
offers the lightweight airpower you need to blow away debris. Double
insulated.",27112701,,,,,,t,product,https://www.acme.com/images/X7H.jpg
.
.
.
ENDOFDATA
```

The Level 2 PunchOut index catalog provides much more content. It lists each PunchOut item and the descriptions contain enough data so that users can find specific products. The more complete your descriptions, the more likely users will find your items when they search.

Each index item also gives requisitioners enough information to decide whether to punch out to view your product page. For example, it lists a catalog image file, which displays a picture of the product in Ariba Buyer 8.2.2 or later and SAP Ariba Buying and Invoicing. It also uses the `punchoutLevel` attribute to indicate that the item is a product-level PunchOut item in SAP Ariba Buying and Invoicing.

## Resulting PunchOutSetupRequest

The example `PunchOutSetupRequest` document illustrates the results of a simple user request from a level 2 PunchOut Index Catalog.

If a user selects the first item from the [Level 2 PunchOut Index Catalog \[page 118\]](#) example, a `PunchOutSetupRequest` document is generated.

```
<?xml version="1.0"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxm.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="958075346970@www.bigbuyer.com"
timestamp="2006-03-19T12:57:09-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN000002792</Identity>
```

```

    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN100000123</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="AribaNetworkUserId">
      <Identity>sysadmin@ariba.com</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Ariba Buyer 8.2.2</UserAgent>
  </Sender>
</Header>
<Request>
  <PunchOutSetupRequest operation="create">
    <BuyerCookie>1J3YVWU9QWMTB</BuyerCookie>
    <Extrinsic name="CostCenter">610</Extrinsic>
    <Extrinsic name="User">jpicard</Extrinsic>
    <BrowserFormPost>
      <URL>http://bigbuyer.com:3377/punchout</URL>
    </BrowserFormPost>
    <SupplierSetup>
      <URL></URL>
    </SupplierSetup>
    <ShipTo>
      <Address addressID="001">
        <Name xml:lang="en">BigBuyer Headquarters</Name>
        <PostalAddress>
          <DeliverTo>Jean Picard</DeliverTo>
          <Street>1565 Pine, MS A.2</Street>
          <City>New York</City>
          <State>NY</State>
          <PostalCode>01043</PostalCode>
          <Country isoCountryCode="US">United States</Country>
        </PostalAddress>
      </Address>
    </ShipTo>
    <Contact>
      <Name>jpicard</Name>
    </Contact>
    <SelectedItem>
      <ItemID>
        <SupplierPartID>A2C</SupplierPartID>
      </ItemID>
    </SelectedItem>
  </PunchOutSetupRequest>
</Request>
</cXML>

```

Your PunchOut site uses the `SupplierPartID` element to determine which product to display. If you need to differentiate variations of a product for size, color, or language, use the `SupplierPartAuxiliaryID` field in your index catalog; procurement systems copy it to the `SelectedItem` element.

## Level 2 PunchOut Index Catalog

The Level 2 PunchOut Index Catalog example illustrates an item-level request.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Index SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.012/cXML.dtd">
<Index>

```

```

<SupplierID domain="duns">611429481</SupplierID>
<Comments xml:lang="en-US">
  Sample cXML/Index
</Comments>
<IndexItem>
  <IndexItemPunchout>
    <ItemID>
      <SupplierPartID>1-57231-805-8</SupplierPartID>
    </ItemID>
    <PunchoutDetail punchoutLevel="product">
      <Description xml:lang="en-US">Whiteboard markers,
        one dozen</Description>
      <URL>http://www.whitebd.com/cXML/PunchoutSetup/
        Punchoutshop.asp</URL>
      <Classification domain="UNSPSC">55101524</Classification>
    </PunchoutDetail>
  </IndexItemPunchout>
</IndexItem>
<IndexItem>
  <IndexItemPunchout>
    <ItemID>
      <SupplierPartID>VTS-4976-200</SupplierPartID>
    </ItemID>
    <PunchoutDetail punchoutLevel="product">
      <Description xml:lang="en-US">Whiteboard Eraser, felt</Description>
      <URL>http://www.whitebd.com/cXML/PunchoutSetup/
        Punchoutshop.asp</URL>
      <Classification domain="UNSPSC">43232005</Classification>
    </PunchoutDetail>
  </IndexItemPunchout>
</IndexItem>
<IndexItem>
  <IndexItemPunchout>
    <ItemID>
      <SupplierPartID>GS3600</SupplierPartID>
    </ItemID>
    <PunchoutDetail punchoutLevel="product">
      <Description xml:lang="en-US">Whiteboard Cleaner,
        non-toxic</Description>
      <URL>http://www.whitebd.com/cXML/PunchoutSetup/
        Punchoutshop.asp</URL>
      <Classification domain="UNSPSC">52161512</Classification>
    </PunchoutDetail>
  </IndexItemPunchout>
</IndexItem>
</Index>

```

## Shelf-Level PunchOut

Shelf-level PunchOut is a way of offering similar products through one PunchOut index item. Consider using this type of PunchOut if you have similar products from multiple manufacturers or a single product available in multiple configurations.

You create a product-selector page on your PunchOut site that enables requisitioners to choose a specific configuration or SKU.

For example, you might offer lawnmowers from several manufacturers:

Lawn Maid 4-HP gas 20-inch deck self-powered lawnmower, side discharge

Lawn Maid 6-HP gas 25-inch deck self-powered lawnmower, side discharge

Precision Touch 4-HP gas 12-inch deck lawnmower, side discharge  
Precision Touch 5-HP gas 15-inch deck lawnmower, rear discharge

The product-selector page on your PunchOut site could display these models with links to datasheets. You would add the following item to your PunchOut index catalog so requisitioners could find this product category and punch out to your product-selector page:

```
AN100000123,lawnmowers,XXX,"Powerful and Efficient Gas  
Lawnmowers",27112014,,,,,,,,t,https://www.acme.com/images/lawnmower.jpg,shelf
```

When users punch out to your product-selector page, they do not have to perform a search to find the specific product or configuration. Instead, your page displays all available products of that type.

Use shelf-level PunchOut for specific products, not for groups of related products. For example:

Example Supplier	Specific Products	Groups of Products
Computer Store	Computer Mice	Computer Peripherals
Hardware Store	Handsaws	Tools
Grocery Store	Cereals	Breakfast Foods

## Uploading Index Catalogs

Level 2 PunchOut requires you to upload your index catalogs to SAP Business Network more often than for store-level PunchOut to ensure that your customers have your latest product offerings. Depending on the volatility of your offerings, you might want to update your catalogs monthly, weekly, or even daily.

Each time you upload a catalog, your customer's procurement system automatically downloads it and incorporates it into the local search index.

**Note**  
For Level 2 PunchOut index catalogs, cXML is the preferred format because the file size is smaller than CIF.

You have two options for uploading catalogs:

- **Manual Upload:** Manual upload requires you to sign in to your SAP Business Network account to upload and publish your cXML index catalogs. For more information about manually uploading catalogs, see [Creating and Managing Customer Catalogs](#).
- **Automatic Upload:** Automatic upload uses the cXML `catalogUpload` transaction to upload and publish your cXML index catalogs. You generate a `catalogUploadRequest` document and include your cXML catalog as a MIME attachment. For more information about automatic upload, see [Catalog Upload Transaction \[page 373\]](#).

Your customers automatically poll SAP Business Network for updated catalogs, usually once per day. You might want to contact them to find out what time this polling takes place so you can have your updated index catalogs ready.

# PunchOut Session Timeout

If PunchOut sessions do not end with a `PunchOutOrderMessage` document, Ariba Buyer and SAP Ariba Buying and Invoicing terminate the session after six hours.

## ASP Examples

The ASP examples can be used as a starting point to deploy a PunchOut site rapidly. They demonstrate how to receive `PunchOutSetupRequest` documents and generate `PunchOutSetupResponse` documents.

These are basic examples and are not ready for production. For example, credential variables attached in the query string are not acceptable for production code. These examples use variables that have not been declared. Because a global variable file has not been included with this example, change the following variables in the appropriate locations:

- `receivePunchoutSetupRequest.asp`

```
myAribaPassword = "welcome"
myURL = http://supersupplier.com/punchoutasp
```

- `resolveXML.asp`

```
olddtdvalue = ""cXML.dtd""
newdtdvalue = ""http://supersupplier.com/cXML.dtd""
```

`receivePunchoutSetupRequest.asp`

The `receivePunchoutSetupRequest.asp` example receiving the `PunchOutSetupRequest` document and generating a valid `PunchOutSetupResponse` document containing the first page URL.

```
<%@LANGUAGE = VBScript%>
<%
    Dim myAribaPassword
    Dim myURL
%>
<%
' *****Comments*****
' Include file that loads http post cXML and parses with MS DOM
' *****
%>
<!--#include file="resolveXML.asp" --->
<%
' *****Comments*****
' Variables needed for example. Very simple validation for asp
' Set sharedsecret password expected from SAP Business Network
' *****
    myAribaPassword = "welcome"
    myURL = "http://workchairs.com/punchoutaspv2/"
%>
<%
' *****Comments*****
```

```

' Basic Shared Secret validation.
'
' Please note: You will need to fix the timestamp and payloadID. The
' f() now is currently invalid and will fail on some builds of Ariba
' Buyer as well as other product lines. Please use the format
' specified in the cXML reference guide available at http://www.cXML.org.
' See file TCcXMLFormatDTime.asp for a good start on formatting the
' timestamp in ISO 8601 format.
'*****
if (myAribaPassword <> sharedSecret) then %>
<?xml version="1.0" ?>
<!DOCTYPE cXML SYSTEM "cXML.dtd">
<cXML payloadID="&lt;%= Now &&quot;@&&quot;";
Request.ServerVariables("&quot;LOCAL_ADDR&quot;")%&gt;" timestamp="&lt;%= Now %&gt;">
<Response>
<Status code="500" Text="Invalid document" />
</Response>
</cXML>
<% else %>
<?xml version="1.0" ?>
<!DOCTYPE cXML SYSTEM "cXML.dtd">
<cXML payloadID="&lt;%= Now &&quot;@&&quot;";
Request.ServerVariables("&quot;LOCAL_ADDR&quot;")%&gt;" timestamp="&lt;%= Now %&gt;">
<Response>
<Status code="200" text="Success">
</Status>
<PunchOutSetupResponse>
<StartPage>
<URL>
<%=myURL%>
<p>b2bsite/shop.asp?fromIdentity=<%= fromIdentity%>&operation=<%=
operation%>&buyerCookie=<%= buyerCookie%>&BrowserFormPost=<%= BrowserFormPost%></
URL></StartPage></PunchOutSetupResponse></Response></cXML> <%end if%> </p>

```

resolveXML.asp

The resolveXML.asp example file loads the HTTP POST into a Microsoft DOM object and extracts data for the PunchOutSetupResponse document.

```

<%
Dim xml
Dim xdoc
Dim xml2
'*****Comments*****
' MSDOM cannot resolve local DTDs, so replace definition with URL.
' Get DTDs from http://www.cXML.org and store them locally on your
' server for performance.
'*****
Dim olddtdvalue
Dim newdtdvalue
olddtdvalue = ""cXML.dtd""
newdtdvalue = ""http://workchairs.com/cxml1.2/cXML.dtd""
if (Request.ServerVariables("REQUEST_METHOD") = "POST") then
'*****Comments*****
' This command reads the incoming HTTP cXML Request
' Note: this does not currently handle cXML documents sent with
' content-type: text/xml or any transfer that specifies the MIME
' charset attribute on that header.
'*****
totalBytes = Request.TotalBytes
IF totalBytes > 0 THEN
xml = Request.BinaryRead( totalBytes )
for i = 1 to totalBytes

```

```

        xmlstr = xmlstr + String(1,AscB(MidB(xml, i, 1)))
    Next
    xml2 = xmlstr
    xml2 = Replace(xml2,olddtdvalue,newdtdvalue)
    xml2 = Replace(xml2,"utf-8","utf-16")
    xml2 = Replace(xml2,"UTF-8","UTF-16")
END IF
' *****Comments*****
' Create MSDOM object and set load values.
' *****
Set xdoc = Server.CreateObject("Microsoft.XMLDOM")
    xdoc.ValidateOnParse = False
    xdoc.async = False
    xdoc.resolveExternals = False
    loadStatus = xdoc.loadXML(xml2)
' *****Comments*****
' Create MSDOM object and set load values.
' Note: these XML retrievals handle only the first of any list of
' credential elements
' *****
    If loadStatus = True then
        Set fromIdentity = xdoc.getElementsByTagName("Header/From/Credential/
Identity")
        fromIdentity = (fromIdentity.item(0).text)
        Set toSuppCred = xdoc.getElementsByTagName("Header/To/Credential/Identity")
        toSuppCred = (toSuppCred.item(0).text)
        Set senderCred = xdoc.getElementsByTagName("Header/Sender/Credential/
Identity")
        senderCred = (senderCred.item(0).text)
        Set sharedSecret = xdoc.getElementsByTagName("Header/Sender/Credential/
SharedSecret")
        sharedSecret = (sharedSecret.item(0).text)
        Set fromUserAgent = xdoc.getElementsByTagName("Header/Sender/UserAgent")
        fromUserAge = (fromUserAgent.item(0).text)
        Set operation =
xdoc.documentElement.childNodes(1).childNodes(0).attributes.getNamedItem("operation"
)
        operation =
xdoc.documentElement.childNodes(1).childNodes(0).attributes.getNamedItem("operation"
).text
        Set buyerCookie = xdoc.getElementsByTagName("Request/PunchOutSetupRequest/
BuyerCookie")
        buyerCookie = (buyerCookie.item(0).text)
        Set buyExtrinsics = xdoc.getElementsByTagName("Request/PunchOutSetupRequest/
Extrinsic")
        For i = 0 To (buyExtrinsics.length -1)
            BuyExtrinsicVars = (buyExtrinsics.item(i).text) & "," & BuyExtrinsicVars
        Next
        Set BrowserFormPost = xdoc.getElementsByTagName("Request/PunchOutSetupRequest/
BrowserFormPost")
        BrowserFormPost = (BrowserFormPost.item(0).text)
' *****Comments*****
' Some nice MSDOM error logging for a failed parse or load.
' *****
    Else
        Response.Write " <P> xml @ supplier site failed to load using MSDOM: "
        Dim strErrText
        Dim xPE
        Set xPE = xdoc.parseError
        strErrText = "Your XML Document failed to load due the following error: " &
"Error #: " & xPE.errorCode & ": " & "Line #: " & xPE.Line & "Line Position: " &
xPE.linepos & "Position In File: " & xPE.filepos & "Source Text: " & xPE.srcText &
"Document URL: " & xPE.url
        Response.Write strErrText
    End If
    Else
' *****Comments*****
' ASP page was called using a GET. Functions expect a post.

```

```

' *****
Response.Write "<P> Wrong Method Get: Post supported only"
End if
%>

```

TCcXMLFormatDTime.asp

The TCcXMLFormatDTime file contains a function to format a timestamp in ISO 8601 format.

```

' *****
' This function does not do the time adjustment but provides a great
' start in helping you out.
' *****
<%
private function TCcXMLFormatDTime(strDTimeIn)
' *****
' Purpose:
' This function returns a date/time value formatted for cXML messaging
' cXML uses the ISO 8601 date/time standard.
' *****
' Input:
' strDTimeIn      Input date/time to be formatted.
'
' Output:  n/a
'
' Return: String value containing the formatted date/time.
'
    const conRoutine = "TCcXMLFormatDTime"
    dim strTempOutDtime
    dim strDay
    dim strMonth
    dim strTime
    TCcXMLFormatDTime = ""
    strTime = FormatDateTime(strDTimeIn, 4) ' Short time.
    ' Set the year.
    strTempOutDtime = Year(strDTimeIn) & "-"
    ' Set the month.
    strMonth = Month(strDTimeIn)
    if len(strMonth) = 1 then strMonth = "0" & strMonth
    strTempOutDtime = strTempOutDtime & strMonth & "-"
    ' Set the day and the date/time delimiter.
    strDay = Day(strDTimeIn)
    if len(strDay) = 1 then strDay = "0" & strDay
    strTempOutDtime = strTempOutDtime & strDay & "T"
    ' Set the time.
    strTempOutDtime = strTempOutDtime & strTime
    TCcXMLFormatDTime = strTempOutDtime
    exit function
end function
%> </p>
</body>
</html>

```

# Attachments

The cXML protocol supports the attachment of external files of any type to cXML documents, including orders, order confirmations, ship notices, service sheets, and customer catalogs. The cXML document contains references to external parts sent within a multipart MIME envelope.

Buyers sometimes clarify orders with memos or drawings. Similarly, suppliers sometimes clarify order confirmation, ship notices, service sheets, and invoices with memos, faxes, or drawings.

## Additional References

- *cXML reference guide* at <http://www.cxml.org> 
- [Maximum Document and Attachment Size \[page 15\]](#)  
[Attachments on SAP Business Network \[page 126\]](#)  
[Attachment File Names \[page 127\]](#)  
[Attachments and Anti-Virus Scanning \[page 127\]](#)  
[AttachmentOnline Extrinsic \[page 127\]](#)

## Attachments on SAP Business Network

SAP Business Network stores attachments for retrieval by both trading partners. Users can retrieve these files by logging on to their SAP Business Network accounts. SAP Business Network can also forward attachments to suppliers through email or cXML post.

Attachments expire 18 months after SAP Business Network receives them. Expired attachments are not available online.

SAP Business Network has the following attachment implementation details:

- In the attachment part of the MIME file, Content-Length is optional while Content-Disposition is required with the attachment name.
- In the attachment part of the MIME file, if non-ASCII characters are used in the filename of the Content-Disposition header, the document attached describes the encoding method used by SAP Business Network.
- In the cXML part of the MIME file, the attachment tag is optional for orders with attachments. If the attachment tags in the header or line item are indeed provided with the corresponding Content-IDs of the attachments, SAP Business Network maintains the Content-IDs of the attachment in the MIME file forwarded to the supplier. A cXML-enabled supplier can use the attachment tags to link the attachments to the corresponding line items.
- In the main POST header of the MIME file, Content-Type can be a multipart/related or multipart/mixed header.
- SAP Business Network does not support the `Attachment@visibility` attribute currently, even though it is defined in the cXML DTD.

# Attachment File Names

SAP Business Network supports attachments with file names in all supported character sets, including Chinese, Japanese, and Korean. The only special characters allowed are period (.), hyphen (-), and underscore (\_).

SAP Business Network conforms to Multipurpose Internet Mail Extensions (MIME) standards by encoding non-ASCII filenames according to Internet Engineer Task Force (IETF) Request for Comment (RFC) 2047. Filenames in Asian languages can contain up to 15 characters, and filenames in Latin-1 languages can contain up to 21 eight-bit characters or 70 seven-bit characters.

## Related Information

[Handling Special Characters in Documents \[page 25\]](#)

# Attachments and Anti-Virus Scanning

SAP Ariba automatically scans external files that are uploaded to SAP Business Network.

If a virus or malware is detected when a file is uploaded, SAP Ariba displays a warning message indicating that the file is infected. Uploaded files are scanned for viruses by streaming the file contents to the virus scanning engine, so no local copies of the file are saved prior to being scanned. If a virus is detected, the file is automatically purged from the system.

## AttachmentOnline **Extrinsic**

The `AttachmentOnline` extrinsic indicates that an account is configured to send cXML documents but not attachments. It can be used by buyers and suppliers, depending on their configurations.

## Leaving Attachments Online for Orders

If suppliers configure their SAP Business Network accounts to send orders but not attachments, SAP Business Network adds an `Extrinsic` element named `AttachmentOnline` to the `OrderRequestHeader` to indicate the existence of attachments.

### Example

```
<Extrinsic name="AttachmentOnline">  
  https://service.ariba.com/ad/orderDetail?poID=1234&amp;anp=Ariba
```

```
</Extrinsic>
```

Suppliers can use the URL in this `Extrinsic` to manually sign in and view the purchase order. They can then click on the listed attachments to view or download them.

### Note

SAP Business Network inserts escaped ampersand (&) characters in the URL. Before you can use the URL to sign in and view the purchase order, replace "&amp;" with "&" in the URL.

SAP Business Network adds this `Extrinsic` only for suppliers that have selected **Leave attachments online...** in their order routing configuration.

## Leaving Attachments Online for Order Confirmations, Ship Notices, Service Sheets, and Invoices

If buying organizations configure their SAP Business Network accounts to send supplier documents but not attachments, SAP Business Network adds an `Extrinsic` element named `AttachmentOnline` to the header of the document to indicate the existence of an attachment.

### Example

```
<Extrinsic name="AttachmentOnline">  
  https://service.ariba.com/ad/shipnoticeDetail?poID=1234&amp=Ariba  
</Extrinsic>
```

Buying organizations can use the URL in this `Extrinsic` to manually sign in and view the document. They can then click on the listed attachments to view or download them.

SAP Business Network adds this `Extrinsic` only for buying organizations that have selected **Send URLs to view attachments on Ariba Network** in their transaction configuration.

# Purchase Requisitions

A purchase requisition is the first step in a procurement process.

A purchase requisition is a request to purchase an item (or multiple items). Each requisition is assigned a unique ID (such as PR2394) so you can track it as it moves through the purchasing process. A requisition can consist of multiple line items.

You send requisition documents in cXML format to the Ariba Procurement Solution through SAP Business Network. After the requisition is processed into an order, the purchase order is sent to the appropriate supplier via SAP Business Network.

A requisition can contain items from any of the following sources:

- The requestor's company catalog
- A supplier's catalog (also known as a PunchOut catalog)
- Non-catalog items (from another source)

[Importing Requisitions \[page 129\]](#)

[Importing a New Requisition \[page 129\]](#)

[Updating a Requisition \[page 132\]](#)

[Canceling a Requisition \[page 133\]](#)

## Importing Requisitions

Before you can import requisitions using cXML Posts, ensure that your site is configured to use XML for data integration. The cXML channel applies only to SAP Business Network and not from the ERP to SAP Ariba Procurement solutions.

The following four extrinsic fields are required in the `PurchaseRequisitionRequest` cXML file:

- `AccountCategory`
- `BuyerPartNumber`
- `Facility`
- `Need-by Date`

## Importing a New Requisition

The following example imports a new requisition:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.026/cXML.dtd">
```

```

<cXML payloadID="req00001"
timestamp="2016-05-26T00:00:00-08:00" xml:lang="en-US">
<Header>
<From>
<!-- SAP Business Network buyer account -->
<Credential domain="NetworkID">
<Identity>AN71000002012</Identity>
</Credential>
<Credential domain="EndPointID">
<Identity>ERP</Identity>
</Credential>
</From>
<To>
<!-- SAP Business Network buyer account -->
<Credential domain="NetworkID">
<Identity>AN71000002012</Identity>
</Credential>
<Credential domain="EndPointID">
<Identity>ERP</Identity>
</Credential>
</To>
<Sender>
<!-- This document has passed from the ERP to
the SAP Ariba Procurement Solution. -->
<Credential domain="NetworkID">
<Identity>AN71000002012</Identity>
</Credential>
<Credential domain="EndPointID">
<Identity>ERP</Identity>
<SharedSecret>welcome3a</SharedSecret>
</Credential>
<UserAgent>Ariba.com Network V1.0</UserAgent>
</Sender>
</Header>
<Request>
<PurchaseRequisitionRequest>
<PurchaseRequisition>
<PurchaseRequisitionHeader
requisitionID="PR123"
requisitionDate="2016-05-26T00:00:00-08:00"
type="new">
<ShipTo>
<Address addressID="3000">
<Name xml:lang="en">New York</Name>
<PostalAddress>
<DeliverTo>Joe Smith</DeliverTo>
<Street>691 Random Ave</Street>
<City>New York</City>
<State>NY</State>
<PostalCode>10001</PostalCode>
<Country isoCountryCode="US">USA</Country>
</PostalAddress>
</Address>
</ShipTo>
<BillTo>
<Address addressID="US006">
<Name xml:lang="en">New York</Name>
<PostalAddress>
<Street>691 Random Ave</Street>
<City>New York</City>
<State>NY</State>
<PostalCode>10001</PostalCode>
<Country isoCountryCode="US">USA</Country>
</PostalAddress>
</Address>
</BillTo>
<Contact role="preparer">
<Name xml:lang="en-US">Jane Doe</Name>

```

```

    <PostalAddress>
      <Street>123 Anystreet</Street>
      <City>Sunnyvale</City>
      <State>CA</State>
      <PostalCode>94089</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
    <Email>cnoll@ariba.com</Email>
  </Contact>
  <Contact role="requester">
    <Name xml:lang="en-US">Jane Doe</Name>
    <PostalAddress>
      <Street>123 Anystreet</Street>
      <City>Sunnyvale</City>
      <State>CA</State>
      <PostalCode>94089</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
    <Email>cnoll@ariba.com</Email>
  </Contact>
</PurchaseRequisitionHeader>
<ItemIn quantity="10.000" lineNumber="00001">
  <ItemID>
    <SupplierPartID>MON923 6</SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">100.00</Money>
    </UnitPrice>
    <Description xml:lang="en">Optimax-V Monitor
      Cable DB9M/DB23F </Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="UNSPSC">43211800</Classification>
    <Extrinsic name="AccountCategory">K</Extrinsic>
    <Extrinsic name="PurchaseOrg">3000</Extrinsic>
    <Extrinsic name="PurchaseGroup">100</Extrinsic>
    <Extrinsic name="BuyerPartNumber">SSP16446-cXML</Extrinsic>
    <Extrinsic name="Facility">Bangalore</Extrinsic>
    <Extrinsic name="Need-by Date">2016-06-10T00:00:00-08:00</Extrinsic>
  </ItemDetail>
  <SupplierList>
    <Supplier>
      <Name xml:lang="en">JCN Technologies</Name>
      <SupplierID domain="NetworkID">AN70000000004</SupplierID>
    </Supplier>
  </SupplierList>
  <Distribution>
    <Accounting name="Default">
      <AccountingSegment id="100">
        <Name xml:lang="en">Percentage</Name>
        <Description xml:lang="en">Percentage</Description>
      </AccountingSegment>
      <AccountingSegment id="02">
        <Name xml:lang="en">Company</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
      <AccountingSegment id="5000">
        <Name xml:lang="en">CostCenter</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
      <AccountingSegment id="US002">
        <Name xml:lang="en">BusinessUnit</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
      <AccountingSegment id="8100">
        <Name xml:lang="en">Account</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
    </AccountingSegment>
  </Distribution>

```

```

    <AccountingSegment id="5009">
      <Name xml:lang="en">SubAccount</Name>
      <Description xml:lang="en">ID</Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">20000.00</Money>
  </Charge>
  </Distribution>
</ItemIn>
</PurchaseRequisition>
</PurchaseRequisitionRequest>
</Request>
</cXML>

```

## Updating a Requisition

The following example updates an existing requisition:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.026/cXML.dtd">
<cXML payloadID="req00002"
  timestamp="2016-05-27T00:00:00-08:00" xml:lang="en-US">
  <Header>
    <From>
      <!-- SAP Business Network buyer account -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">
        <Identity>ERP</Identity>
      </Credential>
    </From>
    <To>
      <!-- SAP Business Network buyer account -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">
        <Identity>ERP</Identity>
      </Credential>
    </To>
    <Sender>
      <!-- This document has passed from the ERP to
      the SAP Ariba Procurement Solution. -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">
        <Identity>ERP</Identity>
        <SharedSecret>welcome3a</SharedSecret>
      </Credential>
      <UserAgent>Ariba.com Network V1.0</UserAgent>
    </Sender>
  </Header>
  <Request>
    <PurchaseRequisitionRequest>
      <PurchaseRequisition>
        <PurchaseRequisitionHeader
          requisitionID="PR123"
          requisitionDate="2016-05-26T00:00:00-08:00"
          type="update">

```

```

    ...
  </PurchaseRequisitionHeader>
  <ItemIn>
    <ItemID>
      <SupplierPartID>MON923 6</SupplierPartID>
    </ItemID>
    <ItemDetail>
      <UnitPrice>
        <Money currency="USD">100.00</Money>
      </UnitPrice>
      <Description xml:lang="en">Optimax-V Monitor
        Cable DB9M/DB23F </Description>
      <UnitOfMeasure>EA</UnitOfMeasure>
      <Classification domain="UNSPSC">43211800</Classification>
      <Extrinsic name="AccountCategory">K</Extrinsic>
      <Extrinsic name="PurchaseOrg">3000</Extrinsic>
      <Extrinsic name="PurchaseGroup">100</Extrinsic>
      <Extrinsic name="BuyerPartNumber">SSP16446-cXML</Extrinsic>
      <Extrinsic name="Facility">Bangalore</Extrinsic>
      <Extrinsic name="Need-by Date">2016-06-10T00:00:00-08:00</Extrinsic>
    </ItemDetail>
  </ItemIn>
  ...
</PurchaseRequisition>
</PurchaseRequisitionRequest>
</Request>
</cXML>

```

## Canceling a Requisition

The following example cancels an existing requisition:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxmml.org/schemas/cXML/1.2.026/cXML.dtd">
<cXML payloadID="req00002"
  timestamp="2016-05-27T00:00:00-08:00" xml:lang="en-US">
  <Header>
    <From>
      <!-- SAP Business Network buyer account -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">
        <Identity>ERP</Identity>
      </Credential>
    </From>
    <To>
      <!-- SAP Business Network buyer account -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">
        <Identity>ERP</Identity>
      </Credential>
    </To>
    <Sender>
      <!-- This document has passed from the ERP
      to the Ariba Procurement Solution. -->
      <Credential domain="NetworkID">
        <Identity>AN71000002012</Identity>
      </Credential>
      <Credential domain="EndPointID">

```

```

    <Identity>ERP</Identity>
    <SharedSecret>welcome3a</SharedSecret>
  </Credential>
  <UserAgent>Ariba.com Network V1.0</UserAgent>
</Sender>
</Header>
<Request>
  <PurchaseRequisitionRequest>
    <PurchaseRequisition>
      <PurchaseRequisitionHeader>
        requisitionID="PR123"
        requisitionDate="2016-05-26T00:00:00-08:00"
        type="delete">
          ...
      </PurchaseRequisitionHeader>
      <ItemIn>
        <ItemID>
          <SupplierPartID>MON923 6</SupplierPartID>
        </ItemID>
        <ItemDetail>
          <UnitPrice>
            <Money currency="USD">100.00</Money>
          </UnitPrice>
          <Description xml:lang="en">Optimax-V Monitor
            Cable DB9M/DB23F </Description>
          <UnitOfMeasure>EA</UnitOfMeasure>
          <Classification domain="UNSPSC">43211800</Classification>
          <Extrinsic name="AccountCategory">K</Extrinsic>
          <Extrinsic name="PurchaseOrg">3000</Extrinsic>
          <Extrinsic name="PurchaseGroup">100</Extrinsic>
          <Extrinsic name="BuyerPartNumber">SSP16446-cXML</Extrinsic>
          <Extrinsic name="Facility">Bangalore</Extrinsic>
          <Extrinsic name="Need-by Date">2016-06-10T00:00:00-08:00</Extrinsic>
        </ItemDetail>
      </ItemIn>
      ...
    </PurchaseRequisition>
  </PurchaseRequisitionRequest>
</Request>
</cXML>

```

# Purchase Orders

cXML `OrderRequest` documents represent purchase orders. These documents consists of one `OrderRequestHeader` element and one or more `ItemOut` elements. Ariba Buyer and SAP Ariba Buying and Invoicing sends these documents to SAP Business Network. cXML-enabled suppliers respond with `OrderResponse` documents.

[Order Routing on SAP Business Network \[page 135\]](#)

[OrderRequestHeader Element \[page 136\]](#)

[ItemOut Element \[page 161\]](#)

[Masking Values in Purchase Orders \[page 166\]](#)

[Cancel Orders and Change Orders \[page 175\]](#)

[Change Orders \[page 178\]](#)

[Purchase Order Implementation Hints and Restrictions \[page 179\]](#)

[Schedule Agreement Releases \[page 194\]](#)

[Planned and Unplanned Service Line Items \[page 197\]](#)

[Response Documents \[page 211\]](#)

## Order Routing on SAP Business Network

SAP Business Network suppliers can select electronic routing methods for orders and other incoming documents.

Orders are generated by customer procurement applications and sent electronically to SAP Business Network as cXML documents.

SAP Business Network essentially functions as a hub to receive orders and route them to suppliers for review and order processing (fulfillment) using a supported order routing method. Suppliers can select order routing methods when they set up their account, and they can change them anytime afterward.

Online order routing is the default. With online order routing, orders appear online in the SAP Business Network supplier portal. Online order routing requires only an Internet connection and a supported browser.

Suppliers can connect SAP Business Network with a cXML-enabled application, such as an order receiving system, by selecting cXML as a routing method. For information about configuring document routing for your account, see *Configuring document routing* in the SAP Ariba help center.

Suppliers do not need a PunchOut website to receive cXML purchase orders. PunchOut and cXML order-receiving are distinct capabilities. However, the infrastructure and applications required for supporting PunchOut are the same for receiving cXML purchase orders.

## OrderRequestHeader Element

The `OrderRequestHeader` element contains contact and shipping information that applies to the entire order.

`OrderRequestHeader` has the following attributes:

Attribute	Description
<code>orderID</code> (required)	The identifier for this order. Analogous to the purchase order number.
<code>orderDate</code> (required)	The date and time this order was placed, in ISO 8601 format.
<code>orderType</code>	Type of order. Possible values: <ul style="list-style-type: none"><li><code>regular</code> (default)—Regular purchase order.</li><li><code>release</code>—Release against an existing master agreement, contract, or a blanket purchase order.</li><li><code>blanket</code>—Blanket purchase order.</li><li><code>stockTransport</code>—Stock transport order.</li><li><code>stockTransportRelease</code>—Stock transport scheduling agreement release (SAR).</li></ul>
<code>releaseRequired</code>	Used only if <code>orderType</code> is <code>blanket</code> to indicate whether the blanket order requires releases (purchase orders). If "yes" is specified, the blanket order requires separate release orders before the supplier can act. If not specified, the supplier can act on the blanket order itself. The default is unspecified.
<code>type</code>	Type of request: <code>new</code> (default), <code>update</code> , or <code>delete</code> . Update and delete orders must use the <code>DocumentReference</code> element with the <code>payloadID</code> to refer to the original purchase order.
<code>orderVersion</code>	Specifies the order version number of change orders, starting with "1" for the original order.
<code>isInternalVersion</code>	Indicates whether the order includes changes that are relevant only within the buying organization. For example, a minor change was made that does not affect information used by the supplier. Suppliers might not see internal order versions, depending on their customers' configuration.
<code>agreementID</code>	Used only if <code>orderType</code> is <code>release</code> to indicate the buyer's identifier for associated master agreement or blanket purchase order.
<code>agreementPayloadID</code>	Used only if <code>orderType</code> is <code>release</code> to indicate the cXML document payload ID for the associated master agreement or blanket purchase order.
<code>parentAgreementID</code>	Used only if <code>orderType</code> is <code>blanket</code> to indicate the parent blanket order.
<code>parentAgreementPayloadID</code>	Used only if <code>orderType</code> is <code>blanket</code> to indicate the document reference identifier for the parent blanket order.
<code>effectiveDate</code>	Required if <code>orderType</code> is <code>blanket</code> to indicate the date the blanket order becomes effective (the date from which releases can be created or invoices submitted for the blanket order).
<code>expirationDate</code>	Used only if <code>orderType</code> is <code>blanket</code> to indicate the date the blanket order expires. Releases cannot be created against the blanket order after this date.

Attribute	Description
requisitionID	The buyer's requisition identifier for this entire order. It might be the same as orderID, and it might not be included at all. Must not be included if requisitionID is specified in any ItemOut elements.
shipComplete	A preference against partial shipments. The only allowed value is "yes". By default, items are shipped when available.  Because orders might include items with varying ShipTo elements, only groups of items with common shipping locations should be held until complete when shipComplete="yes".
pickUpDate	The date when the order should be ready for pickup and delivery.
requestedDeliveryDate	Essential date information for the supplier as well as for the freight forwarder. In many cases this reflects the time, or time frame, when the buyer is able and willing to receive the goods.
isSTOOutbound	Set to yes to indicate that this OrderRequest is used to send the stock to the supplier. The goods are sent from the buyer plant to the supplier plant. This is currently relevant only for the stock transport order scenario.

### Example: Outbound Stock Transport Order

```

<OrderRequest>
  <OrderRequestHeader
    orderID = "4500030514"
    orderDate = "2019-03-13T12:00:00+01:00"
    orderType = "stockTransport"
    type = "new"
    orderVersion = "1"
    isSTOOutbound = "yes">
  <Total>
    <Money currency = "EUR">500.0</Money>
  </Total>
  <ShipTo>
    <Address
      isoCountryCode = "DE"
      addressID = "0001"
      addressIDDomain = "buyerLocationID">
    <Name xml:lang = "en">Werk 0001</Name>
    <PostalAddress name = "default">
      <Street>Hasso-Plattner-Ring 7</Street>
      <City>Walldorf</City>
      <PostalCode>69190</PostalCode>
      <Country isoCountryCode = "DE"/>
    </PostalAddress>
    </Address>
    <IdReference identifier = "0001" domain =
      "buyerLocationID"/>
  </ShipTo>
  <BillTo>
    <Address
      isoCountryCode = "DE"
      addressID = "CUST_0123"
      addressIDDomain = "supplierID">
    <Name xml:lang = "de">SAP A.G.</Name>
    <PostalAddress name = "SAP AG">
      <Street>Hasso-Plattner-Ring 7</Street>

```

```

    <City>Walldorf</City>
    <PostalCode>69190</PostalCode>
    <Country isoCountryCode = "DE"/>
  </PostalAddress>
</Address>
  <IdReference identifier = "CUST_0123" domain = "supplierID"/>
  <IdReference identifier = "0001" domain = "buyerID"/>
</BillTo>
<LegalEntity>
  <IdReference identifier = "0001" domain = "CompanyCode">
    <Description xml:lang = "en">SAP A.G.</Description>
  </IdReference>
</LegalEntity>
<OrganizationalUnit>
  <IdReference identifier = "0001" domain =
    "PurchasingOrganization">
    <Description xml:lang = "en">Einkaufsorg.
      0001</Description>
  </IdReference>
</OrganizationalUnit>
<PaymentTerm payInNumberOfDays = "14">
  <Discount>
    <DiscountPercent percent = "3.000"/>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "20">
  <Discount>
    <DiscountPercent percent = "2.000"/>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "30">
  <Discount>
    <DiscountPercent percent = "0.00"/>
  </Discount>
</PaymentTerm>
<Contact
  role = "supplierCorporate"
  addressID = "100000"
  addressIDDomain = "buyerID">
  <Name xml:lang = "en">Großhändler THEURER</Name>
  <PostalAddress>
    <Street>Wasserturm Straße 121</Street>
    <City>Mannheim</City>
    <PostalCode>68059</PostalCode>
    <Country isoCountryCode = "DE"/>
  </PostalAddress>
  <Email name = "default">100000@sap.com</Email>
  <IdReference identifier = "100000" domain = "buyerID"/>
</Contact>
<TermsOfDelivery>
  <TermsOfDeliveryCode value = "TransportCondition"/>
  <ShippingPaymentMethod value = "Other"/>
  <TransportTerms value = "EXW">Ex Works</TransportTerms>
  <Address>
    <Name xml:lang = "en">Walldoof</Name>
  </Address>
</TermsOfDelivery>
<OrderRequestHeaderIndustry>
  <ExternalDocumentType documentType = "NB">
    <Description xml:lang = "en">Standard PO</Description>
  </ExternalDocumentType>
</OrderRequestHeaderIndustry>
</OrderRequestHeader>
<ItemOut
  quantity = "10.0"
  lineNumber = "10"
  requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
  itemCategory = "stockTransfer"

```

```

stockTransferType = "intra"
partialDelivery = "yes"
orderCombination = "yes" >
<ItemID>
  <SupplierPartID/>
  <BuyerPartID>STANDARD</BuyerPartID>
</ItemID>
<ItemDetail>
  <UnitPrice>
    <Money currency = "EUR">50.0</Money>
  </UnitPrice>
  <Description xml:lang = "en">Standard Material</Description>
  <UnitOfMeasure>PCE</UnitOfMeasure>
  <PriceBasisQuantity quantity = "1.0" conversionFactor = "1">
    <UnitOfMeasure>PCE</UnitOfMeasure>
  </PriceBasisQuantity>
  <Classification domain = "not available">Material group 1</Classification>
  <Extrinsic name = "extLineNumber">10</Extrinsic>
</ItemDetail>
<ControlKeys>
  <OCInstruction value = "notAllowed"/>
  <ASNInstruction value = "notAllowed"/>
  <InvoiceInstruction value = "isNotERS" verificationType = "goodsReceipt"/>
</ControlKeys>
<ScheduleLine
  quantity = "10.0"
  requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
  lineNumber = "1">
  <UnitOfMeasure>PCE</UnitOfMeasure>
</ScheduleLine>
</ItemOut>
</OrderRequest>

```

## Example: Stock Transport Scheduling Agreement Release

```

<Request deploymentMode = "production">
  <OrderRequest>
    <OrderRequestHeader
      orderID = "4500030514"
      orderDate = "2019-03-13T12:00:00+01:00"
      orderType = "stockTransportRelease"
      type = "new"
      orderVersion = "1">
    <Total>
      <Money currency = "EUR">500.0</Money>
    </Total>
    <ShipTo>
      <Address
        isoCountryCode = "DE"
        addressID = "0001"
        addressIDDomain = "buyerLocationID">
        <Name xml:lang = "en">Werk 0001</Name>
        <PostalAddress name = "default">
          <Street>Hasso-Plattner-Ring 7</Street>
          <City>Walldorf</City>
          <PostalCode>69190</PostalCode>
          <Country isoCountryCode = "DE"/>
        </PostalAddress>
      </Address>
      <IdReference identifier = "0001" domain = "buyerLocationID"/>
    </ShipTo>
    <BillTo>
      <Address

```

```

    isoCountryCode = "DE"
    addressID = "CUST_0123"
    addressIDDomain = "supplierID">
    <Name xml:lang = "de">SAP A.G.</Name>
    <PostalAddress name = "SAP AG">
      <Street>Hasso-Plattner-Ring 7</Street>
      <City>Walldorf</City>
      <PostalCode>69190</PostalCode>
      <Country isoCountryCode = "DE"/>
    </PostalAddress>
  </Address>
  <IdReference identifier = "CUST_0123" domain = "supplierID"/>
  <IdReference identifier = "0001" domain = "buyerID"/>
</BillTo>
<LegalEntity>
  <IdReference identifier = "0001" domain = "CompanyCode">
    <Description xml:lang = "en">SAP A.G.</Description>
  </IdReference>
</LegalEntity>
<OrganizationalUnit>
  <IdReference identifier = "0001" domain = "PurchasingOrganization">
    <Description xml:lang = "en">Einkaufsorg. 0001</Description>
  </IdReference>
</OrganizationalUnit>
<PaymentTerm payInNumberOfDays = "14">
  <Discount>
    <DiscountPercent percent = "3.000"/>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "20">
  <Discount>
    <DiscountPercent percent = "2.000"/>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "30">
  <Discount>
    <DiscountPercent percent = "0.00"/>
  </Discount>
</PaymentTerm>
<Contact
  role = "supplierCorporate"
  addressID = "100000"
  addressIDDomain = "buyerID">
  <Name xml:lang = "en">Großhändler THEURER</Name>
  <PostalAddress>
    <Street>Wasserturm Straße 121</Street>
    <City>Mannheim</City>
    <PostalCode>68059</PostalCode>
    <Country isoCountryCode = "DE"/>
  </PostalAddress>
  <Email name = "default">100000@sap.com</Email>
  <IdReference identifier = "100000" domain = "buyerID"/>
</Contact>
<TermsOfDelivery>
  <TermsOfDeliveryCode value = "TransportCondition"/>
  <ShippingPaymentMethod value = "Other"/>
  <TransportTerms value = "EXW">Ex Works</TransportTerms>
  <Address>
    <Name xml:lang = "en">Walldorf</Name>
  </Address>
</TermsOfDelivery>
<OrderRequestHeaderIndustry>
  <ExternalDocumentType documentType = "NB">
    <Description xml:lang = "en">Standard PO</Description>
  </ExternalDocumentType>
</OrderRequestHeaderIndustry>
</OrderRequestHeader>
<ItemOut

```

```

quantity = "10.0"
lineNumber = "10"
requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
itemCategory = "stockTransfer"
stockTransferType = "intra"
partialDelivery = "yes"
orderCombination = "yes" >
<ItemID>
  <SupplierPartID/>
  <BuyerPartID>STANDARD</BuyerPartID>
</ItemID>
<ItemDetail>
  <UnitPrice>
    <Money currency = "EUR">50.0</Money>
  </UnitPrice>
  <Description xml:lang = "en">Standard Material</Description>
  <UnitOfMeasure>PCE</UnitOfMeasure>
  <PriceBasisQuantity quantity = "1.0" conversionFactor = "1">
    <UnitOfMeasure>PCE</UnitOfMeasure>
  </PriceBasisQuantity>
  <Classification domain = "not available">Material group 1</Classification>
  <Extrinsic name = "extLineNumber">10</Extrinsic>
</ItemDetail>
<ControlKeys>
  <OCInstruction value = "notAllowed"/>
  <ASNInstruction value = "notAllowed"/>
  <InvoiceInstruction value = "isNotERS" verificationType = "goodsReceipt"/>
</ControlKeys>
<ScheduleLine>
  quantity = "10.0"
  requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
  lineNumber = "1">
  <UnitOfMeasure>PCE</UnitOfMeasure>
</ScheduleLine>
</ItemOut>
</OrderRequest>

```

## ShipTo, BillTo, and Their Child Elements

ShipTo and BillTo elements contain the addresses of the ShipTo and BillTo entities on the order. The ShipTo address can also appear at the item level. All items must be billed to a single entity, so the BillTo element appears only in the OrderRequestHeader.

[Name Element \[page 142\]](#)

[DeliverTo Element, Line One \[page 142\]](#)

[DeliverTo Element, Line Two \[page 142\]](#)

[Street Element \[page 143\]](#)

[City Element \[page 143\]](#)

[State Element \[page 143\]](#)

[PostalCode Element \[page 143\]](#)

[CarrierIdentifier Element \[page 143\]](#)

[TransportInformation Element \[page 144\]](#)

[Country isoCountryCode \[page 145\]](#)

[TelephoneNumber Element \[page 145\]](#)

[Fax Element \[page 146\]](#)

[Email Element \[page 146\]](#)

[URL Element \[page 146\]](#)

## Name **Element**

For ship to, the `Name` element value should be the company or organization of the employee receiving ordered products. For bill to, this is the department or group responsible for payment. `Name` is not as specific as the location referenced in the second `DeliverTo` line.

```
<Name xml:lang="en">Workchairs, Inc.</Name>
```

## `DeliverTo` **Element, Line One**

The `DeliverTo` element on line one is the name of the person receiving the ordered products.

Avoid empty or white space elements and attributes. Missing values might affect EDI and cXML suppliers.

The suggested implementation name format template is “firstname lastname.”

### Note

Both `DeliverTo` lines in the `BillTo` element should be in the same format for consistency. This logic is not in the existing templates. Add it manually.

```
<DeliverTo>Joe Smith</DeliverTo>
```

## `DeliverTo` **Element, Line Two**

The `DeliverTo` element on line two is the location (building, city, office, or mailstop) of the person receiving the ordered products. Locations should always be complete enough for a mailing label.

### Note

Both `DeliverTo` lines in the `BillTo` element should be in the same format for consistency. This logic is not in the existing templates. Add it manually.

```
<DeliverTo>Mailstop M-543</DeliverTo>
```

## Street Element

The `Street` element is the street address of the `ShipTo` or `BillTo` location where ordered products are to be delivered and billed. Up to four `Street` elements are allowed to accommodate multi-line addresses.

```
<Street>123 Anystreet</Street>
<Street>M/S 450</Street>
```

## City Element

The `City` element is the city where ordered products are to be shipped or billed.

```
<City>Sunnyvale</City>
```

## State Element

The `State` element is a two-letter state, province, or territory code for the location where the goods are to be shipped and billed.

```
<State>CA</State>
```

For more information, see [Country, State, and PostalCode Elements \[page 22\]](#).

## PostalCode Element

The `PostalCode` element is the postal or zip code where goods are to be shipped and billed. Do not use a dash (-) in US extended zip codes.

```
<PostalCode>90489</PostalCode>
```

For more information, see [Country, State, and PostalCode Elements \[page 22\]](#).

## CarrierIdentifier Element

The `CarrierIdentifier` element contains the carrier name of the shipment.

```
<ShipTo>
  <Address>
    <Name xml:lang="USD">Acme</Name>
    <PostalAddress name="Headquarters">
      <DeliverTo>Joe Smith</DeliverTo>
      <DeliverTo>Mailstop M-543</DeliverTo>
```

```

    <Street>123 Anystreet</Street>
    <City>Sunnyvale</City>
    <State>CA</State>
    <PostalCode>90489</PostalCode>
    <Country isoCountryCode="US">UnitedStates</Country>
  </PostalAddress>
  <CarrierIdentifier domain="companyName">UPS</CarrierIdentifier>
</Address>

```

## TransportInformation **Element**

The `TransportInformation` element contains the transport information for a purchase order or ship notice. This element is specified only at the header-level.

The `TransportInformation` element contains the following elements:

Element	Description
Route	Shipping method for the shipment. This is required if you select a carrier.  This element has the following attribute: <ul style="list-style-type: none"> <li>• Method The possible values for shipping method are:</li> <li>• air</li> <li>• motor</li> <li>• rail</li> <li>• ship</li> </ul>
ShippingContractNumber	The contract number associated to the contract for sale.
ShippingInstructions	Information for the shipment

## Example

```

<OrderRequestHeader orderDate="2010-03-26T16:40:53" orderID="POw4401"
orderType="regular"
  type="Update">
  <Total>
    <Money currency="USD">10.00</Money>
  </Total>
  <ShipTo>
    <Address>
      <Name xml:lang="USD">Acme</Name>
      <PostalAddress name="default">
        <DeliverTo>Joe Smith</DeliverTo>
        <DeliverTo>Mailstop M-543</DeliverTo>
        <Street>123 Anystreet</Street>
        <City>Sunnyvale</City>
        <State>AL</State>
        <PostalCode>35762</PostalCode>
        <Country isoCountryCode="US">United States</Country>
      </PostalAddress>
    </Address>
    <CarrierIdentifier domain="companyName">UPS</CarrierIdentifier>
  </ShipTo>
</OrderRequestHeader>

```

```

    <TransportInformation>
      <Route method="motor" /
      <ShippingContractNumber>145</ShippingContractNumber>
      <ShippingInstructions>
        <Description xml:lang="en-US">As per the contract</Description>
      </ShippingInstructions>
    </TransportInformation>
  .
  .
  .

```

## Country `isoCountryCode`

The `isoCountryCode` attribute is the country code from the ISO 3166 standard. The content for `Country` is a human-readable or printable name.

```
<Country isoCountryCode="US">United States</Country>
```

For more information, see [Country, State, and PostalCode Elements \[page 22\]](#).

## TelephoneNumber **Element**

The `TelephoneNumber` element is the telephone number of the person or department where ordered products are shipped to or billed.

For international dialing, the `CountryCode` contains the ITU dialing code for a country after any escape codes. The ITU dialing code is the access code for a particular country.

United States example:

```

<TelephoneNumber>
  <CountryCode isoCountryCode="US">1</CountryCode>
  <AreaOrCityCode>650</AreaOrCityCode>
  <Number>9308410</Number>
</TelephoneNumber>

```

London example:

```

<TelephoneNumber>
  <CountryCode isoCountryCode="UK">44</CountryCode>
  <AreaOrCityCode>20</AreaOrCityCode>
  <Number>78628500</Number>
</TelephoneNumber>

```

For more information, see [Recommended Coding Systems \[page 413\]](#).

## Fax Element

The `Fax` element is the fax number of the person or department where ordered products are to be shipped or billed.

United States example:

```
<Fax name="work">
  <TelephoneNumber>
    <CountryCode isoCountryCode="US">1</CountryCode>
    <AreaOrCityCode>408</AreaOrCityCode>
    <Number>3582100</Number>
  </TelephoneNumber>
</Fax>
```

London example:

```
<Fax>
  <TelephoneNumber>
    <CountryCode isoCountryCode="GB">44</CountryCode>
    <AreaOrCityCode>137</AreaOrCityCode>
  </TelephoneNumber>
</Fax>
```

## Email Element

The `Email` element is the email address of a person or a department where ordered products are to be shipped or billed. SAP Business Network sends status information to the `ShipTo Email` address when the order status is updated, or as the result of a `ConfirmationRequest` or `ShipNoticeRequest`.

SAP Business Network uses the optional `preferredLang` attribute (produced by Ariba Buyer 8.2 or later) in the `Email` element to specify the recipient's language.

```
<Email>wsmithers@springfield.com</Email>
<Email preferredLang="ja-JP">mburns@springfield.com</Email>
```

## URL Element

The `URL` element is the ship to URL. Providing a value for this element is optional.

### Example

```
<URL>https://www.workchairs.com</URL>
```

## BusinessPartner **Element**

Contains information about the business partner for an item. This element can be used to supply sold to, ship from, and ordering address information for an item.

### Note

Buyers also can pass sold to information to suppliers within a `Contact` element in an order.

`BusinessPartner` has the following attributes:

Attribute	Description
<code>type</code> (required)	Identifies the type of the business partner. Only possible value is <code>organization</code> .
<code>role</code> (required)	Indicates the role the partner plays in the procurement process. Possible values are <code>soldTo</code> , <code>shipFrom</code> , or <code>orderingAddress</code> .

`BusinessPartner` has the following elements:

Element	Description
<code>Address</code> (required)	Provides a description of the business party. Follow these instructions for each <code>role</code> : <ul style="list-style-type: none"><li><code>soldTo</code>: The <code>domain</code> attribute of the element <code>IdReference</code> should be set to "buyerAccountID", the identifier to the sold to party ID. The <code>addressIDDomain</code> should be set to "buyerAccountID". The <code>addressID</code> should be set to the sold to party ID. Use the name for the description.</li><li><code>shipFrom</code>: The <code>addressIDDomain</code> should be set to "shipFromAddressID". The <code>addressID</code> should be set to the ship from party ID. Use the name for the description.</li><li><code>orderingAddress</code>: The <code>addressIDDomain</code> should be set to "supplierCorporate". The <code>addressID</code> should be set to the ordering address party ID. Use the name for the description.</li></ul>
<code>IdReference</code>	ID reference is within the application context (for example, a certain pair of buyer and supplier). The (identifier, domain) pair should be unique.

The following example shows several `BusinessPartner` elements:

```
<BusinessPartner type = "organization"
  role = "soldTo">
  <Address
    isoCountryCode = "EN"
    addressID = "0002"
    addressIDDomain = "buyerAccountID">
    <Name xml:lang = "de">SAP A.G.</Name>
    <PostalAddress name = "SAP Labs LLC">
      <Street>Hillview Ave 3450</Street>
      <City>Palo Alto</City>
      <PostalCode>94304</PostalCode>
      <Country isoCountryCode = "US"/>
    </PostalAddress>
  </Address>
  <IdReference identifier = "0002" domain = "buyerAccountID"/>
  <IdReference identifier = "CUST_0123" domain = "supplierID"/>
```

```

</BusinessPartner>
<BusinessPartner type = "organization"
  role = "shipFrom">
  <Address
    isoCountryCode = "EN"
    addressID = "0002"
    addressIDDomain = "shipFromAddressID">
    <Name xml:lang = "de">SAP A.G.</Name>
    <PostalAddress name = "SAP Labs LLC">
      <Street>Hillview Ave 3450</Street>
      <City>Palo Alto</City>
      <PostalCode>94304</PostalCode>
      <Country isoCountryCode = "US"/>
    </PostalAddress>
  </Address>
</BusinessPartner>
<BusinessPartner type = "organization"
  role = "orderingAddress">
  <Address
    isoCountryCode = "EN"
    addressID = "ADDR0002"
    addressIDDomain = "supplierCorporate">
    <Name xml:lang = "de">SAP A.G.</Name>
    <PostalAddress name = "SAP Labs LLC">
      <Street>Hillview Ave 3450</Street>
      <City>Palo Alto</City>
      <PostalCode>94304</PostalCode>
      <Country isoCountryCode = "US"/>
    </PostalAddress>
  </Address>
</BusinessPartner>

```

## TermsOfDelivery **Element**

The `TermsOfDelivery` element specifies the terms of delivery in a purchase order or ship notice. The `TermsOfDelivery` element can appear at the header-level or line-item level. To add at line-item level, include this element to the `ItemOut` element.

### Note

You can also add this element to the `ShipNoticeHeader` to specify terms at the header level. To add at the line-item level, include it to the `ShipNoticeItem` element. For more information, see [TermsOfDelivery Element \[page 241\]](#).

The `TermsOfDelivery` element contains the following elements:

Element	Description
<code>TermsOfDeliveryCode</code>	Standard delivery terms.

Element	Description
ShippingPaymentMethod	Denotes the mode of shipping payment. <ul style="list-style-type: none"> <li>Account: When shipping charges are charged to an account.</li> <li>Collect: When the consignee pays the freight charges.</li> <li>Prepaid by Seller: When the seller makes the payment to the carrier for freight charges prior to a shipment.</li> <li>Mixed: When the consignment is partially Collect and partially Prepaid.</li> <li>Other: Any other shipping payment method or the third-party pays the shipment charges. You can enter additional information for the payment method.</li> </ul>
TransportTerms	The terms of transportation: <ul style="list-style-type: none"> <li>Free-Carrier</li> <li>CostAndFreight</li> <li>DeliveredAtFrontier</li> <li>Other: When you specify this option, you can additionally enter a description.</li> </ul>
Address	The Deliver To address for the ship notice.
Comments	Additional information for the delivery terms.
Comments	Additional information when "Other" Transport Term is selected.

## Example

```
<TermsOfDelivery>
  <TermsOfDeliveryCode value="PriceCondition"/>
  <ShippingPaymentMethod value="AdvanceCollect"/>
  <TransportTerms value="Other">Contract Terms</TransportTerms>
  <Address>
    <Name xml:lang="en-US">SNV</Name>
    PostalAddress name="default">
      <Street>123 street</Street>
      <City>Sunnyvale</City>
      <State>AL</State>
      <PostalCode>35762</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
  </Address>
</TermsOfDelivery>
```

```

    <Comments xml:lang="en-US" type="Transport">Transport instructions</Comments>
    <Comments xml:lang="en-US" type="TermsOfDelivery">Delivery at the doorstep</
Comments>
</Terms Of Delivery>

```

## Tax Element

This element holds the details of the taxes on the purchase order. This element is present if the buying organization computes tax. When appearing within the `OrderRequestHeader` element, `Tax` describes the total tax for an order.

```

<Tax>
  <Money currency="USD">1.34</Money>
  <Description xml:lang="en">Sales Tax</Description>
</Tax>

```

Tax elements at the line item level are nested within the `ItemOut` element and describe the taxes applied on the purchase order line items. Purchase orders generated by SAP Ariba Procurement solutions have taxes only at the line level. In the example below, the tax code `Tax Code1` has been applied on the line item. The total tax amount for the tax code USD 10.96. Out of this, USD 8 is the amount for tax type `VAT` while USD 2.96 is the amount for tax type `Cess`.

```

<ItemOut>
:
:
  <Tax>
    <Money currency="USD">10.96</Money>
    <Description xml:lang="en">Tax Code1</Description>
    <TaxDetail category="VAT">
      <TaxAmount>
        <Money currency="USD">8.00</Money>
      </TaxAmount>
      <Description xml:lang="en">VAT Description</Description>
    </TaxDetail>
    <TaxDetail category="Cess">
      <TaxAmount>
        <Money currency="USD">2.96</Money>
      </TaxAmount>
      <Description xml:lang="en">Cess Description</Description>
    </TaxDetail>
  </Tax>
</ItemOut>

```

The `Money` element in `Tax` element is used to capture totals for all tax amounts and is not used for invoice display.

## Withholding Taxes

Two extrinsic elements can be added to the `Tax` element:

- `withholdingTax` (for total withholding taxes), and
- `withholdingTaxTotal` (for total taxes minus withholding tax)

The example below shows how withholding tax data in an invoice is displayed when exported to cXML. A withholding tax rate of -2% was applied to the invoice that was submitted via SAP Business Network. The use of negative rates ensures backward compatibility of existing cXML applications.

```
<Tax>
  <Money currency="USD">1273.35</Money>
  <Description xml:lang="en-US"></Description>
  <TaxDetail category="withholdingTax" percentageRate="-2">
    <TaxableAmount>
      <Money currency="USD">25466.90</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="USD">-509.34</Money>
    </TaxAmount>
    <Description xml:lang="en-US"></Description>
  </TaxDetail>
  <TaxDetail category="vat" percentageRate="7"
taxPointDate="2011-03-11T00:00:00-08:00">
    <TaxableAmount>
      <Money currency="USD">25466.90</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="USD">1782.69</Money>
    </TaxAmount>
    <Description xml:lang="en-US"></Description>
  </TaxDetail>
  <Extrinsic name="withholdingTaxTotal">
    <Money currency="USD">-509.34</Money>
  </Extrinsic>
  <Extrinsic name="taxTotal">
    <Money currency="USD">1782.69</Money>
  </Extrinsic>
</Tax>
```

## Modifications **Element**

The `Modifications` element contains details of the allowances and charges applicable at the header-level and line-item level.

This element provides details of:

- Any additional cost or deduction that alters the original price or shipping price of the item
- One or more `Modification` elements

The `Modification` element has an optional attribute `level`, which can have an integer value. It is used for displaying on which level a certain modification is applied. For more information, see [level Attribute \[page 301\]](#).

You can add the `Modifications` element to the `Shipping` element. Line-item level modifications can be added either at the line level, or at unit price level depending on buyer configurations. It has the following elements:

Element	Description
<code>OriginalPrice</code>	<p>The original price of the item. The allowances and charges are applied on the original price.</p> <p>This element has the <code>Money</code> element. It also contains an optional <code>type</code> attribute.</p> <p>For example, the <code>type</code> value can be the <code>MSRP</code>, <code>ListPrice</code>, <code>Actual</code>, <code>AverageSellingPrice</code>, <code>CalculationGross</code>, <code>BaseCharge</code>, <code>AverageWholesalePrice</code>, <code>ExportPrice</code>, <code>AlternatePrice</code>, <code>ContractPrice</code>, and so on.</p>
<code>AdditionalDeduction</code>	<p>The details of the deductions available for the item. Used only when allowances are applicable.</p> <p>This element can have any one of the following elements that defines the deduction value:</p> <ul style="list-style-type: none"> <li>• <code>DeductionAmount</code>: This element has the <code>Money</code> element.</li> <li>• <code>DeductionPercent</code>: This has a <code>percent</code> attribute.</li> <li>• <code>DeductedPrice</code>: This element has the <code>Money</code> element. It contains the final price of the item. This price overrides the price of the item.</li> </ul> <p>The <code>AdditionalDeduction</code> element has an optional <code>type</code> attribute. It contains details on the type of deductions available for the item.</p>
<code>AdditionalCost</code>	<p>The details of the additional charges applied on an item.</p> <p>It contains the following elements:</p> <ul style="list-style-type: none"> <li>• <code>Money</code>: Enter the money value in the <code>value</code> attribute. This is a mandatory attribute.</li> <li>• <code>Percentage</code>: Enter the percentage value in the <code>percent</code> attribute. This is a mandatory attribute.</li> </ul>
<code>ModificationDetail</code>	<p>The details of any information for the <code>AdditionalDeduction</code> or <code>AdditionalCost</code> element.</p> <p>This <code>ModificationDetail</code> element has the following elements:</p> <ul style="list-style-type: none"> <li>• <code>Description</code></li> <li>• <code>Extrinsic</code></li> <li>• <code>Code</code></li> </ul> <p>This element has the following attributes:</p> <ul style="list-style-type: none"> <li>• <code>name</code>: This is a mandatory attribute.</li> <li>• <code>startDate</code>: This is an optional attribute.</li> <li>• <code>endDate</code>: This is an optional attribute.</li> </ul>
<code>Tax</code>	<p>This tax is for the allowances and charges.</p> <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px; margin-top: 10px;"> <p><b>Note</b></p> <p>The <code>OriginalPrice</code> element is an optional element when added as part of the <code>Modification</code> element.</p> </div>

## Example For Header-Level Modifications

```
<OrderRequestHeader orderDate="2012-11-19T10:15:00-08:00" orderID="1_2482012_5"
orderType="regular" type="new">
  <Total>
    <Money currency="USD">65.00</Money>
  </Total>
  <Modifications>
    <Modification>
      <OriginalPrice>
        <Money currency = "USD">40.00</Money>
      </OriginalPrice>
      <AdditionalCost>
        <Money currency = "USD">10</Money>
      </AdditionalCost>
      <ModificationDetail endDate="2013-11-30T10:15:00-08:00" name="Access
Charges" startDate="2012-11-19T10:15:00-08:00">
        <Description xml:lang="en-US">Access Charges</Description>
      </ModificationDetail>
    </Modification>
  </Modifications>
</OrderRequestHeader>
```

## Example for Line-Item Level Modifications

In the example below, a discount of USD 2.00 and an insurance charge of USD 3.00 has been applied on a line item having amount USD 14.95.

```
<UnitPrice>
  <Money alternateCurrency="" alternateAmount="" currency="USD">14.95</Money>
  <Modifications>
    <Modification>
      <AdditionalDeduction>
        <DeductionAmount>
          <Money alternateCurrency="" alternateAmount=""
currency="USD">2.00</Money>
        </DeductionAmount>
      </AdditionalDeduction>
      <ModificationDetail name="Discount">
        <Description xml:lang="en-US">Discount</Description>
      </ModificationDetail>
    </Modification>
    <Modification>
      <AdditionalCost>
        <Money alternateCurrency="" alternateAmount="" currency="USD">3.00</
Money>
      </AdditionalCost>
      <ModificationDetail name="Insurance">
        <Description xml:lang="en-US">Insurance Charges</Description>
      </ModificationDetail>
    </Modification>
  </Modifications>
</UnitPrice>
```

## Distribution **Element**

The `Distribution` element facilitates the buying organization's reconciliation process. It allows requisitioners to split line item charges among multiple groups or accounts.

The `Distribution` element can contain any relevant accounting code used by a buying organization. For example, if a line item has a two-way split (for example 60/40), there should be two `Distribution` elements.

The `Distribution` element can contain `Accounting`, `AccountingSegment`, and `Segment` elements.

## Accounting **Element**

The `Accounting` element groups segments to identify who, or what group, is responsible for a line item's costs. The `name` attribute identifies the accounting combination. The default value for `name` is `DistributionCharge`:

```
<Accounting name="DistributionCharge">
```

The data in the `Accounting` element is combined to form the actual accounting code, for example, a-b-c where a, b, and c are the IDs of accounting segments.

## Example

```
<Distribution>
  <Accounting name="split 60%">
    <AccountingSegment id="2911">
      <Name xml:lang="en">Department</Name>
      <Description xml:lang="en">Development</Description>
    </AccountingSegment>
    <AccountingSegment id="345">
      <Name xml:lang="en">Account</Name>
      <Description xml:lang="en">Computer Accessories</Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">288</Money>
  </Charge>
</Distribution>
<Distribution>
  <Accounting name="split 40%">
    <AccountingSegment id="2911">
      <Name xml:lang="en">Department</Name>
      <Description xml:lang="en">Development</Description>
    </AccountingSegment>
    <AccountingSegment id="123">
      <Name xml:lang="en">Account</Name>
      <Description xml:lang="en">Office Supplies</Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">192</Money>
  </Charge>
</Distribution>
```

In the example, each `Distribution/Accounting` has two `AccountingSegment` elements, with the same name patterns. The whole charge is to the same department, but the "Account" segment is split (60% for Computer Accessories and 40% for Office Supplies). The `Charge` elements for an item should add up to the item's extended price.

In the example, the number of digits in the `id` attributes are consistent where the `Name` element is the same. That is, the `Department` segment has a four digit number and the `Account` segment has a three digit number. The structure of the accounting segments must be consistent.

Buying organizations do not need to reveal all of their accounting information; just accounting information for this purchase order. Because the segments are named and are not dependent on position in the accounting structure, Buying organizations can provide only the ones they wish to represent.

### Note

Some Ariba Buyer configurations generate accounting data in awkward ways. For example, they put the split percentage in an `AccountingSegment` element, resulting in accounting codes such as 75%-123-45-ABC, where 123, 45, and ABC make sense, such as division, project, and department, but the 75% is difficult to process.

## ControlKeys Element

The `ControlKeys` element in the cXML structure allows you to override default business rules for order confirmations, ship notices, service sheets, and invoices. `ControlKeys` has the following elements:

Element	Description
<code>OCInstruction</code>	Indicates whether an order confirmation is allowed for this order or line item, regardless of the default business rules configured in the SAP Business Network.
<code>ASNInstruction</code>	Indicates whether a ship notice is allowed for this order or line item, regardless of the default business rules configured in the SAP Business Network.
<code>SESInstruction</code>	Indicates whether a service sheet is allowed for this order or line item, regardless of the default business rules configured in the SAP Business Network. Also indicates whether the suppliers are allowed to change the unit price in the service sheet.
<code>InvoiceInstruction</code>	Indicates whether an invoice is allowed for this order or line item, regardless of the default business rules configured in the SAP Business Network. Also indicates whether the suppliers are allowed to change the unit price in the invoice.

In the following example:

- The `InvoiceInstruction@value` attribute is set to "isERS", which disables the creation of invoices against a line item flagged for ERS on the purchase order. You can use the `InvoiceInstruction` child element to differentiate between regular invoices and ERS invoices.
- The `unitPriceEditable` attribute is set to "yes", which indicates that the supplier is allowed to change the unit price for the invoice or service entry sheet.

## Example

```
<ItemOut lineNumber="1" quantity="2" requestedDeliveryDate="2008-09-21">
<ItemID>
<SupplierPartID>AX4518</SupplierPartID>
<SupplierPartAuxiliaryID>AXSPA001</SupplierPartAuxiliaryID>
</ItemID>
<ItemDetail>
<UnitPrice>
<Money currency="USD">31.20</Money>
</UnitPrice>
<Description xml:lang="en">BULLNOSE SHELVES 4 PK</Description>
<UnitOfMeasure>PK</UnitOfMeasure>
<Classification domain="SPSC">foo</Classification>
<ManufacturerPartID>AX4518</ManufacturerPartID>
<ManufacturerName>20008496</ManufacturerName>
</ItemDetail>
<Distribution>
<Accounting name="DistributionCharge">
<Segment description="Entertainment" id="23456" type="G/L Account"/>
<Segment description="Western Region Sales" id="2323" type="Cost Center"/>
</Accounting>
<Charge>
<Money currency="USD">187.20</Money>
</Charge>
</Distribution>
<ControlKeys>
<InvoiceInstruction unitPriceEditable="yes" value="isERS"/>
<SESInstruction unitPriceEditable="yes" value="allowed"/>
</ControlKeys>
</ItemOut>
```

## AccountingSegment Element

The `AccountingSegment` element identifies the accounting segment relative to others in the `Accounting` element.

`AccountingSegment` has one attribute, `id`, which is the unique identifier within an `AccountingSegment` `Name` (for example, the actual accounting code).

It contains two elements: `Name` and `Description`. The `Name` element identifies the accounting segment relative to others in the `Accounting` element; and `Description` specifies the ID value, which is typically `ID`, although it can be other values.

`AccountingSegment` can contain any relevant accounting code used by a buying organization. Ariba Buyer populates these elements from a line item's `Cost Center` and `Account Name`. Examples of possible values are: `asset number`, `billing code`, `cost center`, `G/L account`, and `department`.

## Example

```
<Distribution>
  <Accounting name="DistributionCharge">
    <AccountingSegment id="456">
```

```

        <Name xml:lang="en-US">G/L Account</Name>
        <Description xml:lang="en-US">ID</Description>
    </AccountingSegment>
    <AccountingSegment id="23">
        <Name xml:lang="en-US">Cost Center</Name>
        <Description xml:lang="en-US">ID</Description>
    </AccountingSegment>
</Accounting>
<Charge>
    <Money currency="USD">4688.00</Money>
</Charge>
</Distribution>

```

In the example, the `G/L Account` charge corresponds to the 456 account, and the `Cost Center` charge corresponds to the 23 account.

## Segment Element (Deprecated)

The `Segment` element identifies the accounting segment relative to others in the `Accounting` element. `Segment` is deprecated, replaced by the `AccountingSegment` element in cXML 1.2.005, but supplier must be able to process `Segment` because it is still generated by Ariba Buyer 6, 7, and 8.

`Segment` has three attributes: `type`, `id`, and `description`. `type` identifies the segment relative to others in the `Accounting` element. `id` is the unique identifier within a `Segment type` (for example, the actual accounting code). `description` describes the `id` value.

`Segment` can contain any relevant accounting code used by a buying organization. Ariba Buyer populates these elements from a line item's `Cost Center` and `Account Name`. Examples of possible values are: `asset number`, `billing code`, `cost center`, `G/L account`, and `department`. The values can also include accounting information for Funds Management account assignment fields. Examples of Funds Management account assignment fields are `Fund`, `Budget Period`, `Funds Center`, `Commitment Item`, `Earmarked Funds Document`, `Functional Area`, `Grant`, and `FM Area`.

## Example

```

<Distribution>
  <Accounting name="DistributionCharge">
    <Segment description="Travel" id="456" type="G/L Account"/>
    <Segment description="European Projects" id="23" type="Cost Center"/>
    <Segment description="Fund001" id="301" type="Fund" />
    <Segment description="BP2015" id="BP1" type="Budget Period" />
    <Segment description="FC1000" id="1200" type="Funds Center" />
  </Accounting">
  <Charge>
    <Money currency="USD">4688.00</Money>
  </Charge>
</Distribution>

```

In the example `Travel` describes the `G/L Account` charge, and corresponds to the 456 account. This example also includes Funds Management accounting information for the `Fund`, `Budget Period`, and `Funds Center` fields.

# Accounting Fields in SAP Ariba Invoice Management

Purchase orders sent to SAP Ariba Invoice Management have expected cXML mappings for accounting fields split fields.

## Example

```
<ItemOut quantity="2.0" lineNumber="0000000001"
requestedDeliveryDate="2009-03-12T10-03-39+01:00">
  <ItemID><SupplierPartID></SupplierPartID></ItemID>
  <ItemDetail>
    <UnitPrice><Money currency="EUR">50.0</Money></UnitPrice>
    <Description xml:lang="en">TESTING
      <ShortName>TEST_07</ShortName>
    </Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="UNSPSC">10401501</Classification>
    <ManufacturerPartID></ManufacturerPartID>
    <Extrinsic name="AccountCategory">K</Extrinsic>
      <Extrinsic name="ItemCategory">M</Extrinsic>
      <Extrinsic name="CompanyCode">0100</Extrinsic>
      <Extrinsic name="PurchaseGroup">0001</Extrinsic>
  </ItemDetail>
  <Distribution>
    <Accounting name="Accounting Information">
      <AccountingSegment id="100">
        <Name xml:lang="en">Percentage</Name>
        <Description xml:lang="en">Percentage</Description>
      </AccountingSegment>
      <AccountingSegment id="0000015300">
        <Name xml:lang="en">GeneralLedger</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
      <AccountingSegment id="07801042A0">
        <Name xml:lang="en">CostCenter</Name>
        <Description xml:lang="en">ID</Description>
      </AccountingSegment>
    </Accounting>
    <Charge>
      <Money currency="EUR">50.0</Money>
    </Charge>
  </Distribution>
</ItemOut>
```

# Receiving Types in SAP Ariba Invoice Management

Many ERP systems expect a match between an invoice and the associated orders for items that do not require a receipt. These ERP systems typically indicate if a receipt is required or not.

The Extrinsic `ReceivingType` indicates if a receipt is required or not. The following values are supported for the `ReceivingType` Extrinsic:

ReceivingType	Result
4	No receipt required. Reconcile by quantity. Invoice line items are reconciled to order lines based on the quantity.
10	No receipt required. Reconcile by amount. Invoice lines are reconciled based on the value in the Amount field only.
any other value	Triggers three-way invoice exception handling between the invoice, receipts and order.

## Example

```
<ItemOut quantity="2.0" lineNumber="0000000001"
requestedDeliveryDate="2009-03-12T10-03-39+01:00">
  <ItemID><SupplierPartID></SupplierPartID></ItemID>
  <ItemDetail><UnitPrice><Money currency="EUR">50.0</Money></UnitPrice>
  <Description xml:lang="en">TESTING<ShortName>TEST_07</ShortName></
Description>
  UnitOfMeasure>EA</UnitOfMeasure><Classification
domain="UNSPSC">10401501</Classification>
  <ManufacturerPartID></ManufacturerPartID>
  <Extrinsic name="ReceivingType">4</Extrinsic>
  . . .
```

If `ReceivingType` is any other value than 4 or 10, or if `ReceivingType` is not present in the `ItemDetail` element, the invoice reconciliation includes matching of receipts to invoices and orders. Supplier see the receiving type in SAP Business Network when reviewing order details.

## ReceivingType Integration with External Systems

`ReceivingType` integration with an external ERP system depends on how the external system handles receipt requirements. For example, some ERP systems only indicate at the header level if a receipt is required. You need to build your own business logic to set the receipt required indicator on line level based on your business practices and needs.

In SAP, the **GR Based IV** check box indicates if a receipt is required for invoice verification. You must set up your custom mapping to set the Extrinsic `ReceivingType` to 4 for items where that box is not checked in SAP. If GR Based IV is checked in SAP, you can omit setting the Extrinsic `ReceivingType` entirely, or set `ReceivingType` to any other value than 4 (including just leaving it blank).

## BlanketItemDetail **Element**

The `BlanketItemDetail` element provides details specific to blanket purchase order items and unplanned service order items.

### Note

The SAP Business Network does not support service lines in blanket purchase orders. Service lines are only supported in service purchase orders.

## BlanketItemDetail **in Blanket Purchase Orders**

The `BlanketItemDetail` element can appear in three different kinds of blanket purchase orders: supplier, commodity, and item.

- **Supplier level:** Contains only one line item defining the terms of the supplier level agreement, and can also contain a maximum amount.
- **Commodity level:** Contains one or more line items that correspond to different commodities that the blanket purchase order captures. This type of line item has supplier, commodity, and limits. `ItemID` in this case should include an empty `SupplierID` tag.
- **Item level:** Contains similar information to the `ItemDetail` element, except that all elements are primarily optional.

The following extrinsics are not visible to the supplier, but are required by SAP Business Network for internal implementation purposes:

- `Ariba.availableAmount`: A numeric value sent only on the creation of a BPO.
- `Ariba.invoicingAllowed`: A Boolean value that specifies if SAP Business Network allows suppliers to create PO-Flip invoices for purchase orders or BPOs. Yes indicates a no release required BPO. No indicates a release required BPO.
- `Ariba.collaborationAllowed`: A Boolean value that specifies if invoices can be created by supplier punch in.

### Note

The `BlanketItemDetail` element can also contain the quantity-based pricing for a line item in a blanket purchase order.

## Related Information

[PriceBasisQuantity Element \[page 171\]](#)

## BlanketItemDetail in Service Purchase Orders

BlanketItemDetail describes line items in a service purchase order that are unplanned and do not have any specifics. When suppliers fulfill the order, they add items to the service sheet to describe how they fulfilled the order.

For unplanned service lines, the BlanketItemDetail element must enclose a MaxAmount element that defines the hidden maximum amount that the supplier cannot exceed when creating service sheets.

### Example

```
<ItemOut lineNumber="1" quantity="1" requestedDeliveryDate="2013-09-1"
requiresServiceEntry="yes">
  <ItemID>
    <SupplierPartID>LW4001</SupplierPartID><SupplierPartAuxiliaryID></
SupplierPartAuxiliaryID>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang="en">Site preparation of parcel no. 110 (3 acres)</
Description>
    <MaxAmount>
      <Money currency="USD">70000</Money>
    </MaxAmount>
    <UnitPrice><Money currency="USD">50000</Money></UnitPrice>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="ascc">606501</Classification>
    <Extrinsic name="Construction"></Extrinsic>
    <Extrinsic name="ServicePeriod">    <Period
endDate="2013-09-01T23:59:59-00:00"
      startDate="2012-07-12T00:00:00-00:00"></Period>    </Extrinsic>
    </BlanketItemDetail>
  </ItemOut>
```

## ItemOut Element

ItemOut elements describe individually ordered items.

ItemOut has the following attributes:

Attribute	Description
quantity (required)	The number of items desired. Fractions are allowed for some units of measure. The value might have already been checked by the supplier during a PunchOut session. This value should never be negative.
lineNumber	Position of the item within an order. This ordinal value increases once per ItemOut in a "new" OrderRequest. Clients should always specify this attribute in an OrderRequest, although it might not be useful in other ItemOut contexts.
requisitionID	The buyer's requisition identifier for this line item. Must not be included if requisitionID is specified in the OrderRequestHeader.

Attribute	Description
<code>agreementItemNumber</code>	The buyer's master agreement identifier for the line item.
<code>requestedDeliveryDate</code>	The date item was requested for delivery, which allows item-level delivery dates in the <code>OrderRequest</code> . It must be in ISO 8601 format.
<code>isAdHoc</code>	<p>Indicates that the item is a non-catalog (ad-hoc) item. Non-catalog purchase orders contain items entered manually by requisitioners, not items selected from electronic catalogs. Often, these items do not have valid part numbers. Non-catalog orders usually require special validation and processing.</p> <p>Users enter non-catalog items to purchase products and services on an ad-hoc basis or because they could not find them in electronic catalogs.</p>
<code>parentLineNumber</code>	The line number of the corresponding parent line item. This is a mandatory field and applicable only for a line item with <code>itemType="item"</code> .
<code>itemType</code>	<p>Specifies the type of item. Possible values:</p> <ul style="list-style-type: none"> <li><code>composite</code>—Identifies an item group.</li> <li><code>item</code>—Identifies an independent line item.</li> <li><code>lean</code>—Indicates that no child item is expected for the line.</li> </ul>
<code>requiresServiceEntry</code>	Specifies whether or not the item requires a <code>ServiceEntryRequest</code> service sheet to describe how it was serviced.
<code>confirmationDueDate</code>	Specifies the date by which the supplier must respond to the buyer confirming receipt of the purchase order.
<code>compositeItemType</code>	Specifies whether a parent item uses group-level pricing. Possible values are <code>"groupLevel"</code> or <code>"itemLevel"</code> .
<code>itemClassification</code>	<p>Specifies whether the current line item is material or service. Possible values:</p> <ul style="list-style-type: none"> <li><code>material</code></li> <li><code>service</code></li> </ul>
<code>itemCategory</code>	<p>Specifies how a component or material is procured. Possible values:</p> <ul style="list-style-type: none"> <li><code>materialUnknown</code>—Refers to procuring a material without specifying the material number.</li> <li><code>text</code>—Refers to procuring a free-form text item.</li> <li><code>stockTransfer</code>—Refers to transfer of stock from one plant to another.</li> <li><code>materialGroup</code>—Refers to procuring a material without specifying the value or quantity.</li> <li><code>subcontract</code>—Procuring a material by providing component information to a contract manufacturer that makes the finished product.</li> <li><code>consignment</code>—Managing a material through a special process where the payment to supplier is withheld until the material or service is consumed by the buyer.</li> <li><code>thirdParty</code>—Procuring a material from a third-party vendor.</li> <li><code>limit</code>—Indicates that there is an expected limit for unplanned services or material covered by this item.</li> </ul>

Attribute	Description
<code>subcontractingType</code>	The buyer's ERP system determines the subcontracting type based on the material provision indicator determined to support the regular subcontracting refurbishments or replacements scenarios. Possible values: <ul style="list-style-type: none"> <li><code>regular</code>—Standard subcontracting scenario.</li> <li><code>refurbWithoutChange</code>—Refurbishment without changed material.</li> <li><code>refurbWithChange</code>—Refurbishment with changed material.</li> <li><code>replacement</code>—Replacement of the materials.</li> </ul>
<code>stockTransferType</code>	The buyer's ERP system sends the stock transfer type based on the stock transport order or stock transport release. Possible values: <ul style="list-style-type: none"> <li><code>intra</code>—Refers to transfer of stock from one plant to another plant within the same company code.</li> <li><code>inter</code>—Refers to transfer of stock from one plant to another plant in different company codes.</li> </ul>
<code>requestedShipmentDate</code>	The ship date requested by the buyer for the item.
<code>isReturn</code>	Set to "yes" to indicate that the item is a return item.
<code>returnAuthorizationNumber</code>	Return authorization number for a line item.
<code>isDeliveryCompleted</code>	Set to yes to indicate that this item is considered closed, and no more deliveries are expected for it. This flag is set by the buyer for informative purposes.
<code>unlimitedDelivery</code>	Set to yes to indicate that the line item supports unlimited quantity deliveries. Corresponding unlimited delivery tolerance is flagged on the ERP. This flag is used during ship notice creation only.
<code>isItemChanged</code>	Set to yes to indicate that the item has changed.
<code>isKanban</code>	Set to yes to indicate that the item is flagged for the Kanban process. Kanban-related orders require in time and 100% delivery quality.
<code>stoDelivery</code>	The delivery options possible for stock transport order item. <ul style="list-style-type: none"> <li><code>full</code> (default)—Only full delivery allowed for the order. This is specific to stock transport order or stock transport release.</li> <li><code>partial</code>—Partial delivery allowed for the order. This is specific to stock transport order or stock transport release.</li> </ul>
<code>stoOrderCombination</code>	When the attribute <code>itemCategory</code> has value "stockTransfer" and the attribute <code>stoOrderCombination</code> is set to "yes", then it is possible to combine items from different stock transport orders with the flag set during ship notice creation. A corresponding flag for order combination is set in the buyer's ERP. This setting is relevant for stock transport orders or stock transport releases.

## Item That Has Changed and Is Flagged for Kanban Process

```
<ItemOut
  itemType="item"
  lineNumber="00001"
```

```

quantity="10.00"
requestedDeliveryDate="2019-01-02T10:00:00+06:00"
requestedShipmentDate="2019-01-01T10:00:00+06:00"
isItemChanged="yes"
isKanban="yes" >
<ItemID>
  <SupplierPartID>Supplier Part ID</SupplierPartID>
  <SupplierPartAuxiliaryID>Supplier Part Aux ID</SupplierPartAuxiliaryID>
  <BuyerPartID>Buyer Part ID</BuyerPartID>
  <IdReference domain="UPCCConsumerPackageCode" identifier="UP
    ID"></IdReference>
</ItemID>
<ItemDetail>
  <UnitPrice>
    <Money currency="EUR">20</Money>
  </UnitPrice>
  <Description xml:lang="en">ERP-7372
    <ShortName>Short Description</ShortName>
  </Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <Classification domain="NotAvailable">007</Classification>
  <ManufacturerPartID>Manufacturer Part ID</ManufacturerPartID>
  <ManufacturerName xml:lang="en">Manufacturer Name</ManufacturerName>
  <ItemDetailIndustry isConfigurableMaterial="yes">
    <ItemDetailRetail>
      <EANID>EAN ID</EANID>
      <EuropeanWasteCatalogID>EWC ID</EuropeanWasteCatalogID>
      <Characteristic domain="color" value="red"/>
      <Characteristic domain="component" value="Server"/>
    </ItemDetailRetail>
  </ItemDetailIndustry>
</ItemDetail>
<SupplierID domain="DUNS">Supplier DUNS ID</SupplierID>
<Comments xml:lang="en"> Free Text</Comments>
<Comments xml:lang="en">Terms and Conditions</Comments>
<ScheduleLine quantity="10.00" requestedDeliveryDate="2019-01-02T10:00:00+06:00" >
  <UnitOfMeasure>EA</UnitOfMeasure>
</ScheduleLine>
<ItemOutIndustry planningType="CTO">
  <ReferenceDocumentInfo lineNumber="000090">
    <DocumentInfo documentID="0000006222" documentType="Sales Order XY"/>
  </ReferenceDocumentInfo>
  <ReferenceDocumentInfo>
    <DocumentInfo documentID="0001234567" documentType="ReplanishmentOrder"/>
  </ReferenceDocumentInfo>
</ItemOutIndustry>
</ItemOut>

```

### Example: Items of Type "Composite" and "Item" in an Order

```

<ItemOut lineNumber="1" quantity="4" itemType="composite">
  <ItemID>
    <SupplierPartID>AD1513</SupplierPartID>
    <SupplierPartAuxiliaryID></SupplierPartAuxiliaryID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">30</Money>
    </UnitPrice>
    <Description xml:lang="en">
      Dining Set
    </Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
  </ItemDetail>
</ItemOut>

```

```

        Classification domain="unspsc">432118</Classification>
    </ItemDetail>
    <Distribution>
        <Accounting name="DistributionCharge">
            <AccountingSegment id="100">
                <Name xml:lang="en">Percentage</Name>
                <Description xml:lang="en">
                    Percentage
                </Description>
            </AccountingSegment>
        </Accounting>
        <Charge>
            <Money currency="USD"> 120</Money>
        </Charge>
    </Distribution>
</ItemOut>
<ItemOut lineNumber="2" quantity="4" parentLineNumber="1" itemType="item">
    <ItemID>
        <SupplierPartID>AD1514</SupplierPartID>
        <SupplierPartAuxiliaryID></SupplierPartAuxiliaryID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency="USD">2.50</Money>
        </UnitPrice>
        <Description xml:lang="en">
            Fork
        </Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
        <Classification domain="unspsc">432118</Classification>
    </ItemDetail>
</ItemOut>

```

### Example: Item of Type "Lean" in an Order

```

<ItemOut
  lineNumber="1" quantity="1"
  requestedDeliveryDate="2020-06-20T03:30:00-07:00"
  itemType="lean">
  <ItemID>
    <SupplierPartID></SupplierPartID>
  </ItemID>
  <BlanketItemDetail>
    <Description
      xml:lang="en">Consulting services</Description>
    <UnitPrice>
      <Money
        alternateAmount="" alternateCurrency=""
        currency="CAD">800.00</Money>
      </UnitPrice>
    <UnitOfMeasure>AU</UnitOfMeasure>
    <Classification
      domain="ccc">A050</Classification>
    <Extrinsic name="ExpectedUnplanned">
      <Money
        alternateAmount="" alternateCurrency=""
        currency="CAD">800.00</Money>
      </Extrinsic>
    </BlanketItemDetail>
    <SpendDetail>
      <Extrinsic name="service">service</Extrinsic>
    </SpendDetail>
  </ItemOut>

```

## Example: Item for Intra Stock Transfer with Partial Delivery and Order Combination

```
<ItemOut
  quantity = "10.0"
  lineNumber = "10"
  requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
  itemCategory = "stockTransfer"
  stockTransferType = "intra"
  stoDelivery = "partial"
  stoOrderCombination = "yes" >
  <ItemID>
    <SupplierPartID/>
    <BuyerPartID>STANDARD</BuyerPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency = "EUR">50.0</Money>
    </UnitPrice>
    <Description xml:lang = "en">Standard Material</Description>
    <UnitOfMeasure>PCE</UnitOfMeasure>
    <PriceBasisQuantity quantity = "1.0" conversionFactor = "1">
      <UnitOfMeasure>PCE</UnitOfMeasure>
    </PriceBasisQuantity>
    <Classification domain = "not available">Material
      group 1</Classification>
    <Extrinsic name = "extLineNumber">10</Extrinsic>
  </ItemDetail>
  <ControlKeys>
    <OCInstruction value = "notAllowed"/>
    <ASNInstruction value = "notAllowed"/>
    <InvoiceInstruction value = "isNotERS" verificationType =
      "goodsReceipt"/>
  </ControlKeys>
  <ScheduleLine
    quantity = "10.0"
    requestedDeliveryDate = "2019-03-15T12:00:00+01:00"
    lineNumber = "1">
    <UnitOfMeasure>PCE</UnitOfMeasure>
  </ScheduleLine>
</ItemOut>
```

## Masking Values in Purchase Orders

SAP Business Network allows buying organizations to mask the quantity, amount, and price while sending a purchase order to the supplier. These values are also not displayed when a supplier creates an invoice for the purchase order containing the masked values.

Buyer organizations can mask values in the following types of purchase orders:

- Material orders
- Blanket orders
- Service orders

### Note

If a supplier creates an invoice item for a blanket purchase order item, the quantity and unit price values are editable for the invoice item.

To mask these values, SAP Business Network has introduced the following extrinsic that buying organizations must use to mask values in the **Amount**, **Quantity**, and **Unit Price** fields in a purchase order:

- `hideAmount`—An extrinsic that allows you to mask values for the amount.
- `hideUnitPrice`—An extrinsic that allows you to mask values for the quantity and unit price

A buying organization can always view all the values available in a purchase order from its SAP Business Network buyer account. When the purchase order contains a masked value, the string “The purchase order contains masked values for the supplier.” appears. When the purchase order is sent through cXML or exported through cXML, the masked values display a zero amount in the respective fields.

To enable this feature, configure your adapter (either an SAP Business Network Adapter or your own adapter) to send the required extrinsic in the purchase order. For more information, see the *SAP Business Network Buyer Administration Guide*.

The following example shows `hideUnitPrice` and `hideAmount` used in the header of an order:

```
<Request deploymentMode="production">
  <OrderRequest>
    <OrderRequestHeader orderDate="2017-10-26T07:09:06-07:00" orderID="DO12091956"
      orderType="regular" type="new">
      <Total>
        <Money currency="USD">300</Money>
      </Total>
      <ShipTo>
        ...
      </ShipTo>
      <BillTo>
        ...
      </BillTo>
      ...
      <Extrinsic name="hideUnitPrice"/>
      <Extrinsic name="hideAmount"/>
    </OrderRequestHeader>
    ...
  </OrderRequest>
</Request>
```

The following example shows `hideUnitPrice` and `hideAmount` used in a line item of an order:

```
<ItemDetail>
  <UnitPrice>
    <Money currency="USD">11</Money>
  </UnitPrice>
  <Description xml:lang="en">BULLNOSE SHELVES 4 PK</Description>
  <UnitOfMeasure>PK</UnitOfMeasure>
  <Classification domain="SPSC">foo</Classification>
  <ManufacturerPartID>AX4518</ManufacturerPartID>
  <ManufacturerName>20008496</ManufacturerName>
  <Extrinsic name="hideUnitPrice"/>
  <Extrinsic name="hideAmount"/>
</ItemDetail>
```

[Header-Level and Line-Level Masking \[page 168\]](#)

[AmountBasedReceiving Extrinsic \[page 169\]](#)

[ContingencyReceiving Extrinsic \[page 169\]](#)

[InformationReceiving Extrinsic \[page 170\]](#)

[Money currency Attribute \[page 170\]](#)

[Modifications Element \[page 171\]](#)

[TermsOfDelivery Element \[page 171\]](#)

[PriceBasisQuantity Element \[page 171\]](#)

[Tolerances Element \[page 172\]](#)

[ScheduleLine Element \[page 174\]](#)

[SAP Business Network Currency Code Mapping \[page 174\]](#)

## Header-Level and Line-Level Masking

The `hideAmount` and `hideUnitPrice` extrinsics can be applied to mask values at the header and line levels.

Buying organizations can include the `hideUnitPrice` and `hideAmount` extrinsics at at the header level or line level, depending on the type of order:

- Material orders and blanket orders: The `hideUnitPrice` and `hideAmount` extrinsics can be included at the header level, line level, or both. If either or both extrinsics is specified at the header level, the values are masked in the header level and all the line items of the purchase order. If the extrinsics are specified only at the line item level, the values for that particular line item are masked.
- Service orders: The `hideUnitPrice` and `hideAmount` extrinsics must be included at all levels of the service order hierarchy (parents and children). Unit prices won't be hidden if the parent items have the `hideUnitPrice` and `hideAmount` extrinsics and the child items don't.

The following table displays the fields that are masked when the `hideAmount` and `hideUnitPrice` extrinsics are specified at header level or line level for a purchase order:

Extrinsic Enabled	Values Masked in a Purchase Order					
Header level - Amount and Unit Price	Amount Available	Subtotal	Maximum Amount	Minimum Amount	Status	Price
Header level - Unit Price	-	-	-	-	Status	Price
Header level - Amount	Amount Available	Subtotal	Maximum Amount	Minimum Amount	Status	-
Line level – Amount and Unit Price	Amount Available	Subtotal	Maximum Amount	Minimum Amount	Status	Price
Line level – Unit Price	-	-	-	-	Status	Price
Line level – Amount	Amount Available	Subtotal	Maximum Amount	Minimum Amount	Status	-

## AmountBasedReceiving **Extrinsic**

Line items that contain the `AmountBasedReceiving` extrinsic with the value "Yes" are considered amount-based line items. Amount-based line items can be used in purchase orders for services, and only need to specify the total amount that the buyer expects to spend.

When a supplier invoices an amount-based line item, the **Quantity**, **Unit**, and **Unit Price** values are not displayed. Suppliers can enter partial amounts to partially invoice amount-based line items.

### Example

```
<ItemDetail>
  <UnitPrice>
    <Money alternateCurrency="" alternateAmount="" currency="USD">200</Money>
  </UnitPrice>
  <Description xml:lang="en">IT Services</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <Classification domain="unspsc">76</Classification>
  <LeadTime>0</LeadTime>
  <Extrinsic name="AmountBasedReceiving">Yes</Extrinsic>
</ItemDetail>
```

#### Note

Line items aren't considered amount-based when the `AmountBasedReceiving` extrinsic isn't specified. Therefore, it's incorrect to use the `AmountBasedReceiving` extrinsic with a value of "No".

## ContingencyReceiving **Extrinsic**

Line items that contain the extrinsic `ContingencyReceiving` with the value "Yes" are considered contingency line items. Contingency line items can be used in purchase orders for services and this line type describes a service that is not essential to perform an purchase order. The value of the contingency line is included in the total value of the Bill of Services (BOS) only if the contingency line item is enabled while creating a service sheet or an invoice.

### Example

```
<ItemDetail>
  -<UnitPrice>
    <Money currency="USD">50</Money>
  </UnitPrice>
  <Description xml:lang="en">bulldozer driverb</Description>
  <UnitOfMeasure>HUR</UnitOfMeasure>
  <Classification domain="SPSC">foo</Classification>
  <ManufacturerPartID>AX4518</ManufacturerPartID>
  <ManufacturerName>20008496</ManufacturerName>
  <Extrinsic name="ContingencyReceiving">Yes</Extrinsic>
</ItemDetail>
```

## InformationReceiving **Extrinsic**

Line items that contain the `InformationReceiving` extrinsic with the value "Yes" are considered information service lines. Information service lines are used only to store additional information; service sheets and invoices cannot be created against information service lines.

### Example

```
<ItemDetail>
- <UnitPrice>
<Money currency="USD">3000</Money>
</UnitPrice>
<Description xml:lang="en">bulldozer minia</Description>
<UnitOfMeasure>PK</UnitOfMeasure>
<Classification domain="SPSC">foo</Classification>
<ManufacturerPartID>AX4518</ManufacturerPartID>
<ManufacturerName>20008496</ManufacturerName>
<Extrinsic name="InformationReceiving">Yes</Extrinsic>
</ItemDetail>
```

## Money currency **Attribute**

The currency attribute is an ISO 4217 standard 3-letter currency code that indicates how to interpret the monetary value expressed in the `Money` element.

```
<Money currency="USD">1.34</Money>
```

For more information, see [Recommended Coding Systems \[page 413\]](#).

## Modifications **Element**

The `Modification` element contains details of the allowances and charges applicable for line items. The `Modifications` element is wrapped by an `ItemDetail` element.

## TermsofDelivery **Element**

The `TermsOfDelivery` element specifies the terms of delivery in a purchase order or ship notice.

## PriceBasisQuantity **Element**

The `PriceBasisQuantity` element contains the quantity-based pricing for a line item. Quantity-based pricing allows the unit price of an item to be calculated on quantities greater than 1.

In addition to quantity-based pricing, Unit Conversion Pricing allows unit of measure conversion in the pricing calculation, when the unit of measure on the order differs from the pricing unit of measure. The `PriceBasisQuantity` is populated in the target cXML only if the string length of the `PriceUnit` element is greater than zero.

### Example

```
<ItemDetail>
  <UnitPrice>
    <Money currency="USD">0.10</Money>
  </UnitPrice>
  <Description xml:lang="en">ACME Push Pins; Clear; Box Of 20</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <PriceBasisQuantity quantity = "2" conversionFactor = "0.10">
    <UnitOfMeasure>BX</UnitOfMeasure>
    <Description xml:lang = "en">This field specifies that 1 Box is equivalent
      to 10 EA and unit price is for 2 Boxes</Description>
  </PriceBasisQuantity>
</ItemDetail>
```

#### Note

This element can be used in blanket purchase orders, but not service purchase orders.

## Tolerances **Element**

The `Tolerances` element, available to buyers on SAP Business Network, allows buyers to specify maximum price limits for line items in a purchase order, and minimum and maximum quantity and delivery date limits at the purchase order header and line item level.

Buyers can specify line item tolerances for individual purchase orders or different line items in a purchase order they send from their ERP systems. The line item tolerances specified in the purchase order takes a higher priority over the line item tolerances specified on the **Default Transaction Rules** page in the SAP Business Network account. The tolerances specified in the purchase order are applied when a supplier creates order confirmations, ship notices, or service sheets against the purchase order.

Tolerances are applied independently to each document the supplier submits. They aren't applied cumulatively to all order confirmations, ship notices, or service sheets against the same purchase order.

When a buyer sends a changed purchase order containing a line item quantity tolerance, the tolerance takes precedence over the tolerance specified in the original purchase order. When the changed order does not specify any line item quantity tolerance value, then the line item quantity specified in the changed purchase order or the tolerance value specified in the **Default Transaction Rules** page is applied.

If the line item quantity tolerance specified in the changed purchase order is less than the total line item quantity that can be shipped, then SAP Business Network does not allow you to ship any more items for the purchase order.

To send a purchase order with line item tolerances, the `OrderRequest` cXML document must contain the `Tolerances` element. The `Tolerances` element has the following elements:

Element	Description
<code>QuantityTolerance</code>	The quantity tolerance for a line item. This element has the following elements: <ul style="list-style-type: none"><li><code>Percentage</code>: The percentage for the quantity tolerance.</li><li><code>Value</code>: The quantity number for the quantity tolerance.</li></ul> You can specify one of these elements in the <code>QuantityTolerance</code> element.
<code>PriceTolerance</code>	The price tolerance for a line item. This element has the following elements: <ul style="list-style-type: none"><li><code>Percentage</code>: The percentage for the price tolerance.</li><li><code>Money</code>: The amount and currency for the price tolerance.</li></ul> You can specify one of these elements in the <code>PriceTolerance</code> element.
<code>TimeTolerance</code>	The delivery date tolerance for a line item. This element has the following attributes: <ul style="list-style-type: none"><li><code>limit</code> (required): The delivery date tolerance limit.</li><li><code>type</code>: The type of time limit. Possible values are: <code>minutes</code>, <code>hours</code>, <code>days</code> (default), and <code>weeks</code>. Generally, <code>days</code> or <code>weeks</code> are recommended for specifying delivery date tolerances.</li></ul>

Quantity and delivery date tolerances must be enclosed in `Lower` and `Upper` elements to define minimum and maximum tolerances.

### Example: Quantity, Price, and Time Tolerances

```
<ItemOut>
```

```

    <Tolerances>
      <QuantityTolerance>
        <Percentage percent = "12"/>
      </QuantityTolerance>
      <PriceTolerance>
        <Money currency="USD">200</Money>
      </PriceTolerance>
      <TimeTolerance limit="5" />
    </Tolerances>
  </ItemOut>

```

## Lower and Upper Quantity Tolerances

```

<ItemOut>
  <ControlKeys>
    <OCInstruction value="allowed">
      <Lower>
        <Tolerances>
          <QuantityTolerance>
            <!-- underdelivery of up to 5 units allowed -->
            <Value value="5" />
          </QuantityTolerance>
          <TimeTolerance limit="5"/>
        </Tolerances>
      </Lower>
      <Upper>
        <Tolerances>
          <QuantityTolerance>
            <!-- up to 10% overdelivery allowed -->
            <Percentage percent="10" />
          </QuantityTolerance>
          <TimeTolerance limit="5"/>
        </Tolerances>
      </Upper>
    </OCInstruction>
    <...>
  </ControlKeys>
</ItemOut>

```

## Related Information

[SAP Business Network Buyer Administration Guide](#)

## ScheduleLine **Element**

The `ScheduleLine` element specifies information related to delivery schedules for a line item. A line item can have a maximum of 50 schedule lines.

`ScheduleLine` wraps a `UnitOfMeasure` element and has the following attributes:

Attribute	Description
<code>quantity</code>	Quantity of items to be shipped. This is a mandatory field.
<code>requestedDeliveryDate</code>	Date that the specified quantity is expected to be delivered This is a mandatory field.
<code>deliveryWindow</code> (optional)	Duration of time in which the quantity is expected to be delivered.
<code>lineNumber</code> (optional)	A line number can be added as a line identifier for a specific schedule line.

## SAP Business Network Currency Code Mapping

Use ISO 4217 three-letter (CodeA) currency codes to specify currency types in cXML. SAP Business Network recognizes some formerly supported codes that are now obsolete, and converts them to their new codes.

When SAP Business Network receives purchase orders, it converts the following obsolete currency codes to up-to-date codes:

Obsolete Code	Current Code
ARP	ARS
ARA	ARS
BGL	BGN
BRE	BRL
BRR	BRL
CAN	CAD
CDN	CAD
IRL	IEP
MXP	MXN
PLZ	PLN
RUB	RUR

If you use obsolete currency codes in catalogs or in Ariba Buyer, change them to up-to-date codes.

For amounts that do not specify a currency, SAP Business Network assigns them to USD.

### Note

SAP Business Network does not perform currency code conversion for test accounts.

## Related Information

[Currency Codes \[page 414\]](#)

# Cancel Orders and Change Orders

Cancel orders and change orders are purchase orders sent by buying organizations that modify previously sent purchase orders.

[Cancel and Change Order Requirements \[page 175\]](#)

[Cancel and Change Order Requirements for Buying Organizations \[page 175\]](#)

[Cancel and Change Order Requirements for Suppliers \[page 176\]](#)

[Cancel and Change Orders and Order Status \[page 176\]](#)

[Purchase Order Matching \[page 176\]](#)

[Cancel Orders \[page 177\]](#)

## Cancel and Change Order Requirements

Before a buying organization can send cancel orders or change orders, specific requirements must be met in terms of buying organizations' capabilities, order status, and purchase order matching.

## Cancel and Change Order Requirements for Buying Organizations

Cancel and change orders use depends on the business processes of buying organizations. Organizations can enable or disable the generation of these orders in Ariba Buyer and on SAP Business Network.

By default, SAP Business Network does not allow buying organizations to cancel or change purchase orders that are marked Shipped or Partially Shipped. SAP Business Network has buyer-configurable rules, however, for allowing cancel and change orders for fully shipped or partially shipped purchase orders. Suppliers can view these rules.

SAP Business Network allows buying organizations to change service purchase orders that are marked Partially Serviced, with the following restrictions:

Purchase Order Status	Changes Allowed
New	Buyers can make any updates except changing a service line ( <code>requiresServiceEntry="yes"</code> ) to a non-service line or vice versa. Service lines must remain service lines and non-service lines must remain non-service lines in any changes to existing orders.
Partially Serviced	<ul style="list-style-type: none"><li>Buyers cannot change service lines to non-service lines or vice versa at any time.</li><li>Buyers can add both service and material goods lines.</li><li>Buyers can edit or delete both service and material goods lines that have approved or unapproved service sheets created against them.</li></ul>

Buyers can update purchase order or line amounts on service orders for projects that go over initial budgets so that suppliers can continue to create service sheets against them until the project is completed.

Suppliers can create new service sheets against changed purchase orders. They can only invoice approved service lines if the buyer has not removed those lines from the underlying order.

## Cancel and Change Order Requirements for Suppliers

Suppliers can configure their SAP Business Network accounts to route cancel and change orders differently from new purchase orders.

## Cancel and Change Orders and Order Status

When SAP Business Network receives change orders, it resets order status to the initial state. It discards any previously set status for those orders.

For information about the interaction between these orders and confirmation and ship notices, see [Confirmations and Cancel Orders \[page 226\]](#) and [Ship Notices and Cancel and Change Orders \[page 241\]](#).

## Purchase Order Matching

Each cancel and change order refers to the previous version of the order through a `DocumentReference` element containing the `payloadID` of the previous order version.

SAP Business Network checks whether this reference is valid. If no existing purchase order matches, it rejects the cancel or change order.

# Cancel Orders

Buying organizations use cancel orders to cancel previously sent purchase orders. SAP Business Network displays the status of canceled purchase orders as "Obsoleted."

Cancel orders are the same as regular purchase orders, except:

- The `OrderRequestHeader` element has the attribute `type="delete"` instead of "new", and the `orderVersion` attribute of the original order (Ariba Buyer 8.1 and later).
- The `OrderRequestHeader DocumentReference` element may contain the `payloadID` of the previous `OrderRequest`.

## Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="985274930687.1374859706.109.7733@zimbuyer.com"
  timestamp="2003-03-28T13:04:04-08:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN01000002792</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="DUNS">
        <Identity>623331717</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="BuyerNetworkUserId">
        <Identity>sysadmin@buyer.com</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Ariba Buyer 8.1</UserAgent>
    </Sender>
  </Header>
  <Request>
    <OrderRequest>
      <OrderRequestHeader
        orderDate="2003-03-28T13:04:04-08:00"
        orderID="PC066"
        type="delete"
        orderVersion="3">
        <DocumentReference payloadID="985274.155.43@zimbuyer.com"/>
        .
        .
        .
        Order details are included by Ariba Buyer,
        but are ignored by SAP Business Network
        .
        .
        .
      </OrderRequestHeader>
    </OrderRequest>
  </Request>
</cXML>
```

For information about the interaction between these orders and confirmation and ship notices, see [Confirmations and Cancel Orders \[page 226\]](#) and [Ship Notices and Cancel and Change Orders \[page 241\]](#).

# Change Orders

Buying organizations use change orders to modify previously sent purchase orders. Each updated `OrderRequest` document replaces the previous version of that document. In other words, the previous document version is discarded. Updates are not cumulative.

Change orders are the same as regular purchase orders, except:

- The `OrderRequestHeader` element has the attribute `type="update"` instead of `"new"`.
- The `OrderRequestHeader DocumentReference` element may contain the `payloadID` of the previous `OrderRequest`.

Ariba Buyer 8.0 and earlier uses a different mechanism to denote order versions from Ariba Buyer 8.1 and later.

## Change Orders in Ariba Buyer 8.0 and Earlier

Ariba Buyer 8.0 and earlier denote a change order by appending `-Vn` to the `orderID` of an earlier order version. For example, `orderID="PC066-V2"` is the first revision of the original purchase order `PC066`. The version number "1" is implied for the original order, and it increments for each subsequent change order.

Ariba Buyer 7.0.6 fixed a minor problem in cXML change orders. For more information, see [Changes Introduced by Ariba Buyer 7.0.6 \[page 204\]](#).

## Change Orders in Ariba Buyer 8.1 and Later

Ariba Buyer 8.1 and later employ cXML 1.2009 with `OrderRequestHeader` attributes to insert order version information that enable better version tracking by receiving systems.

`OrderRequestHeader` attributes include:

- `orderVersion`  
Specifies the buyer system order version and is applicable only when the `OrderRequest` represents a change order request. The version number for the original purchase order should be 1 and incremented by 1 for each subsequent version.  
SAP Business Network validates the `orderVersion` number. This number must be unique per purchase order number, and it must be ascending (from the original order to newest change order). SAP Business Network does not allow duplicate or descending order versions.
- `isInternalVersion`  
Indicates whether the change is relevant only within the buying organization. For example, a minor change was made that does not affect information used by the supplier. Suppliers might not see internal order versions, depending on their customers' configuration.

## Example

```
<OrderRequestHeader orderDate="2005-03-28T13:04:04-08:00" orderID="D0166"  
type="update"  
  orderVersion="3" isInternalVersion="yes">  
  <DocumentReference payloadID="985274.155.43@zimbuyer.com" />  
</OrderRequestHeader>
```

This order is a change order (`type="update"`). It is the second revision of the original order (`orderVersion="3"`). It is an internal version, so changes in it are not relevant to the supplier (`isInternalVersion="yes"`).

# Purchase Order Implementation Hints and Restrictions

When you implement your cXML purchase order applications be aware of recommendations and possible restrictions.

- [Credential Elements \[page 180\]](#)
- [Contact Roles \[page 180\]](#)
- [Sold To Address and VAT ID \[page 181\]](#)
- [Path Routing and Copy Orders \[page 181\]](#)
- [Accounting Splits for ERP Copy Orders \[page 181\]](#)
- [Non-Catalog Items \[page 183\]](#)
- [User-Entered Information for Non-Catalog Items \[page 183\]](#)
- [Enabling or Disabling Non-Catalog Orders \[page 183\]](#)
- [Detecting Non-Catalog Orders \[page 184\]](#)
- [Breaking Requisitions into Multiple OrderRequests \[page 184\]](#)
- [Item Groups and Grouped Items in Service Orders \[page 184\]](#)
- [Service Sheets \[page 184\]](#)
- [PCards \[page 185\]](#)
- [Blanket Purchase Orders \[page 185\]](#)
- [Subcontracting Orders \[page 185\]](#)
- [Incoterms on Orders \[page 193\]](#)
- [AribaNetwork.PaymentTermsExplanation Extrinsic \[page 194\]](#)

## Related Information

[Maximum Document and Attachment Size \[page 15\]](#)

- [Extrinsic for Clickable Links \[page 203\]](#)
- [Extrinsic for Legacy Purchase Orders \[page 204\]](#)
- [Changes Introduced by Ariba Buyer 7.0.6 \[page 204\]](#)

## Credential **Elements**

cXML `Credential` elements in the header of each cXML document identify the sender and receiver organizations.

For detailed information about the credentials used in `OrderRequest` documents, see [cXML Credentials \[page 37\]](#).

For information about credential restrictions of older versions of Ariba Buyer, see [NetworkID and Older Versions of Ariba Buyer \[page 41\]](#).

## Contact **Roles**

By default, `OrderRequest` documents use the `BillTo` and `ShipTo` elements to specify bill to and ship to addresses. In some cases trading partners might want to provide additional addresses.

When buying organizations generate `OrderRequest` documents, they can use the optional `Contact` section to specify multiple roles and addresses.

SAP Business Network recognizes the following `Contact` role values in purchase orders:

Contact Role Value	Displays As
<code>postDelivery</code>	Post Address
<code>cargoDelivery</code>	Cargo Address
<code>companyDelivery</code>	Receiving
<code>privateEndUser</code>	Requisitioner Address
<code>defaultDelivery</code>	Personal Deliver To Address
<code>buyerCorporate</code>	Buyer Headquarter Address
<code>supplierCorporate</code>	Supplier Address
<code>soldTo</code>	Customer

### Note

Buyers also can pass sold to information to suppliers within a [BusinessPartner \[page 147\]](#) element in an order.

## Sold To Address and VAT ID

SAP Business Network allows buyers to configure a list of Sold To Addresses and associate them with one or more VAT IDs. As a best practice, SAP Ariba recommends that buyers using SAP Business Network Commerce Automation or SAP Ariba Invoice Management include the Sold To address and VAT ID in the purchase order cXML.

Including the Sold To address and VAT ID in purchase order cXML eliminates the need for the supplier to provide this information on a subsequent invoice. To add the Sold To address, use the `Contact` `role` element. To add the VAT ID, add the Extrinsic `buyervatID` to the `OrderRequestHeader`:

```
<Extrinsic name="buyervatID">SE123456789087</Extrinsic>
```

When a supplier creates a PO invoice or a non-PO invoice, SAP Business Network displays the list and allows the supplier to choose an address. If a VAT ID is associated with the address, SAP Business Network displays it on the invoice.

## Path Routing and Copy Orders

Supplier aggregators or marketplace hosts that want to receive copies of purchase orders, but are not the primary recipients, should use cXML path routing. These organizations are called copy organizations.

Copy organizations should perform the following steps to prepare for path routing:

1. Copy organizations must tell buying organizations to add path routing information to all `PunchOutSetupRequest` and `OrderRequest` documents. For example:

```
<Path>
  <Node type="copy">
    <Credential domain="NetworkID">
      <Identity>AN01000000111</Identity>
    </Credential>
  </Node>
</Path>
```

2. Copy organizations must add the `CopyRequest` transaction to their cXML profile.

When SAP Business Network receives a purchase order containing path routing copy information, it first looks up the copy organization's `CopyRequest` URL in the organization's cXML profile. If the organization does not have a cXML profile or if `CopyRequest` does not appear in its profile, SAP Business Network attempts to send the copy `OrderRequest` to the URL the organization entered in the "URL to send your orders" field in the Method for Receiving Orders page in the Configuration area of its account.

## Accounting Splits for ERP Copy Orders

If your site allows accounting splits, you can add accounting distributions to line items in an ERP copy order to split the amounts between different accounting units in an organization.

The following example shows a line item with accounting splits by percentage for an ERP copy order:

```
<ItemOut quantity="100.000" lineNumber="00001"
  requestedDeliveryDate="2020-01-20T00:00:00.005:45">
```

```

<ItemID>
  <SupplierPartID>Non Catalog Item</SupplierPartID>
</ItemID>
<ItemDetail>
  <UnitPrice>
    <Money currency="USD">10</Money>
  </UnitPrice>
  <Description xml:lang="EN">1st line</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <PriceBasisQuantity quantity="1" conversionFactor="1">
    <UnitOfMeasure>EA</UnitOfMeasure>
  </PriceBasisQuantity>
  <Classification domain="NotAvailable">00801</Classification>
  <Extrinsic name="AccountCategory">K</Extrinsic>
  <Extrinsic name="ReceivingType">4</Extrinsic>
</ItemDetail>
<Distribution>
  <Accounting name="DistributionCharge">
    <AccountingSegment id="0000400000">
      <Name xml:lang="en">GeneralLedger</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
    <AccountingSegment id="0000001200">
      <Name xml:lang="en">CostCenter</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
    <AccountingSegment id="60.00">
      <Name xml:lang="en">Percentage</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">600.00</Money>
  </Charge>
</Distribution>
<Distribution>
  <Accounting name="DistributionCharge">
    <AccountingSegment id="0000400000">
      <Name xml:lang="en">GeneralLedger</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
    <AccountingSegment id="0000001200">
      <Name xml:lang="en">CostCenter</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
    <AccountingSegment id="40.00">
      <Name xml:lang="en">Percentage</Name>
      <Description xml:lang="en"/>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">400.00</Money>
  </Charge>
</Distribution>
</ItemOut>

```

### 📌 Note

In SAP Ariba Invoice Management, if the associated order is an ERP copy order, you must split accounting distributions by percentage. Splitting by amount or quantity is not supported if the order is an ERP copy order.

## Related Information

[Accounting Element \[page 154\]](#)

[Path Routing and Copy Orders \[page 181\]](#)

## Non-Catalog Items

Non-catalog (ad-hoc) purchase orders contain items described manually by requisitioners rather than items selected from electronic catalogs. Requisitioners enter these items on an ad-hoc basis or because they could not find them in electronic catalogs.

Often, non-catalog items do not have part numbers. Purchase orders containing non-catalog items usually require special validation and processing, so not all suppliers accept them.

## User-Entered Information for Non-Catalog Items

Non-catalog items must include specific user-entered information.

Non-catalog item information should include:

- Supplier Part ID (optional)
- Description
- Commodity Code
- Quantity
- Unit of Measure
- Unit Price

Suppliers must carefully validate this information since it does not come from their electronic catalogs.

## Enabling or Disabling Non-Catalog Orders

Buying organizations determine whether their users can order non-catalog items. Suppliers should contact their customers to determine if they allow orders containing non-catalog items.

Suppliers can configure their SAP Business Network accounts to route orders that contain non-catalog items differently from regular orders, or to reject those orders.

## Detecting Non-Catalog Orders

To detect non-catalog items, SAP Business Network examines incoming orders and looks for either the `isAdHoc` flag (Ariba 8.0 and later), or Supplier Part IDs that are blank or set to "not available".

Ariba Buyer does not use the `isAdHoc` flag for regular catalog items.

## Breaking Requisitions into Multiple OrderRequests

Ariba Buyer should be configured to break requisitions that contain both catalog and non-catalog items into separate purchase orders. Suppliers can then automatically process as many requisition items as possible, instead of having to manually process both catalog and non-catalog items.

## Item Groups and Grouped Items in Service Orders

In purchase orders with multiple levels (item groups that contain grouped items), service lines can be either individual lines, item groups, or grouped items. SAP Business Network does not support service lines under a non-service item group.

Service lines can be grouped under a service item group. For example:

Allowed:	Not Allowed:
<ul style="list-style-type: none"><li>• 1 Service Line Item A (item group)<ul style="list-style-type: none"><li>• 1.1 Goods Line Item A1 (grouped item)</li><li>• 1.2 Goods Line Item A2 (grouped item)</li></ul></li><li>• 2 Service Line Item B (item group)<ul style="list-style-type: none"><li>• 2.1 Goods Line Item B1 (grouped item)</li><li>• 2.2 Service Line Item B2 (grouped item)</li></ul></li><li>• 3 Service Line Item C (individual line)</li><li>• 4 Goods Line Item D (individual line)</li></ul>	<ul style="list-style-type: none"><li>• 1 Goods Line Item A (item group)<ul style="list-style-type: none"><li>• 1.1 Service Line Item A1 (grouped item)</li></ul></li></ul>

## Service Sheets

SAP Business Network requires suppliers to create one or more service sheet documents for any line in a purchase order with an `ItemOut` attribute that includes the `requiresServiceSheet="yes"` attribute.

Service sheets can include both service and material goods lines. The supplier uses the service sheets to describe services as they are performed, and also uses them as a basis for invoices. See [Service Sheets \[page 244\]](#).

## PCards

Buying organizations can include the `PCard` element in the `OrderRequestHeader` element to provide purchasing card information to suppliers. Suppliers can charge PCards through their own point-of-sale systems.

## Blanket Purchase Orders

SAP Ariba Procurement solutions only support item-level Blanket Purchase Orders (BPOs) from external ERP systems.

When SAP Ariba Procurement solutions receive any other type of BPO from an ERP system, the BPO is accepted by the SAP Ariba solution, and the contract type specified in the incoming BPO cXML file (in the `ContractType` extrinsic) is reflected accurately in the SAP Ariba solution, but the BPO does not function according to its contract type. For example, the pricing terms are shown as item-level pricing terms even if the incoming BPO is a supplier contract.

### Note

SAP Business Network does not support service lines (those that require a service sheet) in blanket purchase orders.

## Subcontracting Orders

A subcontracting order is a purchase order that is sent from a buyer to a contract manufacturer to request the production and delivery of finished goods.

The subcontracting order carries not only item level and schedule line level information but also subcontracting component information. Subcontracting components are the raw materials that are used for manufacturing the finished goods specified at the item level.

### Subcontracting Order

The following elements and attributes have been added to support contract manufacturing collaboration.

Table 1: Elements Added for the Subcontracting Order

Element	Contained In	Description
<code>SubcontractingComponent*</code>	<code>ScheduleLine</code>	Contains a buyer's detailed information about a subcontracting component which is used to manufacture finished goods. For example, <code>SubcontractingComponent</code> could contain an ID, a description, a buyer's product ID, a quantity, or the date required.

Element	Contained In	Description
ComponentID	SubcontractingComponent	Contains a buyer's identifier for a subcontracting component within the procurement process.
Product	SubcontractingComponent	Contains product information for a subcontracting component, such as a buyer product ID, supplier product ID, standard product ID, or internal product ID.
ProductRevisionID	SubcontractingComponent	Contains an identifier for a specific change made to a component. This is a sequential number that is assigned when changes are made to an object.
Batch	SubcontractingComponent ItemOut	Contains batch information for material or goods produced in a single manufacturing run.
BuyerBatchID	Batch	Contains a buyer's identifier for the material or goods produced in a single manufacturing run.
PropertyValuation	Batch	Contains a value that can be assigned to characteristics, such as property values pertaining to currency amounts, quantities, or dates. <i>PropertyValuation</i> includes the property to be valued and the associated values.
PropertyReference	PropertyValuation	A reference to the property being valued.
ValueGroup	PropertyValuation	Contains a group of values for a property being valued.
ParentID	ValueGroup	An identifier of its parent.
PropertyValue	ValueGroup	Properties for valuating a property.

Table 2: Attributes Added for the Subcontracting Order

Attribute	Contained In	Description
itemCategory	ItemOut	Defines how a component or material is procured. Possible values are <i>subcontract</i> , <i>consignment</i> , or <i>thirdParty</i> .
code	Characteristic	Code associated with a characteristic, such as a currency code or unit of measure.

## Component Ship Notice Message

Table 3: Elements Added for the Component Ship Notice

Element	Contained In	Description
IdReference	ItemID	Contains a group of values pertaining to a property. IdReference was added to ItemID to refer to additional identifiers.
Batch	ShipNoticeItem	Contains batch information for material or goods produced in a single manufacturing run.

## Component Inventory Snapshot

Table 4: Elements Added for the Component Inventory Snapshot

Element	Contained In	Description
ProductActivityMessage	n/a	Transmits component inventory, consignment movement, and forecast information from the buyer's ERP system. The buyer-provided inventory summary view includes the components issued to the supplier. The information provided gives a snapshot of the component inventory and forecast situation at a certain point in time.
ProductActivityHeader	ProductActivityMessage	Contains information about of a single component inventory, the product forecast details, or a consignment movement for the product.
ProductActivityDetails	ProductActivityMessage	Contains the details about a product activity.
ItemID	ProductActivityDetails	Contains identifying information for the item.
Batch	ProductActivityMessage	Contains batch information for material or goods produced in a single manufacturing run.
Contact	ProductActivityDetails	The contact element contains, in the role attribute, the name of the plant at the point of origin, and the name of the plant at the destination.  Use the role attribute, and the IdReference and Description elements to pass plant information.
IdReference	Contact	You can pass plant information in IdReference by setting values for the domain and identifier attributes.

Element	Contained In	Description
Description	ProductActivityDetails	<p><b>Note</b></p> <p>To use <code>IdReference</code> to pass plant information, set plant name in the description, as in the following example:</p> <pre>&lt;Description xml:lang="en"&gt;Sunnyvale - Plant1&lt;/Description&gt;</pre>
Inventory	ProductActivityDetails	Contains details about the component stock.
SubcontractingStockIn- TransferQuantity	Inventory	Contains information about quantity and unit of measure.

Table 5: Attributes Added for the Component Inventory Snapshot

Attribute	Contained In	Description
role	Contact	<p>When <code>role</code> is set to <code>locationFrom</code> or <code>locationTo</code> then plant information can be passed in <code>IDReference</code>.</p> <p>To use <code>Contact</code> for point of origin, set <code>role=locationFrom</code>. To use <code>Contact</code> for destination, set <code>role=locationTo</code>.</p>

## Component Receipt Message

Table 6: Attributes Added for the Component Receipt Message

Attribute	Contained In	Description
completedIndicator	ReceiptItem	Specifies whether a component ship notice item is considered closed. This would mean that no more component receipts are expected for this item. This attribute is a pass-through value and no validation is done against it in the back-end.
lineNumber	ReceiptItemReference	In the scenario where the <code>OrderRequest</code> is blank, the line number refers to the <code>shipNoticeLineNumber</code> of the Component Ship Notice, that is, the ship notice referenced in the <code>ShipNoticeReference</code> .

## Component Consumption (Backflush)

Table 7: Elements Added for the Component Consumption (Backflush) Message

Element	Contained In	Description
ComponentConsumption-Details	ShipNoticeItem	Contains component consumption details.

## Component Consumption (Real-Time)

Table 8: Elements Added for the Component Consumption (Real-Time) Message

Element	Contained In	Description
ComponentConsumptionRequest	n/a	Data sent by a supplier to the buyer to report the consumption of components during the manufacturing of an ordered item.
ComponentConsumptionHeader	ComponentConsumptionRequest	Contains data pertinent to all portions of the component consumption.
ComponentConsumptionPortion	ComponentConsumptionRequest	Contains details of all component consumptions for a particular OrderRequest.
ComponentConsumptionItem	ComponentConsumptionPortion	Contains purchase order details for the components consumed.
ComponentConsumptionDetails	ComponentConsumptionItem	Contains details about component consumption.

## Subcontracting Order Example

The following excerpt from a subcontracting order shows an ItemOut element containing several SubcontractingComponent elements:

```
<ItemOut itemCategory="subcontract" requestedDeliveryDate="2008-09-21"
quantity="100" lineNumber="1">
  <ItemID>
    <SupplierPartID>AX4518-1</SupplierPartID>
    <SupplierPartAuxiliaryID>AXSPA001-1</SupplierPartAuxiliaryID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">31.20</Money>
    </UnitPrice>
    <Description xml:lang="en">Violin</Description>
    <UnitOfMeasure>PK</UnitOfMeasure>
    <Classification domain="SPSC">foo</Classification>
    <ManufacturerPartID>AX4518-1</ManufacturerPartID>
```

```

    <ManufacturerName>20008496-1</ManufacturerName>
  </ItemDetail>
  <Distribution>
    <Accounting name="DistributionCharge">
      <Segment type="G/L Account" id="23456" description="Entertainment"/>
      <Segment type="Cost Center" id="2323" description="Western Region
Sales"/>
    </Accounting>
    <Charge>
      <Money currency="USD">31.20</Money>
    </Charge>
  </Distribution>
  <ScheduleLine requestedDeliveryDate="2008-09-20T00:00:00-08:00" quantity="10"
lineNumber="1">
    <UnitOfMeasure>PK</UnitOfMeasure>
    <SubcontractingComponent quantity="1"
requirementDate="2013-08-01T14:37:31-07:00">
      <ComponentID>1</ComponentID>
      <UnitOfMeasure>BOX</UnitOfMeasure>
      <Description xml:lang="en">Fiddle Peg</Description>
      <Product>
        <SupplierPartID>SupplierPartID1</SupplierPartID>
        <SupplierPartAuxiliaryID>SupplierPartAuxiliaryID1</
SupplierPartAuxiliaryID>
        <BuyerPartID>BuyerPartID1</BuyerPartID>
        <IdReference domain="StandardID" identifier="1000"/>
        <IdReference domain="InternalID" identifier="2000"/>
      </Product>
      <ProductRevisionID>12345</ProductRevisionID>
      <Batch
originCountryCode="US" expirationDate="2014-06-10T14:37:31-07:00"
productionDate="2013-06-10T14:37:31-07:00">
        <BuyerBatchID>BuyerBatchID1</BuyerBatchID>
        <SupplierBatchID>SupplierBatchID1</SupplierBatchID>
        <PropertyValuation>
          <PropertyReference>
            <IdReference domain="ID" identifier="Image"/>
          </PropertyReference>
          <ValueGroup>
            <PropertyValue name="BinarySpecification">
              <Characteristic domain="BinaryObject"
value="AQIDBAUGBwgJAA==" />
              <Characteristic domain="mimeCode" value="x-world/
x-3dmf" />
              <Characteristic domain="characterSetCode"
value="ASCII" />
              <Characteristic domain="format" value="netCDF" />
              <Characteristic domain="fileName" value="binaryData" />
              <Characteristic domain="uri" value="http://sap.com/
anyURI" />
            </PropertyValue>
            <PropertyValue name="DateTimeSpecification">
              <Characteristic domain="DateTime"
value="1999-05-31T13:20:00Z" />
              <Characteristic domain="timeZoneCode" value="PST" />
              <Characteristic domain="daylightSavingTimeIndicator"
value="true" />
            </PropertyValue>
            <PropertyValue name="AmountSpecification">
              <Characteristic domain="Amount" value="200" code="USD" />
              <Characteristic domain="LowerAmount" value="100"
code="EUR" />
              <Characteristic domain="UpperAmount" value="300"
code="EUR" />
            </PropertyValue>
            <PropertyValue name="QuantitySpecification">
              <Characteristic domain="Quantity" value="200"
code="BOX" />

```



```

        </PropertyReference>
        <ValueGroup>
            <IdReference domain="ID" identifier="dilu"/>
            <ParentID>2</ParentID>
            <PropertyValue name="NameSpecification">
                <Characteristic domain="Name" value="1+0 - 1+3"/>
            </PropertyValue>
        </ValueGroup>
    </PropertyValuation>
    <PropertyValuation>
        <PropertyReference>
            <IdReference domain="ID" identifier="CAPACITY"/>
        </PropertyReference>
        <ValueGroup>
            <IdReference domain="ID" identifier="cap"/>
            <ParentID>2</ParentID>
            <PropertyValue name="NameSpecification">
                <Characteristic domain="Name" value="1-4 lt"/>
            </PropertyValue>
        </ValueGroup>
    </PropertyValuation>
    <PropertyValuation>
        <PropertyReference>
            <IdReference domain="ID" identifier="CHEM_FORM"/>
        </PropertyReference>
        <ValueGroup>
            <IdReference domain="ID" identifier="form"/>
            <ParentID>2</ParentID>
            <PropertyValue name="NameSpecification">
                <Characteristic domain="Name" value="flussig"/>
                <Characteristic domain="languageCode" value="de"/>
            </PropertyValue>
            <PropertyValue name="NameSpecification">
                <Characteristic domain="Name" value="liquid"/>
                <Characteristic domain="languageCode" value="en"/>
            </PropertyValue>
        </ValueGroup>
    </PropertyValuation>
</Batch>
</SubcontractingComponent>
<SubcontractingComponent quantity="3"
requirementDate="2013-08-03T14:37:31-07:00">
    <ComponentID>3</ComponentID>
    <UnitOfMeasure>BOX</UnitOfMeasure>
    <Description xml:lang="en">Bridge</Description>
    <Product>
        <SupplierPartID>SupplierPartID3</SupplierPartID>
        <SupplierPartAuxiliaryID>SupplierPartAuxiliaryID3</
SupplierPartAuxiliaryID>
        <BuyerPartID>BuyerPartID3</BuyerPartID>
        <IdReference domain="StandardID" identifier="1000"/>
        <IdReference domain="InternalID" identifier="2000"/>
    </Product>
    <ProductRevisionID>12345</ProductRevisionID>
    <Batch
originCountryCode="US" expirationDate="2014-06-10T14:37:31-07:00"
productionDate="2013-06-10T14:37:31-07:00">
        <BuyerBatchID>BuyerBatchID3</BuyerBatchID>
        <SupplierBatchID>SupplierBatchID3</SupplierBatchID>
    </Batch>
</SubcontractingComponent>
</ScheduleLine>
<Batch originCountryCode="US" expirationDate="2014-06-10T14:37:31-07:00"
productionDate="2013-06-10T14:37:31-07:00">
    <BuyerBatchID>BuyerBatchID1-Item1</BuyerBatchID>
    <SupplierBatchID>SupplierBatchID1-Item1</SupplierBatchID>
</Batch>
</ItemOut>

```

# Incoterms on Orders

Incoterms are a series of predefined commercial terms published by the International Chamber of Commerce (ICC). The Incoterms three-letter trade terms are related to common contractual sales practices. They are intended primarily to clearly communicate the tasks, costs, and risks associated with the transportation and delivery of goods. The Incoterms 2010 edition supports the following 11 rules:

- EXW (Ex Works)
- FCA (Free Carrier)
- CPT (Carriage Paid To)
- CIP (Carriage And Insurance Paid To)
- DAT (Delivered At Terminal)
- DAP (Delivered At Place)
- DDP (Delivered Duty Paid)
- FAS (Free Alongside Ship)
- FOB (Free On Board)
- CFR (Cost and Freight)
- CIF (Cost, Insurance and Freight)

For detailed descriptions of the Incoterms rules, see the [International Chamber of Commerce website](#) .

To support Incoterms in orders at the header and line-item level of orders, the following cXML extrinsics have been added to `OrderRequestHeader` and `ItemDetail`:

Extrinsic Name	This Field Stores...
<code>incoTerm</code>	Three-letter Incoterms code
<code>incoTermDesc</code>	Incoterms description
<code>incoTermLocation</code>	Incoterms location

The following cXML excerpt shows extrinsic elements for Incoterms in `OrderRequestHeader`:

```
<OrderRequestHeader orderDate="2016-02-16T01:16:58-08:00"
  orderID="po-it453245" orderType="regular" type="new">
  ...
  <Extrinsic name = "incoTerm">FOB</Extrinsic>
  <Extrinsic name = "incoTermDesc">Free on Board</Extrinsic>
  <Extrinsic name = "incoTermLocation">Lima</Extrinsic>
</OrderRequestHeader>
```

The following cXML excerpt shows extrinsic elements for Incoterms in `ItemDetail`:

```
<ItemDetail>
  <UnitPrice>
    <Money currency="USD">20.00</Money>
  </UnitPrice>
  <Description xml:lang="en">Computer Video Cables</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
  ...
  <Extrinsic name = "incoTerm">EXW</Extrinsic>
  <Extrinsic name = "incoTermDesc">Ex Works</Extrinsic>
  <Extrinsic name = "incoTermLocation">Santiago</Extrinsic>
</ItemDetail>
```

## AribaNetwork.PaymentTermsExplanation **Extrinsic**

A cXML extrinsic field supports the payment terms explanation, which is a freeform description of the payment terms received from the buyer's system. If the supplier is not allowed to change the payment terms, the payment terms explanation is flipped from the order to the invoice for information purposes.

The following cXML extrinsic is supported in `OrderRequestHeader` and `InvoiceDetailRequestHeader`:

Extrinsic Name	This Field Stores...
<code>AribaNetwork.PaymentTermsExplanation</code>	Free-form text describing the payment terms for information purposes.

The following cXML excerpt shows the payment terms explanation in the header of an order:

```
<Request deploymentMode="production">
  <OrderRequest>
    <OrderRequestHeader orderDate="2016-01-29T01:16:58-08:00"
      orderID="po-pte20150129" orderType="regular" type="new">
      ...
      <PaymentTerm payInNumberOfDays = "14">
        <Discount>
          <DiscountPercent percent = "1.000"></DiscountPercent>
        </Discount>
      </PaymentTerm>
      <PaymentTerm payInNumberOfDays = "30">
      </PaymentTerm>
      <Extrinsic name="AribaNetwork.PaymentTermsExplanation">
        After receipt of invoice: 14days 1% disc. 30days net
      </Extrinsic>
    </OrderRequestHeader>
  </OrderRequest>
</Request>
```

### Note

The `AribaNetwork.PaymentTermsExplanation` extrinsic can appear in the `OrderRequestHeader` or `InvoiceDetailRequestHeader` without any accompanying `PaymentTerm` elements.

## Schedule Agreement Releases

The cXML 1.2.026 DTD introduced changes that support schedule agreement releases.

For information about cXML, see the DTD and cXML *reference guide* available at <http://www.cxml.org>.

[ReleaseInfo](#) [page 195]

[ScheduleLineReleaseInfo](#) [page 196]

[agreementType](#) [page 196]

[ShipNoticePortion](#) [page 197]

## ReleaseInfo

`ReleaseInfo` has been added to `ItemOut` as an optional element. `ReleaseInfo` stores the details about a release of items or materials.

`ReleaseInfo` may contain the following elements:

Element	Description
<code>ShipNoticeReleaseInfo</code>	References the previous ship notice created from a delivery schedule. This reference is against the previous shipment made for the schedule line in the schedule agreement release.
<code>UnitofMeasure</code>	Unit of measure for the quantity specified for the schedule line item.
<code>Extrinsic</code>	Any additional information for the schedule line item.

`ReleaseInfo` may contains the following attributes:

Attribute	Description
<code>releaseType</code>	<p>A mandatory field. A string value to identify the type of delivery schedule against the schedule agreement release.</p> <p>Possible values:</p> <ul style="list-style-type: none"><li>• <b>JIT</b> (Just-In-Time)</li><li>• <b>forecast</b></li></ul>
<code>cumulativeReceivedQuantity</code>	A mandatory field. A number value to identify the cumulative quantity of all goods received against the scheduling agreement release over a period up to a certain date.
<code>productionGoAheadEndDate</code>	An optional field. Date denoting the end of the production go-ahead period (go-ahead for production).
<code>materialGoAheadEndDate</code>	Date denoting the end of the material go-ahead period (go-ahead for purchase of input materials).

## Example

```
<ReleaseInfo releaseType="forecast" cumulativeReceivedQuantity="0"
  productionGoAheadEndDate="2014-06-13T14:37:31-07:00"
  materialGoAheadEndDate="2014-11-14T14:37:31-07:00"
  <UnitOfMeasure>EA</UnitOfMeasure>
</ReleaseInfo>
```

## ScheduleLineReleaseInfo

An element, `ScheduleLineReleaseInfo`, has been added to the `ScheduleLine` element.

`ScheduleLineReleaseInfo` stores details about a specific release of items or materials for a schedule line.

`ScheduleLineReleaseInfo` contains the following attributes:

Attribute	Description
<code>commitmentCode</code>	<p>A string value to identify the type of the delivery. The value can be any of the following:</p> <p><code>firm g</code>: Go-ahead for production. Vendor can ship against the schedule line. Customer is responsible for cost of production as well as cost of material procurement.</p> <p><code>tradeoff</code>: Go-ahead for material procurement. Vendor can ship against the schedule line if rule is enabled. Buyer is responsible for cost of material procurement.</p> <p><code>forecast</code> : Informational. Customer can change the schedule line without incurring any liabilities with the vendor.</p>
<code>cumulativeScheduledQuantity</code>	Total quantity to be shipped for a particular line item up through the schedule line.

## Example

```
<ScheduleLine quantity="100" requestedDeliveryDate="2014-05-10T14:37:31-07:00">  
  <UnitOfMeasure>EA</UnitOfMeasure>  
  <ScheduleLineReleaseInfo commitmentCode="firm"  
cumulativeScheduledQuantity="100">  
    <UnitOfMeasure>EA</UnitOfMeasure>  
  </ScheduleLineReleaseInfo>  
</ScheduleLine>
```

## agreementType

An attribute, `agreementType`, has been added to the `MasterAgreementIDInfo` element and `MasterAgreementReference` element to indicate whether the referenced agreement is a scheduling agreement release.

## Example

```
<MasterAgreementIDInfo agreementID="SA301" agreementType="scheduling_agreement" />
```

ShipNoticePortion

ShipNoticePortion may include two additional, optional elements, MasterAgreementReference, and MasterAgreementID to identify the master agreement from which the ship notice is derived.

The following table describes these elements.

Element	Description
MasterAgreementReference	Optional. References the master agreement from which the release is derived.
MasterAgreementIDInfo	Optional. Indicates the ID of the master agreement from which the release is derived.

## Planned and Unplanned Service Line Items

SAP Business Network supports both planned and unplanned service line items in purchase orders.

- [Planned Service Line Items \[page 197\]](#)
- [Unplanned Service Line Items \[page 200\]](#)
- [Planned vs. Unplanned Service Lines \[page 202\]](#)
- [Extrinsic for Clickable Links \[page 203\]](#)
- [Extrinsics for Service Periods \[page 203\]](#)
- [Extrinsic for Legacy Purchase Orders \[page 204\]](#)
- [Changes Introduced by Ariba Buyer 7.0.6 \[page 204\]](#)
- [External Line Numbers \[page 205\]](#)
- [Service Order with Multi-Level Hierarchy \[page 205\]](#)

## Planned Service Line Items

Planned service line items describe specific services or material goods using <ItemDetail>.

- If planned service line items are individual line items, they require a service sheet.
- If planned services line items are parent item groups with grouped items under them, the parent item group requires a service sheet.

### Example of CXML from the SAP ERP

```
<ItemOut itemType = "composite" lineNumber = "10"  
  quantity = "1.0" requestedDeliveryDate = "2016-01-12T12:00:00+01:00"
```

```

requiresServiceEntry = "yes">
<ItemID>
  <SupplierPartID></SupplierPartID>
</ItemID>
<BlanketItemDetail>
  <Description xml:lang = "en">Cleaning Services</Description>
  <MaxAmount>
    <Money currency = "EUR">474.0</Money>
  </MaxAmount>
  <MaxQuantity>1.0</MaxQuantity>
  <MinQuantity>1.0</MinQuantity>
  <UnitPrice>
    <Money currency = "EUR">474.0</Money>
  </UnitPrice>
  <UnitOfMeasure>C62</UnitOfMeasure>
  <PriceBasisQuantity conversionFactor = "1" quantity = "1.0">
    <UnitOfMeasure>C62</UnitOfMeasure>
  </PriceBasisQuantity>
  <Classification domain = "not available">Material
    group 1</Classification>
</BlanketItemDetail>
<SpendDetail>
  <Extrinsic name = "ConsiderServiceAsMaterialType"></Extrinsic>
</SpendDetail>
<Tolerances>
  <PriceTolerance>
    <Percentage percent = "20.00"></Percentage>
  </PriceTolerance>
</Tolerances>
<ScheduleLine lineNumber = "1" quantity = "1.0"
  requestedDeliveryDate = "2016-01-12T12:00:00+01:00">
  <UnitOfMeasure>C62</UnitOfMeasure>
</ScheduleLine>
</ItemOut>
<ItemOut lineNumber = "1000100010" parentLineNumber = "10"
  quantity = "34.0">
  <ItemID>
    <SupplierPartID>SUPPLIER_NO</SupplierPartID>
    <BuyerPartID>1000020</BuyerPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency = "EUR">11.0</Money>
    </UnitPrice>
    <Description xml:lang = "en">Cleaning Windows</Description>
    <UnitOfMeasure>HUR</UnitOfMeasure>
    <Classification domain = "not available">Material group 1
      </Classification>
  </ItemDetail>
  <SpendDetail>
    <Extrinsic name = "ConsiderServiceAsMaterialType"></Extrinsic>
  </SpendDetail>
</ItemOut>

```

## Example of CXML from the SAP Business Suite Add-On for Ariba Network Integration

```

<ItemOut quantity="1.0" lineNumber="10"
  requestedDeliveryDate="2016-07-13T12:00:00+02:00" itemType="composite"
  requiresServiceEntry="yes">
  <ItemID>
    <SupplierPartID/>
  </ItemID>
  <BlanketItemDetail>

```

```

<Description xml:lang="en">Cleaning Services</Description>
<MaxAmount>
  <Money currency="EUR">984.0</Money>
</MaxAmount>
<MaxQuantity>1.0</MaxQuantity>
<MinQuantity>1.0</MinQuantity>
<UnitPrice>
  <Money currency="EUR">984.0</Money>
</UnitPrice>
<UnitOfMeasure>C62</UnitOfMeasure>
<PriceBasisQuantity quantity="1.0" conversionFactor="1">
  <UnitOfMeasure>C62</UnitOfMeasure>
</PriceBasisQuantity>
<Classification domain="not available">Material
  group 2</Classification>
</BlanketItemDetail>
<SpendDetail>
  <Extrinsic name="GenericServiceCategory"/>
</SpendDetail>
<ScheduleLine quantity="1.0"
  requestedDeliveryDate="2016-07-13T12:00:00+02:00"
  lineNumber="1">
  <UnitOfMeasure>C62</UnitOfMeasure>
</ScheduleLine>
</ItemOut>
<ItemOut quantity="123.0" lineNumber="1000100010" parentLineNumber="10">
  <ItemID>
    <SupplierPartID/>
    <BuyerPartID>1000020</BuyerPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="EUR">8.0</Money>
    </UnitPrice>
    <Description xml:lang="en">cleaning windows</Description>
    <UnitOfMeasure>HUR</UnitOfMeasure>
    <Classification domain="not available">Material
      group 2</Classification>
  </ItemDetail>
  <SpendDetail>
    <Extrinsic name="GenericServiceCategory">Standard Service</Extrinsic>
  </SpendDetail>
</ItemOut>
<ItemOut
  quantity="1.0"
  lineNumber="20"
  requestedDeliveryDate="2016-07-13T12:00:00+02:00"
  itemType="composite"
  requiresServiceEntry="yes">
  <ItemID>
    <SupplierPartID/>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang="en">Maintenance</Description>
    <MaxAmount>
      <Money currency="EUR">800.0</Money>
    </MaxAmount>
    <MaxQuantity>1.0</MaxQuantity>
    <MinQuantity>1.0</MinQuantity>
    <UnitPrice>
      <Money currency="EUR">800.0</Money>
    </UnitPrice>
    <UnitOfMeasure>C62</UnitOfMeasure>
    <PriceBasisQuantity quantity="1.0" conversionFactor="1">
      <UnitOfMeasure>C62</UnitOfMeasure>
    </PriceBasisQuantity>
    <Classification domain="not available">Material
      group 2</Classification>
  </BlanketItemDetail>
</ItemOut>

```

```

</BlanketItemDetail>
<SpendDetail>
  <Extrinsic name="GenericServiceCategory"/>
</SpendDetail>
<ScheduleLine
  quantity="1.0"
  requestedDeliveryDate="2016-07-13T12:00:00+02:00"
  lineNumber="1">
  <UnitOfMeasure>C62</UnitOfMeasure>
</ScheduleLine>
</ItemOut>
<ItemOut
  quantity="1.0"
  lineNumber="1000200010"
  parentLineNumber="20">
  <ItemID>
    <SupplierPartID/>
    <BuyerPartID>1000030</BuyerPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="EUR">800.0</Money>
    </UnitPrice>
    <Description xml:lang="en">yearly maintenance
      central heating</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="not available">Material
      group 2</Classification>
  </ItemDetail>
  <SpendDetail>
    <Extrinsic name="GenericServiceCategory">Maintenance</Extrinsic>
  </SpendDetail>
</ItemOut>

```

## Unplanned Service Line Items

Unplanned service line items describe general services using `<BlanketItemDetail>` and a required `<MaxAmount>`.

Unplanned service lines have the following characteristics:

- If they are individual lines, they require a service sheet.
- If they are parent item groups, they do not contain any grouped items under them.

### Example

```

<ItemOut lineNumber="1" quantity="1" requestedDeliveryDate="2013-09-1"
  requiresServiceEntry="yes">
  <ItemID>
    <SupplierPartID>LW4001</SupplierPartID>
    <SupplierPartAuxiliaryID></SupplierPartAuxiliaryID>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang="en">Site preparation of parcel no. 110
      (3 acres)</Description>
    <MaxAmount>
      <Money currency="USD">70000</Money>
    </MaxAmount>
  </BlanketItemDetail>
</ItemOut>

```

```

    </MaxAmount>
    <UnitPrice><Money currency="USD">50000</Money></UnitPrice>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="ascc">606501</Classification>
    <Extrinsic name="Construction"></Extrinsic>
    <Extrinsic name="ServicePeriod">
      <Period endDate="2013-09-01T23:59:59-00:00"
        startDate="2012-07-12T00:00:00-00:00">
      </Period>
    </Extrinsic>
  </BlanketItemDetail>
  <Distribution>
    <Accounting name="Distribution Charge">
      <AccountingSegment id="100">
        <Name xml:lang="en">Construction</Name>
        <Description xml:lang="en">Western Division</Description>
      </AccountingSegment>
    </Accounting>
    <Charge><Money currency="USD">50000</Money></Charge>
  </Distribution>
</ItemOut>

```

## ExpectedUnplanned and MaximumUnplanned Extrinsic

You can pass **Expected Value** and **Overall Limit** values for unplanned line items by using extrinsics.

**Expected Value** is displayed to both buyers and suppliers on purchase orders at the line-item level. **Overall Limit** is not exposed to supplier users. Suppliers cannot submit service sheets that include unplanned line items with a value that exceeds the **Overall Limit**.

### Note

**Overall Limit** must be greater than or equal to **Expected Value**.

The following extrinsic elements support **Expected Value** and **Overall Limit**:

Element	Contained In	Description
<Extrinsic name="ExpectedUnplanned">	<BlanketItemDetail>	Expected value for unplanned line items. Displayed to buyer and supplier on purchase order.
<Extrinsic name="MaximumUnplanned">	<BlanketItemDetail>	Overall limit (maximum value) for unplanned line items. Not disclosed to suppliers.

cXML service orders and service sheets downloaded from the SAP Business Network user interface by suppliers do not contain `MaximumUnplanned` extrinsic elements.

## Example CXML with Expected Value and Overall Limit

```

<ItemOut lineNumber="1" quantity="1"
  requestedDeliveryDate="2015-12-17" requiresServiceEntry="yes">
  <ItemID>
    <SupplierPartID>LW4001</SupplierPartID>

```

```

    <SupplierPartAuxiliaryID/>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang="en">Site preparation of parcel no. 100
      (3 acres)</Description>
    <UnitPrice>
      <Money currency="USD">50000</Money>
    </UnitPrice>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="ascc">606501</Classification>
    <Extrinsic name="ServicePeriod">
      <Period endDate="2015-12-17T17:00:00+08:00"
        startDate="2015-09-23T08:00:00+08:00"/>
    </Extrinsic>
    <Extrinsic name="ExpectedUnplanned">
      <Money currency="USD">50000</Money>
    </Extrinsic>
    <Extrinsic name="MaximumUnplanned">
      <Money currency="USD">70000</Money>
    </Extrinsic>
  </BlanketItemDetail>
</ItemOut>

```

## Planned vs. Unplanned Service Lines

When you create cXML purchase order applications, you may need to distinguish between planned and unplanned service lines.

The following table summarizes the characteristics of planned vs. unplanned service lines:

Service Line	Characteristics	Examples
Planned	<p>The service line is an item group with grouped items under it. If the unit price is visible, the subtotals of the grouped item add up to the unit price.</p> <p>If the buyer allows suppliers to add ad hoc items to an order and the service line specifies a (hidden) maximum amount that is larger than the unit price, the supplier can add unplanned/ad hoc items to a planned service line up to tolerance limits.</p>	<p>Planned line:</p> <ul style="list-style-type: none"> <li>1 Service Line A \$300 (max amount \$300)           <ul style="list-style-type: none"> <li>1.1 Service Item A1 \$200</li> <li>1.2 Goods Item A2 \$100</li> </ul>           Planned line to which supplier can add unplanned/ad hoc items:         </li> <li>2 Service Line B \$300 (max amount \$500)           <ul style="list-style-type: none"> <li>2.1 Service Item B1 \$200</li> <li>2.2 Goods Item B2 \$100</li> </ul> </li> </ul>
Unplanned	<p>The service line is an item group with no items grouped under it. The unit price might be visible or hidden.</p> <p>The supplier must add items to the unplanned service line. The subtotal of those items can add up to the unit price, if it is visible, and must not exceed the (hidden) maximum amount.</p>	<p>Unplanned line with unit price:</p> <ul style="list-style-type: none"> <li>1 Service Line A \$300 (max amount \$300)</li> </ul> <p>Unplanned line with hidden amount:</p> <ul style="list-style-type: none"> <li>2 Service Line B undisclosed (max amount \$500)</li> </ul>

## Extrinsic for Clickable Links

SAP Business Network can render URLs as clickable links in online purchase orders and invoices.

Clickable URL links are produced by `Extrinsic` elements of the form:

```
<Extrinsic name="anyname">
  <URL name="click me">http://www.bigcompany.com/info</URL>
</Extrinsic>
```

This example produces the following online text:

```
anyname:click me
```

The words “click me” are underlined and are clickable, and the link destination is `http://www.bigcompany.com/info</URL>`.

If the URL element has no `name` attribute, SAP Business Network displays the URL and makes it clickable.

## Extrinsics for Service Periods

You can specify service periods for service lines in a purchase order by using the `ServicePeriod` extrinsic in the `GenericServiceCategory` extrinsic in either `ItemDetail` or `BlanketItemDetail`. Alternatively, you can specify the `ServicePeriod` within the `SpendDetail` element in `ItemOut`. Both are valid cXML. Whichever method you use, make sure the SAP Business Network adapter for your back-end system maps the data appropriately.

### Note

SAP Business Suite Add-On for SAP Business Network Integration uses `ScheduleLine@requestedDeliveryDate` to specify the requested delivery date for line items.

### Example of `ServicePeriod` Within `GenericServiceCategory`

```
<Extrinsic name="GenericServiceCategory">
  <Extrinsic name="ServicePeriod">
    <Period endDate="2013-09-01T23:59:59-00:00"
      startDate="2012-07-12T00:00:00-00:00"></Period>
  </Extrinsic>
</Extrinsic>
```

### Example of `ServicePeriod` Within `SpendDetail`

```
<SpendDetail>
```

```
<Extrinsic name="ServicePeriod">
  <Period endDate="2013-09-01T23:59:59-00:00"
    startDate="2012-07-12T00:00:00-00:00"></Period>
</Extrinsic>
</SpendDetail>
```

## Related Information

[ScheduleLine Element \[page 174\]](#)

## Extrinsic for Legacy Purchase Orders

You can upload previously fulfilled purchase orders so that your suppliers can invoice you through SAP Business Network. SAP Business Network routes these legacy purchase orders to your supplier's online Inbox, even if the use another routing method. The legacy purchase order contains the comment, "This purchase order has already been fulfilled."

To differentiate legacy purchase orders from new purchase orders, include an Extrinsic element named `AribaNetwork.LegacyOrders` in the order request header.

### Example

```
<OrderRequestHeader orderDate="2015-10-31T13:04:04-08:00" orderID="PC066">
  ...
  <Extrinsic name="AribaNetwork.LegacyOrders"></Extrinsic>
  ...
</OrderRequestHeader>
```

SAP Business Network displays a warning message informing you that the order has already been fulfilled on the online purchase order page, and sets the status of the order to "Sent/New."

## Changes Introduced by Ariba Buyer 7.0.6

Ariba Buyer 7.0.6 fixed two problems in `OrderRequest` documents.

- Earlier versions of Ariba Buyer had a minor problems in cXML change orders: `lineNumber` values for items in change orders and original orders were different. Ariba Buyer 7.0.6 and later maintains the original line item numbers in change orders, which complies with the cXML specification.
- Earlier versions of Ariba Buyer used `requestedDeliveryDate` with an unneeded time value, for example:

```
requestedDeliveryDate="2005-02-01T00:00:00+09:00"
```

Ariba Buyer 7.0.6 and later includes only the date value for this attribute, for example:

```
requestedDeliveryDate="2005-02-01"
```

## External Line Numbers

To support external line numbers of items in purchase orders, the following cXML extrinsic has been added to `BlanketItemDetail` and `ItemDetail`:

Extrinsic Name	This Field Stores...
<code>extLineNumber</code>	A number. It can have leading zeroes (for example, "001"). When the SAP Business Network displays the external line number for an item, it concatenates all external line numbers for the item and all its parent items.

The following cXML excerpt shows the new extrinsic element for purchase order external line items:

```
<BlanketItemDetail>
  <Description
    xml:lang="en">ADB2226 - Build a house</Description>
  <UnitPrice>
    <Money currency="USD">50000.00</Money>
  </UnitPrice>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <Classification domain="UNSPSC">721315</Classification>
  ...
  <Extrinsic name="extLineNumber" />001</Extrinsic>
</BlanketItemDetail>
```

## Service Order with Multi-Level Hierarchy

A service order with a multi-level hierarchy has the following characteristics:

- Top-level outline items have `MaxAmount`, `UnitPrice`, `UnitOfMeasure`, and `PriceBasisQuantity` elements. Outline items that are not at the top level do NOT have these elements.
- The `ItemOut` element can contain a `requiresServiceEntry="yes"` attribute, which specifies that the supplier must create a service sheet for the line item.
- The `parentLineNumber` attribute is a mandatory field for all items with parent items. It refers to the line number of the parent line item.
- The `ItemType` attribute can contain two values: "composite" to identify an outline item or "item" to identify an independent line item. `ItemOut` elements with either `ItemType` can require a service entry sheet.
- Items have external line numbers specified by the `extLineNumber` extrinsic element.

### Example

```
<OrderRequest>
  <OrderRequestHeader orderID = "4500018482" orderType = "regular" orderDate =
    "2015-03-31T02:30:01+05:30" type = "new">
```

```

<Total>
  <Money currency = "USD">239700.00</Money>
</Total>
<ShipTo>
  <Address isoCountryCode = "US" addressID = "3000">
    <Name xml:lang = "EN">New York</Name>
    <PostalAddress>
      <Street>691 Broadway</Street>
      <City>NEW YORK</City>
      <Municipality>NEW YORK</Municipality>
      <State>NY</State>
      <PostalCode>10001</PostalCode>
      <Country isoCountryCode = "US"></Country>
    </PostalAddress>
    <Phone>
      <TelephoneNumber>
        <CountryCode isoCountryCode = "US"></CountryCode>
        <AreaOrCityCode></AreaOrCityCode>
        <Number>001-9287-34571</Number>
      </TelephoneNumber>
    </Phone>
    <Fax>
      <TelephoneNumber>
        <CountryCode isoCountryCode = "US"></CountryCode>
        <AreaOrCityCode></AreaOrCityCode>
        <Number>001-9287-34573</Number>
      </TelephoneNumber>
    </Fax>
  </Address>
</ShipTo>
<BillTo>
  <Address isoCountryCode = "US" addressID = "3000">
    <Name xml:lang = "EN">IDES US INC</Name>
    <PostalAddress>
      <Street>1230 Lincoln Avenue</Street>
      <City>NEW YORK</City>
      <Municipality>NEW YORK</Municipality>
      <State>NY</State>
      <PostalCode>10019</PostalCode>
      <Country isoCountryCode = "US"></Country>
    </PostalAddress>
    <Phone>
      <TelephoneNumber>
        <CountryCode isoCountryCode = "US"></CountryCode>
        <AreaOrCityCode></AreaOrCityCode>
        <Number>212-555-0983</Number>
      </TelephoneNumber>
    </Phone>
    <Fax>
      <TelephoneNumber>
        <CountryCode isoCountryCode = "US"></CountryCode>
        <AreaOrCityCode></AreaOrCityCode>
        <Number>212-555-5693</Number>
      </TelephoneNumber>
    </Fax>
  </Address>
</BillTo>
<PaymentTerm payInNumberOfDays = "14">
  <Discount>
    <DiscountPercent percent = "3.000"></DiscountPercent>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "30">
  <Discount>
    <DiscountPercent percent = "2.000"></DiscountPercent>
  </Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays = "45"></PaymentTerm>

```

```

<Contact role = "supplierCorporate" addressID = "0000001000">
  <Name xml:lang = "EN">C.E.B. BERLIN</Name>
  <PostalAddress>
    <Street>Kolping Str. 15</Street>
    <City>Berlin</City>
    <Municipality></Municipality>
    <State>11</State>
    <PostalCode>12001</PostalCode>
    <Country isoCountryCode = "DE"></Country>
  </PostalAddress>
  <Email></Email>
  <Phone>
    <TelephoneNumber>
      <CountryCode isoCountryCode = "DE"></CountryCode>
      <AreaOrCityCode></AreaOrCityCode>
      <Number>06894/55501-0</Number>
    </TelephoneNumber>
  </Phone>
  <Fax>
    <TelephoneNumber>
      <CountryCode isoCountryCode = "DE"></CountryCode>
      <AreaOrCityCode></AreaOrCityCode>
      <Number>06894/55501-100</Number>
    </TelephoneNumber>
  </Fax>
</Contact>
<Extrinsic name = "CompanyCode">3000</Extrinsic>
<Extrinsic name = "Ariba.invoicingAllowed">Yes</Extrinsic>
<Extrinsic name = "Ariba.availableAmount">239700</Extrinsic>
<Extrinsic name = "partyAdditionalID">0000001000</Extrinsic>
</OrderRequestHeader>
<ItemOut itemType = "composite" requestedDeliveryDate =
  "2015-04-27T00:00:00+05:30" lineNumber = "00010" quantity = "1.000"
  requiresServiceEntry = "yes">
  <ItemID>
    <SupplierPartID></SupplierPartID>
    <BuyerPartID></BuyerPartID>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang = "en">SAP Consulting</Description>
    <MaxAmount>
      <Money currency = "USD">239700</Money>
    </MaxAmount>
    <UnitPrice>
      <Money currency = "USD">239700</Money>
    </UnitPrice>
    <UnitOfMeasure>SU</UnitOfMeasure>
    <PriceBasisQuantity conversionFactor = "1" quantity = "1">
      <UnitOfMeasure>SU</UnitOfMeasure>
    </PriceBasisQuantity>
    <Classification domain = "NotAvailable">00801</Classification>
    <Extrinsic name = "AccountCategory">K</Extrinsic>
    <Extrinsic name = "ReceivingType"></Extrinsic>
    <Extrinsic name = "extLineNumber">00010</Extrinsic>
  </BlanketItemDetail>
  <ScheduleLine requestedDeliveryDate = "2015-04-27T00:00:00+05:30"
    quantity = "1.000">
    <UnitOfMeasure>SU</UnitOfMeasure>
  </ScheduleLine>
</ItemOut>
<ItemOut parentLineNumber = "00010" itemType = "composite"
  lineNumber = "0000200010" quantity = "1.0" requiresServiceEntry = "yes">
  <ItemID>
    <SupplierPartID></SupplierPartID>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang = "EN">Functional Architect</Description>
    <Extrinsic name = "AccountCategory">K</Extrinsic>

```

```

        <Extrinsic name = "extLineNumber">FUN_ARCH</Extrinsic>
    </BlanketItemDetail>
    <SpendDetail>
        <Extrinsic name = "service">service</Extrinsic>
    </SpendDetail>
</ItemOut>
<ItemOut parentLineNumber = "0000200010" itemType = "composite"
  lineNumber = "0000300010" quantity = "1.0" requiresServiceEntry = "yes">
  <ItemID>
    <SupplierPartID></SupplierPartID>
  </ItemID>
  <BlanketItemDetail>
    <Description xml:lang = "EN">Technical Consultants</Description>
    <Extrinsic name = "AccountCategory">K</Extrinsic>
    <Extrinsic name = "extLineNumber">CONSULTS</Extrinsic>
  </BlanketItemDetail>
  <SpendDetail>
    <Extrinsic name = "service">service</Extrinsic>
  </SpendDetail>
</ItemOut>
<ItemOut parentLineNumber = "00010" lineNumber = "1000100010"
  quantity = "45.000">
  <ItemID>
    <SupplierPartID></SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency = "USD">1500</Money>
    </UnitPrice>
    <Description xml:lang = "EN">Architects</Description>
    <UnitOfMeasure>DAY</UnitOfMeasure>
    <PriceBasisQuantity conversionFactor = "1" quantity = "1">
      <UnitOfMeasure>DAY</UnitOfMeasure>
    </PriceBasisQuantity>
    <Classification domain = "UNSPSC">00801</Classification>
    <Extrinsic name = "AccountCategory">K</Extrinsic>
    <Extrinsic name = "extLineNumber">10</Extrinsic>
  </ItemDetail>
  <SpendDetail>
    <Extrinsic name = "service">service</Extrinsic>
  </SpendDetail>
  <Distribution>
    <Accounting name = "DistributionCharge">
      <AccountingSegment id = "0000400000">
        <Name xml:lang = "en">GeneralLedger</Name>
        <Description xml:lang = "en"></Description>
      </AccountingSegment>
      <AccountingSegment id = "0000002100">
        <Name xml:lang = "en">CostCenter</Name>
        <Description xml:lang = "en"></Description>
      </AccountingSegment>
      <AccountingSegment id = "100.00">
        <Name xml:lang = "en">Percentage</Name>
        <Description xml:lang = "en"></Description>
      </AccountingSegment>
    </Accounting>
    <Charge>
      <Money currency = "USD">67500.00</Money>
    </Charge>
  </Distribution>
</ItemOut>
<ItemOut parentLineNumber = "0000200010" lineNumber =
  "1000200010" quantity = "90.000">
  <ItemID>
    <SupplierPartID></SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>

```

```

        <Money currency = "USD">900</Money>
    </UnitPrice>
    <Description xml:lang = "EN">Functional Consultants</Description>
    <UnitOfMeasure>DAY</UnitOfMeasure>
    <PriceBasisQuantity conversionFactor = "1" quantity = "1">
        <UnitOfMeasure>DAY</UnitOfMeasure>
    </PriceBasisQuantity>
    <Classification domain = "UNSPSC">00801</Classification>
    <Extrinsic name = "AccountCategory">K</Extrinsic>
    <Extrinsic name = "extLineNumber">10</Extrinsic>
</ItemDetail>
<SpendDetail>
    <Extrinsic name = "service">service</Extrinsic>
</SpendDetail>
<Distribution>
    <Accounting name = "DistributionCharge">
        <AccountingSegment id = "0000400000">
            <Name xml:lang = "en">GeneralLedger</Name>
            <Description xml:lang = "en"></Description>
        </AccountingSegment>
        <AccountingSegment id = "0000001200">
            <Name xml:lang = "en">CostCenter</Name>
            <Description xml:lang = "en"></Description>
        </AccountingSegment>
        <AccountingSegment id = "100.00">
            <Name xml:lang = "en">Percentage</Name>
            <Description xml:lang = "en"></Description>
        </AccountingSegment>
    </Accounting>
    <Charge>
        <Money currency = "USD">81000.00</Money>
    </Charge>
</Distribution>
</ItemOut>
<ItemOut parentLineNumber = "0000200010" lineNumber =
    "1000200020" quantity = "110.000">
    <ItemID>
        <SupplierPartID></SupplierPartID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency = "USD">750</Money>
        </UnitPrice>
        <Description xml:lang = "EN">Technical Architect</Description>
        <UnitOfMeasure>DAY</UnitOfMeasure>
        <PriceBasisQuantity conversionFactor = "1" quantity = "1">
            <UnitOfMeasure>DAY</UnitOfMeasure>
        </PriceBasisQuantity>
        <Classification domain = "UNSPSC">00801</Classification>
        <Extrinsic name = "AccountCategory">K</Extrinsic>
        <Extrinsic name = "extLineNumber">20</Extrinsic>
    </ItemDetail>
    <SpendDetail>
        <Extrinsic name = "service">service</Extrinsic>
    </SpendDetail>
    <Distribution>
        <Accounting name = "DistributionCharge">
            <AccountingSegment id = "0000400000">
                <Name xml:lang = "en">GeneralLedger</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
            <AccountingSegment id = "0000002100">
                <Name xml:lang = "en">CostCenter</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
            <AccountingSegment id = "100.00">
                <Name xml:lang = "en">Percentage</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
        </Accounting>
    </Distribution>

```

```

        </AccountingSegment>
    </Accounting>
    <Charge>
        <Money currency = "USD">82500.00</Money>
    </Charge>
</Distribution>
</ItemOut>
<ItemOut parentLineNumber = "0000300010" lineNumber =
    "1000300010" quantity = "7.000">
    <ItemID>
        <SupplierPartID></SupplierPartID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency = "USD">600</Money>
        </UnitPrice>
        <Description xml:lang = "EN">Sr.Consultants</Description>
        <UnitOfMeasure>DAY</UnitOfMeasure>
        <PriceBasisQuantity conversionFactor = "1" quantity = "1">
            <UnitOfMeasure>DAY</UnitOfMeasure>
        </PriceBasisQuantity>
        <Classification domain = "UNSPSC">00801</Classification>
        <Extrinsic name = "AccountCategory">K</Extrinsic>
        <Extrinsic name = "extLineNumber">10</Extrinsic>
    </ItemDetail>
    <SpendDetail>
        <Extrinsic name = "service">service</Extrinsic>
    </SpendDetail>
    <Distribution>
        <Accounting name = "DistributionCharge">
            <AccountingSegment id = "0000400000">
                <Name xml:lang = "en">GeneralLedger</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
            <AccountingSegment id = "0000002100">
                <Name xml:lang = "en">CostCenter</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
            <AccountingSegment id = "100.00">
                <Name xml:lang = "en">Percentage</Name>
                <Description xml:lang = "en"></Description>
            </AccountingSegment>
        </Accounting>
    <Charge>
        <Money currency = "USD">4200.00</Money>
    </Charge>
</Distribution>
</ItemOut>
<ItemOut parentLineNumber = "0000300010" lineNumber =
    "1000300020" quantity = "10.000">
    <ItemID>
        <SupplierPartID></SupplierPartID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency = "USD">450</Money>
        </UnitPrice>
        <Description xml:lang = "EN">Jr.Consultants</Description>
        <UnitOfMeasure>DAY</UnitOfMeasure>
        <PriceBasisQuantity conversionFactor = "1" quantity = "1">
            <UnitOfMeasure>DAY</UnitOfMeasure>
        </PriceBasisQuantity>
        <Classification domain = "UNSPSC">00801</Classification>
        <Extrinsic name = "AccountCategory">K</Extrinsic>
        <Extrinsic name = "extLineNumber">20</Extrinsic>
    </ItemDetail>
    <SpendDetail>
        <Extrinsic name = "service">service</Extrinsic>

```

```

</SpendDetail>
<Distribution>
  <Accounting name = "DistributionCharge">
    <AccountingSegment id = "0000400000">
      <Name xml:lang = "en">GeneralLedger</Name>
      <Description xml:lang = "en"></Description>
    </AccountingSegment>
    <AccountingSegment id = "0000001200">
      <Name xml:lang = "en">CostCenter</Name>
      <Description xml:lang = "en"></Description>
    </AccountingSegment>
    <AccountingSegment id = "100.00">
      <Name xml:lang = "en">Percentage</Name>
      <Description xml:lang = "en"></Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency = "USD">4500.00</Money>
  </Charge>
</Distribution>
</ItemOut>
</OrderRequest>

```

## Response Documents

After SAP Business Network forwards an `OrderRequest` to a supplier, the supplier must respond with a cXML `Response` in the same HTTP connection within five minutes. The response serves as an acknowledgment.

The `Response` is not an agreement to ship any items, but simply an acknowledgement that the `OrderRequest` was received, was authenticated successfully, and that it validates correctly against the DTD. To communicate detailed order status, the supplier can later send `ConfirmationRequest` documents.

[Example Response Document \[page 211\]](#)

[Purchase Order Acknowledgments \[page 212\]](#)

[Other Ways to Acknowledge Purchase Orders \[page 213\]](#)

[Blanket Purchase Order Acknowledgements \[page 213\]](#)

[Duplicate Documents \[page 213\]](#)

[Sending Broadcast Messages to Suppliers \[page 213\]](#)

## Example Response Document

A simple response to an `OrderRequest` is an HTTP acknowledgement that the order was received.

### Example

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="994994" xml:lang="en" timestamp="2002-03-12T18:39:09-08:00">
  <Response>
    <Status code="200" text="OK"/>
  </Response>
</cXML>
```

There is no reference to the `OrderRequest` document, because the `Response` is sent synchronously in the same HTTP connection used to transmit the `OrderRequest` document.

If SAP Business Network does not receive a `Response` within five minutes, it resends the `OrderRequest` with the same `payloadID`. After 10 retries (once per hour), SAP Business Network holds the transaction and labels it "Failed."

There is no element named "OrderResponse," because the only data that needs to be sent back to SAP Business Network is the `Status` part of the `Response`.

## Purchase Order Acknowledgments

Suppliers must acknowledge that they received cXML and EDI purchase orders from SAP Business Network and that they are syntactically correct. Acknowledgments set purchase order routing status from "sent" to "acknowledged" or "failed."

Ariba Buyer 8.1 (or later) uses the cXML get pending transaction to retrieve `StatusUpdateRequest` documents containing receive purchase order acknowledgments from SAP Business Network. Users of earlier versions of Ariba Buyer must sign in to SAP Business Network to see purchase order acknowledgements.

SAP Business Network's purchase order acknowledgment requirements depend on suppliers' routing methods. The following table lists the period during which suppliers must send acknowledgments and whether SAP Business Network resends purchase orders if it receives no acknowledgments:

Routing Method	Supplier Acknowledgment	Time Out for Acknowledgment	Ariba Network Re-sends PO?
cXML	cXML <code>Response</code> in the same HTTP connection as the purchase order	5 minutes	Yes, 10 times (once per hour)
EDI	X12 997 or EDIFACT CONTRL	72 hours	No
Fax	"confirmation of receipt" message from the fax machine	Immediately after sending fax	Yes, 10 times (once per hour)
Email	None	None	No
Online	None	None	No

Email and online routing methods do not support acknowledgments; SAP Business Network immediately sets the routing status of these documents to "sent." If suppliers' mailboxes reject email purchase orders, SAP Business Network sets the routing status of these documents to "failed."

Suppliers cannot acknowledge failed purchase orders. They must first sign in to their SAP Business Network accounts, resend the failed purchase orders, and return positive acknowledgments.

## Other Ways to Acknowledge Purchase Orders

Suppliers can acknowledge “sent” or “failed” purchase orders by sending invoices against them. Suppliers can use any invoicing method: online, cXML, or EDI. SAP Business Network considers invoices to be acknowledgments and sets purchase order status to “acknowledged.”

If the buying organization downloads purchase order status, SAP Business Network sends a cXML `StatusUpdateRequest` to set purchase order status to “acknowledged.”

## Blanket Purchase Order Acknowledgements

After a blanket purchase order (BPO) is sent to the supplier, updates are sent through SAP Business Network about any subsequent “open” or “close” operation on the order, including the available amount.

The buying organization sends updates to the supplier through SAP Business Network about the amount available on the BPO as a result of invoice reconciliation or the order process.

If the BPO is in a hierarchy and is configured to accumulate spend to a master BPO, then an update for the available amount on the master BPO is also sent through SAP Business Network. The `BlanketOrderStatusUpdateRequest` element, used to send status updates, contains the following information:

- `open`: Sent with the available amount when a BPO is opened.
- `close`: Sent with the available amount when a BPO is closed.
- `update`: Sent when the available amount of a BPO changes as a result of invoice reconciliation or the purchase order process.
- `Comments`: Any comments associated with the “open” or “close” operation for the supplier are included.
- `AvailableAmount`: The amount remaining on the BPO that can still be released or invoiced against.

## Duplicate Documents

If the supplier does not send a `Response` document within the allotted time discussed above, SAP Business Network resends the original document. The duplicate documents have the same `payloadID` value as the original document; it is the supplier’s responsibility to detect duplicates.

If the supplier detects a duplicate, it should discard previous documents and return a `Response` document. The status in the response should be the same as in the original response.

## Sending Broadcast Messages to Suppliers

Buyers can send broadcast messages to suppliers through cXML status update requests.

By sending a cXML status update request, buyers can send a broadcast message to their suppliers to inform them about any events they need to know, such as holiday schedules, production facility closure, or completion of certain activities such as planning run completion.

The status code 211 indicates that the `Status` element of a `StatusUpdateRequest` document is used to send a broadcast message to all integrated suppliers. Here is the syntax:

```
<StatusUpdateRequest>
  <Status code="211" text="OK">Your message here</Status>
</StatusUpdateRequest>
```

To receive broadcast messages, suppliers must check **Send a notification when a Broadcast Status Update Request is received** on the **Account Settings > Settings > Notifications** page and enter an email address.

#### ⓘ Note

Suppliers receive the broadcast message through email, not in the SAP Business Network user interface.

# Order Confirmations and Ship Notices

Suppliers can update purchase order status either manually through their SAP Business Network accounts or by submitting cXML documents to SAP Business Network. cXML `ConfirmationRequest` and `ShipNoticeRequest` documents enable suppliers to programmatically inform buying organizations of status changes to purchase orders through SAP Business Network.

These transactions provide a more detailed item level confirmation and ship notification than the simple acknowledgement of orders provided by `StatusUpdateRequest`.

[Visibility of Order Status \[page 216\]](#)

[SAP Business Network Account Configuration \[page 217\]](#)

[Ariba Buyer 8.1 and Later Transaction Flow \[page 218\]](#)

[ConfirmationRequest Element \[page 218\]](#)

[Implementation Hints and Restrictions for ConfirmationRequest Documents \[page 224\]](#)

[OrderStatusRequest Documents \[page 233\]](#)

[ShipNoticeRequest Documents \[page 235\]](#)

# Visibility of Order Status

Buying organizations, requisitioners, and suppliers can view order status.

## Visibility of Order Status for Buying Organizations

Authorized procurement personnel within buying organizations can sign in to SAP Business Network and view order status.

## Visibility of Order Status for Requisitioners

Requisitioners (end users) have access through their procurement application to order status.

The order status location viewed by requisitioners depends on the procurement application:

Application	Order Status Location
Ariba Buyer 7.04 through 8.0	Order status is stored only on SAP Business Network, not within Ariba Buyer. Requisitioners view order status by automatically performing order status PunchOut to SAP Business Network.
Ariba Buyer 8.1 and later	Order status can optionally be downloaded periodically by Ariba Buyer from SAP Business Network. Requisitioners view order status within Ariba Buyer.

# Visibility of Order Status for Suppliers

Authorized order-management personnel within supplier organizations can log in to SAP Business Network and view order status.

## SAP Business Network Account Configuration

Both buying organizations and suppliers perform configuration to enable order status updates.

### Buying Organizations Account Configuration

Ariba Buyer 8.1 or later can download `ConfirmationRequest` and `ShipNoticeRequest` documents. Buying organizations must first contact SAP Business Network Support to have their accounts enabled to download these document types.

### Suppliers Account Configuration

Before sending `ConfirmationRequest` or `ShipNoticeRequest` documents, suppliers must first configure their SAP Business Network accounts to set their preferred method of routing Order Response Documents. Suppliers can set order status and shipping information either manually or automatically.

To set programmatic order status updates:

1. Log into the SAP Business Network as a supplier.
2. Click the  **Account Settings** icon, and choose **Settings** > **Electronic Order Routing**.
3. On the **Electronic Order Routing** tab, find the **Other Document Types** section.
4. For **Order Response Documents**, select **cXML**.
5. Click **Save**.

#### Note

Suppliers determine the URL for posting `ConfirmationRequest` and `ShipNoticeRequest` documents by using the Profile transaction. For more information, see [Profile Transaction \[page 66\]](#).

These suppliers can still manually update order status by temporarily changing the routing of **Order Response Documents** from cXML to Online. However, after a purchase order has been updated manually, it cannot subsequently be updated through cXML.

Suppliers must also configure their backend system to only use the SAP Business Network ANID of their customer in the `To Credentials` while sending `ConfirmationRequest` or `ShipNoticeRequest` documents.

Additionally, they must ensure that they do not use the following in the `To Credentials` while sending an order confirmation or ship notice through cXML:

- The Network ID (ANID) of your supplier account
- The Network ID (ANID) of SAP Business Network - AN01000000001

## Ariba Buyer 8.1 and Later Transaction Flow

This application can optionally download order confirmations and ship notices using the `GetPending` transaction. It sends a status update to SAP Business Network, which forwards it to the supplier.

The process is as follows.

1. The supplier sends a `ConfirmationRequest` or `ShipNoticeRequest`. If the document is valid, SAP Business Network responds with status code 201/Accepted in the `Response`.
2. Some time later, Ariba Buyer uses the `GetPending` transaction to download the `ConfirmationRequest` or `ShipNoticeRequest`.
3. If the document content passes the buying organization's internal processing, Ariba Buyer sends a `StatusUpdateRequest` to SAP Business Network with status code 200/OK. SAP Business Network responds with a status code 200/OK in the `Response`.
4. If the supplier's cXML profile indicates the supplier supports `StatusUpdateRequest`, SAP Business Network forwards the `StatusUpdateRequest` to the supplier. The supplier responds with status code 200/OK in the `Response`.

For the credential values for order confirmations and ship notices, see [Required Credentials \[page 42\]](#).

### ConfirmationRequest **Element**

`ConfirmationRequest` documents provide detailed status updates of `OrderRequest` documents.

Suppliers can send multiple `ConfirmationRequest` documents for an order, and each `ConfirmationRequest` refers to one, not multiple, `OrderRequest` documents. In the procurement application, requisitioners can view the status of ordered items. The complete order and status history is visible to both the buying organization and the supplier.

#### Note

The `ConfirmationRequest` document notifies a customer that the supplier might or might not change the customer's purchase order. It does not imply that these changes are acceptable to the customer or that the order can automatically be fulfilled in accordance with such changes by the supplier. How buying organizations interpret `ConfirmationRequest` documents depends on business processes that exist outside of the procurement application and SAP Business Network.

`ConfirmationRequest` documents contains three elements: `ConfirmationHeader`, `OrderReference`, and an optional `ConfirmationItem` (included only if `type="detail"` or `"except"`).

## Example

The following ConfirmationRequest illustrates using the purchase order number with the payloadID.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/Fulfill.dtd">
<cXML payloadID="March222001_1154am" timestamp="2001-03-22 11:55:38 -0700">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN0100001234</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000006789</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN0100001234</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Ecommerce Supplier</UserAgent>
    </Sender>
  </Header>
  <Request>
    <ConfirmationRequest>
      <ConfirmationHeader operation="new" confirmID="1234" type="accept"
        noticeDate="2001-02-28T10:07:00-08:00">
        <Total>
          <Money currency="USD">139.95</Money>
        </Total>
        <Shipping>
          <Money currency="USD">5.00</Money>
          <Description xml:lang="en-US">FedEx 2-day</Description>
        </Shipping>
        <Tax>
          <Money currency="USD">12.45</Money>
          <Description xml:lang="en-US">CA State Tax</Description>
        </Tax>
        <Comments>Header Comments</Comments>
      </ConfirmationHeader>
      <OrderReference orderID="PC066">
        <DocumentReference
          payloadID="985274930687.1374859706.109.7733@zimbuyer.com">
        </DocumentReference>
      </OrderReference>
      <ConfirmationItem lineNumber="1" quantity="1">
        <UnitOfMeasure>EA</UnitOfMeasure>
        <ConfirmationStatus quantity="1" type="accept"
          shipmentDate="2001-03-30T08:39:29-08:00">
          <UnitOfMeasure>EA</UnitOfMeasure>
          <Comments>Order has been accepted. Will ship ASAP</Comments>
        </ConfirmationStatus>
      </ConfirmationItem>
    </ConfirmationRequest>
  </Request>
</cXML>
```

[ConfirmationHeader Element \[page 220\]](#)

[OrderReference Element \[page 221\]](#)

[ConfirmationItem Element \[page 222\]](#)

ConfirmationHeader **Element**

The ConfirmationHeader element describes the type and operation of the confirmation request.

ConfirmationHeader has the following attributes and elements:

Attribute	Description
confirmID	Any internal number used by the supplier.
type	<p>Confirmation request type for transaction. Can be: <code>accept</code>, <code>reject</code>, <code>except</code>, <code>detail</code>, <code>backordered</code>, <code>requestToPay</code>, or <code>replace</code>.</p> <ul style="list-style-type: none"> <li><code>type="accept"</code>, <code>reject</code>, and <code>except</code> can be applied to the entire purchase order. Multiple confirmations sent for a purchase order can reference a line item only one time, but can contain multiple statuses for that line item. Multiple confirmations are acceptable only if <code>type="accept"</code>, <code>except</code>, or <code>reject</code>.</li> <li><code>type="detail"</code> updates portions of a purchase order, such as prices, quantities, delivery dates, reject portions, tax, and shipping information. Multiple ConfirmationRequest documents of this type can refer to a single purchase order, but cannot refer to common line items. At least one of the following elements <code>UnitPrice</code>, <code>Shipping</code>, <code>Tax</code>, <code>ItemIn</code> (item substitution), <code>DeliveryDate</code>, or <code>Contact</code> must be present.</li> <li><code>type="backordered"</code> sets the entire order to backordered status. The supplier does not have the items in stock, but will ship them when they are available.</li> <li><code>type="replace"</code> replaces all items in the purchase order with new items. ConfirmationItem elements must contain ConfirmationStatus elements only of type <code>detail</code> and must include an <code>ItemIn</code> element. The procurement application should cancel and replace the original purchase order or generate a change purchase order that contains these new line items.</li> <li><code>type="allDetail"</code> is required when the entitlement <b>Enhanced order confirmation integration capabilities for online and integrated suppliers</b> is enabled. The entitlement also requires that the confirmation contains ConfirmationItem elements with line item information from the order.</li> </ul>
operation	<p>Specifies whether the document is new or an update. Can be <code>"new"</code> or <code>"update"</code>.</p> <ul style="list-style-type: none"> <li><code>operation="new"</code> sets initial status of items or entire orders.</li> <li><code>operation="update"</code> revises item or order status set by previously sent order confirmations. Updates are not cumulative; each one must list all quantities of a line item (each document replaces the previous one). SAP Business Network rejects updates that do not list all line items previously updated in the order confirmation referenced in the <code>DocumentReference</code> element. It also rejects updates that add items which have been mentioned in another ConfirmationRequest.</li> </ul>
noticeDate	For <code>operation="update"</code> , use <code>noticeDate</code> to specify the date of the update (not the original confirmation time).

Attribute	Description
Total	Total dollar value of all line items in the transaction.  The Total element also contains the Modifications element which stores any modification to the original price or shipping price of the item. This element can store a set of one or more Modification elements.  The Modification element contains details of the allowances and charges applicable at the header-level. For more information, see <a href="#">Modifications Element [page 151]</a> .
Shipping	Total shipping charge.
Tax	Total tax.

All values should match the OrderRequest document unless ConfirmationItem updates unit price or quantity.

The type and operation attributes in ConfirmationHeader determine the purpose of the document.

Optional display-only elements allowed in ConfirmationHeader include:

- Total
- Shipping
- Tax
- Contact
- Comments
- Hazard

## OrderReference Element

The OrderReference element refers to either the original purchase order or a previous confirmation request.

OrderReference has the following attributes:

Attribute	Description
orderID	(Optional) The purchase order number assigned by Ariba Buyer.
orderDate	(Optional) Date the purchase order was sent by the buying organization.
DocumentReference	Exists at the header level if the ConfirmationRequest is the initial response to an OrderRequest and also at the line item level if the ConfirmationHeader operation="update".  For operation="new", the DocumentReference at the header level must refer to the purchase order. For operation="update" or "delete", the DocumentReference at the header level must refer to the previous ConfirmationRequest.

## ConfirmationItem Element

The `ConfirmationItem` element indicates the line item number of the item in the `OrderRequest` document.

### Note

`ConfirmationItem` is required when the entitlement **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled. This entitlement also requires that the `ConfirmationHead` element has the `type` attribute set to `allDetail`.

`ConfirmationItem` has the following attributes:

Attribute	Description
<code>lineNumber</code>	Reference line item number from the <code>OrderRequest</code> document.
<code>quantity</code>	Either original quantity if going to confirm in full or updated quantity with type set appropriately.
<code>Comments</code>	Additional information about the status of the overall order, or the portion described in this confirmation, such as payment terms, additional details on shipping terms and clarification of the status. Valid terms for status information include <code>shipped</code> and <code>invalid</code> .

## ConfirmationStatus Element

The `ConfirmationStatus` element indicates the action taken by a supplier for a specific line item.

`ConfirmationStatus` has the following attributes:

Attribute	Description
<code>quantity</code>	Sum must match the quantity in the <code>ConfirmationItem</code> .
<code>type</code>	Action taken by supplier for line item number identified. Can be: <code>accept</code> , <code>allDetail</code> , <code>detail</code> , <code>reject</code> , <code>backordered</code> , <code>requestToPay</code> , or <code>unknown</code> . <ul style="list-style-type: none"><li><code>type="accept"</code> accepts particular line item.</li><li><code>type="allDetail"</code> accepts this portion of the line item as detailed in the contents of this <code>ConfirmationStatus</code> element. These contents completely describe what will be shipped. Unlike <code>type="detail"</code>, this type of confirmation includes all information known by the supplier, whether or not it differs from the data provided in the original <code>OrderRequest</code> document.</li><li><code>type="detail"</code> accepts portion of line item with the changes detailed in the <code>ConfirmationStatus</code> element. At least one of the <code>UnitPrice</code>, <code>Shipping</code>, <code>Tax</code>, or <code>ItemIn</code> elements, or the <code>deliveryDate</code> attribute must be present.</li><li><code>type="reject"</code> rejects this portion of the line item.</li><li><code>type="backordered"</code> sets this portion of the line item to backordered status. The supplier does not have the items in stock, but will ship them when they are available.</li><li><code>type="unknown"</code> resets the status to the default state. The item status displays on SAP Business Network as if no confirmations had been sent.</li></ul>
<code>shipmentDate</code>	Date and time this shipment is expected to leave the supplier. Required if type is <code>accept</code> , <code>allDetail</code> , <code>detail</code> , or <code>backordered</code> .

Attribute	Description
deliveryDate	<p>Date and time this shipment is expected to arrive. Required if type is accept, allDetail, detail, or backordered.</p> <p>Do not include if its value matches requestedDeliveryDate (if any) in the purchase order.</p> <p>Displayed as "Est. Delivery Date" within SAP Business Network.</p>

UnitPrice and Tax are forbidden if ConfirmationStatus type="unknown".

If the purchase order or blanket purchase order has quantity-based pricing for a line item, the ConfirmationStatus element contains the [PriceBasisQuantity element \[page 171\]](#).

In earlier releases of SAP Business Network, suppliers could set backordered status only by setting type="unknown" and including a Comments element containing the text "backordered". This method of setting backordered status is no longer supported.

The ConfirmationStatus element also contains the following elements:

- [Modifications element \[page 151\]](#): The Modification element contains details of the allowances and charges applicable at the line-item level.
- SupplierBatchID: This element stores the batch ID provided by the supplier at the line item quantity level to identify the batch in which the item or the product was produced.

## Example

```
<ConfirmationItem quantity = "3" lineNumber = "1">
  <UnitOfMeasure>DZ</UnitOfMeasure>
  <ConfirmationStatus type = "unknown" quantity = "1">
    <UnitOfMeasure>DZ</UnitOfMeasure>
  </ConfirmationStatus>
  <ConfirmationStatus type = "accept" quantity = "2">
    <UnitOfMeasure>DZ</UnitOfMeasure>
    <UnitPrice>
      <Money currency = "USD">47</Money>
      <Modifications>
        <Modification>
          <OriginalPrice>
            <Money currency = "USD">45.00</Money>
          </OriginalPrice>
          <AdditionalDeduction>
            <DeductionAmount>
              <Money currency = "USD">5.00</Money>
            </DeductionAmount>
          </AdditionalDeduction>
          <ModificationDetail name = "Allowance"
            startDate = "2012-11-19T10:15:00-08:00"
            endDate = "2013-11-30T10:15:00-08:00">
            <Description xml:lang = "en-US">Contract
              Allowance</Description>
            </ModificationDetail>
          </Modification>
        </Modifications>
      </UnitPrice>
      <Tax>
        <Money currency = "USD">7.0</Money>
      </Tax>
    </ConfirmationStatus>
  </ConfirmationItem>
```

```

    <Description xml:lang = "en">Tax</Description>
    <TaxDetail category = "Other">
      <TaxAmount>
        <Money currency = "USD">5.0</Money>
      </TaxAmount>
    </TaxDetail>
    <TaxDetail category = "QST">
      <TaxAmount>
        <Money currency = "USD">2.0</Money>
      </TaxAmount>
    </TaxDetail>
  </Tax>
</ConfirmationStatus>
</ConfirmationItem>

```

## Implementation Hints and Restrictions for ConfirmationRequest Documents

When working with `ConfirmationRequest` documents, be aware of possible item substitutions, how confirmations orders for cancel and change orders are handled, and how order confirmations are updated.

## Item Substitutions in ConfirmationRequest Documents

SAP Business Network allows suppliers to send `ConfirmationRequest` documents that substitute ordered items. cXML enables item substitutions by allowing `ItemIn` elements within `ConfirmationStatus` elements.

SAP Business Network displays only Supplier Part ID, Unit Price, Shipping, and Tax information online. Additional information that might be in `ConfirmationRequest` documents, such as Supplier Part Auxiliary ID, Manufacturer Part ID, Description, and Comments do not display.

## Confirmations and Service Orders

`ConfirmationRequest` documents have the following limitations for service orders that require a service sheet:

- Only top-level items from the order can be included in the `ConfirmationRequest`. Otherwise, the document will be rejected.
- The `type` attribute of `ConfirmationHeader` must have one of the following values:
  - `accept` - accepts the order.
  - `reject` - rejects the order.
  - `detail` - updates portions of a purchase order, such as prices, quantities, delivery dates, reject portions, tax, and shipping information.
- If the `ConfirmationHeader` element has `type="detail"`, `ConfirmationItem` and `ConfirmationStatus` elements are included.
  - If the `ConfirmationItem` is for an outline item, the `type` attribute of the `ConfirmationStatus` element must have one of the following values:

- **accept** - accepts this portion of the line item.
- **reject** - rejects this portion of the line item.
- **unknown** - allows an associated `OrderStatusRequest` (an order inquiry) to add a comment about an outline item.
- If the `ConfirmationItem` is a top-level service item or material item, the `type` attribute of the `ConfirmationStatus` element works as it did before. It must have one of the following values:
  - **accept** - accepts this portion of the line item.
  - **detail** - accepts a portion of the line item with the changes detailed in the `ConfirmationStatus` element. At least one of the `UnitPrice`, `Shipping`, `Shipping`, `Tax`, or `ItemIn` elements, or the `deliveryDate` must be present.
  - **reject** - rejects this portion of the line item.
  - **backordered** - sets this portion of the line item to backordered status. The supplier does not have the items in stock, but will ship them when they are available.
  - **unknown** - resets the status to the default status. The item status displays on SAP Business Network as if no confirmation had been sent.

### Note

If the `type` attribute for `ConfirmationHeader` or `ConfirmationStatus` is an unsupported value, the document is rejected.

## Example

The following `ConfirmationRequest` accepts one top-level outline item from the order and rejects another.

```
<ConfirmationRequest>
  <ConfirmationHeader noticeDate="2015-05-04T10:55:32-07:00" type="detail"
    operation="new" confirmID="OC-4500018889">
    <Tax>
      <Money currency="USD">50.00</Money>
      <Description xml:lang="en-US"></Description>
    </Tax>
  </ConfirmationHeader>
  <OrderReference orderDate="2015-05-04T16:43:18-07:00" orderID="4500018889">
    <DocumentReference payloadID="cat0504-4500018889"></DocumentReference>
  </OrderReference>
  <ConfirmationItem itemType="composite" quantity="1" lineNumber="1">
    <UnitOfMeasure>SU</UnitOfMeasure>
    <ConfirmationStatus type="accept" quantity="1">
      <UnitOfMeasure>SU</UnitOfMeasure>
    </ConfirmationStatus>
  </ConfirmationItem>
  <ConfirmationItem itemType="composite" quantity="1" lineNumber="2">
    <UnitOfMeasure>SU</UnitOfMeasure>
    <ConfirmationStatus type="reject" quantity="1">
      <UnitOfMeasure>SU</UnitOfMeasure>
    </ConfirmationStatus>
  </ConfirmationItem>
</ConfirmationRequest>
```

## Confirmations and Cancel Orders

Suppliers must understand how SAP Business Network processes order confirmations for canceled orders.

- SAP Business Network rejects `ConfirmationRequest` documents for canceled purchase orders.
- SAP Business Network allows no updates to `ConfirmationRequest` documents that were received prior to purchase order cancellation.
- Suppliers cannot send `ConfirmationRequest` documents to acknowledge order cancellations.

## Confirmations and Change Orders

Suppliers must understand how SAP Business Network processes order confirmations for change orders.

- SAP Business Network does not allow suppliers to reject original orders after it receives changed orders.
- By default, SAP Business Network persists `ConfirmationRequest` documents that are posted before the change order is posted, but does not automatically transfer or link the `ConfirmationRequest` to the new change order. Buyers can automatically transfer or link the `ConfirmationRequest` to the new change order by enabling the SAP Business Network business rule **Retain confirmation status of unchanged line items on change orders**.
- A change order appears in a supplier's inboxes as a separate order, with a version indicator (for example -V2). `ConfirmationRequest` documents should refer to the change order's `DocumentReference`. SAP Business Network sets the status of the original order to "Obsoleted."
- Suppliers cannot reject the "changing" of original orders, but they can reject, accept, or change the items in the new order.
- Buyers can configure their account to retain order confirmation information on changed purchase orders with the rule **Retain confirmation status of unchanged line items on change orders**.  
If the buyer enables the retention of confirmed order information on change orders, order confirmations for changed purchase orders generate a `ConfirmationRequest` document with the value "update" for the `operation` attribute and the same `confirmID` attribute as the first order confirmation. The `ConfirmationHeader` includes a `DocumentReference` element that contains the `payloadID` of the previous order confirmation. This allows the buyer's external ERP system to update purchase order and order confirmation information rather than generating a second set of data.

## Order Confirmation Updates

Suppliers can update previously set order status by sending additional `ConfirmationRequest` documents.

To set initial status of line items, use `operation="new"`. To revise line items, use `operation="update"` and list all other line items.

Each `ConfirmationRequest` document replaces the previous version of that document. In other words, the previous document version is discarded; `ConfirmationRequest` documents are not cumulative. Each updated document must list all line items that appeared in the previous version.

Subsequent `ConfirmationRequest` documents must use new `payloadID` and `NoticeDate` attributes, but use the same `confirmID` attribute as the first order confirmation. These documents can have one or two `DocumentReference` elements:

- If `operation="new"`, reference the purchase order with a `DocumentReference` element at the line item level.
- If `operation="update"`, reference the previous `ConfirmationRequest` with a `DocumentReference` at the header level and the purchase order with a `DocumentReference` element at the header level.

SAP Business Network uses the value in the `payloadID` or the `orderID` and `orderDate` attribute to match order confirmation and purchase order documents.

If the `ConfirmationRequest` document contain only the `payloadID`, SAP Business Network uses only the `payloadID` to match documents. When the `ConfirmationRequest` document contains the `payloadID`, `orderID` and `orderDate`, SAP Business Network uses the value in the `orderID` and `orderDate` attributes to match documents.

When SAP Business Network uses the `orderID` and `orderDate`, the timestamp in the `orderDate` must exactly match the date and time in the purchase order, else the `ConfirmationRequest` document will fail.

### Note

As a best practice, SAP Ariba recommends buying organizations that reuse the purchase order number to send the `ConfirmationRequest` document with the `payloadID` or `orderID` and `orderDate`.

- For order confirmation, SAP Ariba Cloud Integration Gateway does not require the reference `payloadID`, but the cXML envelope for `payloadID` is required. For example, the supplier only needs to send `<OrderReference orderID="1234567890">` and leave the `payloadID` blank, `<DocumentReference payloadID="" />`.

## Sending Additional Line-Item Information with Order Confirmations

An entitlement automatically adds line-item information to submitted order confirmations.

If buyers ask SAP Ariba Support to enable one of the following entitlements, order confirmations are created or submitted with additional line-item information.

### Note

Only one of these entitlements can be enabled.

Entitlement	Supported Order-Confirmation Methods
Enhanced order confirmation integration capabilities	<ul style="list-style-type: none"> <li>Creation in SAP Business Network</li> <li>Upload in Excel file</li> <li>Upload in CSV file</li> </ul>

### Note

This entitlement does not add line-item information to order confirmations created by integrated suppliers.

Entitlement	Supported Order-Confirmation Methods
<b>Enhanced order confirmation integration capabilities for hosted and integrated suppliers</b>	Creation in SAP Business Network Creation by integrated suppliers Upload in Excel file Upload in CSV file

When the entitlement **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled and an integrated supplier sends an order confirmation without all required line-item information, this entitlement automatically takes the following corrective action:

1. Create a copy of the confirmation with `allDetail` at the header level.
2. Populate the copy with the missing data, which is retrieved from the corresponding purchase order.
3. Deliver the enriched cXML document to the buyer system, in place of the original document created by the integrated supplier.

This process ensures that the submitted order confirmation isn't blocked because of incomplete line-item details.

## Entire Order Confirmed Without Shipping or Delivery Dates

Entitlement Setting	Order-Confirmation Information Sent	Order-Confirmation Type Values
Disabled	Only header information.	<code>ConfirmationHeader.type = "accept"</code>
Enabled	Line-item information from the order.	<code>ConfirmationHeader.type = "allDetail"</code>  <code>ConfirmationItem.ConfirmationStatus.type = "accept"</code>

The following example shows an entire order confirmation confirmed without shipping or delivery dates when **Enhanced order confirmation integration capabilities** or **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled:

```
<ConfirmationRequest>
  <ConfirmationHeader operation="new" confirmID="1234" type="allDetail"
    noticeDate="2017-02-28T10:07:00-08:00">
    ...
  </ConfirmationHeader>
  <OrderReference orderDate="2017-02-08T10:07:00-08:00" orderID="PC066">
    <DocumentReference
      payloadID="payload20170520-05">
    </DocumentReference>
  </OrderReference>
  <ConfirmationItem lineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ConfirmationStatus deliveryDate="2017-05-20T08:39:29-08:00" type="accept"
      quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ItemIn lineNumber="1" quantity="10">
      <ItemID>
        <SupplierPartID>160INSTLL</SupplierPartID>
        <BuyerPartID>C-160INSTLL</BuyerPartID>
      </ItemID>
    <ItemDetail>
```

```

    <UnitPrice>
      <Money currency="USD">21</Money>
    </UnitPrice>
    <Description xml:lang="en-US">N160INSTLL</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
  </ItemDetail>
</ItemIn>
</ConfirmationStatus>
</ConfirmationItem>
</ConfirmationRequest>

```

## Entire Order Confirmed with Shipping and Delivery Dates

Entitlement Setting	Order-Confirmation Information Sent	Order-Confirmation Type Values
Disabled	Only basic information (line number, confirmation type, confirmed quantity, and unit of measure) plus estimated shipping or delivery dates; the <code>ItemIn</code> element is not included.	<code>ConfirmationHeader.type = "accept"</code>
Enabled	Line-item information from the order (includes the <code>ItemIn</code> element).	<code>ConfirmationHeader.type = "allDetail"</code> <code>ConfirmationItem.ConfirmationStatus.type = "accept"</code>

The following example shows an entire order confirmation confirmed with shipping and delivery dates when **Enhanced order confirmation integration capabilities** or **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled:

```

<ConfirmationRequest>
  <ConfirmationHeader operation="new" confirmID="1234" type="allDetail"
    noticeDate="2017-02-28T10:07:00-08:00">
    ...
  </ConfirmationHeader>
  <OrderReference orderDate="2017-02-08T10:07:00-08:00" orderID="PC066">
    <DocumentReference payloadID="payload20170520-05">
    </DocumentReference>
  </OrderReference>
  <ConfirmationItem lineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ConfirmationStatus deliveryDate="2017-05-24T08:39:29-08:00"
      shippingDate="2017-05-23T08:39:29-08:00" type="accept"
      quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ItemIn lineNumber="1" quantity="10">
      <ItemID>
        <SupplierPartID>160INSTLL</SupplierPartID>
        <BuyerPartID>C-160INSTLL</BuyerPartID>
      </ItemID>
      <ItemDetail>
        <UnitPrice>
          <Money currency="USD">21</Money>
        </UnitPrice>
        <Description xml:lang="en-US">N160INSTLL</Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
      </ItemDetail>
    </ItemIn>
  </ConfirmationItem>
</ConfirmationRequest>

```

```

    </ItemIn>
  </ConfirmationStatus>
</ConfirmationItem>
</ConfirmationRequest>

```

## Entire Order Rejected

Entitlement Setting	Order-Confirmation Information Sent	Order-Confirmation Type Values
Disabled	Only header information.	ConfirmationHeader.type = "reject"
Enabled	Line-item information from the order.	ConfirmationHeader.type = "allDetail" ConfirmationItem.ConfirmationStatus.type = "reject"

The following example shows an order confirmation that rejects an entire order when **Enhanced order confirmation integration capabilities** or **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled:

```

<ConfirmationRequest>
  <ConfirmationHeader operation="new" confirmID="1234" type="allDetail"
    noticeDate="2017-02-28T10:07:00-08:00">
    ...
  </ConfirmationHeader>
  <OrderReference orderDate="2017-02-08T10:07:00-08:00" orderID="PC066">
    <DocumentReference payloadID="payload20170520-05">
    </DocumentReference>
  </OrderReference>
  <ConfirmationItem lineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ConfirmationStatus deliveryDate="2017-05-24T08:39:29-08:00"
      shippingDate="2017-05-23T08:39:29-08:00" type="reject"
      quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ItemIn lineNumber="1" quantity="10">
      <ItemID>
        <SupplierPartID>160INSTLL</SupplierPartID>
        <BuyerPartID>C-160INSTLL</BuyerPartID>
      </ItemID>
      <ItemDetail>
        <UnitPrice>
          <Money currency="USD">21</Money>
        </UnitPrice>
        <Description xml:lang="en-US">N160INSTLL</Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
      </ItemDetail>
    </ItemIn>
  </ConfirmationStatus>
</ConfirmationItem>
</ConfirmationRequest>

```

## Order Confirmed by Updating Line Items: Confirmed As-Is, Backordered, or Rejected

Entitlement Setting	Order-Confirmation Information Sent	Order-Confirmation Type Values
Disabled	Only basic information (line number, confirmation type, confirmed quantity, and unit of measure); the ItemIn element is not included.	ConfirmationHeader.type = "detail" ConfirmationItem.ConfirmationStatus.type = "accept" ConfirmationItem.ConfirmationStatus.type = "reject" ConfirmationItem.ConfirmationStatus.type = "backordered" ConfirmationItem.ConfirmationStatus.type = "unknown"
Enabled	Line-item information from the order (includes the ItemIn element), except for items with confirmation status type unknown.	ConfirmationHeader.type = "allDetail" ConfirmationItem.ConfirmationStatus.type = "accept" ConfirmationItem.ConfirmationStatus.type = "reject" ConfirmationItem.ConfirmationStatus.type = "backordered" ConfirmationItem.ConfirmationStatus.type = "unknown"

The following example shows an order confirmation that backorders an item when **Enhanced order confirmation integration capabilities** or **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled:

```
<ConfirmationRequest>
  <ConfirmationHeader operation="new" confirmID="1234" type="allDetail"
    noticeDate="2017-02-28T10:07:00-08:00">
    ...
  </ConfirmationHeader>
  <OrderReference orderDate="2017-02-08T10:07:00-08:00" orderID="PC066">
    <DocumentReference payloadID="payload20170520-05">
    </DocumentReference>
  </OrderReference>
  <ConfirmationItem lineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ConfirmationStatus deliveryDate="2017-05-24T08:39:29-08:00"
      shippingDate="2017-05-23T08:39:29-08:00" type="backordered"
      quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ItemIn lineNumber="1" quantity="10">
      <ItemID>
        <SupplierPartID>160INSTLL</SupplierPartID>
        <BuyerPartID>C-160INSTLL</BuyerPartID>
      </ItemID>
      <ItemDetail>
        <UnitPrice>
```

```

    <Money currency="USD">21</Money>
  </UnitPrice>
  <Description xml:lang="en-US">N160INSTLL</Description>
  <UnitOfMeasure>EA</UnitOfMeasure>
</ItemDetail>
</ItemIn>
</ConfirmationStatus>
</ConfirmationItem>
</ConfirmationRequest>

```

## Order Confirmed by Updating Line Items: Confirmed with Changes

Entitlement Setting	Order-Confirmation Information Sent	Order-Confirmation Type Values
Disabled	Only cXML elements that contain fields the supplier changed in the order confirmation (the ItemIn element is included only if needed to contain a changed value).	ConfirmationHeader.type = "detail" ConfirmationItem.ConfirmationStatus.type = "detail"
Enabled	Line-item information from the order.	ConfirmationHeader.type = "allDetail" ConfirmationItem.ConfirmationStatus.type = "allDetail" ConfirmationItem.ConfirmationStatus.type = "unknown"

The following example shows an order confirmation that confirms an item with changes when **Enhanced order confirmation integration capabilities** or **Enhanced order confirmation integration capabilities for hosted and integrated suppliers** is enabled:

```

<ConfirmationRequest>
  <ConfirmationHeader operation="new" confirmID="1234" type="allDetail"
    noticeDate="2017-02-28T10:07:00-08:00">
    ...
  </ConfirmationHeader>
  <OrderReference orderDate="2017-02-08T10:07:00-08:00" orderID="PCO66">
    <DocumentReference payloadID="payload20170520-05">
    </DocumentReference>
  </OrderReference>
  <ConfirmationItem lineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ConfirmationStatus deliveryDate="2017-05-24T08:39:29-08:00"
      shippingDate="2017-05-23T08:39:29-08:00" type="allDetail"
      quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <ItemIn lineNumber="1" quantity="10">
      <ItemID>
        <SupplierPartID>160INSTLL</SupplierPartID>
        <BuyerPartID>C-160INSTLL</BuyerPartID>
      </ItemID>
      <ItemDetail>
        <UnitPrice>
          <Money currency="USD">21</Money>
        </UnitPrice>

```

```

        <Description xml:lang="en-US">N160INSTLL</Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
    </ItemDetail>
</ItemIn>
</ConfirmationStatus>
</ConfirmationItem>
</ConfirmationRequest>

```

## OrderStatusRequest Documents

Buyers use the OrderStatusRequest document to ask suppliers for status reports on orders not yet fulfilled. Buyers can request information from suppliers on the status of the order, delivery date, current location of the shipped items, or any other related information regarding purchase orders previously sent by them.

### Example

```

<OrderStatusRequestHeader orderStatusRequestID="order02_08.20"

orderStatusRequestDate="2013-02-06T16:09:26-08:00">
<OrderReference orderID="order02_08.20" orderDate="2013-02-06T16:09:26-08:00">
    <DocumentReference payloadID="order02_08.20@cvbuyer.com"/>
</OrderReference>
<Contact role="soldTo" addressID='AA20'>
    <Name xml:lang="en">Lisa Dollar</Name>
    <PostalAddress name='default'>
        <DeliverTo>Lisa Dollar</DeliverTo>
        <Street>100 Castro Street</Street>
        <City>Mountain View</City>
        <State>CA</State>
        <PostalCode>95035</PostalCode>
        <Country isoCountryCode="US">United States</Country>
        <Extrinsic name="POBox"></Extrinsic>
        <Extrinsic name="houseNumber"></Extrinsic>
        <Extrinsic name="building"></Extrinsic>
    </PostalAddress>
    <Email name='default'>ldollar@workchairs.com</Email>
    <Phone name='work'>
        <TelephoneNumber>
            <CountryCode isoCountryCode="US">1</CountryCode>
            <AreaOrCityCode>650</AreaOrCityCode>
            <Number>9990000</Number>
        </TelephoneNumber>
    </Phone>
</Contact>
<Contact role='from' addressID='0030105956'>
    <Name xml:lang="en">Lisa Dollar</Name>
    <PostalAddressname='default'>
        <DeliverTo>Lisa Dollar</DeliverTo>
        <Street>100 Castro Street</Street>
        <City>Mountain View</City>
        <State>CA</State>
        <PostalCode>95035</PostalCode>
        <Country isoCountryCode='US'>United States</Country>
    </PostalAddress>
    <Email name='default'>ldollar@workchairs.com</Email>
    <Phone name='work'>

```

```
<TelephoneNumber>
  <CountryCode isoCountryCode='US'>1</CountryCode>
  <AreaOrCityCode>650</AreaOrCityCode>
  <Number>9990000</Number>
</TelephoneNumber>
</Phone>
</Contact>
<Comments>Is there any news about our order?</Comments>
</OrderStatusRequestHeader>
```

[OrderStatusRequestHeader Element \[page 234\]](#)

[OrderStatusRequestItem Element \[page 234\]](#)

## OrderStatusRequestHeader **Element**

The `OrderStatusRequestHeader` element contains header-level information for the `OrderStatusRequest` document. It contains the reference information for the `OrderStatusRequestID` and `OrderStatusRequestDate` sent by the buyer.

This element has the following elements:

- `OrderReference` or `OrderIDInfo`
- `Contact`
- `Comments`
- `Extrinsic`

The `OrderStatusRequestHeader` element has the following attributes:

- `orderStatusRequestID`
- `orderStatusRequestDate`

## OrderStatusRequestItem **Element**

The `OrderStatusRequestItem` element stores information regarding a specific line item.

`OrderStatusRequestItem` has the following elements:

- `ItemReference`
- `Comments`

The `ItemReference` element contains the mandatory `lineNumber` attribute.

The `ConfirmationRequest` can include the `OrderStatusRequestReference` and `OrderStatusRequestID` as optional elements to explicitly reference the `OrderStatusRequest` associated to the `ConfirmationRequest`.

## Example

The following example shows an `OrderStatusRequestItem` element:

```
<OrderStatusRequestItem>
  <ItemReference lineNumber''10'>
    <ItemID>
      <SupplierPartID>1023</SupplierPartID>
    </ItemID>
  </ItemReference>
  <Comments>We did not receive the requested quantity.</Comments>
</OrderStatusRequestItem>
```

## ShipNoticeRequest Documents

Suppliers can set the shipping status of purchase order line items by sending cXML `ShipNoticeRequest` documents.

`ShipNoticeRequest` documents are advance ship notices that provide detailed shipping information for items in purchase orders. Suppliers can send these documents before or after shipping items. SAP Business Network receives `ShipNoticeRequest` documents, validates them against the cXML DTDs, and applies the information in them to the affected line items.

## Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/Fulfill.dtd">
<cXML payloadID="1233444-2004@premier.supplier.com"
xml:lang="en-CA" timestamp="2001-10-14T08:39:29-08:00">
  <Header>
    <From>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000002792</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Ecommerce Supplier</UserAgent>
    </Sender>
  </Header>
  <Request>
    <ShipNoticeRequest>
      <ShipNoticeHeader shipmentType="planned" shipmentID="S89823-123"
operation="new" noticeDate="2001-10-14"
shipmentDate="2001-10-14T08:30:19-08:00">
```

```

deliveryDate="2001-10-18T09:00:00-08:00">
<Contact role="shipFrom">
  <Name xml:lang="en-CA">XYZ Warehouse Inc.</Name>
  <PostalAddress>
    <Street>9966 Mercury Liquid Center</Street>
    <City>Sunnyvale</City>
    <State>CA</State>
    <PostalCode>94086</PostalCode>
    <Country isoCountryCode="US">United States</Country>
  </PostalAddress>
  <Phone>
    <TelephoneNumber>
      <CountryCode isoCountryCode="CA">1</CountryCode>
      <AreaOrCityCode>800</AreaOrCityCode>
      <Number>5555555</Number>
    </TelephoneNumber>
  </Phone>
</Contact>
<Comments xml:lang="en-CA">Single shipment.</Comments>
<Comments type="ReasonForShipment" xml:lang="en-US">Low availability
  at warehouse</Comments>
<Comments type="TransitDirection" xml:lang="en-US">East</Comments>
<Comments xml:lang="en-US">As per the terms</Comments>
<TermsOfDelivery>
  <TermsOfDeliveryCode value="PriceCondition"/>
  <ShippingPaymentMethod value="AdvanceCollect"/>
  <TransportTerms value="Other">Contract Terms</TransportTerms>
  <Address>
    <Name xml:lang="en-US">SNV</Name>
    <PostalAddress name="default">
      <Street>123 Anystreet</Street>
      <City>Sunnyvale</City>
      <State>AL</State>
      <PostalCode>35762</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
  </Address>
  <Comments xml:lang="en-US" type="Transport">As per the
    contract</Comments>
  <Comments xml:lang="en-US" type="TermsOfDelivery">Delivery at
    the doorstep</Comments>
</Terms Of Delivery>
</ShipNoticeHeader>
<ShipControl>
  <CarrierIdentifier domain="SCAC">FDE</CarrierIdentifier>
  <CarrierIdentifier domain="companyName">FedEx</CarrierIdentifier>
  <ShipmentIdentifier>8202 8261 3294</ShipmentIdentifier>
</ShipControl>
<ShipNoticePortion>
  <OrderReference orderID="PC066">
    <DocumentReference
      payloadID="985274930687.1374859706.109.7733@zimbuyer.com">
    </DocumentReference>
  </OrderReference>
  <ShipNoticeItem quantity="1" lineNumber="1">
    <UnitOfMeasure>EA</UnitOfMeasure>
  </ShipNoticeItem>
</ShipNoticePortion>
</ShipNoticeRequest>
</Request>
</cXML>

```

[ShipNoticeRequest Implementation Hints and Restrictions \[page 237\]](#)

[Editing a Ship Notice Using cXML \[page 243\]](#)

[Canceling a Ship Notice Using cXML \[page 243\]](#)

## ShipNoticeRequest **Implementation Hints and Restrictions**

The elements and attributes of `ShipNoticeRequest` have various requirements and, in some cases, restrictions.

- [ShipNoticeRequest payloadID Attribute \[page 237\]](#)
- [DocumentReference payloadID Attribute \[page 237\]](#)
- [shipmentID Attribute \[page 238\]](#)
- [ServiceLevel Element \[page 238\]](#)
- [ShipControl Element \[page 238\]](#)
- [PackageIdentification Element \[page 240\]](#)
- [Packaging Element \[page 240\]](#)
- [ShipNoticeItem Element \[page 240\]](#)
- [shipNoticeLineNumber Attribute \[page 240\]](#)
- [TransportInformation Element \[page 240\]](#)
- [SupplierBatchID Element \[page 240\]](#)
- [TermsofDelivery Element \[page 241\]](#)
- [Ship Notices and Cancel and Change Orders \[page 241\]](#)
- [ShipNoticeHeader Extrinsic \[page 241\]](#)
- [Ship Notice Packaging Dimensions \[page 242\]](#)
- [Serial Numbers and Asset Tags in Ship Notices \[page 242\]](#)
- [ShipNoticeRequest Restrictions \[page 242\]](#)

### ShipNoticeRequest payloadID **Attribute**

The `payloadID` in the header of the `ShipNoticeRequest` must be unique.

Refer to the *cXML reference guide* at <http://www.cxml.org> for `payloadID` format.

### DocumentReference payloadID **Attribute**

Like the `ConfirmationRequest` transaction, the `DocumentReference` `payloadID` must match the `payloadID` of an `OrderRequest`. SAP Business Network uses the value in the `payloadID` or the `orderID` and `orderDate` attribute to match documents.

If the `ShipNoticeRequest` document contains only the `payloadID`, SAP Business Network uses only the `payloadID` to match documents. When the `ShipNoticeRequest` document contains the `payloadID`, `orderID` and `orderDate`, SAP Business Network uses the value in the `orderID` and `orderDate` attributes to match documents.

When the `orderID` and `orderDate` attribute is used to match documents, a tolerance of +1 or -1 day is considered for the `orderDate`.

#### Note

As a best practice, SAP Ariba recommends buying organizations that reuse the purchase order number to send the `ShipNoticeRequest` document with the `payloadID` or `orderID` and `orderDate`.

The `orderID` is an optional attribute.

#### Note

For ship notice request, SAP Ariba Cloud Integration Gateway does not require the reference `payloadID`, but the cXML envelope for `payloadID` is required. For example, the supplier only needs to send `<OrderID="1234567890">` and leave the `payloadID` blank, `<DocumentReference payloadID=" "/>`.

## shipmentID Attribute

The `shipmentID` attribute is required.

## ServiceLevel Element

The `ServiceLevel` element is optional. If you include it, one or more language-specific strings are required.

## ShipControl Element

The `ShipControl` element describes travel segments under control of a single carrier. It provides tracking information buying organizations can use to retrieve information about the shipment. The `Route` element describes transit segments (modes) under a carrier's control.

If suppliers specify a carrier name recognized by SAP Business Network, it displays a hyperlink for tracking the shipment at the carrier's website. SAP Business Network uses carrier names in the `companyName` domain:

```
<ShipControl>
  <CarrierIdentifier domain="companyName">FedEx</CarrierIdentifier>
  <ShipmentIdentifier>8202 8261 1194</ShipmentIdentifier>
</ShipControl>
```

SAP Business Network recognizes the following carrier names:

- Airborne Express
- Consolidated Freightways
- DHL
- EGL Eagle Global Logistics

- EmeryWorldwide
- FedEx
- Menlo/IBM
- Purolator
- Purolator Courier
- Roadway Express
- UAL Cargo
- UPS
- US Postal Service
- Velocity Express
- Yellow Freight

The `ShipControl` element also stores the `ShipmentIdentifier` element to store the tracking number and the tracking URL of the shipment.

## PackageIdentification **Element**

The `PackageIdentification` element resides within the `ShipControl` element. Ship notices have just one `ShipmentIdentifier` per carrier. The `PackageIdentification` contains an inclusive range of numbers that appears on portions (for example, boxes, palettes, or skids) of the shipment.

## Packaging **Element**

The `Packaging` element resides within the `ShipNoticeItem` element. It contains both packaging codes (zero or more locale-specific strings) and dimensions for the package of an item. The only supported dimensions are length, width, height, weight and volume.

## ShipNoticeItem **Element**

This `ShipNoticeItem` stores the quantity and line number of the line item.

## shipNoticeLineNumber **Attribute**

The `shipNoticeLineNumber` attribute is included in the `ShipNoticeItem` element and stores the ship notice line numbers.

## TransportInformation **Element**

For more information, see [TransportInformation Element \[page 144\]](#).

## SupplierBatchID **Element**

For more information, see [ConfirmationStatus Element \[page 222\]](#).

## TermsOfDelivery **Element**

You can add the `TermsOfDelivery` element to the `ShipNoticeItem` element to specify terms of delivery at the line-item level.

## Ship Notices and Cancel and Change Orders

If purchase orders are marked as Shipped or Partially Shipped, SAP Business Network rejects any cancel or change orders for them.

## ShipNoticeHeader **Extrinsics**

`ShipNoticeHeader` has several extrinsics that can be used to specify information about packages and cargo.

`ShipNoticeHeader` has the following cXML extrinsics:

Extrinsic	Description
<code>isDivisibleLoad</code>	Indicates whether the cargo can be separated into units of legal weight without affecting the physical integrity of the load.
<code>totalOfPackages</code>	Calculated total number of packages in the shipment.
<code>isSensitiveLoad</code>	Indicates whether any of the cargo is perishable or temperature-sensitive.

The following example shows `ShipNoticeHeader` extrinsics:

```
<ShipNoticeHeader noticeDate="2017-05-17T11:17:52-07:00"
  operation="new"
  shipmentID="asn-2345678">
  <Contact role="shipFrom">
    ...
  </Contact>
  <Contact role="shipTo">
    ...
  </Contact>
  <Hazard>
    <Classification domain="UNDG">1091</Classification>
  </Hazard>
  <Packaging>
    ...
  </Packaging>
  ...
  <Extrinsic name="isDivisibleLoad">
    Yes
  </Extrinsic>
  <Extrinsic name="isSensitiveLoad">
    Yes
  </Extrinsic>
  <Extrinsic name="totalOfPackages">
    2
  </Extrinsic>
</ShipNoticeHeader>
```

## Ship Notice Packaging Dimensions

You can use `Dimension@type` to specify width, length, and height packaging dimensions in a ship notice.

The following example shows how to use `Dimension@type` to specify packaging dimensions in a ship notice:

```
<Packaging>
  <Dimension type="length" quantity="8">
    <UnitOfMeasure>m</UnitOfMeasure>
  </Dimension>
  <Dimension type="width" quantity="5">
    <UnitOfMeasure>m</UnitOfMeasure>
  </Dimension>
  <Dimension type="height" quantity="2">
    <UnitOfMeasure>m</UnitOfMeasure>
  </Dimension>
</Packaging>
```

## Serial Numbers and Asset Tags in Ship Notices

Suppliers can provide serial numbers to buying organizations in ship notices. Alternatively, buying organizations can pre-assign an asset number range to each supplier.

For example, the supplier might offer to print bar codes for the number range and assign them to the products shipped. If suppliers using PO-Flip enter asset tag or serial number information, SAP Business Network places it in the correct element.

Suppliers generate `AssetInfo` tags in the `ShipNoticeRequest` document.

### Example

```
<ShipNoticeItem lineNumber="10" quantity="2.000">
  <AssetInfo tagNumber="111" serialNumber="SN5187" location="Bob's Office"/>
  <AssetInfo tagNumber="112" serialNumber="SN5188" location="Anthony's Office"/>
  <UnitOfMeasure>EA</UnitOfMeasure>
</ShipNoticeItem>
```

## ShipNoticeRequest Restrictions

Observe SAP Business Network restrictions when using `ShipNoticeRequest`.

- Multiple `ShipControl` elements in a `ShipNoticeRequest` are not currently supported. Send a separate `ShipNoticeRequest` for each shipment.
- Multiple `ShipNoticePortion` elements in a `ShipNoticeRequest` are not currently supported. If a shipment contains items from multiple orders, a `ShipNoticeRequest` must be sent for each order.

## Editing a Ship Notice Using cXML

You can revise a ship notice by making several changes to it and then posting it again.

To edit a ship notice, make the following changes to the cXML and then post it again:

- Change the payload ID.
- Change the operation to 'update'.
- Make your desired changes to the ship notice content.

### Note

Do **not** change the ship notice ID (`shipmentID`), which must remain the same as in the original ship notice.

- Add a document reference to the original ship notice.

### Example

```
<ShipNoticeHeader noticeDate="2019-01-10T12:45:22-08:00" operation="update"
shipmentID="SH-1-2">
<DocumentReference payloadID="1471004587132-8233598467200064074@127.0.0.1">
```

## Canceling a Ship Notice Using cXML

You can cancel a ship notice by making several changes to it and then posting it again.

To cancel a ship notice, make the following changes to the cXML and then post it again:

- Change the payload ID
- Change the operation to 'delete'
- Change the ship notice ID (`shipmentID`) by appending '\_1' to the old ship notice ID
- Add a document reference to the old ship notice

### Example

```
<ShipNoticeHeader noticeDate="2016-08-11T16:42:50+03:00" operation="delete"
shipmentID="SH-1-2_1">
<DocumentReference payloadID="1471004587132-8233598467200064073@127.0.0.1">
```

# Service Sheets

A service sheet is a status update for a purchase order that contains service request line items. It provides more detailed description of services than either a `StatusUpdateRequest` or `OrderConfirmationRequest`.

Suppliers do not see Services Invoicing functionality in their accounts until they receive their first service order. When they receive their first service order, Services Invoicing is automatically enabled and they can create service sheets.

Suppliers can update purchase order status either manually through their SAP Business Network accounts or by submitting cXML documents to SAP Business Network.

The cXML `ServiceEntryRequest` document enables suppliers to programmatically inform buying organizations of status changes to purchase orders through SAP Business Network. These transactions can include both material goods and service items that the supplier added while performing the service.

## ⓘ Note

SAP Business Network does not support creating `ServiceEntryRequest` documents against blanket purchase orders (`ordertype="blanket"`). It does, however, support creating service sheets against regular purchase orders (`ordertype="regular"`) with unplanned blanket lines with a defined maximum amount (they must include the `<BlanketItemDetail MaxAmount=" " >` element, with the `MaxAmount` defined).

[Visibility of Service Sheet Order Status \[page 245\]](#)

[SAP Business Network Account Configuration for ServiceEntryRequest Documents \[page 245\]](#)

[ServiceEntryRequest Documents \[page 246\]](#)

[ServiceEntryRequest Status Updates \[page 253\]](#)

## Visibility of Service Sheet Order Status

Buying organizations, requisitioners, and suppliers can view order status.

## Visibility of Order Status to Buying Organizations

Authorized procurement personnel within buying organizations can sign in to SAP Business Network and view order status.

## Visibility of Order Status to Requisitioners

Requisitioners (end users) have access to order status through their procurement applications.

## Visibility of Order Status to Suppliers

Authorized order-management personnel within supplier organizations can sign in to SAP Business Network and view order status.

## SAP Business Network Account Configuration for `ServiceEntryRequest` Documents

Both buying organizations and suppliers perform configuration to enable order status updates.

### `ServiceEntryRequest` Configuration for Buying Organizations

Buying organizations must first contact SAP Business Network Support to have their accounts enabled to download `ServiceEntryRequest` documents.

### `ServiceEntryRequest` Configuration for Suppliers

Before sending `ServiceEntryRequest` documents, suppliers must first configure their SAP Business Network accounts to set their Preferred Method of Sending Documents. Suppliers can set order status and shipping information manually or automatically; both methods cannot be used simultaneously.

To set programmatic order status updates suppliers log on to their SAP Business Network accounts, go to the Configuration area, and set **Preferred Method of Sending Response Documents** to cXML. They must also determine the URL for posting `ServiceEntryRequest` documents by using the Profile transaction.

Suppliers must configure their backend system to use only the SAP Business Network ANID of their customer in the `To Credentials` while sending `ConfirmationRequest` or `ShipNoticeRequest` documents and not their own ANID or the SAP Business Network ANID (AN01000000001).

## Related Information

[Profile Transaction \[page 66\]](#)

## `ServiceEntryRequest` Documents

A `ServiceEntryRequest` document is one that a supplier creates at a work site to provide detailed information about services provided, including material goods used during the service. A supplier sends it in response to a service line in a purchase order that requires service sheets.

Suppliers send these documents after providing services. For large or multi-part service orders, suppliers can create multiple service sheets to describe different parts of a service order or services provided during different time periods for a single line. SAP Business Network receives `ServiceEntryRequest` documents, validates them against the cXML DTDs, and applies the information in them to the affected line items.

Suppliers can set the serviced status of purchase order line items by sending cXML `ServiceEntryRequest` documents. Buying organizations can see updated line item status.

[ServiceEntryRequest Implementation Hints and Restrictions \[page 247\]](#)

[Automatically-Generated Service Sheets \[page 248\]](#)

[Service Sheets and Cancel and Change Orders \[page 250\]](#)

[Example ServiceEntryRequest \[page 250\]](#)

## ServiceEntryRequest Implementation Hints and Restrictions

ServiceEntryRequest has some required elements and attributes, and some restrictions.

### ServiceEntryRequest payloadID Attribute

The payloadID in the header of the ServiceEntryRequest must be unique.

### Additional References

- cXML reference guide at <http://www.cxml.org> ↗

### DocumentReference payloadID Attribute

Like the ConfirmationRequest transaction, the DocumentReference payloadID must match the payloadID of the OrderRequest. SAP Business Network uses the value in the payloadID or the orderID and orderDate attribute to match documents.

If the ServiceEntryRequest document contains only the payloadID, SAP Business Network uses only the payloadID to match documents. When the ServiceEntryRequest document contains the payloadID, orderID and orderDate, SAP Business Network uses the value in the orderID and orderDate attributes to match documents.

When the orderID and orderDate attribute is used to match documents, a tolerance of +1 or -1 day is considered for the orderDate.

#### ⓘ Note

As a best practice, SAP Ariba recommends buying organizations that reuse the purchase order number to send the ServiceEntryRequest document with the payloadID or orderID and orderDate.

The orderID is an optional attribute.

Every service line DocumentReference in a ServiceEntryRequest must reference the same OrderRequest.

## ServiceEntryID **Attribute**

The `ServiceEntryID` in the header of the `ServiceEntryRequest` must be unique.

## PartnerContact **Element**

The `PartnerContact` element in the header of the `ServiceEntryRequest` defines the parties involved with the service sheet. Typically it identifies the buyer's field engineer, the supplier field contractor, and the buyer approver.

- `<Contact role="fieldEngineer">` specifies the buyer field engineer who supervises the service.
- `<Contact role="fieldContractor">` specifies the supplier field contractor who provides the service.
- `<Contact role="requester">` specifies the buyer user who approves the service sheet.

You can set a service sheet transaction rule on SAP Business Network to require suppliers to provide contact information for these parties in order to facilitate collaboration and resolve problems. See the *SAP Business Network Buyer Administration Guide* for more information.

## Period **Element**

The `Period` element in the header of a `ServiceEntryRequest` defines the start and end date for the service period over which the supplier performed the service. This element is optional, but if provided, it specified the default start and end dates for all line items in the service sheet.

# Automatically-Generated Service Sheets

For any service order, suppliers can skip manual service sheet generation, directly generate service invoices for each service line, and allow the SAP Business Network to automatically generate the corresponding service sheets. An automatically-generated service sheet has additional cXML elements, the same elements found on a service invoice.

The tables below list elements and attributes that have been added to automatically-generated service sheets.

Table 9: Existing Elements Added to the Service Sheet

<b>Element</b>	<b>Description</b>
<code>PaymentTerm</code>	Describes either the net term, the discount or penalty term in an invoice.
<code>Tax</code>	Taxes added to allowances and charges.
<code>ShipNoticeIDInfo</code>	Specifies additional reference IDs for shipment related IDs.
<code>TotalCharges</code>	Total sum of all the charges applied on the goods and services.

Element	Description
TotalAllowances	Total sum of all the allowances applied on the goods and services.
TotalAmountWithoutTax	Summarizes the total invoice amount without tax.
NetAmount	Total GrossAmount minus discounts.
DepositAmount	Total deposit or prepayment amount.
DueAmount	Total amount due.
SpecialHandlingAmount	Total special handling charge.
ShippingAmount	Total shipping charge.
GrossAmount	Detail-level gross payment amount.
PriceBasisQuantity	The quantity the price is quoted on.

Table 10: New Elements Created for the Service Sheet

Element	Description
ServiceEntryDetailDiscount	Mapped to InvoiceDetailDiscount
ServiceEntryItemModifications	Mapped to InvoiceItemModifications
ServiceEntryLaborDetail	Mapped to InvoiceLaborDetail
ServiceEntryDetailShipping	Mapped to InvoiceDetailShipping
ServiceEntryHeaderModifications	Mapped to InvoiceHeaderModifications
ServiceEntryDetailSummaryIndustry	Mapped to InvoiceDetailSummaryIndustry
ServiceEntryTimeCardDetail	Mapped to InvoiceTimeCardDetail
ServiceEntryDetailSummaryRetail	Mapped to InvoiceDetailSummaryRetail
ServiceEntryDetailLineIndicator	Mapped to InvoiceDetailLineIndicator

Table 11: New Attributes Added to ServiceEntryItem

Attribute	Description
referenceDate	The reference date for the blanket order or contract item. The usage of this attribute is optional in most cases and must be defined by the trading partners involved in the transaction. Procurement software might use this date in reconciling an invoice against a blanket order or contract.
inspectionDate	The date when the transfer of goods or the delivery of services occurs according to legal tax definitions. The usage of this attribute is optional in most cases, and must be defined by the trading partners involved in the transaction.

# Service Sheets and Cancel and Change Orders

If purchase orders are marked as Partially Serviced, SAP Business Network accepts change orders for them under some circumstances.

Changes allowed for purchase orders depend on the status of the purchase orders:

Purchase Order Status	Changes Allowed
New	Buyers can make any updates except changing a service line (requiresServiceEntry="yes") to a non-service line or vice versa. Service lines must remain service lines and non-service lines must remain non-service lines in any changes to existing orders.
Partially Serviced	<ul style="list-style-type: none"><li>Buyers cannot change service lines to non-service lines or vice versa at any time.</li><li>Buyers can add both service and material goods lines.</li><li>Buyers can edit or delete both service and material goods lines that have approved or unapproved service sheets created against them.</li></ul>

## Example ServiceEntryRequest

For reference purposes a full example of a ServiceEntryRequest is provided.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.025/Fulfill.dtd">
<cXML payloadID="1233444-2004@premier.supplier.com"
xml:lang="en-CA" timestamp="2001-10-14T08:39:29-08:00">
  <Header>
    <From>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000002792</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Ecommerce Supplier</UserAgent>
    </Sender>
  </Header>
  <Request>
    <ServiceEntryRequest>
      <ServiceEntryRequestHeader serviceEntryDate="2013-08-12T21:03:20-07:00"
        serviceEntryID="SES-10001">
        <PartnerContact>
          <Contact role="from">
            <Name xml:lang="en-US">ABC Construction</Name>
            <PostalAddress>
              <Street>125 Supplier Company Street</Street>
              <City>Sunnyvale</City>
              <State>CA</State>
              <PostalCode>94086</PostalCode>
              <Country isoCountryCode="US">United States</Country>
            </PostalAddress>
          </Contact>
        </PartnerContact>
      </ServiceEntryRequestHeader>
    </ServiceEntryRequest>
  </Request>
</cXML>
```

```

        </PostalAddress>
        <Phone>
            <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>800</AreaOrCityCode>
                <Number>5555555</Number>
            </TelephoneNumber>
        </Phone>
    </Contact>
</PartnerContact>
<PartnerContact>
    <Contact role="to">
        <Name xml:lang="en-US">XYZ Incorporated</Name>
        <PostalAddress>
            <Street>865 Buyer Company Street</Street>
            <Street>Suite 234</Street>
            <City>San Francisco</City>
            <State>CA</State>
            <PostalCode>94114</PostalCode>
            <Country isoCountryCode="US">United States</Country>
        </PostalAddress>
        <Phone>
            <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>800</AreaOrCityCode>
                <Number>5555555</Number>
            </TelephoneNumber>
        </Phone>
    </Contact>
</PartnerContact>
<PartnerContact>
    <Contact role="fieldEngineer">
        <Name xml:lang="en-US">Earl</Name>
        <Email>earl@b.com</Email>
    </Contact>
</PartnerContact>
<PartnerContact>
    <Contact role="fieldContractor">
        <Name xml:lang="en-US">Conrad</Name>
        <Email>conrad@s.com</Email>
    </Contact>
</PartnerContact>
<PartnerContact>
    <Contact role="requester">
        <Name xml:lang="en-US">Bob</Name>
        <Email>bob@b.com</Email>
    </Contact>
</PartnerContact>
    <Period endDate="20013-08-09T00:00:00-07:00"
        startDate="2013-08-05T00:00:00-7:00"></Period>
</ServiceEntryRequestHeader>
<ServiceEntryOrder>
    <ServiceEntryOrderInfo>
        <OrderReference orderID="PO-HousingConstruction12345">
            <DocumentReference
                payloadID="ServiceOrderPayloadID12345">
            </DocumentReference>
        </OrderReference>
    </ServiceEntryOrderInfo>
    <ServiceEntryItem quantity="1" serviceLineNumber="1" type="service">
        <ItemReference lineNumber="1">
            <ItemID>
                <SupplierPartID>LW001-1</SupplierPartID>
            </ItemID>
            <Description xml:lang="en-US">Mobilization and
                Establish site</Description>
        </ItemReference>
    </ServiceEntryItem>
    <SubtotalAmount>

```

```

        <Money currency="USD">10000.00</Money>
    </SubtotalAmount>
</ServiceEntryItem>
<ServiceEntryItem quantity="100" serviceLineNumber="2"
type="service">
    <ItemReference lineNumber="1">
        <ItemID>
            <SupplierPartID>Cranel</SupplierPartID>
        </ItemID>
        <Description xml:lang="en-US">Service crane</Description>
    </ItemReference>
    <UnitOfMeasure>HUR</UnitOfMeasure>
    <UnitPrice>
        <Money currency="USD">500.00</Money>
    </UnitPrice>
    <SubtotalAmount>
        <Money currency="USD">50000.00</Money>
    </SubtotalAmount>
</ServiceEntryItem>
<ServiceEntryItem quantity="1000" serviceLineNumber="3"
type="material">
    <ItemReference lineNumber="1">
        <ItemID>
            <SupplierPartID>SafetyFence</SupplierPartID>
        </ItemID>
        <Description xml:lang="en-US">Safety Fence</Description>
    </ItemReference>
    <UnitOfMeasure>FT</UnitOfMeasure>
    <UnitPrice>
        <Money currency="USD">1.00</Money>
    </UnitPrice>
    <SubtotalAmount>
        <Money currency="USD">1000.00</Money>
    </SubtotalAmount>
</ServiceEntryItem>
<ServiceEntryItem quantity="1" serviceLineNumber="4" type="service">
    <ItemReference lineNumber="2">
        <ItemID>
            <SupplierPartID>LW001-1</SupplierPartID>
        </ItemID>
        <Description xml:lang="en-US">Mobilization and
            Establish site</Description>
    </ItemReference>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <UnitPrice>
        <Money currency="USD">10000.00</Money>
    </UnitPrice>
    <SubtotalAmount>
        <Money currency="USD">10000.00</Money>
    </SubtotalAmount>
</ServiceEntryItem>
</ServiceEntryOrder>
<ServiceEntrySummary>
    <SubtotalAmount>
        <Money currency="USD">71000.00</Money>
    </SubtotalAmount>
</ServiceEntrySummary>
</ServiceEntryRequest>
</Request>
</cXML>

```

## ServiceEntryRequest **Status Updates**

Buying organizations send StatusUpdateRequest documents to set service sheet status to approved or rejected. cXML-enabled suppliers can receive these documents.

The following table describes ServiceEntryRequest status settings:

Status	Description
approved	The buyer's ERP system has approved the service sheet.
rejected	The buyer's ERP system has rejected the service sheet, either because of validation or other errors or because a user in the approval flow denied the service sheet.

SAP Business Network posts these documents to the URL that suppliers return in their cXML ProfileResponse. Suppliers cannot cancel service sheets at any time and they cannot invoice against rejected service sheets. They can edit and resubmit rejected service sheets.

StatusUpdateRequest documents identify service sheets using the DocumentReference element with documentType="ServiceEntryRequest" for the DocumentInfo element.

### Example

```
<StatusUpdateRequest>
  <DocumentReference payloadID="ServiceOrderPayloadID12345">
  </DocumentReference>
  <Status code="200" text="OK"></Status>
  <DocumentStatus type="approved">
    <DocumentInfo documentID="SES-HC-t1" documentType="ServiceEntryRequest"
      documentDate="2013-08-12T21:03:20-07:00">
    </DocumentInfo>
    <Comments>This service sheet has been approved.</Comments>
  </DocumentStatus>
</StatusUpdateRequest>
```

# Requests for Quotation

Buyers send requests for quotation to SAP Ariba Sourcing either from their ERP systems or from their procurement or invoicing solution provided by SAP Ariba. The process of sending and processing these requests for quotation varies based on the originating system. Buyers can generate RFQs in the ERP systems and send a quote request to SAP Ariba Sourcing which is used for a sourcing event. Requests for quotations can also be used with the quote automation feature to process and publish the RFQs in SAP Business Network Discovery.

[SAP Ariba Sourcing Integration with SAP ERP \[page 254\]](#)

[Quote Automation \[page 263\]](#)

[Sourcing Integration with SAP Ariba Procurement solutions \[page 270\]](#)

## SAP Ariba Sourcing Integration with SAP ERP

Several cXML extrinsic elements accommodate fields that are sent from SAP ERP Central Component (ECC) to SAP Ariba Sourcing. SAP sends a `QuoteRequest` document to SAP Ariba Sourcing with information that SAP Ariba Sourcing uses to create a sourcing request. In most cases, the sourcing request is used to create a sourcing event that includes data and items from the sourcing request. After the event ends, SAP Ariba Sourcing can send award or pricing information back to SAP in a `QuoteMessage` document.

[QuoteRequest Documents for SAP Ariba Sourcing Integration \[page 254\]](#)

[QuoteMessage Documents for SAP Ariba Sourcing Integration \[page 259\]](#)

### `QuoteRequest` Documents for SAP Ariba Sourcing Integration

A `quoterequest` document is sent to SAP Ariba Sourcing; SAP Ariba Sourcing uses it to create a sourcing request.

A `quoteRequest` document contains a `QuoteRequest` element. The following example shows the basic structure of a `QuoteRequest` element:

```
<QuoteRequest>
  <QuoteRequestHeader>

  header information
  </QuoteRequestHeader>
  <QuoteItemOut>

  QuoteItemOut information
  </QuoteItemOut>
</QuoteRequest>
```

## QuoteRequestHeader for SAP Ariba Sourcing Integration

The `QuoteRequestHeader` includes general information about the request for quotations.

`QuoteRequestHeader` has the following attributes:

Attribute Name	Description
<code>requestID</code>	Unique internal number specifying the buyer's system ID for the request for quotations. This field is mandatory.
<code>requestDate</code>	The date and time of the <code>QuoteRequest</code> document. This field is mandatory.
<code>requestVersion</code>	The version number of the <code>QuoteRequest</code> in the buyer's system. This is applicable when there is a change to the original <code>QuoteRequest</code> . The version number for the original <code>QuoteRequest</code> document should be 1 and must increment by 1 for each subsequent version.  For example, the second version of the <code>QuoteRequest</code> must be 2.
<code>type</code>	Type of <code>QuoteRequest</code> , one of: <ul style="list-style-type: none"><li>• new</li><li>• update</li><li>• delete</li></ul> The default value is "new".
<code>currency</code>	The currency in which the request for quotation is to be bid. This field is mandatory.
<code>templateName</code>	The template used by the sourcing application. The template can outline the terms and conditions regarding the details for a request for quotation sent between the buyer and sourcing application.
<code>openDate</code>	The date the <code>quoteRequest</code> is open for suppliers to respond.
<code>closeDate</code>	The date the <code>quoteRequest</code> is closed for supplier responses.
<code>previewDate</code>	The date the <code>quoteRequest</code> is available to suppliers.

The `QuoteRequestHeader` element has the following elements:

Element Name	Description
<code>Name</code>	The name of the <code>QuoteRequest</code> . This field is optional.
<code>MasterAgreementIDinfo</code>	The ID number of the buyer for the corresponding master agreement of the contract or release order. This field is optional.

Element Name	Description
SupplierSelector	<p>Defines the supplier selection criteria for a QuoteRequest. This field is optional.</p> <p>The SupplierSelector element has the SupplierID element with the following mandatory attribute:</p> <ul style="list-style-type: none"> <li>• <b>MatchingType:</b> Specifies how suppliers are matched for a QuoteRequest. The SupplierSelector attribute can have the following values:</li> <li>• <b>InvitationOnly:</b> Suppliers are matched with the suppliers that have been invited to join the network.</li> <li>• <b>approvedVendorOnly:</b> Suppliers from the vendor master list. However, the sourcing application may filter the suppliers that can bid based on the product or service category and territory matching rules.</li> <li>• <b>public:</b> Any public supplier. The supplier can also exist in the vendor master list.</li> </ul> <p>The SupplierSelector can contain SupplierInvitation elements, where each SupplierInvitation element specifies a supplier (participant) invited to the event. Each SupplierInvitation element contains the following child elements:</p> <ul style="list-style-type: none"> <li>• OrganizationID</li> <li>• Correspondent</li> <li>• MasterAgreementIDInfo</li> <li>• Extrinsic</li> </ul> <p>For more information, see the section <i>Request for Quotations &gt; QuoteRequestHeader &gt; SupplierSelector</i> in <a href="http://xml.cxml.org/current/cXMLReferenceGuide.pdf">http://xml.cxml.org/current/cXMLReferenceGuide.pdf</a>.</p>
Total	The total amount of the QuoteRequest. This field is optional.
Description	Description of the QuoteRequest. This field is optional.
ShipTo	The Ship to information for the QuoteRequest. This field is optional.
Contact	The contact information for the request. There may be more than one Contact element. This field is optional.
Extrinsic	Extraneous data specific to the request. There can be more than one Extrinsic element, and there is always one Terms extrinsic.

## QuoteItemOut for SAP Ariba Sourcing Integration

Each QuoteItemOut in a QuoteRequest stores details on a line item.

A QuoteItemOut has attributes, elements, and a Terms extrinsic.

The `QuoteItemOut` element has the following attributes:

Attribute	Description
<code>quantity</code> (required)	The number of items.  If the order type is "blanket" and has supplier and commodity level items, the default value is 1. This quantity is not considered to calculate the subtotal. Instead, the <code>MaxAmount</code> in the <code>BlanketItemDetail</code> is used to indicate any line level amounts.
<code>lineNumber</code>	Line position (counting from 1) of the item in a <code>QuoteRequest</code> . Used to maintain a reference between the items in the document with the type as "new" and "update".
<code>parentLineNumber</code>	Position (counting from 1) of this item's parent in a <code>QuoteRequest</code> . Used to maintain a hierarchical reference between items in documents.
<code>requestedDeliveryDate</code>	The delivery date requested for the line item.
<code>itemClassification</code>	Specifies whether the current line item is "material" or "service".
<code>itemType</code>	Specifies the type of item. Possible values: <ul style="list-style-type: none"> <li><code>composite</code>—Identifies an item group.</li> <li><code>item</code>—Identifies an independent line item.</li> <li><code>lean</code>—Indicates that no child item is expected for the line.</li> </ul>
<code>serviceLineType</code>	Represents the type of the service line. Possible values: <ul style="list-style-type: none"> <li><code>standard</code>—Standard service.</li> <li><code>blanket</code>—Blanket service for which you don't specify a quantity. It is settled as a lump sum.</li> <li><code>contingency</code>—A service that is not absolutely necessary to perform the order.</li> <li><code>openquantity</code>—A service for which the sold-to party requires that the bidder offer the quantity for a specific partial service.</li> <li><code>information</code>—The line type does not describe a service and is for information purposes only.</li> </ul>

`QuoteItemOut` has the following elements:

Element	Description
<code>ItemID</code>	Provides unique identification of an item.
<code>ItemDetail</code> (required)	Contains descriptive information about the item that procurement applications present to users.
<code>ShipTo</code>	The ship to address for a item. <code>ShipTo</code> contains four elements: <code>Address</code> , <code>CarrierIdentifier</code> , <code>TransportInformation</code> , and <code>IdReference</code> .
<code>Shipping</code>	Contains additional information for transportation of the shipment.
<code>Tax</code>	Contains tax information.
<code>SpendDetail</code>	Captures spend detail information.
<code>Total</code>	Contains the total cost for the items in the order, excluding any tax and shipping.
<code>TermsOfDelivery</code>	Specifies the terms of delivery for the ship notice.

Element	Description
ReferenceDocumentInfo	Contains information about a referenced document.
Contact	The contact information for the supplier. Can specify more than one Contact element.
Comments	The Comments element is only used for attaching external files in SAP Ariba Sourcing. Contains comments for the external files attached to this RFQ line item. The Comments element must contain an Attachment element for including external files.
Alternative	Represents an alternative option to service specification lines.
SupplierSelector	Defines the way suppliers are selected for responding to an RFQ. If present, it contains a SupplierInvitation element for each supplier invited submit a response for the item. If absent or if it does not contain SupplierInvitation elements, all suppliers invited to the event are invited to submit a response for the item.

## SAP Service Items and Service Hierarchies (cXML Adapter Version 1.2.034 or Later)

A quoteRequest or quoteMessage document can contain data for SAP service items (SAP Item Category D items) in a service hierarchy.

quoteRequest documents received from SAP and quoteMessage documents sent to SAP have the following items in QuoteItemOut and QuoteItemIn elements for service hierarchies:

- The attribute itemClassification with the value service.
- The itemType attribute, set to composite for service lines and service outlines, or set to item for service specifications.
- The parentLineNumber and lineNumber attributes are used to link parent and child items, such as a parent service line and child service specification. The value of a child's parentLineNumber attribute matches its parent's lineNumber attribute.
- The child element Classification has the attribute code set to Services and the attribute domain set to MaterialGroup. The value of the Classification element is an SAP material group.

The following is an excerpt of a quoteRequest document with 3 QuoteItemOut elements: a service line, service outline, and service specification.

```
<QuoteItemOut itemClassification="service" itemType="composite" quantity="1.000"
requestedDeliveryDate="2017-08-28T07:45:50+05:30" lineNumber="00010">
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD" />
    </UnitPrice>
    <Description xml:lang="en">Services</Description>
    <UnitOfMeasure>SU</UnitOfMeasure>
    <Classification code="Services" domain="MaterialGroup">007</Classification>
  </ItemDetail>
  <ReferenceDocumentInfo lineNumber="00010">
    <DocumentInfo documentType="Requisition" documentID="0010021706">Constant</
DocumentInfo>
  </ReferenceDocumentInfo>
  <Comments xml:lang="en">>true </Comments>
</QuoteItemOut>
<QuoteItemOut itemType="composite" quantity="0.000" parentLineNumber="00010"
lineNumber="0000200010">
```

```

<ItemDetail>
  <UnitPrice>
    <Money currency="USD" />
  </UnitPrice>
  <Description xml:lang="en">Set up Construction site</Description>
  <UnitOfMeasure/>
  <Classification domain="MaterialGroup" />
</ItemDetail>
<ReferenceDocumentInfo lineNumber="00010">
  <DocumentInfo documentType="RFQ" documentID="6000001310" />
</ReferenceDocumentInfo>
</QuoteItemOut>
<QuoteItemOut itemType="item" quantity="1.000" parentLineNumber="0000200010"
serviceLineType="standard" lineNumber="1000300010">
  <ItemID>
    <SupplierPartID/>
    <BuyerPartID>0000000000000100000</BuyerPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD" />
    </UnitPrice>
    <Description xml:lang="en">Set up construction site</Description>
    <UnitOfMeasure>SU</UnitOfMeasure>
    <Classification domain="MaterialGroup">007</Classification>
  </ItemDetail>
  <ReferenceDocumentInfo lineNumber="0000300010">
    <DocumentInfo documentType="RFQ" documentID="6000001310" />
  </ReferenceDocumentInfo>
</QuoteItemOut>

```

## QuoteMessage Documents for SAP Ariba Sourcing Integration

SAP Ariba Sourcing sends quoteMessage documents with pricing or award information from an event.

A quoteMessage contains a QuoteMessage element. The QuoteMessage element has the following elements:

- QuoteMessageHeader
- QuoteItemIn

### QuoteMessageHeader for SAP Ariba Sourcing

QuoteMessageHeader element provides general information about the QuoteMessage.

The cXML QuoteMessage document that describes an award document received in response to an SAP RFQ must include the currency attribute in the QuoteMessageHeader element. The currency attribute defines the currency used in the sourcing project. Currency can be defined using ISO or non-ISO currency codes.

The `QuoteMessageHeader` has the following additional attributes:

Attribute Name	Description
<code>Type</code>	<p>The supplier action on the <code>QuoteRequest</code>. Can have one of the following values:</p> <ul style="list-style-type: none"> <li>• <code>accept</code></li> <li>• <code>reject</code></li> <li>• <code>update</code></li> <li>• <code>final</code></li> <li>• <code>award</code></li> </ul> <p>This field is mandatory.</p>
<code>quoteID</code>	<p>Unique ID of the quote.</p> <p>This field is mandatory.</p>
<code>quoteDate</code>	<p>Date on which the quote was submitted.</p> <p>This field is mandatory.</p>

The `QuoteMessageHeader` header has the following elements:

Element Name	Description
<code>SupplierID</code>	<p>The unique identification of the supplier. There can be more than one <code>SupplierID</code>. This field is mandatory.</p>
<code>Total</code>	<p>The total amount of the <code>QuoteRequest</code>.</p>
<code>ShipTo</code>	<p>The <code>ShipTo</code> address from the <code>QuoteRequest</code>.</p>
<code>Contact</code>	<p>The <code>Contact</code> information for the <code>QuoteRequest</code>.</p>
<code>QuoteRequestReference</code>	<p>Contains the <code>RequestID</code> and <code>requestDate</code>.</p> <p><code>QuoteRequestReference</code> has the following attributes:</p> <ul style="list-style-type: none"> <li>• <code>requestID</code>: Unique internal number specifying the buyer's system ID for the request for quotations. This attribute is mandatory.</li> <li>• <code>requestDate</code>: The data and time of the <code>QuoteRequest</code> document</li> </ul> <p><code>QuoteRequestReference</code> has the following element:</p> <ul style="list-style-type: none"> <li>• <code>DocumentReference</code>: indicates when a document type is update or delete. It refers to the most recent <code>quoteRequest</code> document.</li> </ul>
<code>Comments</code>	<p>Contains comments about the request. This field is optional.</p>
<code>Extrinsic</code>	<p>Contains extrinsic information. There may be more than one <code>Extrinsic</code> element, but there is always a <code>Terms</code> extrinsic.</p>

## Participant Responses to Event Questions

Participant responses to event questions are included in the `Terms` extrinsic within the `QuoteMessageHeader`. The response is linked to its corresponding question by its `name` attribute, which is set to the value of the **ERP field mapping** field for the question.

SAP Ariba Sourcing can send the following types of question responses in award data:

- **Attachment.** The attachment is sent as part of a Multipurpose Internet Mail Extensions (MIME) envelope with the `QuoteMessage` document. The extrinsic for the response has a child `Attachment` element, which contains a child `URL` element with a content ID (`Content-ID` or `CID`) for the attachment. The corresponding attachment contains the same `CID` in its header.

For example, a `QuoteMessageHeader` contains the following elements:

```
<Extrinsic name="Terms">
  <Extrinsic name="SupplierDesignSpecifications">
    <Attachment>
      <URL>cid:0</URL>
```

The content ID for the attachment is 0; the MIME header for the corresponding attachment contains the following entry:

`Content-ID<0>`

For more information about attachments in cXML documents, see [cXML Reference Guide](#).

### ⚠ Restriction

SAP Integration Suite, managed gateway for spend management and SAP Business Network does not support responses with type `Attachment`.

- **Date.** SAP Ariba Sourcing sends the response in one of the following formats:

`YYYY-MM-DDT hh:mm:ss+hh:mm`

`YYYY-MM-DDT hh:mm:ss-hh:mm`

Where:

- `YYYY` specifies the year
- `MM` specifies the month
- `DD` specifies the day
- `T` is a literal value that specifies the start of the time section
- `hh` specifies the hour
- `mm` specifies the minutes
- `ss` specifies the seconds
- `+hh:mm` specifies a time zone with a positive offset from UTC (Coordinated Universal Time)
- `-hh:mm` specifies a time zone with a negative offset from UTC (Coordinated Universal Time)

For example:

`2019-05-25T00:00:00-08:00`

The date format is a restricted subset of ISO 8601. The "Z" time zone designator is not allowed.

- **Decimal Number**
- **Money.** SAP Ariba Sourcing sends the response in the following format:  
`amount currencyID`  
Where `amount` is a numeric amount and `currencyID` is the ID for the currency type. For example, 100 USD.
- **Percentage:** The response is sent with the numeric value only (no percent sign). For example, 99.
- **Quantity**
- **Text (single line limited)**
- **Text (single line)**
- **Text (multiple lines)**
- **Whole Number**
- **Yes/No** (Boolean). The response is sent as Yes or No.

## QuoteItemIn for SAP Ariba Sourcing Integration

QuoteItemIn describes supplier action on a line item in the QuoteMessage. A QuoteMessage may contain multiple QuoteItemIn definitions.

The QuoteItemIn element has attributes, elements, and a Terms extrinsic.

The QuoteItemIn element has the following attributes:

Attribute Name	Description
Type	The supplier action on the QuoteRequest. Can have one of the following values: <ul style="list-style-type: none"><li>accept</li><li>reject</li><li>update</li><li>final</li><li>award</li></ul> This field is mandatory.
Quantity	The number of items.  If the order type is "blanket" and has supplier and commodity level items, the default value is "1." This quantity is not considered to calculate the subtotal. Instead, the MaxAmount in the BlanketItemDetail is used to indicate any line level amounts.  This field is mandatory.
lineNumber	Line position of the item in the QuoteRequest. Used to maintain a reference between the items in the document with the type as "new" and "update."  This field is optional.
requestedDeliveryDate	The delivery date requested for the line item.  This field is optional.
rank	The rank of the bid.

A QuoteItemIn has the following elements:

- ItemID
- ItemDetail
- ShipTo
- Shipping
- Tax
- SpendDetail
- Contact
- Comments

## Line Item Attachments in Award Data

SAP Ariba Sourcing includes attachments that suppliers have added to line items in `QuoteMessage` documents by using Multipurpose Internet Mail Extensions (MIME).

A line item is linked to its attachment using a content ID (`Content-ID` or `CID`). If a line item has an attachment, the `QuoteItemIn` element for the line item in the `QuoteMessage` includes the following elements:

```
<Comments>
  <Attachment>
    <URL>cid:contentID/URL>
```

The *contentID* corresponds to the `Content-ID` in the MIME header for the attachment.

For example, a `QuoteItemIn` contains the following elements:

```
<Comments>
  <Attachment>
    <URL>cid:0/URL>
```

The content ID for this line item is 0; the MIME header for the corresponding attachment contains the following entry:

```
Content-ID<0>
```

## `QuoteMessage` with Pricing Conditions

A `QuoteMessage` cXML document can contain pricing conditions for line items. The pricing conditions can be defined within an intrinsic element or an extrinsic element in the `QuoteMessage` cXML document.

You can integrate a `QuoteMessage` cXML document that contains pricing conditions as an outline agreement (contract) between SAP Ariba Sourcing and SAP ERP through SAP Ariba Cloud Integration Gateway by using the `PricingConditions` intrinsic element or the `AdvancedPriceConditions` extrinsic element.

For more information, see the *About pricing conditions in SAP RFQ and award integration with SAP Ariba Sourcing* section in the [RFQ and award integration with SAP Ariba Sourcing guide](#).

## Quote Automation

Buyers send the `QuoteRequest` documents from their ERP system to SAP Business Network Discovery through SAP Business Network. SAP Business Network determines if the supplier specified in the `QuoteRequest` document is a registered supplier on SAP Business Network.

If the supplier is not a registered supplier, SAP Business Network creates a new supplier account and sends the `QuoteRequest` document to SAP Business Network Discovery to create an RFQ posting. The supplier information is also sent to SAP Business Network Discovery.

SAP Business Network Discovery matches suppliers based on the commodities and sales territories specified in the `QuoteRequest` document and suppliers are invited to participate and respond to the RFQ posting. If the

supplier is not registered, SAP Business Network Discovery sends an invitation requesting the supplier to register and participate in the RFQ posting.

SAP Business Network Discovery then sends all, lead or the winning bids based on the value specified in the `QuoteRequest` document to the buyer's ERP system.

[QuoteRequest Document \[page 264\]](#)

[Example QuoteRequest Document \[page 266\]](#)

[Canceling Requests for Quotation \[page 270\]](#)

## Related Information

[Quick Enablement Using Request for Quotations \[page 62\]](#)

## `QuoteRequest` Document

The `QuoteRequest` document contains the `QuoteRequest` element.

The `QuoteRequest` element has the following elements:

- `QuoteRequestHeader`
- `QuoteItemOut`

The `QuoteRequestHeader` has the following optional elements:

- `Name`
- `SupplierSelector`
- `Total`
- `Description`
- `ShipTo`
- `Contact`
- `Comments`
- `QuoteHeaderInfo`
- `Extrinsic`

## `SupplierSelector` Element

The optional `SupplierSelector` element specifies how suppliers are selected and matched by SAP Business Network Discovery.

This element has the following attribute:

`MatchingType`: SAP Business Network Discovery uses this attribute value to determine how to match suppliers and invite them to participate in the RFQ posting on SAP Business Network Discovery. This is a mandatory field.

The `MatchingType` attribute can have the following values:

- `InvitationOnly`: Suppliers that are invited to join the RFQ posting are specified in the `OrganizationID` element.
- `approvedVendorOnly`: Suppliers that exist on SAP Business Network. The supplier should be an approved supplier with the buyer. However, SAP Business Network Discovery may filter the suppliers that can bid based on the commodity and territory matching rules.
- `public`: Any public supplier. The supplier must exist on SAP Business Network. However, SAP Business Network Discovery may filter the suppliers that can bid based on the commodity and territory matching rules.

The `SupplierSelector` element contains a `SupplierInvitation` element for each supplier selected. Each `SupplierInvitation` element contains the following child elements:

- `OrganizationID`
- `Correspondent`
- `MasterAgreementIDInfo`
- `Extrinsic`

### `SupplierInvitation`

SAP Business Network Discovery uses the `SupplierInvitation` element to identify the supplier that is invited to join the RFQ posting.

The `SupplierInvitation` element has the following attribute:

- `supplierStatus`  
The `supplierStatus` attribute can have the following values:
  - `approved`: The supplier exists in the buyer's system and is approved by the buyer. The default value is "approved."
  - `contracted`: The supplier is an approved supplier in the buyer's system and has an associated master agreement of a contract. The buyer can specify the `MasterAgreementIDInfo`.

### `OrganizationID`

The `OrganizationID` element is a unique identification for the supplier on SAP Business Network. This element is used by the buyer to specify suppliers that are invited to bid.

### `Correspondent`

The optional `Correspondent` element stores the contact information of the supplier and is used to identify and contact the supplier.

If the supplier does not exist, SAP Business Network uses the contact information to send an invitation to the supplier to register on SAP Business Network

## MasterAgreementIDInfo

The optional `MasterAgreementIDInfo` element is the ID number of the buyer for the corresponding master agreement of the contract or release order. This element is enhanced with the `IdReference` element.

## Extrinsic

The optional `Extrinsic` element allows buyers to provide additional information for the `SupplierInvitation`. Buyers can specify more than one `Extrinsic` element.

## processingTarget **Extrinsic**

Quote automation allows you to configure the flow of RFQs, whether you want SAP Business Network to route them to SAP Business Network Discovery or SAP Ariba Sourcing.

By default, the routing configuration is set to SAP Ariba Sourcing which means that SAP Business Network routes the flow of RFQ events to SAP Ariba Sourcing. However, if the RFQ is originating from SAP S/4HANA ERP system, you can control the flow of each RFQ by specifying the following extrinsic in the `quoteRequest` document:

### processingTarget

This extrinsic specified in the header of the `quoteRequest` cXML document overrides the RFQ routing configuration set in SAP Business Network for quote automation. You can specify one of the following values in the `processingTarget` extrinsic:

- **QuoteAutomation**
- **sourcingRequest**

An example of the code snippet containing the extrinsic:

```
<Extrinsic name="processingTarget">sourcingRequest</Extrinsic>
```

If you specify the value of the extrinsic as **QuoteAutomation**, SAP Business Network processes the RFQ event and routes it to SAP Business Network Discovery irrespective of the routing configuration set in SAP Business Network.

## Example `QuoteRequest` Document

A buyer sends a `QuoteRequest` document to supplier to invite them to bid. The following example shows a sample of the `QuoteRequest` document:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/schemas/cXML/1.2.025/Quote.dtd">
<cXML payloadID="123" timestamp="2013-11-19T11:50:11+00:00" version="1.2.025">
  <Header>
    <From>
      <Credential domain="NetworkId">
        Identity>AN02000533043</Identity>
```

```

    </Credential>
  </From>
  <To>
    <Credential domain="NetworkId">
      <Identity>AN02000533043</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN02000533043</Identity>
      <SharedSecret>sharedsecret</SharedSecret>
    </Credential>
    <UserAgent>Procurement App 2.0</UserAgent>
  </Sender>
</Header>
<Request deploymentMode="production">
  <QuoteRequest>
    <QuoteRequestHeader requestID="2021.2215"
      requestDate="2014-03-06T23:25:01.000-07:00"
      type="new" openDate="2014-03-10T23:13:49.000-07:00"
      currency="USD" xml:lang="en"
      closeDate="2014-03-17T00:00:00.000-07:00"
      quoteReceivingPreference="winningOnly">
      <SupplierSelector matchingType="invitationOnly">
        <SupplierInvitation>
          <OrganizationID>
            <Credential domain="VendorID">
              <Identity>2210</Identity>
            </Credential>
          </OrganizationID>
          <Correspondent>
            <Contact>
              <Name xml:lang="en">New Inv Inc</Name>
              <PostalAddress>
                <DeliverTo>922 West</DeliverTo>
                <Street>15th Avenue</Street>
                <City>California</City>
                <State>CA</State>
                <PostalCode>93504</PostalCode>
                <Country isoCountryCode="US"></Country>
              </PostalAddress>
              <Email>vp@abc.com</Email>
              <Phone>
                <TelephoneNumber>
                  <CountryCode isoCountryCode="US"></CountryCode>
                  <AreaOrCityCode>ca</AreaOrCityCode>
                  <Number>2342344</Number>
                </TelephoneNumber>
              </Phone>
              <URL></URL>
            </Contact>
          </Correspondent>
        </SupplierInvitation>
      </SupplierSelector>
      <Description xml:lang="" >Quote for AS1</Description>
      <ShipTo>
        <Address isoCountryCode="US" addressID="409" >
          <Name xml:lang="en" >P2- Los Angeles</Name>
          <PostalAddress name="P2- Los Angeles" >
            <Street>1022 Sepulveda Blvd</Street>
            <Street>Suite 1000Address2</Street>
            <Street>Address3</Street>
            <City>El Segundo</City>
            <State>California</State>
            <PostalCode>90245</PostalCode>
            <Country isoCountryCode="US" >United States</Country>
          </PostalAddress>
          <Phone>

```

```

        <TelephoneNumber>
            <CountryCode isoCountryCode="US" />
            <AreaOrCityCode/>
            <Number/>
        </TelephoneNumber>
    </Phone>
    <Fax>
        <TelephoneNumber>
            <CountryCode isoCountryCode="US" />
            <AreaOrCityCode/>
            <Number/>
        </TelephoneNumber>
    </Fax>
</Address>
</ShipTo>
</QuoteRequestHeader>
.
.
.

```

## QuoteMessage Document

The QuoteMessage document describes the items or services on which the buyer is requesting quotes. The following example shows a sample of the QuoteMessage document:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.025/Quote.dtd">
<cXML payloadID="5565217623@10.10.14.16" timestamp="2013-08-11T08:50:12-07:00"
version="1.2.025" xml:lang="en-US">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN02000873997</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN70000000073</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN01000874827</Identity>
        <SharedSecret>sharedsecret</SharedSecret>
      </Credential>
      <UserAgent>Procurement App 2.0</UserAgent>
    </Sender>
  </Header>
  <Message>
    <QuoteMessage>
      <QuoteMessageHeader xml:lang="en" currency="USD"
quoteDate="2013-10-03T08:24:15-07:00"
quoteID="T123" type="award">
        <OrganizationID>
          <Credential domain="NetworkID">
            <Identity>AN02000873997</Identity>
          </Credential>
        </OrganizationID>
        <Total>
          <Money currency="USD">235400.0</Money>
        </Total>
        <QuoteRequestReference requestDate="2013-10-03T08:14:54-07:00"
requestID="2021.2215"/>
      </QuoteMessageHeader>
    </QuoteMessage>
  </Message>
</cXML>

```

```

</QuoteMessageHeader>
<QuoteItemIn rank="1" lineNumber="1" quantity="100" type="award">
  <ItemID>
    <SupplierPartID>SupplierPartID-1</SupplierPartID>
    <SupplierPartAuxiliaryID>SupplierPartAuxID-1
    </SupplierPartAuxiliaryID>
    <BuyerPartID/>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">950.00</Money>
    </UnitPrice>
    <Description xml:lang="en">Laptops</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="unspsc">43211503</Classification>
    <ManufacturerPartID>ManufacturerPartID-1</ManufacturerPartID>
    <ManufacturerName>ManufacturerName-1</ManufacturerName>
    <URL>http://www.abc.com-1</URL>
    <LeadTime>31</LeadTime>
  </ItemDetail>
  <Shipping>
    <Money currency="USD">100.0000000000</Money>
    <Description xml:lang="en">Maximum shipping
      allowance-1</Description>
  </Shipping>
  <Tax>
    <Money currency="USD">100.0000000000</Money>
    <Description xml:lang="en">Maximum tax allowance-1</Description>
  </Tax>
  <Total>
    <Money currency="USD">95200.00</Money>
  </Total>
</QuoteItemIn>
<QuoteItemIn rank="1" lineNumber="2" quantity="200" type="award">
  <ItemID>
    <SupplierPartID>SupplierPartID-2</SupplierPartID>
    <SupplierPartAuxiliaryID>SupplierPartAuxID-2
    </SupplierPartAuxiliaryID>
    <BuyerPartID/>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="USD">700.00</Money>
    </UnitPrice>
    <Description xml:lang="en">Desktop Computers</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="unspsc">43211507</Classification>
    <ManufacturerPartID>ManufacturerPartID-2</ManufacturerPartID>
    <ManufacturerName>ManufacturerName-2</ManufacturerName>
    <URL>http://www.abc.com-2</URL>
    <LeadTime>32</LeadTime>
  </ItemDetail>
  <Shipping>
    <Money currency="USD">100.0000000000</Money>
    <Description xml:lang="en">Maximum shipping
      allowance-2</Description>
  </Shipping>
  <Tax>
    <Money currency="USD">100.0000000000</Money>
    <Description xml:lang="en">Maximum tax allowance-2</Description>
  </Tax>
  <Total>
    <Money currency="USD">140200.00</Money>
  </Total>
</QuoteItemIn>
</QuoteMessage>
</Message>

```

## Canceling Requests for Quotation

Buying organizations can cancel a request for quotation that was sent to the sourcing application. SAP Business Network displays the status of canceled requests for quotation as "Obsoleted."

Canceled requests for quotation are the same as regular requests for quotation, except the `QuoteRequestHeader` element has the attribute `type="delete"` instead of "new", and the `requestID` attribute of the original request for quotation.

The following example shows how to cancel a request for quotation:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/schemas/cXML/1.2.029/Quote.dtd">
<cXML payloadID="123" timestamp="2016-02-02T11:50:11+00:00" version="1.2.029">
  <Header>
    <From>
      <Credential domain="NetworkId">
        <Identity>AN02000533043</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkId">
        <Identity>AN02000533043</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN02000533043</Identity>
        <SharedSecret>sharedsecret</SharedSecret>
      </Credential>
      <UserAgent>Procurement App 2.0</UserAgent>
    </Sender>
  </Header>
  <Request deploymentMode="production">
    <QuoteRequest>
      <QuoteRequestHeader
        requestID="6000000131"
        requestDate="2016-02-02T13:56:00-5:00"
        type="delete"
        openDate="2016-02-02T13:56:00-5:00"
        closeDate="2016-03-02T13:56:00-5:00"
        currency="USD"
        xml:lang="en"
        quoteReceivingPreference="winningOnly">
        ...
      </QuoteRequestHeader>
    </QuoteRequest>
  </Request>
</cXML>
```

## Sourcing Integration with SAP Ariba Procurement solutions

When SAP Ariba Procurement solutions are integrated with SAP Ariba Sourcing, a procurement solution can send a `QuoteRequest` document to SAP Ariba Sourcing, which SAP Ariba Sourcing uses to create a sourcing request.

By default, SAP Ariba Procurement solutions can send sourcing requests only for aggregated requisitions, but if the `Application.Purchasing.EnableQuickSourcingForRequisition` site configuration parameter is set to `Yes`, SAP Ariba Procurement solutions can also send sourcing requests for regular requisitions.

The `QuoteRequest` document is sent directly from SAP Ariba Procurement solutions to SAP Ariba Sourcing. A sourcing agent creates a sourcing project for the sourcing request in SAP Ariba Sourcing and invites suppliers to participate in the sourcing event. After the suppliers have submitted their bids, the sourcing agent awards the bid to the most suitable suppliers, generates the pricing terms, and sends the pricing terms back to SAP Ariba Procurement solutions, where they are applied on the requisition. The pricing terms are sent using the `QuoteDataMessage`.

[QuoteRequest Documents Sent by SAP Ariba Procurement solutions \[page 271\]](#)

[QuoteMessage Documents Sent to SAP Ariba Procurement solutions \[page 272\]](#)

## QuoteRequest Documents Sent by SAP Ariba Procurement solutions

When a purchasing agent creates a sourcing request for a requisition in one of the SAP Ariba Procurement solutions, a sourcing request cXML file, also known as `QuoteRequest` document, is sent to SAP Ariba Sourcing. This file contains details of the line items in the requisition.

For sourcing requests sent by SAP Ariba Procurement solutions, the `Identity` element within the `Sender` element in the `Header` holds the value `Buyer`: followed by the **Ariba Network ID** of the site sending the sourcing request. The details of each line item in the requisition are sent using a `QuoteItemOut` element in the `QuoteRequest` element.

## Sample QuoteRequest Document Sent by SAP Ariba Solutions

The sample `QuoteRequest` document given below contains the details of two line items having descriptions `Aircraft` and `AirPart`.

### Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "%cxmlSource%">
<cXML timestamp="2014-12-04T14:59:46+05:30"
payloadID="1417685386200.809200779.00000002@M0gq09EOjMo5PAOF3eZazxOPhjY="
xml:lang="en-US" version="1.2.023">

  <Header>
    <!-- class: ariba.encoder.xml.AXComponent -->
    <From>
      <!-- class: ariba.encoder.xml.AXComponent -->
      <Credential domain="NetworkId">
        <!-- class: ariba.encoder.xml.AXComponent -->
        <Identity>Buyer:AN02001100452</
Identity>
      </Credential>
    </From>
    <To>
      <!-- class: ariba.encoder.xml.AXComponent -->
```

```

    <Credential domain="NetworkId">
      <!-- class: ariba.encoder.xml.AXComponent -->
      <Identity>ACM:AN02001100452</
Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkId">
      <!-- class: ariba.encoder.xml.AXComponent -->
      <Identity>Buyer:AN02001100452</Identity>
      <SharedSecret>***shared secret removed***</SharedSecret>
    </Credential>
    <UserAgent>Buyer 13s25</UserAgent>
  </Sender>
</Header>
<Request>
  <QuoteRequest>
    <QuoteRequestHeader quoteReceivingPreference="winningOnly" type="New"
requestDate="Wed Dec 03 17:17:32 IST 2014" requestID="PR18">
    </QuoteRequestHeader>
    <!-- class:
ariba.purchasing.sourcing.RequisitionSourcingRequestEncodeBodyContent -->
    <QuoteItemOut quantity="5.0000000000" lineNumber="1">
      <ItemDetail>
        <UnitPrice>
          <!-- class: ariba.procure.server.cxml.MoneyComponent -->
          <Money alternateCurrency="" alternateAmount="" currency="USD">100</
Money>
        </UnitPrice>
        <Description xml:lang="en">Aircraft</Description>
        <UnitOfMeasure>5 each</UnitOfMeasure>
      </ItemDetail>
    </QuoteItemOut>
    <QuoteItemOut quantity="4.0000000000" lineNumber="2">
      <ItemDetail>
        <UnitPrice>
          <!-- class: ariba.procure.server.cxml.MoneyComponent -->
          <Money alternateCurrency="" alternateAmount="" currency="USD">10</
Money>
        </UnitPrice>
        <Description xml:lang="en">AirPart</Description>
        <UnitOfMeasure>4 each</UnitOfMeasure>
      </ItemDetail>
    </QuoteItemOut>
  </QuoteRequest>
</Request>
</cXML>

```

## QuoteMessage Documents Sent to SAP Ariba Procurement solutions

After the sourcing project is processed and the bid has been awarded to suppliers, the sourcing agent generates and sends the resulting pricing terms from SAP Ariba Sourcing to your procurement or invoicing solution from SAP Ariba in a cXML file called as a QuoteMessage document.

A single cXML file contains the pricing terms for all the line items in the requisition. The supplier's ID is mentioned in the Identity element within the OrganizationID element. The pricing terms for each line item are mentioned in the QuoteItemIn element. The PricingConditions element contains additional details about the pricing terms, such as charges and discounts.

## Sample QuoteMessage Document Sent to SAP Ariba Solutions

The sample pricing terms file given below contains pricing terms for line item Nc1 . It has been awarded to the supplier with buyer system ID SID515.

### Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "%CXMLDTDURL%">
<!-- class: ariba.cxml.Component -->
<cXML timestamp="2019-11-12T20:04:44-08:00" payloadID="%payload-id%"
xml:lang="en-US" version="1.2.046">
  <Header>
    <!-- class: ariba.encoder.xml.AXComponent -->
    <From>
      <!-- class: ariba.encoder.xml.AXComponent -->
      <Credential domain="SpendManagementNetwork">
        <!-- class: ariba.encoder.xml.AXComponent -->
        <Identity>ACM:AN02001565298</
Identity>
      </Credential>
    </From>
    <To>
      <!-- class: ariba.encoder.xml.AXComponent -->
      <Credential domain="SpendManagementNetwork">
        <!-- class: ariba.encoder.xml.AXComponent -->
        <Identity>Buyer:AN02001565298</
Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="SpendManagementNetwork">
        <!-- class: ariba.encoder.xml.AXComponent -->
        <Identity>ACM:AN02001565298</Identity>
        <SharedSecret>dummy</SharedSecret>
      </Credential>
      <UserAgent>ACM 14s1</UserAgent>
    </Sender>
  </Header>
  <!-- class: ariba.sourcing.integration.networkrfq.QuoteDataMessageEncode -->
  <Message>
    <QuoteMessage>
      <QuoteMessageHeader type="award" quoteID="ID105918"
quoteDate="2019-11-12T20:04:07-08:00" currency="USD"xml:lang="en">
        <OrganizationID>
          <Credential domain="buyersystemid">
            <Identity>SID515</Identity>
          </Credential>
        </OrganizationID>
        <Total>
          <Money currency="USD">120.00</Money>
        </Total>
        <QuoteRequestReference requestDate="2019-11-12T19:34:37-08:00"
requestID="%req-id%"/>
      </QuoteMessageHeader>
      <!-- class: ariba.sourcing.integration.networkrfq.QuoteMessageEncode -->
      <QuoteItemIn rank="1" lineNumber="%line-item%" quantity="1" type="award">
        <ItemID>
          <SupplierPartID>RANDOM123</SupplierPartID>
          <SupplierPartAuxiliaryID></SupplierPartAuxiliaryID>
          <BuyerPartID></BuyerPartID>
        </ItemID>
        <ItemDetail>
          <UnitPrice>
            <Money alternateAmount="" alternateCurrency=""
currency="">Money</Money>
          </UnitPrice>
        </ItemDetail>
      </QuoteItemIn>
    </QuoteMessage>
  </Message>
</cXML>
```

```

<PricingConditions>
  <ValidityPeriods>
    <!--Period Q1-->
    <ValidityPeriod from='01.01.2020' to='31.03.2020'>
      <ConditionTypes>
        <!--Price for Q1-->
        <ConditionType name='Price'>
          <CostTermValue>
            <Money currency="USD">120</Money>
          </CostTermValue>
          <Scales scaleType="From">
            <Scale from ='0'>
              <CostTermValue>
                <Money currency='USD'>120</Money>
              </CostTermValue>
            </Scale>
            <Scale from ='100'>
              <CostTermValue>
                <Money currency='USD'>110</Money>
              </CostTermValue>
            </Scale>
            <Scale from ='500'>
              <CostTermValue>
                <Money currency='USD'>100</Money>
              </CostTermValue>
            </Scale>
          </Scales>
        </ConditionType>
        <!--Discount for Q1-->
        <ConditionType name='Discount'>
          <CostTermValue>
            <Money currency='USD'>-5</Money>
          </CostTermValue>
          <Scales scaleType="From">
            <Scale from ='0'>
              <CostTermValue>
                <Money currency='USD'>-20</Money>
              </CostTermValue>
            </Scale>
            <Scale from ='100'>
              <CostTermValue>
                <Money currency='USD'>-15</Money>
              </CostTermValue>
            </Scale>
            <Scale from ='500'>
              <CostTermValue>
                <Money currency='USD'>-10</Money>
              </CostTermValue>
            </Scale>
          </Scales>
        </ConditionType>
      </ConditionTypes>
    </ValidityPeriod>
    <!--Period Q2-->
    <ValidityPeriod from='01.04.2020' to='30.06.2020'>
      <ConditionTypes>
        <!--Price for Q2-->
        <ConditionType name='Price'>
          <CostTermValue >
            <Money currency="USD">125</Money>
          </CostTermValue>
          <Scales scaleType="From">
            <Scale from ='0'>
              <CostTermValue>
                <Money currency='USD'>125</Money>
              </CostTermValue>
            </Scale>
            <Scale from ='100'>

```

```

        <CostTermValue>
            <Money currency='USD'>115</Money>
        </CostTermValue>
    </Scale>
    <Scale from ='500'>
        <CostTermValue>
            <Money currency='USD'>105</Money>
        </CostTermValue>
    </Scale>
</Scales>
</ConditionType>
<!--Surcharge for Q2-->
<ConditionType name='Discount'>
    <CostTermValue>
        <Money currency='USD'>5</Money>
    </CostTermValue>
    <Scales scaleType="From">
        <Scale from ='0'>
            <CostTermValue>
                <Money currency='USD'>-10</Money>
            </CostTermValue>
        </Scale>
        <Scale from ='100'>
            <CostTermValue>
                <Money currency='USD'>-5</Money>
            </CostTermValue>
        </Scale>
        <Scale from ='500'>
            <CostTermValue>
                <Money currency='USD'>-15</Money>
            </CostTermValue>
        </Scale>
    </Scales>
</ConditionType>
</ConditionTypes>
</ValidityPeriod>
</ValidityPeriods>
</PricingConditions>
</UnitPrice>
<Description xml:lang="en">Nc1</Description>
<UnitOfMeasure>EA</UnitOfMeasure>
<Classification domain="unspsc">2513</Classification>
<ManufacturerPartID></ManufacturerPartID>
<ManufacturerName></ManufacturerName>
<URL></URL>
<LeadTime>3</LeadTime>
</ItemDetail>
<Total>
    <Money currency="USD">120.00</Money>
</Total>
</QuoteItemIn>
</QuoteMessage>
</Message>
</cXML>

```

# Invoices and Scheduled Payments

Suppliers generate invoices manually, through cXML `InvoiceDetailRequests`, or EDI documents. Buying organizations use scheduled payments (`PaymentProposalRequest` documents) to tell SAP Business Network and their suppliers about planned payments.

- [Basic Invoice Functionality \[page 276\]](#)
- [Purchase Order Matching \[page 277\]](#)
- [Invoicing Business Rules \[page 278\]](#)
- [Invoice Implementation Hints \[page 280\]](#)
- [Transmission of Invoices to Buying Organizations \[page 337\]](#)
- [Invoice Status and Cancel Invoices \[page 338\]](#)
- [Example Summary \(Multi-PO\) Invoice \[page 339\]](#)
- [Example Header-Level Invoice \[page 342\]](#)
- [Example Blanket Purchase Order Invoice \[page 345\]](#)
- [Example of a Complex Buyer/Supplier Scenario \[page 348\]](#)
- [Scheduled Payments \[page 359\]](#)

## Basic Invoice Functionality

Suppliers can generate invoices manually using the online invoice generator (PO-Flip), through cXML `InvoiceDetailRequest` documents, or through EDI ANSI X12 810 or EDIFACT INVOIC documents. Suppliers can use any of these methods without making configuration changes on SAP Business Network, but should use only one method per purchase order.

SAP Business Network matches each invoice with its corresponding purchase order and it compares them with the buying organizations' invoicing business rules.

Invoices appear in suppliers' online outboxes and in buying organizations' online inboxes. Both trading partners can view invoices and their up-to-date status as they move through the invoice lifecycle. Invoices provide links to associated documents such as purchase orders, master agreements, and credit/debit memos.

Buyers must enable the rule for suppliers to create PO-based and non-PO invoices. Suppliers can send debit memos through cXML, but SAP Business Network does not support creating them online through the **Create Invoice** pages.

SAP Business Network can route invoices from suppliers to Ariba Buyer (7.1 and later). It can also route invoice status (`StatusUpdateRequest` documents) from those organizations to suppliers. Ariba Buyer performs invoice reconciliation to match charges in invoices to items on purchase orders.

# Purchase Order Matching

Invoices refer to pre-existing purchase orders, master agreements, or credit/debit memos. These documents might reside on SAP Business Network, or they might be external documents (those documents not routed through SAP Business Network). Both SAP Business Network and Ariba Buyer attempt to find pre-existing documents by searching for them.

Suppliers insert one of the following elements in invoices to reference pre-existing purchase orders or master agreements:

- `OrderReference`—(preferred method) A `DocumentReference` element containing the purchase order/master agreement `payloadID`.
- `OrderIDInfo`—The purchase order/master agreement `orderID` and its `orderDate`.

## Matching on SAP Business Network

SAP Business Network performs document matching immediately after cXML validation to find pre-existing purchase orders or master agreements.

- If invoices use **payload ID**, but that value does not match purchase orders on SAP Business Network, SAP Business Network considers the purchase orders to be external.
- If invoices use only **orderID** and **orderDate**, SAP Business Network attempts to match based on the purchase order number and optional order date.
- If invoices use only **orderID** and **orderDate**, and those values match multiple purchase orders, SAP Business Network rejects the invoices.
- If invoices use both **payload ID** and **orderID**, SAP Business Network makes sure these values match the same purchase orders. If they do not match, SAP Business Network considers the purchase orders to be external, even if `payloadID` matches a purchase order.
- If invoices match an obsoleted purchase order, SAP Business Network rejects the invoices.

## Successful Matches

If SAP Business Network successfully matches invoices with purchase orders or master agreements, it creates online hyperlinks to them available to both trading partners.

SAP Business Network then tests invoice contents against the buying organization's business rules (see [Invoicing Business Rules \[page 278\]](#).)

## Unsuccessful Matches

If SAP Business Network cannot match a purchase order, it treats the invoice as belonging to an external purchase order, which is any purchase order that was not routed through SAP Business Network.

Buying organizations configure their SAP Business Network accounts to either allow or reject invoices against external purchase orders. For more information, see [Invoicing Business Rules \[page 278\]](#).

## Matching in Ariba Buyer

By default, Ariba Buyer finds pre-existing purchase orders or master agreements by using the `OrderReferencePayloadID` from invoices. If invoices do not contain that value, it matches by `OrderIDInfo` (purchase order number).

If Ariba Buyer cannot find referenced purchase orders, it generates unmatched invoice exceptions. These exceptions list invoice details and allow requisitioners to manually match invoices to purchase orders. If requisitioners cannot find matches, they can reject the invoices, and Ariba Buyer sends `cXMLStatusUpdateRequest` documents to SAP Business Network to set invoice status to “rejected.”

Buying organizations can configure Ariba Buyer to automatically reject invoices that do not match purchase orders. They can also customize the logic that Ariba Buyer uses for document matching.

## Invoicing Business Rules

When buying organizations enable their SAP Business Network accounts for invoicing, they specify invoicing business rules. These rules specify basic requirements of their invoicing process.

Examples of business rules include:

- Allow invoices that contain detailed service information for both goods and service items but that are not based on service sheets. These are invoices with `InvoiceDetailServiceItem` elements (introduced in cXML 1.2.009). For service line items, the name attribute can be `IsShippingServiceItem`, `IsSpecialHandlingServiceItem`, `ServiceLocation` (contains contact element) or an arbitrary text string.
- Allow invoices against external (non-SAP Business Network) purchase orders.
- Allow invoices against PCard/credit card orders.
- Allow non-service invoices to change currency, unit price, unit of measure, part number, ship to, or bill to.
- Allow invoices to have additional quantities or line items.
- Allow users to view invoices on SAP Business Network from your ERP application.

Each buying organization can set these business rules differently.

When SAP Business Network receives invoices, it tests their contents against these business rules. SAP Business Network does not route invoices that fail to pass. It sends email notifications to suppliers (not to buying organizations) and it does not send cXML status documents.

## Note

SAP Ariba Cloud Integration Gateway receives the invoices and then posts it to the SAP Business Network. If the invoice is transmitted successfully, the **Transaction Tracker** in the cloud integration gateway will show it as successful. SAP Business Network then sends a `StatusUpdate` to the cloud integration gateway for the invoice against the buyers business rules. The status of Invoice in transaction tracker will not be updated but you can map the `StatusUpdate` received by SAP Ariba Cloud Integration Gateway to suppliers acknowledgement formats.

For any other document type, when the document is posted by SAP Ariba Cloud Integration Gateway, SAP Business Network responds synchronously and the status is reflected in the **Transaction Tracker** against the transaction.

## Rules That Affect PO-Flip Only

Some business rules only affect manually-created online purchase orders (PO-Flip), but not invoices generated through cXML, EDI, or CSV.

The following business rules affect only PO-Flip invoices:

- Allow a change in Ship To Information
- Allow a change in Bill To Information
- Allow direct entry of sales tax

## Supplier Visibility of Business Rules

Suppliers can view the invoicing business rule settings of their customers through their SAP Business Network accounts. Suppliers should understand their customers' capabilities before generating invoices.

To view a customer's invoicing business rules, suppliers go to the Buyers area of their SAP Business Network accounts and click the name of the customer. If invoicing rules are not listed, that customer does not accept invoices through SAP Business Network.

## Numeric Validation

SAP Business Network does not perform any numeric validation on line-items, totals, or costs within cXML invoices.

SAP Business Network does not validate math errors. For example, if a cXML invoice lists unit price \$50 and quantity 5, SAP Business Network will not check to see if the subtotal is \$250. That discrepancy will not generate a validation error.

Similarly, SAP Business Network does not perform numeric validation of amounts in `ConfirmationRequest` documents that refer to invoices. In particular, SAP Business Network does not check the `PartialAmount`

element. `PartialAmount` enables buying organizations to specify different amounts paid than the amounts specified in invoices.

## Invoice Implementation Hints

SAP Ariba applications have specific requirements for invoice contents.

- [eSignatures \[page 281\]](#)
- [IdReference Element \[page 284\]](#)
- [Contact Roles \[page 287\]](#)
- [Conversion of Segment to AccountingSegment \[page 287\]](#)
- [Invoice payloadID Attribute \[page 287\]](#)
- [ServiceEntryItemReference Element \[page 288\]](#)
- [SerialNumber Elements \[page 288\]](#)
- [PaymentTerm Element \[page 289\]](#)
- [Remittance IDs \[page 289\]](#)
- [Credit Memos and Line-Item Credit Memos \[page 290\]](#)
- [Goods Receipt-Based Invoice Verification \[page 290\]](#)
- [inspectionDate Attribute \[page 293\]](#)
- [PriceBasisQuantity Element \[page 293\]](#)
- [itemType Attribute \[page 294\]](#)
- [compositeltemType Attribute \[page 295\]](#)
- [Tolerances Element \[page 297\]](#)
- [TaxDetail Category \[page 298\]](#)
- [Tax on Shipping and Special Handling \[page 298\]](#)
- [Allowances and Charges \[page 300\]](#)
- [French Parafiscal Taxes \[page 309\]](#)
- [Withholding Tax Support \[page 313\]](#)
- [Mandatory Fields for Countries with a VAT System \[page 314\]](#)
- [Invoices for Suppliers from Mexico \[page 320\]](#)
- [Extrinsic Elements for Invoices \[page 324\]](#)
- [Invoice Element Field Lengths \[page 336\]](#)
- [PDF Invoice Copy Attachments \[page 337\]](#)

# eSignatures

Digital signatures (eSignatures) provide an electronic method of authenticating the creators of documents and of ensuring content integrity. They are also used to meet country-specific requirements, including VAT.

Digital signatures enable buying organizations and suppliers to prove that an invoice is unaltered, depending on local laws. If a digitally signed invoice is changed after it is signed, the digital signature is invalid.

SAP Business Network can apply a digital signature to invoices generated online, through cXML, EDI, or CSV. SAP Business Network compares the originating and destination countries on the invoice to determine whether the invoice should be digitally signed. If either country requires digital signatures, SAP Business Network digitally signs the invoice. Some countries require digital signatures for both the originating and the destination countries.

To determine the originating and destination countries, SAP Business Network checks the `InvoiceDetail` cXML for the following information in the order given. If the country cannot be determined, SAP Business Network does not digitally sign the invoice.

Order	Originating Country Determined By...	Destination Country Determined By...
1	Tax representative's VAT ID prefix	Buyer's VAT ID prefix
2	Tax representative's country code	"shipTo" element country code (header level)
3	Supplier's VAT ID prefix	"shipTo" element country code (line item)
4	"From" element country code	

The customer's currency is determined by the country specified in the **Ship To** field.

Digitally signed invoices are compatible with any version of Ariba Buyer that accepts invoices. Versions of Ariba Buyer before 8.2 accept signed invoices but do not authenticate digital signatures. European buying organizations should allocate disk space to store the additional 3-4 kilobytes per invoice for digital signatures.

On the **Review Invoice** page, SAP Business Network specifies that the invoice will be digitally signed. SAP Business Network also signs updated and cancel invoices that you generate. SAP Business Network does not apply a digital signature for paper invoices, ICS invoices (invoices sent from an invoice conversion service provider), or invoices marked with the `invoiceSubmissionMethod` extrinsic.

For information on the current invoicing certificate requirements for several European countries, see [https://knowledge.ariba.com/Ariba\\_eSigning\\_CountryMatrix](https://knowledge.ariba.com/Ariba_eSigning_CountryMatrix).

[Supplier Self-Signed Invoices \[page 282\]](#)

[eSigning Restrictions \[page 282\]](#)

[ICS Invoices \[page 282\]](#)

[Other Invoice Source Documents \[page 284\]](#)

## Supplier Self-Signed Invoices

SAP Business Network supports self-signed invoices. Suppliers who implement their own digital signature solution (via cXML) can create self-signed invoices.

The self-signing process assumes that the supplier is the issuer of the invoice and can validate on behalf of the buyer. Therefore, the supplier must use the signature validation method specified for canonicalization as described in the W3C specifications before signing the invoice.

Suppliers are free to use their established business logic for determining when and how to eSign as follows:

- Which invoices to sign (in some case the supplier may choose not to apply an eSignature at all)
- What country combinations of origin and destination to use
- Which certificates to use for signing invoices

## eSigning Restrictions

Buyers should fully understand the supplier's process for eSigning and validating on their behalf. If the invoice is not canonicalized before signing, any third party (for example, Infomosaic, Apache) validation of the signature fails. SAP Ariba's digital signature feature utilizes TrustWeaver as the third-party digital signature ASP.

### Note

Using Apache is preferred for signature validation (and not Microsoft.NET). Refer to <http://www.w3.org/TR/xml-c14n> and [http://en.wikipedia.org/wiki/Canonical\\_XML](http://en.wikipedia.org/wiki/Canonical_XML) for more information about XML canonicalization.

## Related Information

[Digital Signature Process](#)

[Digital Certificates \[page 34\]](#)

## ICS Invoices

The `invoiceSubmissionMethod` extrinsic indicates the means used to submit the invoice. SAP Business Network uses this extrinsic to assign a value to invoices created online for reporting and uses it to determine

whether to digitally sign invoices. Invoice conversion service providers use the extrinsic with the value `PaperViaICS`.

## Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.020/InvoiceDetail.dtd">
...
<InvoiceDetailRequestHeader invoiceDate="2008-08-11T01:34:42+01:00"
invoiceID="280064482"
    operation="new" purpose="standard" ...>
    <Extrinsic name="invoiceSubmissionMethod">PaperViaICS</Extrinsic>
</InvoiceDetailRequestHeader>
...
```

Other values for `invoiceSubmissionMethod` are: `Online`, `EDI`, `cXML`, `PaperInvoice`, `SupplierPunchIn`, and `CSVUpload`.

When an invoice is received from an invoice conversion service provider, the **Submit Method** column in the user interface in the SAP Business Network account and the `invoiceSubmissionMethod` element in the cXML contains the following values:

- If the invoice is sent with a value in the `invoiceSubmissionMethod` extrinsic, SAP Business Network retains this value and displays it in the cXML and in the SAP Business Network account.
- If the invoice is sent without a value in the `invoiceSubmissionMethod` extrinsic, then the `invoiceSubmissionMethod` in the cXML shows "PaperViaICS" and the **Submit Method** column in the SAP Business Network account displays, "ICS Paper Invoice."

### Note

The `invoiceSubmissionMethod` extrinsic supersedes the legacy `convertedInvoiceData` extrinsic, which indicated how the invoice was created. Use `invoiceSubmissionMethod` instead.

## Related Information

[SAP Business Network Guide to Invoice Conversion](#)

## Other Invoice Source Documents

The extrinsic `invoiceSourceDocument` is used for reporting purposes to show the source document referenced in the invoice. The value is one of the following strings: `PurchaseOrder`, `SalesOrder`, `Contract`, `ExternalPurchaseOrder`, or `Time_ExpenseSheet`.

### Example

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.020/InvoiceDetail.dtd">
...
  <InvoiceDetailRequestHeader invoiceDate="2008-08-11T01:34:42+01:00"
  invoiceID="280064482"
    operation="new" purpose="standard" invoiceOrigin="supplier">
    <Extrinsic name="invoiceSourceDocument">Contract</Extrinsic>
    <Extrinsic name="invoiceSubmissionMethod">SupplierPunchin</Extrinsic>
  </InvoiceDetailRequestHeader>
...
```

When suppliers send a non-PO invoice or credit memo through cXML or EDI, they must ensure that a value is specified in the `invoiceSourceDocument extrinsic`. This extrinsic value is used to show the source document referenced in the invoice.

- If the buyer has enabled the rule, “**Require suppliers to provide order information**” in the SAP Business Network buyer account, a value is required in one of the Order Information fields for invoices sent through cXML or EDI. The value entered in the `invoiceSourceDocument extrinsic` is displayed in the **Source Doc** field.
- If the buyer has not enabled the rule, then the value in the Order Information fields are optional and can be left blank for invoices sent through cXML or EDI. The cXML is generated with an empty `orderId` attribute. However, suppliers should ensure that they enter the string, “NoOrderInformation” in the `invoiceSourceDocument extrinsic` when there is no value in the Order Information fields. When this string is not provided in the extrinsic, the **Source Doc** field is left blank.

```
      <Extrinsic
name="invoiceSourceDocument">NoOrderInformation</Extrinsic>
```

### Note

The string, “NoOrderInformation” is case-sensitive and must be entered exactly as mentioned here.

## IdReference Element

Trading partners should understand how to generate and use the `IdReference` value within `InvoicePartner` elements.

For example, in most cases, the domains `accountID` and `bankRoutingID` should be used as a pair with `Contact role remitTo`.

## Example

```
<InvoicePartner>
  <Contact role="remittanceTo">
    <Name xml:lang="en-US">Supplier Accts. Receivable</Name>
    <PostalAddress>
      <Street>One Bank Avenue</Street>
      <City>Any City</City>
      <State>CA</State>
      <PostalCode>94087</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
  </Contact>
  <IdReference identifier="123456789" domain="bankRoutingID" />
  <IdReference identifier="3456" domain="accountID" />
</InvoicePartner>
```

For some trading relationships, the `accountID` might not refer to a bank account ID. It might be an ID assigned to the supplier by the buying organization.

Additional details about `IdReference` domains:

- `accountPayableID`—Buying organization's vendor number for the supplier.
- `accountReceivableID`—Supplier's customer number for the buying organization.
- `creditorRefID`—Specifies the creditor reference number for an `InvoicePartner`.
- `departmentName`— Identifies the Japanese address and honorific format on SAP Business Network. In addition, allows to enter the name of the person or organization to whom the service is being delivered.
- `gstID`—Goods and Services Tax identifier for Canadian organizations.
- `stateTaxID` and `provincialTaxID`—Interchangeable, representing only different globalized descriptions.
- `supplierReference`— Internal supplier reference ID used to identify outbound documents to the supplier user.
- `vatID`—Value Added Tax identifier for organizations that comply with VAT requirements.

## ACH Information

ACH information provides details on where to send payments.

## Example

```
<InvoicePartner>
  <Contact role="receivingBank">
    <Name xml:lang="en-US">Wells Fargo Bank</Name>
  </Contact>
  <IdReference identifier="121042882" domain="abaRoutingNumber" />
  <IdReference identifier="Workchairs Savings" domain="accountName" />
  <IdReference identifier="34567890" domain="accountID" />
  <IdReference identifier="Savings" domain="accountType" />
  <IdReference identifier="Sunnyvale" domain="branchName" />
</InvoicePartner>
```

## Wire Information

Wire information provides details on where to send payments.

### Example

```
<InvoicePartner>
  <Contact role="wireReceivingBank">
    <Name xml:lang="en-US">BankAmerica</Name>
  </Contact>
  <IdReference identifier="121042882" domain="swiftID" />
  <IdReference identifier="12345678" domain="ibanID" />
  <IdReference identifier="Workchairs Savings" domain="accountName" />
  <IdReference identifier="123456" domain="accountID" />
  <IdReference identifier="Savings" domain="accountType" />
  <IdReference identifier="Sunnyvale" domain="branchName" />
</InvoicePartner>
```

## Creditor Reference Information

Creditor reference information for the `InvoicePartner` can be included in the contact information to achieve quick payment cycles.

### Example

```
<InvoicePartner>
  <Contact role="wireReceivingBank">
    <Name xml:lang="en-US">BankAmerica</Name>
  </Contact>
  <IdReference identifier="121042882" domain="swiftID" />
  <IdReference identifier="12345678" domain="ibanID" />
  <IdReference identifier="Workchairs Savings" domain="accountName" />
  <IdReference identifier="123456" domain="accountID" />
  <IdReference identifier="Savings" domain="accountType" />
  <IdReference identifier="Sunnyvale" domain="branchName" />
  <IdReference identifier="RF70 1234 5611 2233" domain="creditorRefID" />
</InvoicePartner>
```

## Contact **Roles**

Invoices can provide `Contact` roles that define a supplier's name and address, and the name and address of the buyer.

`Contact` roles can have the following values:

- `from`—Supplier's name and address.
- `soldTo`—Buyer's name, email, and address.
- `billTo`—Buyer's name and address.
- `remitTo`—Supplier's address.
- `shipFrom`—Supplier's shipping address, with email address, if any.
- `shipTo`—Buyer's name and address.
- `receivingBank`—Name of the bank receiving an electronic payment.
- `wireReceivingBank`—Name of the bank receiving a wire transfer.

The `Contact` element within `InvoiceDetailShipping` has the following roles: `shipFrom` and `shipTo`. Both roles are required.

The `role="remitTo"` can optionally have an `addressID` attribute.

## Conversion of `Segment` to `AccountingSegment`

The `Segment` element was deprecated and replaced by the `AccountingSegment` element in cXML 1.2.005.

When suppliers generate invoices manually through their SAP Business Network accounts, SAP Business Network transforms any `Segment` elements from the purchase orders into `AccountingSegment` elements for the invoices.

## Invoice `payloadID` Attribute

The `payloadID` in the invoice document header must be a unique value for all documents. If the `payloadID` is not unique, the invoice is not generated and no error message appears.

Invoices should also contain the `payloadID` of the corresponding purchase order or master agreement. Use the guidelines for formulating `payloadID` in the *cXML reference guide* at <http://www.cxml.org>.

### Note

For invoices, SAP Integration Suite, managed gateway for spend management and SAP Business Network does not require the reference `payloadID`, but the cXML envelope for `payloadID` is required. For example, the supplier only needs to send `<OrderID="1234567890">` and leave the `payloadID` blank, `<DocumentReference payloadID="" />`.

## Related Information

[Purchase Order Matching \[page 277\]](#)

### ServiceEntryItemReference **Element**

The `ServiceEntryItemReference` element references the service sheet line item on which the invoice line item is based.

`ServiceEntryItemReference` has the following attributes:

A new element that references the originating service sheet. It has the following attributes:

- `serviceEntryDate`, the date when the service sheet was created
- `serviceEntryID`, the unique identifier for the service sheet
- `serviceLineNumber`, the service sheet line number

It includes a `<DocumentReference>` element that references the service sheet itself. For example:

```
<InvoiceDetailItem invoiceLineNumber="1" quantity="1">
  <UnitOfMeasure>EA</UnitOfMeasure>
  <UnitPrice>
    <Money currency="USD">9000</Money>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber="1">
    <ItemID>
      <SupplierPartID>cat1010m</SupplierPartID>
    </ItemID>
    <Description xml:lang="en-US"></Description>
  </InvoiceDetailItemReference>
  <ServiceEntryItemReference serviceEntryDate="2013-08-12T21:03:20-07:00"
    ServiceEntryID="SES-HC-t1" serviceLineNumber="1">
    <DocumentReference
      payloadID="1381430779525-5274812674141413083@10.10.15.142">
    </DocumentReference>
  </ServiceEntryItemReference>
  <SubtotalAmount>
    <Money currency="USD">9000</Money>
  </SubtotalAmount>
  <GrossAmount>
    <Money currency="USD">9000</Money>
  </GrossAmount>
  <NetAmount>
    <Money currency="USD">9000</Money>
  </NetAmount>
</InvoiceDetailItem>
```

### SerialNumber **Elements**

Suppliers can uniquely identify items being invoiced by specifying their serial numbers. Suppliers can insert one or more `SerialNumber` elements within `InvoiceDetailItemReference` elements:

```
<SerialNumber>45993823469876</SerialNumber>
<SerialNumber>45993823469877</SerialNumber>
```

```
<SerialNumber>45993823469878</SerialNumber>
```

The `serialNumber` attribute was deprecated in cXML 1.2.009 and replaced by the `SerialNumber` element. SAP Business Network displays both `serialNumber` attributes and `SerialNumber` elements.

## PaymentTerm **Element**

The `PaymentTerm` element allows suppliers to specify discounts or penalties based on payment date. Payment terms can come from corresponding purchase orders.

Buying organizations can allow or disallow changes to payment terms on SAP Business Network. Regardless of whether they allow suppliers to edit payment terms, SAP Business Network accepts changes in payment terms for purchase orders that do not specify these terms.

Buying organizations can also require the presence of payment terms on invoices.

Standard invoices and debit memos can have payment terms; however, SAP Business Network rejects credit memos and line-item credit memos that have payment terms.

## Remittance IDs

Buying organizations might require suppliers to consistently identify remittance addresses with a unique ID value. Suppliers should populate the `Contact addressID` attribute with that ID.

### Example

```
<InvoicePartner>
  <Contact role="remitTo" addressID="1234">
    <Name xml:lang="en">Joan Bill</Name>
    <PostalAddress name="billing department">
      <DeliverTo>Joan Bill</DeliverTo>
      <Street>16 Castro Street</Street>
      <City>Mountain View</City>
      <State>CA</State>
      <PostalCode>95035</PostalCode>
      <Country isoCountryCode="US">United States</Country>
    </PostalAddress>
    .
    .
  </Contact>
  .
  .
</InvoicePartner>
```

The buying organization can assign a unique ID value for each supplier address. The supplier must use the ID appropriate for the buying organization.

# Credit Memos and Line-Item Credit Memos

Suppliers can issue credits to their customers by sending credit memos and line-item credit memos. To issue a credit, suppliers should send a header-level credit memo or a line-item credit memo with a negative amount.

Your customers must configure their SAP Business Network account to accept line-item credit memos. If your customers do not configure their accounts, SAP Business Network treats a line-item credit memo as a standard invoice.

## Example

The following example shows the `InvoiceDetailRequestHeader` element of a line-item credit memo:

```
<InvoiceDetailRequest>
  <InvoiceDetailRequestHeader invoiceID="CRD012042"
    purpose="lineLevelCreditMemo" operation="new"
    invoiceDate="2001-12-04T18:00:00-07:00">
    <InvoiceDetailHeaderIndicator/>
  <InvoiceDetailLineIndicator/>
  <Comments xml:lang="en-US">
    Buyer ordered 5 Computer Video Cables and 3 Wireless Keyboards.
    We invoiced the customer for 8 Cables by mistake.
  </Comments>
```

### Note

In order for the line-item credit memo to contain a link to the original invoice, suppliers need to provide the `DocumentReference` element with the `payloadID` attribute set to the `payloadID` of the original invoice (`<DocumentReference payloadID="PreviousInvoicePayloadId" />`). For example, `<DocumentReference payloadID="55555555@10.10.1.1" />`. For non-cXML suppliers, `InvoiceIDInfo` is an acceptable alternative. The `InvoiceDetailRequestHeader` element example shows only the `invoiceID` provided in the credit memo.

# Goods Receipt-Based Invoice Verification

For goods receipt-based invoice verification with SAP Ariba Invoice Management

Invoice lines reconciled against goods receipts are transferred to the external ERP system.

- When an invoice has been approved, invoice lines with references to order lines marked as **Ship Notice Required** are split per the goods receipt lines that were matched to the invoice item.
- Multiple `InvoiceDetailOrder` segments are generated for each invoice line item: one for each matched goods receipt line, and one for each shipping and special handling line.

Goods receipt-based invoice verification requires custom integration and mapping. Your external ERP system must be configured to send the required information.

If your external ERP system is SAP ERP, this feature works with existing adapters without additional mapping, with the exception of handling returns, which requires custom mapping to pass the original receipt ID.

## Order CXML

In the cXML for the purchase orders, line items targeted for verification based on goods receipts must be flagged as follows:

```
<InvoiceInstruction value="isNotERS" verificationType="goodsReceipt"></InvoiceInstruction>
```

## Receipt CXML and Handling of Returns

Receipts imported from your ERP system must include the ship notice ID:

```
<ShipNoticeIDInfo shipNoticeID="GR_ASN_007"></ShipNoticeIDInfo>
```

The ship notice ID field is required to trigger automatic matching of invoice lines to receipts. If the receipts don't include the associated ship notice ID, invoice exception handlers need to manually match invoice lines to available receipts. Make sure your receiving data entry processes and system configuration support your users to include the correct ship notice IDs when creating receipts.

Returns are processed as negative receipts. The cXML for returns must include a reference to the original receipt to specify which goods receipt the return is for. The extrinsics `ReceiptReference` and `ReceiptReferenceDate` carry this information in the `ReceiptRequestHeader` section of the `CopyReceipt`.

```
<ReceiptRequestHeader receiptID="ReversalOfGR1"
receiptDate="2017-08-15T15:42:11-07:00" operation="new">
  <Extrinsic name="ReceiptReference">GR1</Extrinsic>
  <Extrinsic name="ReceiptReferenceDate">2017-08-15T15:42:11-07:00</Extrinsic>
</ReceiptRequestHeader>
```

## Invoice CXML

The cXML for goods receipt-based invoices include the ship notice ID at the header level and the line level. SAP Ariba Invoice Management takes the ship notice ID from the `ShipNoticeIDInfo` element at the line level.

Header-level ship notice information:

```
<InvoiceDetailShipNoticeInfo>
  <ShipNoticeReference shipNoticeDate="2017-04-10T03:40:08-07:00"
shipNoticeID="123">
    <DocumentReference
payloadID="1491820808414-4963805651512454906@10.163.0.251"></DocumentReference>
  </ShipNoticeReference>
</InvoiceDetailShipNoticeInfo>
```

Line-level ship notice information:

```
<ShipNoticeIDInfo shipNoticeID="123"></ShipNoticeIDInfo>
```

The invoice must include the reference number assigned to the line items on the ship notice as follows:

```
<ShipNoticeLineItemReference shipNoticeLineNumber="1"></ShipNoticeLineItemReference>
```

In SAP ERP, the **Delivery Note ID** field of an invoice is populated with the `shipNoticeID` value from the invoice cXML. If there's no `shipNoticeID` value (for example, for integrated suppliers who don't create invoices on SAP Business Network), the **Delivery Note ID** field is populated with ID reference information in the `ShipNoticeIDInfo` element:

```
<ShipNoticeIDInfo shipNoticeID="Packing Slip ID">
  <IdReference domain="deliveryNoteID" identifier="Delivery Note ID"/>
  <IdReference domain="deliveryNoteLineItemNo" identifier="Delivery Note Line
#"/>
</ShipNoticeIDInfo>
```

## Invoice Reconciliation CXML

The cXML for invoice reconciliations includes the following information for each line item:

- Ship notice information (under `InvoiceDetailItem`):

```
<ShipNoticeIDInfo shipNoticeID="GR_ASN_773"></ShipNoticeIDInfo>
```

- Associated receipt (under `InvoiceDetailOrder`):

```
<InvoiceDetailReceiptInfo>
  <ReceiptReference receiptID="1" receiptDate="2017-08-15T15:42:11-07:00">
    <DocumentReference payloadID="111bb333.34314"/>
  </ReceiptReference>
</InvoiceDetailReceiptInfo>
```

- Line number of the item on the associated receipt (under `InvoiceDetailItem`):

```
<ReceiptLineItemReference receiptLineNumber="1"></ReceiptLineItemReference>
```

## Example

The following is a sample excerpt of invoice reconciliation cXML that includes the ship notice and receipt information for an item on the invoice.

```
<InvoiceDetailOrder>
  <InvoiceDetailOrderInfo>
    <OrderReference orderID="4500001075">
      <DocumentReference payloadID="E662E25605B7FA2CE10000000A4C42BD"></
DocumentReference>
    </OrderReference>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailReceiptInfo>
    <ReceiptReference receiptID="1" receiptDate="2017-08-15T15:42:11-07:00">
      <DocumentReference payloadID="111bb333.34314"/>
    </ReceiptReference>
  </InvoiceDetailReceiptInfo>
  <InvoiceDetailItem invoiceLineNumber="1" quantity="5">
```

```

    <ShipNoticeIDInfo shipNoticeID="GR_ASN_773"></ShipNoticeIDInfo>
      <ReceiptLineItemReference receiptLineNumber="1"></
ReceiptLineItemReference>
      <GrossAmount>
        <Money alternateCurrency="" alternateAmount="" currency="USD">82.67</
Money>
      </GrossAmount>
      <NetAmount>
        <Money alternateCurrency="" alternateAmount="" currency="USD">82.67</
Money>
      </NetAmount>
    </InvoiceDetailItem>
  </InvoiceDetailOrder>

```

## inspectionDate **Attribute**

Some countries, such as Japan, mandate that invoices specify when the transfer of products or the delivery of services occurs.

Suppliers specify inspection dates using the `inspectionDate` attribute, which can be used with the `InvoiceDetailItem`, `InvoiceDetailServiceItem`, and `InvoiceDetailOrderSummary` elements.

### Example

```

<InvoiceDetailItem invoiceLineNumber="1" quantity="5"
inspectionDate="2004-01-01T00:01:23+00:00">

```

SAP Business Network automatically adds this attribute when suppliers generate invoices manually in their SAP Business Network accounts if both trading partners' addresses are in Japan.

## PriceBasisQuantity **Element**

The `PriceBasisQuantity` element contains the quantity-based pricing for a line item.

For more information, see [PriceBasisQuantity Element \[page 171\]](#).

This element is also available in invoices with `InvoiceDetailServiceItem` elements as long as they are not based on underlying service sheets. Invoices created from service sheets do not support `PriceBasisQuantity` elements.

## itemType **Attribute**

The `itemType` attribute specifies if the line item is a grouped item having child items or an independent line item. It can contain two values: "composite" to identify an item group or "item" to identify an independent line item.

In `InvoiceDetailItem` and `InvoiceDetailServiceItem`, the attribute `parentInvoiceLineNumber` refers to the line number of the parent line item. Buyers can group child line items under an item group.

### Example

```
<InvoiceDetailItem invoiceLineNumber="1" quantity="10" itemType="composite">
  <UnitOfMeasure>EA</UnitOfMeasure>
  <UnitPrice>
    <Money currency="USD">11.11</Money>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber="1">
    <ItemID>
      <SupplierPartID>KYBD101E</SupplierPartID>
    </ItemID>
    <Description xml:lang="en-US">This is an item group.
    </Description>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency="USD">111.10</Money>
  </SubtotalAmount>
  <GrossAmount>
    <Money currency="USD">111.10</Money>
  </GrossAmount>
  <NetAmount>
    <Money currency="USD">111.10</Money>
  </NetAmount>
</InvoiceDetailItem>
<InvoiceDetailItem invoiceLineNumber="2" quantity="5" parentInvoiceLineNumber="1">
  <UnitOfMeasure>EA</UnitOfMeasure>
  <UnitPrice>
    <Money currency="USD">11.11</Money>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber="1001">
    <ItemID>
      <SupplierPartID>KYBD101E</SupplierPartID>
    </ItemID>
    <Description xml:lang="en-US">This is a child line</Description>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency="USD">55.55</Money>
  </SubtotalAmount>
  <GrossAmount>
    <Money currency="USD">55.55</Money>
  </GrossAmount>
  <NetAmount>
    <Money currency="USD">55.55</Money>
  </NetAmount>
  </InvoiceDetailItemReference>
</InvoiceDetailItem>
```

## compositeItemType **Attribute**

The compositeItemType is used to support item groups in non-PO invoices.

- The compositeItemType attribute is used for DTD tag Item.mod. Its possible values are groupLevel and itemLevel.
- The compositeItemType entity is added as an optional attribute to the following elements:
  - ItemIn
  - ItemOut
  - InvoiceDetailItem
  - ConfirmationItem
  - ShipNoticeItem
  - ReceiptItem

The following example shows an item group with group-level pricing type:

```
<InvoiceDetailOrder>
  <InvoiceDetailOrderInfo>
    <OrderIDInfo orderID=" " ></OrderIDInfo>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailItem quantity="1" invoiceLineNumber="1"
  itemType="composite" compositeItemType="groupLevel">
    <UnitOfMeasure></UnitOfMeasure>
    <UnitPrice>
      <Money currency="USD">21.00</Money>
    </UnitPrice>
    <InvoiceDetailItemReference lineNumber="1">
      <ItemID>
        <SupplierPartID>1</SupplierPartID>
      </ItemID>
      <Description xml:lang="en">Parent Item</Description>
    </InvoiceDetailItemReference>
    <TotalAllowances>
      <Money currency="USD">25.00</Money>
    </TotalAllowances>
    <TotalAmountWithoutTax>
      <Money currency="USD">290.00</Money>
    </TotalAmountWithoutTax>
    <NetAmount>
      <Money currency="USD">290.00</Money>
    </NetAmount>
  </InvoiceDetailItem>
  <InvoiceDetailItem invoiceLineNumber="2" quantity="15"
  parentInvoiceLineNumber="1" itemType="item">
    <UnitOfMeasure>33</UnitOfMeasure>
    <UnitPrice>
      <Money currency="USD">21.00</Money>
    </UnitPrice>
    <InvoiceDetailItemReference lineNumber="1">
      <ItemID>
        <SupplierPartID>1</SupplierPartID>
      </ItemID>
      <Description xml:lang="en">Child Item</Description>
    </InvoiceDetailItemReference>
    <SubtotalAmount>
      <Money currency="USD">315.00</Money>
    </SubtotalAmount>
    <GrossAmount>
      <Money currency="USD">290.00</Money>
    </GrossAmount>
    <InvoiceItemModifications>
      <Modification>
```

```

<AdditionalDeduction>
  <DeductionAmount>
    <Money currency="USD">47.25</Money>
  </DeductionAmount>
  <DeductionPercent percent="15"></DeductionPercent>
</AdditionalDeduction>
<ModificationDetail name="Contract Allowance">
  <Description xml:lang="en"/>
</ModificationDetail>
</Modification>
</InvoiceItemModifications>
  <TotalAllowances>
    <Money currency="USD">25.00</Money>
  </TotalAllowances>
  <TotalAmountWithoutTax>
    <Money currency="USD">290.00</Money>
  </TotalAmountWithoutTax>
  <NetAmount>
    <Money currency="USD">290.00</Money>
  </NetAmount>
</InvoiceDetailItem>
</InvoiceDetailOrder>

```

The following example shows an item group with item-level pricing type:

```

<InvoiceDetailOrder>
  <InvoiceDetailOrderInfo>
    <OrderIDInfo orderID=" " ></OrderIDInfo>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailItem quantity="1" invoiceLineNumber="1"
  itemType="composite" compositeltemType="itemLevel">
    <UnitOfMeasure></UnitOfMeasure>
    <UnitPrice>
      <Money currency="USD">0.00</Money>
    </UnitPrice>
    <InvoiceDetailItemReference lineNumber="1">
      <ItemID>
        <SupplierPartID>1</SupplierPartID>
      </ItemID>
      <Description xml:lang="en">Parent Item</Description>
    </InvoiceDetailItemReference>
  </InvoiceDetailItem>
  <InvoiceDetailItem invoiceLineNumber="2" quantity="15"
  parentInvoiceLineNumber="1" itemType="item">
    <UnitOfMeasure>33</UnitOfMeasure>
    <UnitPrice>
      <Money currency="USD">21.00</Money>
    </UnitPrice>
    <InvoiceDetailItemReference lineNumber="1">
      <ItemID>
        <SupplierPartID>1</SupplierPartID>
      </ItemID>
      <Description xml:lang="en">Child Item</Description>
    </InvoiceDetailItemReference>
    <SubtotalAmount>
      <Money currency="USD">315.00</Money>
    </SubtotalAmount>
    <GrossAmount>
      <Money currency="USD">290.00</Money>
    </GrossAmount>
    <InvoiceItemModifications>
      <Modification>
        <AdditionalDeduction>
          <DeductionAmount>
            <Money currency="USD">47.25</Money>
          </DeductionAmount>
          <DeductionPercent percent="15"/>
        </AdditionalDeduction>
      </Modification>
    </InvoiceItemModifications>
  </InvoiceDetailItem>
</InvoiceDetailOrder>

```

```

</AdditionalDeduction>
<ModificationDetail name="Contract Allowance">
  <Description xml:lang="en"></Description>
</ModificationDetail>
</InvoiceItemModifications>
<TotalAllowances>
  <Money currency="USD">25.00</Money>
</TotalAllowances>
<TotalAmountWithoutTax>
  <Money currency="USD">290.00</Money>
</TotalAmountWithoutTax>
<NetAmount>
  <Money currency="USD">290.00</Money>
</NetAmount>
</InvoiceDetailItem>
</InvoiceDetailOrder>

```

## Tolerances **Element**

When a purchase order contains the line item quantity and unit price tolerances, these tolerances are applied to invoices created on SAP Business Network.

SAP Business Network applies the line item quantity and unit price tolerances to invoices in the `InvoiceDetailRequest` cXML documents sent through cXML. The line item quantity and unit price tolerances from the purchase order does not appear in invoices also. However, when suppliers create an invoice, SAP Business Network validates the line item quantity tolerance and unit price tolerance does not exceed the specified tolerance limit in the purchase order.

When suppliers create an invoice for a changed purchase order, the line item quantity and unit price tolerances available in the changed purchase order is used to validate the line items in the invoice. The tolerances specified in the original purchase order are ignored.

SAP Business Network applies the line item quantity and unit price tolerances in invoices as the following:

- When the buyer enables the following rules:  
**Allow suppliers to increase item quantities**  
**Allow suppliers to increase item quantities on ship notices**  
**Allow suppliers to create invoices based on received quantities only** OR **Allow suppliers to create invoices based on shipped quantities only**  
 Case 1:  
 When the shipped or received line item quantity is less than the purchase order line item quantity, and the purchase order has the line item quantity tolerance, SAP Business Network allows suppliers to invoice only for the shipped or received line item quantity.  
 For example,  
 You send a purchase order with the following:  
 Quantity for line item 1 = 100.  
 Line item quantity tolerance for line item 1 = 10%. Total quantity for line item 1 that can be shipped or received is 110.  
 Quantity shipped or received for line item 1 = 50.  
 SAP Business Network allows suppliers to invoice line item 1 for a quantity of 50 only.  
 Case 2:  
 When the shipped or received line item quantity is more than the purchase order line item quantity, and the purchase order has the line item quantity tolerance, SAP Business Network allows suppliers to invoice only for the line item quantity that does not exceed the specified tolerance limit in the purchase order.

For example,

You send a purchase order with the following:

Quantity for line item 1 = 100.

Line item quantity tolerance for line item 1 = 10%. Total quantity for line item 1 that can be shipped or received is 110.

Quantity shipped or received for line item 1 = 150.

SAP Business Network allows suppliers to invoice line item 1 for a quantity of 110 only.

For more information, see [Tolerances Element \[page 172\]](#).

## TaxDetail **Category**

The **Generate Invoice** page on SAP Business Network enables suppliers to specify values for the `TaxDetail` category attribute.

For example:

```
<TaxDetail purpose="tax" category="gst">
```

Possible values for invoices generated on SAP Business Network are:

TaxDetail Category Attribute	Description
sales	Sales Tax
vat	Value Added Tax
gst	Goods and Services Tax
pst	Provincial Sales Tax
qst	Quebec Sales Tax
hst	Harmonized Sales Tax
usage	Usage Tax
other	Other Tax Category

## Tax on Shipping and Special Handling

In some locales, suppliers must indicate tax on shipping or special handling. They add an additional `TaxDetail` element and indicate whether it is line, shipping, or special handling tax with `purpose="tax"`, `purpose="shippingTax"`, or `purpose="specialHandlingTax"`. They indicate tax category independently.

There can be only one shipping amount and one special handling amount per line, so there is no need to indicate which shipping or special handling amount a `TaxDetail` element applies to. Suppliers can specify individual taxes only if they specify both tax and shipping inline, not in the header. If they specify shipping inline but tax in the header, they can still have one `TaxDetail` element in the header that applies to the total of all shipping charges.

The following example specifies line tax, special handling tax, and shipping tax for a single invoice item:

```
<InvoiceDetailItem invoiceLineNumber="1" quantity="10">
```

```

<UnitOfMeasure>EA</UnitOfMeasure>
<UnitPrice>
  <Money currency="USD">500</Money>
</UnitPrice>
...
<SubtotalAmount>
  <Money currency="USD">5000</Money>
</SubtotalAmount>
<Tax>
  <!-- Tax breakdown:
        5000 * 0.05 = 250 (5% tax on $5000 goods)
         40 * 0.05 = 2 (5% tax on $40 shipping)
         80 * 0.05 = 4 (5% tax on $80 special handling)
        ===
        256 total tax
  -->
  <Money currency="USD">256</Money>
  <TaxDetail purpose="tax" category="sales" percentageRate="5">
    <TaxableAmount>
      <Money currency="USD">5000</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="USD">250</Money>
    </TaxAmount>
    <Description xml:lang="en">Sales tax on goods</Description>
  </TaxDetail>
  <TaxDetail purpose="shippingTax" category="sales" percentageRate="5">
    <TaxableAmount>
      <Money currency="USD">40</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="USD">2</Money>
    </TaxAmount>
    <Description xml:lang="en">Sales tax on shipping</Description>
  </TaxDetail>
  <TaxDetail purpose="specialHandlingTax" category="sales" percentageRate="5">
    <TaxableAmount>
      <Money currency="USD">80</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="USD">4</Money>
    </TaxAmount>
    <Description xml:lang="en">Sales tax on special handling</Description>
  </TaxDetail>
</Tax>
<InvoiceDetailLineSpecialHandling>
  <Money currency="USD">80</Money>
</InvoiceDetailLineSpecialHandling>
<InvoiceDetailLineShipping>
  <InvoiceDetailShipping>
    ...
  </InvoiceDetailShipping>
  <Money currency="USD">40</Money>
</InvoiceDetailLineShipping>
...
<!-- Gross breakdown:
      5000 subtotal
      + 40 shipping
      + 80 special handling
      + 256 all taxes
      ====
      5376 gross
-->
<GrossAmount>
  <Money currency="USD">5376</Money>
</GrossAmount>
...
</InvoiceDetailItem>

```

As a best practice, use negative numbering (such as "-1," "-2") for `invoiceLineNumber` in `InvoiceDetailServiceItem` elements for shipping and special handling charges. Use "0" for `lineNumber` in `InvoiceDetailServiceItemReference` elements for the corresponding `InvoiceDetailServiceItem` for shipping and special handling charges.

If buying organizations use SAP Business Network Adapter, they might specify line-item tax in purchase orders and require suppliers to use that tax information in invoices. Suppliers can provide header-level special handling tax or shipping tax information in the `InvoiceDetailSummary` element:

```
<InvoiceDetailSummary>
  ...
  <TaxDetail purpose="shippingTax" category="sales" percentageRate="6">
    <TaxAmount>
      <Money currency="USD">344</Money>
    </TaxAmount>
    <Description xml:lang="en-US">Sales tax on shipping</Description>
  </TaxDetail>
</Tax>
  ...
</InvoiceDetailSummary>
```

## Allowances and Charges

SAP Business Network allows suppliers to include additional charges, allowances, and their taxes that are incurred for the total landed cost of the goods and services for line items on an invoice.

## Shipping and `SpecialHandling`

Details of header-level shipping and special handling charges are sent using the `ShippingAmount` and `SpecialHandlingAmount` elements while details of line-level shipping and special handling charges are sent using the `InvoiceDetailLineShipping` and `InvoiceDetailLineSpecialHandling` elements.

In the sample code given below, a special handling charge of USD 10 has been applied on the line item.

### Sample Code

```
<InvoiceDetailOrder>
  <InvoiceDetailItem>
    <InvoiceDetailLineSpecialHandling>
      <Description xml:lang="en-US">Special handling</Description>
      <Money currency="USD">10.00</Money>
    </InvoiceDetailLineSpecialHandling>
  </InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailSummary>
  <SpecialHandlingAmount>
    <Money currency="USD">10.00</Money>
  </SpecialHandlingAmount>
  <TotalCharges>
    <Money currency="USD">10.00</Money>
  </TotalCharges>
</InvoiceDetailSummary>
```

## Discount

Details of discounts applied on the invoice are sent using the `InvoiceDetailDiscount` element at the header and line level.

```
<InvoiceDetailOrder>
  <InvoiceDetailItem>
    <InvoiceDetailDiscount>
      <Money currency="USD">15.00</Money>
    </InvoiceDetailDiscount>
  </InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailSummary>
  <InvoiceDetailDiscount>
    <Money currency="USD">15.00</Money>
  </InvoiceDetailDiscount>
</InvoiceDetailSummary>
```

## level **Attribute**

The `Modification` element has an optional attribute `level`, which can have an integer value. It is used for compound allowances and charges and it displays on which level a certain modification is applied.

The following example shows how the `level` attribute is used for an item with several modifications:

```
<InvoiceHeaderModifications>
  <Modification level="1">
    <OriginalPrice>5.500</OriginalPrice>
    <AdditionalDeduction>
      <DeductionPercent>2</DeductionPercent>
    </AdditionalDeduction>
  </Modification>
  <Modification level="1">
    <OriginalPrice>5.500</OriginalPrice>
    <AdditionalCost>
      <Money currency="USD">2.00</Money>
    </AdditionalCost>
  </Modification>
  <Modification level="2">
    <OriginalPrice 7.390</OriginalPrice >
    <AdditionalDeduction>
      <DeductionPercent>10</DeductionPercent>
    </AdditionalDeduction>
  </Modification>
</InvoiceHeaderModifications>
```

## InvoiceHeaderModifications

The `InvoiceHeaderModifications` element specifies the additional charges, allowances, and their taxes that are incurred for the total landed cost of the goods and services at the invoice header-level.

The `InvoiceHeaderModifications` element can store one or more [Modification elements \[page 151\]](#).

The `AdditionalDeduction` element with `type="withholdingTax"` contains withholding taxes. For each line item in a `PaymentRemittanceRequest`, the value displayed in the `Money` element contained by the

AdjustmentAmount element is the sum of the values displayed in the Money elements contained by the DeductionAmount elements, which are contained by AdditionalDeduction elements with the attributes type="withholdingTax" and type="other".

In the PaymentRemittanceSummary, the value displayed in the Money element contained by the AdjustmentAmount element is the sum of all adjustment amounts in the remittance.

The following example shows AdjustmentAmount and Comments elements from the InvoiceHeaderModifications:

```
<AdjustmentAmount>
  <Money currency="USD">110.00</Money>
  <Modifications>
    <Modification>
      <AdditionalDeduction type="withholdingTax">
        <DeductionAmount>
          <Money currency="USD">95.00</Money>
        </DeductionAmount>
      </AdditionalDeduction>
    </Modification>
    <Modification>
      <AdditionalDeduction type="other">
        <DeductionAmount>
          <Money currency="USD">15.00</Money>
        </DeductionAmount>
      </AdditionalDeduction>
    </Modificiation>
  </Modifications>
</AdjustmentAmount>
<Comments>Tax Withheld</Comments>
```

### InvoiceItemModifications

The InvoiceItemModifications element specifies the additional charges, allowances, and their taxes for the total landed cost of the goods and service for an invoice line-item.

The InvoiceItemModifications element can store one or more Modification elements. For more information on the Modification element, see [Modifications Element \[page 151\]](#).

## TotalCharges

The `TotalCharges` element is the total sum of all the charges applied on the goods and services. It can appear at the line-item and summary in an invoice.

## TotalAllowances

The `TotalAllowances` element is the total sum of all the allowances applied on the goods and services. It can appear at the line item and summary in an invoice.

## TotalAmountWithoutTax

The `TotalAmountWithoutTax` element is used to summarize the total invoice amount without tax.

The total amount includes:

- SubTotal
- Shipping Amount
- Special Handling
- Charges

Allowances and discounts are subtracted from the sum of the above four amounts.

The following examples specify the allowances, charges, and their taxes in an invoice. The first example displays line-item allowances and charges at the line level and the second displays unit price modifications.

- Modifications at the line level:

```
<InvoiceDetailItem invoiceLineNumber = "1" quantity = "1">
  <UnitOfMeasure>ea</UnitOfMeasure>
  <UnitPrice>
    <Money currency = "USD">1000.00</Money>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber = "1">
    <ItemID>
      <SupplierPartID>part#1</SupplierPartID>
    </ItemID>
    <Description xml:lang = "en-US"></Description>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency = "USD">1000.00</Money>
  </SubtotalAmount>
  <GrossAmount>
    <Money currency = "USD">1000.00</Money>
  </GrossAmount>
  <InvoiceItemModifications>
    <Modification>
      <AdditionalCost>
        <Money currency = "USD">13</Money>
      </ AdditionalCost>
      <ModificationDetail name = "Insurance"
        startDate = "2013-09-06T10:15:00-08:00"
        endDate = "2013-09-10T10:15:00-08:00" />
    </Modification>
  </InvoiceItemModifications>
</InvoiceDetailItem>
```

```

</InvoiceItemModifications>
<TotalCharges>
  <Money currency="USD">13</Money>
</TotalCharges>
<TotalAmountWithoutTax>
  <Money currency="USD">1013</Money>
</TotalAmountWithoutTax>
<NetAmount>
  <Money currency = "USD">1013.00</Money>
</NetAmount>
</InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailSummary>
  <SubtotalAmount>
    <Money currency = "USD">1000.00</Money>
  </SubtotalAmount>
  <Tax>
    <Money currency = "USD">10.0</Money>
    <Description xml:lang = "en-US"></Description>
    <TaxDetail category="TaxOnAllowance" percentageRate = "10">
      <TaxableAmount>
        <Money currency = "USD">100.00</Money>
      </TaxableAmount>
      <TaxAmount>
        <Money currency = "USD">10.00</Money>
      </TaxAmount>
      <Description xml:lang = "en-US"></Description>
    </TaxDetail>
  </Tax>
  <GrossAmount>
    <Money currency = "USD">1000.00</Money>
  </GrossAmount>
  <InvoiceHeaderModifications>
    <Money currency="USD">100</Money>
    <Modification>
      <AdditionalDeduction>
        <Money currency = "USD">100</Money>
      </AdditionalDeduction>
      <Tax>
        <Money currency = "USD">10.00</Money>
        <Description xml:lang = "en-US"></Description>
        <TaxDetail category="TaxOnAllowance" percentageRate="10">
          <TaxableAmount>
            <Money currency = "USD">100.00</Money>
          </TaxableAmount>
          <TaxAmount>
            <Money currency = "USD">10.00</Money>
          </TaxAmount>
          <Description xml:lang = "en-US"></Description>
        </TaxDetail>
      </Tax>
      <ModificationDetail name = "SpecialDiscount"
        startDate = "2013-09-06T10:15:00-08:00"
        endDate = "2013-09-10T10:15:00-08:00"/>
    </Modification>
  </InvoiceHeaderModifications>
  <TotalCharges>
    <Money currency="USD">13</Money>
  </ TotalCharges>
  <TotalAllowances>
    <Money currency="USD">100</Money>
  </ TotalAllowances>
  <TotalAmountWithoutTax>
    <Money currency = "AUD">913.00</Money>
  </TotalAmountWithoutTax>
  <NetAmount>
    <Money currency = "USD">923.00</Money>
  </NetAmount>

```

```

    <DueAmount>
      <Money currency = "USD">923.00</Money>
    </DueAmount>
  </InvoiceDetailSummary>
</InvoiceDetailRequest>

```

- Modifications at unit price level:

```

<InvoiceDetailItem invoiceLineNumber="1" quantity="10">
  <UnitOfMeasure>LB</UnitOfMeasure>
  <UnitPrice>
    <Money currency="USD">15.00</Money>
    <Modifications>
      <Modification>
        <OriginalPrice>
          <Money currency="USD">25.00</Money>
        </OriginalPrice>
        <AdditionalDeduction>
          <DeductionAmount>
            <Money currency="USD">10.00</Money>
          </DeductionAmount>
        </AdditionalDeduction>
        <ModificationDetail name="Discount-Special">
          <Description xml:lang="en">Test Discount</Description>
        </ModificationDetail>
      </Modification>
    </Modifications>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber="1">
    <ItemID>
      <SupplierPartID>1</SupplierPartID>
    </ItemID>
    <Description xml:lang="en">Test Item 1</Description>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency="USD">150.00</Money>
  </SubtotalAmount>
  <GrossAmount>
    <Money currency="USD">150.00</Money>
  </GrossAmount>
  <TotalAmountWithoutTax>
    <Money currency="USD">150.00</Money>
  </TotalAmountWithoutTax>
  <NetAmount>
    <Money currency="USD">150.00</Money>
  </NetAmount>
</InvoiceDetailItem>
<InvoiceDetailSummary>
  <SubtotalAmount>
    <Money currency="USD">150.00</Money>
  </SubtotalAmount>
  <Tax>
    <Money currency="USD">0</Money>
    <Description xml:lang="en" />
  </Tax>
  <GrossAmount>
    <Money currency="USD">150.00</Money>
  </GrossAmount>
  <InvoiceDetailSummaryLineItemModifications>
    <Modification>
      <AdditionalDeduction>
        <DeductionAmount>
          <Money currency="USD">100.00</Money>
        </DeductionAmount>
      </AdditionalDeduction>
      <ModificationDetail name="Discount-Special">
        <Description xml:lang="en">Test Discount</Description>
      </ModificationDetail>
    </Modification>
  </InvoiceDetailSummaryLineItemModifications>

```

```

        </Modification>
    </InvoiceDetailSummaryLineItemModifications>
    <TotalAmountWithoutTax>
        <Money currency="USD">150.00</Money>
    </TotalAmountWithoutTax>
    <NetAmount>
        <Money currency="USD">150.00</Money>
    </NetAmount>
    <DueAmount>
        <Money currency="USD">150.00</Money>
    </DueAmount>
</InvoiceDetailSummary>

```

## Money or Percentage Allowances and Charges

The following examples show how to add allowances and charges as percentage rate or as fixed amount:

- Modification on header level with amount charge

```

<InvoiceHeaderModifications>
  <Modification>
    <AdditionalCost>
      <Money currency="USD">25.00</Money>
    </AdditionalCost>
    <ModificationDetail name="Other charges">
      <Description xml:lang="en">Test Charge</Description>
    </ModificationDetail>
  </Modification>
</InvoiceHeaderModifications>

```

- Modification on header level with percentage charge

```

<InvoiceHeaderModifications>
  <Modification>
    <AdditionalCost>
      <Percentage percent="10"/>
    </AdditionalCost>
    <ModificationDetail name="Other charges">
      <Description xml:lang="en">Test Charge</Description>
    </ModificationDetail>
  </Modification>
</InvoiceHeaderModifications>

```

- Modification on line level with amount charge

```

<InvoiceItemModifications>
  <Modification>
    <AdditionalCost >
      <Money currency="USD">25.00</Money>
    </AdditionalCost>
    <ModificationDetail name="Other charges">
      <Description xml:lang="en">Test Charge Line</Description>
    </ModificationDetail>
  </Modification>
</InvoiceItemModifications>

```

- Modification on line level with percentage charge

```

<InvoiceItemModifications>
  <Modification>
    <AdditionalCost >
      <Percentage percent="10"/>
    </AdditionalCost>
  </Modification>
</InvoiceItemModifications>

```

```

    </AdditionalCost>
    <ModificationDetail name="Other charges">
      <Description xml:lang="en">Test Charge Line</Description>
    </ModificationDetail>
  </Modification>
</InvoiceItemModifications>

```

- Modification on header level with amount allowance

```

<InvoiceHeaderModifications>
  <Modification>
    <AdditionalDeduction>
      <DeductionAmount><Money currency="USD">5.00</Money></DeductionAmount>
    </AdditionalDeduction>
    <ModificationDetail name="Volume Discount">
      <Description xml:lang="en"> Test Discount</Description>
    </ModificationDetail>
  </Modification>
</InvoiceHeaderModifications>

```

- Modification on header level with percentage allowance

```

<InvoiceHeaderModifications>
  <Modification>
    <AdditionalDeduction>
      <DeductionPercent percent="10"/>
    </AdditionalDeduction>
    <ModificationDetail name="Volume Discount">
      <Description xml:lang="en"> Test Discount</Description>
    </ModificationDetail>
  </Modification>
</InvoiceHeaderModifications>

```

- Modification on line level with amount allowance

```

<InvoiceItemModifications>
  <Modification>
    <OriginalPrice>
      <Money currency="USD">25.00</Money>
    </OriginalPrice>
    <AdditionalDeduction>
      <DeductionAmount><Money currency="USD">5.00</Money></DeductionAmount>
    </AdditionalDeduction>
    <ModificationDetail name="Discount-Special">
      <Description xml:lang="en">Test Discount Line</Description>
    </ModificationDetail>
  </Modification>
</InvoiceItemModifications>

```

- Modification on line level with percentage allowance

```

<InvoiceItemModifications>
  <Modification>
    <OriginalPrice>
      <Money currency="USD">25.00</Money>
    </OriginalPrice>
    <AdditionalDeduction>
      <DeductionPercent percent="10"/>
    </AdditionalDeduction>
    <ModificationDetail name="Discount-Special">
      <Description xml:lang="en">Test Discount Line</Description>
    </ModificationDetail>
  </Modification>
</InvoiceItemModifications>

```

## ModificationDetail **Names**

The following values can be used for the name attribute of ModificationDetail:

- Access Charge
- AccountNumberCorrectionCharge
- AcidBattery
- AdditionalPackaging
- Adjustment
- Allowance
- Carrier
- Charge
- ChargeForCommercialDiscount
- ChargeForPreferentialPositioning
- ChargesForReturnedGoods
- CollectionFee
- Contract Allowance
- CustomFees
- Discount-Special
- FinancialFees
- Freight
- FreightBasedOnDollarMinimum
- Insurance
- Handling
- Honorarium
- Labelling
- OrderCharges
- OtherCharges
- OrderOfFullPalette
- Packaging
- Parafiscal Tax
- ReturnableGoodsCharge
- Royalties
- ServiceCharges
- Volume Discount

# French Parafiscal Taxes

SAP Business Network allows suppliers to include French parafiscal taxes on invoices. Parafiscal taxes are mandatory taxes, collected for dedicated funds, enforced by French law. Suppliers can add French parafiscal taxes by using the following elements:

- `ModificationDetail` name `Parafiscal Tax`. It is used for charges of type parafiscal tax.
- `Extrinsic` name `code`. It is used for the code of the added parafiscal tax.

The following cXML excerpts show examples of `Parafiscal Tax ModificationDetail` with the available parafiscal taxes:

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Droit eaux et boissons non alcool </Description>
  <Extrinsic name="code">3001000002008</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Droit spécif or argent et platine</Description>
  <Extrinsic name="code">3001000002022</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe forestière</Description>
  <Extrinsic name="code">3001000002039</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe CODIFAB</Description>
  <Extrinsic name="code">3001000002046</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe DEFI</Description>
  <Extrinsic name="code">3001000002060</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Redevance édition et ouvr librairie</Description>
  <Extrinsic name="code">3001000002077</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe HBJOAT</Description>
  <Extrinsic name="code">3001000002084</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Surtaxe sur les eaux minérales</Description>
  <Extrinsic name="code">3001000002091</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe financement organisme agricole</Description>
  <Extrinsic name="code">3001000002107</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Redevance sanitaire d'abattage</Description>
  <Extrinsic name="code">3001000002114</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe municipale sur l'électricité</Description>
  <Extrinsic name="code">3001000002169</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe département sur l'électricité</Description>
  <Extrinsic name="code">3001000002176</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Redevance sanitaire de découpage</Description>
  <Extrinsic name="code">3001000002183</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Cotisation Interbev</Description>
  <Extrinsic name="code">3001000002190</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe CTIFL</Description>
  <Extrinsic name="code">3001000002206</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Octroi de mer</Description>
  <Extrinsic name="code">3001000002213</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TICGN</Description>
  <Extrinsic name="code">3001000002237</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Cotisation Unicid</Description>
  <Extrinsic name="code">3001000002244</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">CVRO Gazon</Description>
  <Extrinsic name="code">3001000002251</Extrinsic>
</ModificationDetail>
```

```
<Description xml:lang="fr">Taxe du CN du cinématographe</Description>
<Extrinsic name="code">3001000002268</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe CIFOG</Description>
  <Extrinsic name="code">3001000002275</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Contribution Eco-emballages</Description>
  <Extrinsic name="code">3001000002282</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TIPP</Description>
  <Extrinsic name="code">3001000002299</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TGAP</Description>
  <Extrinsic name="code">3001000002305</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Droits d'accises sur les alcools</Description>
  <Extrinsic name="code">3001000002312</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Cotisation sécurité sociale</Description>
  <Extrinsic name="code">3001000002329</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Contribution Corepile</Description>
  <Extrinsic name="code">3001000002336</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Cotisation Interfel</Description>
  <Extrinsic name="code">3001000002367</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Cotisation label viande</Description>
  <Extrinsic name="code">3001000002381</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe CETIM</Description>
  <Extrinsic name="code">3001000002398</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Autre CVO interprofessionnelle</Description>
  <Extrinsic name="code">3001000002404</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">Taxe d'abatage</Description>
  <Extrinsic name="code">3001000002411</Extrinsic>
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">CTA Gaz</Description>
  <Extrinsic name="code">3001000002435</Extrinsic>
```

```
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">CSPE</Description>  
  <Extrinsic name="code">3001000002442</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Contribution DEEE</Description>  
  <Extrinsic name="code">3001000002459</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">CTA Electricité</Description>  
  <Extrinsic name="code">3001000002466</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Rémunération pour copie privée</Description>  
  <Extrinsic name="code">3001000002473</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Contribution pour une pêche durable</Description>  
  <Extrinsic name="code">3001000002480</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Redevance pour pollutions diffuses</Description>  
  <Extrinsic name="code">3001000002497</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Taxe pour le dvpt ind construction</Description>  
  <Extrinsic name="code">3001000002503</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Compensation gaz tarif solidarité</Description>  
  <Extrinsic name="code">3001000002510</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Contribution Eco TLC</Description>  
  <Extrinsic name="code">3001000002527</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Taxe vidéogrammes</Description>  
  <Extrinsic name="code">3001000002534</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">  
  <Description xml:lang="fr">Taxe sur les prémix</Description>  
  <Extrinsic name="code">3001000002541</Extrinsic>  
</ModificationDetail>
```

```
<ModificationDetail name="Parafiscal Tax">
```

```

    <Description xml:lang="fr">CSE Porc</Description>
    <Extrinsic name="code">3001000002596</Extrinsic>
  </ModificationDetail>

```

```

<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TICFE</Description>
  <Extrinsic name="code">3001000002619</Extrinsic>
</ModificationDetail>

```

```

<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TDCFE</Description>
  <Extrinsic name="code">3001000002626</Extrinsic>
</ModificationDetail>

```

```

<ModificationDetail name="Parafiscal Tax">
  <Description xml:lang="fr">TCCFE</Description>
  <Extrinsic name="code">3001000002633</Extrinsic>
</ModificationDetail>

```

## Withholding Tax Support

SAP Business Network allows suppliers and buyers to specify the withholding tax amount at the line level for invoices for services or goods. This type of tax is paid by the buying organization to the state or government tax authorities on behalf of the supplier.

Two extrinsic elements can be added to the cXML `Tax` element:

- `withholdingTax` (for total withholding taxes), and
- `withholdingTaxTotal` (for total taxes minus withholding tax)

The `Money` element in `Tax` element is used to capture totals for all tax amounts and is not used for invoice display. The use of negative rates ensures backward compatibility of existing cXML applications.

### Example

The following is an example of how withholding tax data in an invoice is displayed when exported to cXML. A withholding tax rate of -2% was applied to the invoice that was submitted via SAP Business Network:

```

<Tax><Money currency="USD">1273.35</Money><Description xml:lang="en-US"></
Description>
  <TaxDetail category="withholdingTax" percentageRate="-2">
    <TaxableAmount><Money currency="USD">25466.90</Money></TaxableAmount>
    <TaxAmount><Money currency="USD">-509.34</Money></TaxAmount>
    <Description xml:lang="en-US"></Description>
  </TaxDetail>
  <TaxDetail category="vat" percentageRate="7"
taxPointDate="2011-03-11T00:00:00-08:00">
    <TaxableAmount><Money currency="USD">25466.90</Money></TaxableAmount>
    <TaxAmount><Money currency="USD">1782.69</Money></TaxAmount>
    <Description xml:lang="en-US"></Description>
  </TaxDetail>
  <Extrinsic name="withholdingTaxTotal"><Money currency="USD">-509.34</Money></
Extrinsic>

```

```
<Extrinsic name="taxTotal"><Money currency="USD">1782.69</Money></Extrinsic>
</Tax>
```

## Mandatory Fields for Countries with a VAT System

Buying organizations might require invoices to contain data mandated by countries using VAT systems. Suppliers should check their customers' invoice rules on SAP Business Network to see whether these fields are mandatory.

[Mandatory Line Item Description \[page 314\]](#)

[Mandatory Bill To \[page 315\]](#)

[Mandatory Remit To \[page 315\]](#)

[Mandatory Ship From and Ship To \[page 316\]](#)

[Mandatory Buyer VAT ID and Supplier VAT ID \[page 317\]](#)

[Mandatory Supplier Information \[page 317\]](#)

[Mandatory Supply Date \[page 318\]](#)

[Mandatory VAT in Both Buyer's and Supplier's Local Currency \[page 319\]](#)

[Mandatory Explanation of Zero-Value VAT Entries \[page 319\]](#)

## Mandatory Line Item Description

Some countries may require mandatory line item descriptions.

### Example

The following example shows a line item description:

```
<InvoiceDetailItemReference lineNumber="1">
  ...
  <Description xml:lang="en">Blue Ballpoint Pens, Retractable</Description>
</InvoiceDetailItemReference>
```

## Mandatory Bill To

Some countries may require a mandatory Bill To contact.

### Example

The following example shows a Bill To contact:

```
<InvoicePartner>
  <Contact role="billTo" addressID="4319">
    <Name xml:lang="en">Mike Smith</Name>
    <PostalAddress name="default">
      <DeliverTo>Mike Smith</DeliverTo>
      <Street>15 Rue Des Fleurs</Street>
      <City>Libourne</City>
      <PostalCode>33506</PostalCode>
      <Country isoCountryCode="FR">France</Country>
    </PostalAddress>
    <Email name="default">msmith@buyer.com</Email>
    <Phone name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="FR">33</CountryCode>
        <AreaOrCityCode>562</AreaOrCityCode>
        <Number>35820</Number>
      </TelephoneNumber>
    </Phone>
  </Contact>
</InvoicePartner>
```

## Mandatory Remit To

Some countries may require a mandatory Remit To contact. In case the Remit To contact is a factoring service, it may also be to mark that on invoices.

### Examples

The following example shows a Remit To contact:

```
<InvoicePartner>
  <Contact role="remitTo" addressID="Billing">
    <Name xml:lang="en">Lisa King</Name>
    <PostalAddress name="billing department">
      <DeliverTo>Lisa King</DeliverTo>
      <Street>16 Rue De L'ecole</Street>
      <City>Paris</City>
      <PostalCode>91250</PostalCode>
      <Country isoCountryCode="FR">France</Country>
    </PostalAddress>
    <Email name="default">lking@supplier.com</Email>
    <Phone name="work">
      <TelephoneNumber>
```

```

        <CountryCode isoCountryCode="FR">33</CountryCode>
        <AreaOrCityCode>l</AreaOrCityCode>
        <Number>99900</Number>
    </TelephoneNumber>
</Phone>
</Contact>
<IdReference identifier="00000-11111" domain="accountReivableID">
    <Creator xml:lang="en">Supplier's Back Office System</Creator>
</IdReference>
<IdReference identifier="123456789" domain="bankRoutingID">
    <Creator xml:lang="en">First National Bank of Paris</Creator>
</IdReference>
</InvoicePartner>

```

The following example shows a Remit To contact, which is a factoring service:

```

<InvoiceDetailRequestHeader invoiceDate="2014-06-02T16:14:13+03:00"
invoiceID="IN0123"
invoiceOrigin="supplier" operation="new" purpose="standard">
    <InvoiceDetailHeaderIndicator/>
    <InvoiceDetailLineIndicator/>
    <InvoicePartner>
        <Contact role="remitTo">
            <Name xml:lang="en">Factoring Service</Name>
            <PostalAddress>
                <Street>test</Street>
                <City>Sofia</City>
                <PostalCode>1000</PostalCode>
                <Country isoCountryCode="BG">Bulgaria</Country>
            </PostalAddress>
            <Extrinsic name="isFactoring">>true</Extrinsic>
        </Contact>
    </InvoicePartner>
</InvoiceDetailRequestHeader>

```

## Mandatory Ship From and Ship To

Some countries may require mandatory Ship From and Ship To fields.

### Example

The following example shows a Ship To and Ship From contact if the `isShippingInLine` attribute is not set to yes:

```

<InvoiceDetailShipping>
    <Contact role="shipFrom" addressID="1000487">
        <Name xml:lang="en">Supplier DotCom, Paris</Name>
        <PostalAddress name="default">
            <Street>16 Rue De L'ecole</Street>
            <City>Paris</City>
            <PostalCode>91250</PostalCode>
            <Country isoCountryCode="FR">France</Country>
        </PostalAddress>
        <Email name="default">lking@supplier.com</Email>
        <Phone name="work">
            <TelephoneNumber>
                <CountryCode isoCountryCode="FR">33</CountryCode>
            </TelephoneNumber>
        </Phone>
    </Contact>

```

```

                <AreaOrCityCode>1</AreaOrCityCode>
                <Number>99900</Number>
            </TelephoneNumber>
        </Phone>
    </Contact>
    <Contact role="shipTo" addressID="1000488">
        <Name xml:lang="en">Libourne Headquarters</Name>
        <PostalAddress name="default">
            <DeliverTo>Mike Smith</DeliverTo>
            <Street>15 Rue Des Fleurs</Street>
            <City>Libourne</City>
            <PostalCode>33506</PostalCode>
            <Country isoCountryCode="FR">France</Country>
        </PostalAddress>
        <Email name="default">msmith@buyer.com</Email>
        <Phone name="work">
            <TelephoneNumber>
                <CountryCode isoCountryCode="FR">33</CountryCode>
                <AreaOrCityCode>562</AreaOrCityCode>
                <Number>35820</Number>
            </TelephoneNumber>
        </Phone>
    </Contact>
</InvoiceDetailShipping>

```

## Mandatory Buyer VAT ID and Supplier VAT ID

The supplier's VAT ID is always required. The buyer's VAT ID is required for intra-European Union transactions. Intra-EU is defined as trade within the European Union, where the From and To country codes are in the European Union and are different countries.

### Example

The following example shows buyer and supplier VAT IDs:

```

<InvoiceDetailRequestHeader>
    ...
    <Extrinsic name="buyerVatID">SE123456789087</Extrinsic>
    <Extrinsic name="supplierVatID">CH987654321</Extrinsic>
</InvoiceDetailRequestHeader>

```

## Mandatory Supplier Information

In some countries, the tax authorities requires suppliers to include their commercial registration ID and legal details in all electronic invoices. The commercial registration ID is not the same as the supplier VAT ID. Legal details are used to capture legal information about the supplier, such as "CEO" or another corporate credential.

### Note

Ariba Buyer, SAP Ariba Buying and Invoicing and SAP Ariba Invoice Management support the following maximum number of characters. Any field values exceeding the limit will be truncated to:

- `supplierCommercialIdentifier`: 50 characters
- `supplierCommercialCredentials`: 100 characters
- `legalStatus`: 50 characters
- `legalCapital`: 50 characters

## Example

```
<InvoiceDetailRequestHeader>
  ...
  <Extrinsic name="supplierCommercialIdentifier">1234567890</Extrinsic>
  <Extrinsic name="supplierCommercialCredentials">CEO</Extrinsic>
  <Extrinsic name="legalStatus">Inc.</Extrinsic>
  <Extrinsic name="legalCapital">1000</Extrinsic>
</InvoiceDetailRequestHeader>
```

## Mandatory Supply Date

VAT entries must have a `TaxDetail` element with a `category="vat"` attribute. The supply date is mandatory if it differs from the invoice date, so VAT entries must have a `taxPointDate` attribute. Buyers can request the supply date using an invoice rule.

## Example

The following example shows VAT information and a supply date:

```
<Tax>
  <Money currency="EUR">799.60</Money>
  <Description xml:lang="en-GB">Value Added Tax</Description>
  <TaxDetail category="vat" percentageRate="8"
taxPointDate="2005-04-20T23:59:45+01:00">
    <TaxableAmount>
      <Money currency="EUR">9995.00</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="EUR">799.60</Money>
    </TaxAmount>
    <TaxLocation xml:lang="en-GB">Europe</TaxLocation>
  </TaxDetail>
</Tax>
```

## Mandatory VAT in Both Buyer's and Supplier's Local Currency

VAT entries must specify values in both the buyer's and the supplier's local currency.

### Example

The following example shows how to use the `alternateAmount` and `alternateCurrency` attributes to specify an amount in the buying organization's local currency:

```
<Tax>
  <Money alternateAmount="5.28" alternateCurrency="GBP" currency="EUR">10.00</
Money>
  <Description xml:lang="en-US"></Description>
  <TaxDetail category="vat" percentageRate="10">
    <TaxableAmount>
      <Money currency="EUR">100.00</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money alternateAmount="5.28" alternateCurrency="GBP"
currency="EUR">10.00</Money>
    </TaxAmount>
    <Description xml:lang="en-US"></Description>
  </TaxDetail>
</Tax>
```

## Mandatory Explanation of Zero-Value VAT Entries

When the VAT is 0% for certain goods or services in the invoice, suppliers can specify if the VAT is exempt or zero rated. The `exemptDetail` attribute in the `TaxDetail` element is required if a buying organization enables the invoice rule **"Require explanation for zero-rate VAT."**

### Example

```
<!-- Exempt Tax Detail -->
<Tax>
  <Money currency="EUR">0.00</Money>
  <Description xml:lang="en-US"></Description>
  <TaxDetail category="vat" percentageRate="0" exemptDetail="zeroRated">
    <TaxableAmount>
      <Money currency="EUR">100.00</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency="EUR">0.00</Money>
    </TaxAmount>
  </TaxDetail>
</Tax>
```

# Invoices for Suppliers from Mexico

When suppliers from Mexico (supplier country is Mexico) create invoices on SAP Business Network, the `InvoiceDetailRequest` document must contain additional fields in the `TaxDetail`, `PostalAddress`, `InvoiceDetailRequestHeader` elements. The `TaxDetail` element also contains additional extrinsics.

## Note

Suppliers can integrate directly with an accredited electronic invoicing service provider to create CFDI invoices in the service provider's portal or generate CFDI invoices from their accounting system. Tax invoices for integrated Mexican suppliers use different extrinsics. See [Tax Invoice Extrinsics \[page 326\]](#).

The `TaxDetail` element contains the following element:

Element	Description
<code>TaxRegime</code>	<p>Specifies the tax category related to the type of supplier activities and commodities in invoices. Tax Regime is the governing organization for a tax category. Suppliers pay taxes based on the tax regime.</p> <p>Sample tax regimes:</p> <ul style="list-style-type: none"><li>• Assimilated Regime wages</li><li>• Regime of Small Taxpayers (REPECO)</li><li>• Regimen of business and professional activities, etc.</li></ul> <p>This is an optional element.</p> <p>An invoice can have one or more tax regimes, but suppliers can associate only one tax regime in the <code>TaxDetail</code> element. This element is applicable to all countries.</p>

```
<Tax>
  <Money currency = "USD">1.87</Money>
  <Description xml:lang = "en-US"/>
  <TaxDetail category="vat" percentageRate="2"
    taxPointDate="2013-06-19T00:00:00+05:30">
    <TaxableAmount>
      <Money currency = "USD">93.60</Money>
    </TaxableAmount>
    <TaxAmount>
      <Money currency = "USD">1.87</Money>
    </TaxAmount>
    <Description xml:lang = "en-US"/>
    <TaxRegime>Regimen de Asalariados</TaxRegime>
  </TaxDetail>
</Tax>
```

The `PostalAddress` element has the following element:

Element	Description
<code>Municipality</code>	Specifies the name of the municipality for a division of the state in an Address' location. This is an optional element and added as part of the <code>PostalAddress</code> element.

#### Note

This field is mandatory only for suppliers with country Mexico and is used to digitally sign invoices from Mexico. If this information is missing in the `From` address element, the CFDI (legal invoice for Mexico) is incomplete and the service provider (EDICOM) and the Tax authority of Mexico does not approve the CFDI document.

```
<PostalAddress>
  <Street>24 Mossy Creek</Street>
  <City>Chihuahua</City>
  <Municipality>Juárez</Municipality >
  <State>Chihuahua</State>
  <PostalCode>94089</PostalCode>
  <Country isoCountryCode = "MX">Mexico</Country>
</PostalAddress>
```

The `InvoiceDetailRequest` document also stores the `Contact role=billFrom`. This field is mandatory in invoices for suppliers with `From` and `To` country Mexico.

The following elements are also mandatory in the `PostalAddress` element:

- `Street`
- `City`
- `State`
- `PostalCode`

#### Note

The `invoiceID` field can be used to store the folio number for the CFDI. The `invoiceID` field length must be restricted to 20 characters.

The InvoiceDetailRequestHeader has the following extrinsic:

Element	Description
paymentMethod	<p>Specifies the mode of payment. Possible values:</p> <ul style="list-style-type: none"><li>• Cash</li><li>• DirectDeposit</li><li>• CreditTransfer</li><li>• Wire</li><li>• Check</li><li>• Others</li></ul> <p>This extrinsic information is stored in the Contact role="remitTo" in the InvoiceDetailRequestHeader element.</p> <p>Suppliers from Mexico must configure at least one remitTo address.</p> <pre>&lt;Extrinsic name =   "paymentMethod"&gt;creditTransfer&lt;/Extrinsic&gt;</pre>
paymentNote	<p>Specifies the number of installments that the buyer needs to pay the invoice. This value is taken from the purchase order, if it is available.</p> <p>Suppliers can enter a value for this extrinsic while creating an invoice. On SAP Business Network, this field is available in the <b>Additional Fields</b> section on the invoice creation page.</p> <pre>&lt;Extrinsic name =   "paymentNote"&gt;1 installment   of 10&lt;/Extrinsic&gt;</pre>
invoiceType	<p>Specifies the invoice type. This extrinsic is added as part of the InvoiceDetailRequestHeader element.</p> <p>Possible values:</p> <ul style="list-style-type: none"><li>• commercialInvoice</li><li>• commissionInvoice</li><li>• feelInvoice</li><li>• rentInvoice</li><li>• carrierInvoice</li></ul> <p>This field is available in invoices for suppliers with From and To country Mexico.</p> <pre>&lt;Extrinsic name =   "invoiceType"&gt;commercialInvoice&lt;/Extrinsic&gt;</pre>

The `TaxDetail` element has the following extrinsic:

Element	Description
<code>WithholdingTaxType</code>	<p>Specifies if the tax category has the withholding tax. This extrinsic is added as part of the <code>TaxDetail</code> element.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>ISR</li> <li>IVA</li> </ul> <p>This field is mandatory in invoices for suppliers with <code>From</code> and <code>To</code> country Mexico.</p>
<code>taxType</code>	Enables SAP Ariba Buying and Invoicing to receive and process invoices from SAP Business Network. However, this is limited to invoice cXML entries in Mexico, Italy, and Colombia only.

```
<TaxDetail category="withholdingTax" percentageRate="-1">
  <TaxableAmount><Money currency="USD">99.95</Money></TaxableAmount>
  <TaxAmount>
    <Money currency="USD">-1.00</Money>
  </TaxAmount>
  <TaxLocation xml:lang="en-US">San Jose</TaxLocation>
  <Description xml:lang="en-US">Testing Purpose</Description>
  <Extrinsic name="withholdingTaxType">IVA</Extrinsic>
</TaxDetail>
```

The following are the possible errors that occur when invoices created by suppliers from Mexico (supplier country is Mexico) fail on SAP Business Network:

Error	This Error Occurs When The.....
Payment method is missing	Extrinsic <code>paymentMethod</code> is missing.
Payment note is missing	Extrinsic <code>paymentNote</code> is missing.
Invoice Type is missing	Extrinsic <code>invoiceType</code> is missing.
Withholding tax type is missing	Extrinsic <code>withholdingTaxType</code> is missing with the <code>withholdingTax</code> tax category.
Tax Regime is missing	Element <code>TaxRegime</code> is missing in one of the <code>TaxDetails</code> element.
Municipality is missing in Supplier address	Element <code>Municipality</code> is missing in the <code>From</code> element.
Bill From Contact is missing	Invoice partner contact with the role "BillFrom" is missing in the invoice.
Invoice ID exceeds maximum length of 20 characters	Invoice ID of the invoice exceeds 20 characters. The ID must be less than or equal to 20.
A digital certificate is required	Digital certificate has not been uploaded by the supplier.
A valid digital certificate is required	Digital certificate that has been uploaded in the supplier's profile is invalid or has expired.
Buyer VAT id is missing	Buyer has not configured the VAT ID in their profile and the VAT ID is missing in the invoice.
The Supplier VAT ID is missing	Supplier has not configured the VAT ID in their profile and the VAT ID is missing in the invoice.
Street1 is missing in the Supplier address	Supplier has not provided the Street information in the Contact role="From" <code>PostalAddress</code> element.

Error	This Error Occurs When The.....
State is missing in the Supplier address.	Supplier has not specified the state in the Contact role="From" PostalAddress element.
Postal Code is missing in the Supplier address	Supplier has not specified the postal code in the Contact role="From" PostalAddress element.
City is missing in the Bill From address	Supplier has not specified the city in the Contact role="billFrom" PostalAddress element.

## Extrinsic Elements for Invoices

Suppliers can include various `Extrinsic` elements in invoices.

### Custom Extrinsic

Buying organizations can request that invoices contain custom `Extrinsic` elements. Suppliers enter values for these `Extrinsic` elements in the SAP Business Network invoice wizard. cXML suppliers that do not use the invoice wizard should contact their customers to see what `Extrinsic` elements they expect.

### Extrinsic for Clickable Links

SAP Business Network can render URLs as clickable links in online purchase orders and invoices.

These URLs are produced by `Extrinsic` elements of the form:

```
<Extrinsic name="anyname">
  <URL name="click me">http://www.bigcompany.com/info</URL>
</Extrinsic>
```

This example produces the following online text:

```
anyname:click me
```

The words "click me" are underlined and are clickable, and the link destination is `http://www.bigcompany.com/info`. If the URL element has no `name` attribute, SAP Business Network displays the URL and makes it clickable.

## Extrinsic for Enabling SSO and ERP

The rule "Allow users to view invoices on SAP Business Network from your application" enables users within your organization to access invoices submitted through your ERP when they sign in to the SAP Ariba account.

SAP Business Network can include a URL in the invoice using the following `Extrinsic` element:

```
<Extrinsic name="AribaNetwork.InvoiceDisplay">
  <URL name="click me">http://www.bigcompany.com/info</URL>
</Extrinsic>
```

Contact your SAP Ariba Support representative to assist you with activating this feature.

## Extrinsic for Service Line Items

`InvoiceDetailItem` can be applied to both goods and service line items in invoices. In the case of service line items, the `name` attribute can be `IsShippingServiceItem` or `IsSpecialHandlingServiceItem`, or `ServiceLocation` (which must contain a contact element).

## Extrinsic for Polish Document Titles in the Invoice cXML

Buyers can specify the rule **Require suppliers to include the Polish invoice title for invoices and credit memos in EDI or cXML invoices** to allow Polish suppliers (supplier country is Poland or VAT ID starts with "PL") to send invoices and credit memos having titles in Polish through cXML, CSV, or EDI.

Suppliers must ensure that they include the following extrinsic while sending invoices and credit memos through cXML to the buyer:

- cXML invoices:

```
<InvoiceDetailRequestHeader>
  <Extrinsic name="InvoiceTitle">Faktura</Extrinsic>
</InvoiceDetailRequestHeader>
```

- cXML credit memos:

```
<InvoiceDetailRequestHeader>
  <Extrinsic name="InvoiceTitle">Faktura Koryguj ca</Extrinsic>
</InvoiceDetailRequestHeader>
```

### Note

When the rule is enabled by the buyer, and the supplier sends the invoice or credit memo without the required extrinsic or incorrect value, SAP Business Network displays an error.

When Polish suppliers create an invoice or credit memo through the SAP Business Network user interface, SAP Business Network automatically includes the Polish titles in the invoices and credit memos.

For more information about Polish document titles, see the [SAP Business Network Guide to Invoicing](#).

## Tax Invoice Extrinsic

Some countries, such as Australia, mandate an indicator on invoices that contain tax charges in order for buying organizations to receive tax credits.

Suppliers can indicate tax invoices by inserting the following `Extrinsic` element in the `InvoiceDetailRequestHeader` element:

```
<Extrinsic name="TaxInvoice">This is a tax invoice</Extrinsic>
```

The name must be "TaxInvoice", but the element's contents are ignored. SAP Business Network automatically adds this element when suppliers generate invoices manually in their SAP Business Network accounts if they have an Australian address.

The following extrinsics are used to support additional tax invoice information required by the service provider when the invoice is legally signed. They are added in the `InvoiceDetailRequestHeader` element:

Extrinsic Name	Description
<code>economicActivityCode</code>	Numeric code assigned by the SSI related to the economic activity of the supplier (for Chile).
<code>economicActivityDescription</code>	Free-form text describing the supplier's economic activity.
<code>externalPurpose</code>	DTE document type (for Chile).
<code>externalVersion</code>	This element contains the tax invoice format. Possible values include NFE, DTE, CFDI, EDIXML, XML, PDF, or other.
<code>invoiceSubmissionMethod</code>	The method of submission to SAP Business Network, either <code>Online</code> , <code>LegalInvoiceViaXML</code> , or <code>NFeViaXML</code> (for Brazil).
<code>schemaVersion</code>	Dotted version number (for example, 3 . 2) of the XML invoice format for a country.
<code>signatureVerifier</code>	This element identifies the platform, which verifies the tax invoice signature and generates the signature verification report. Possible values include <code>BM4</code> , <code>BNG</code> and <code>AribaNetwork</code> . The element is not applicable to signed cXML invoices.
<code>signValidationDateTime</code>	Validation date and time.
<code>signerProvider</code>	The name of the signer of the tax invoice (for example, <code>Self-Signed</code> or <code>{ProviderName}</code> ).
<code>signingCertificate</code>	X509 signing certificate.
<code>signingRequester</code>	The organization that requested that the invoice be signed (for example, <code>AribaNetwork</code> ).
<code>signingTime</code>	Signing date and time.
<code>taxInvoiceAttachmentName</code>	Name for the file which contains the signature verified.
<code>taxInvoiceFormat</code>	Tax invoice format (for example, NFE, DTE, CFDI, or EDIXML).

Extrinsic Name	Description
taxInvoiceNumber	External tax invoice number.
taxInvoiceRepresentation	This element identifies whether the invoice is a tax invoice or not. If the value is Tax, the invoice is a tax invoice. This is used for recognizing external tax invoices.
taxInvoiceVerification	This element contains information about the signing status of the tax invoice. It has two possible values, Signed and Not Signed. This is used for processing external tax invoices.
taxStampingDate	Signing date and time.

The following cXML excerpt shows an example of extrinsic elements used for a Chilean tax invoice:

```
<Extrinsic name="buyerVatID">86160300-8</Extrinsic>
<Extrinsic name="supplierVatID">77546140-3</Extrinsic>
<Extrinsic name="invoiceSourceDocument">PurchaseOrder</Extrinsic>
<Extrinsic name="invoiceSubmissionMethod">Online</Extrinsic>
<Extrinsic name="resolutionNumber">89001</Extrinsic>
<Extrinsic name="resolutionDate">2014-10-22</Extrinsic>
<Extrinsic name="economicActivityCode">671929</Extrinsic>
<Extrinsic name="economicActivityDescription">EMPRESAS DE ASESORIA, CONSULTORIA
FINANCIERA Y DE APOYO AL GIRO</Extrinsic>
<Extrinsic name="taxInvoiceNumber">224880677</Extrinsic>
<Extrinsic name="taxInvoiceFormat">DTE</Extrinsic>
<Extrinsic name="externalSignerProvider">Signature</Extrinsic>
<Extrinsic name="schemaVersion">DTE-1.0</Extrinsic>
<Extrinsic name="taxInvoiceRepresentation">Tax</Extrinsic>
<Extrinsic name="taxInvoiceVerification">Signed</Extrinsic>
<Extrinsic name="externalPurpose">33</Extrinsic>
<Extrinsic name="signingCertificate">MIIDiz...</Extrinsic>
<Extrinsic name="taxStampingDate">2003-10-13T09:33:20</Extrinsic>
<Extrinsic name="signValidationDateTime">2015-01-09T08:03:36-08:00</Extrinsic>
<Extrinsic name="taxInvoiceAttachmentName">cid:SignedXML</Extrinsic>
<Extrinsic name="signingRequester">AribaNetwork</Extrinsic>
```

## Tax Exchange Rate Extrinsic

SAP Business Network uses exchange rates from Bloomberg to calculate tax amounts. Some countries, such as Spain, require exchange rates to be retrieved from Spain's officially published rates. To accommodate this requirement, SAP Business Network allows suppliers to enter exchange rates instead of automatically converting tax amounts to the specified currency.

Suppliers can indicate tax exchange rates by inserting the following `Extrinsic` element in the `InvoiceDetailRequestHeader` element:

```
<Extrinsic name="taxExchangeRate">1.2</Extrinsic>
```

SAP Business Network allows a tax to be specified in one currency only for online invoicing. The currency of the buying organization is calculated according to the country specified in the Ship To address. The online invoice form does not allow suppliers to create invoice lines shipping to multiple countries if this rule is turned on. The supplier

is prompted to enter the exchange rate if the currency of tax amounts is different from the currency of the Ship To address country.

SAP Business Network also validates that the incoming cXML has tax amounts specified in the currency of the Ship To address. If the tax information is specified at the line item level, SAP Business Network validates the tax information specified in the currency of the Ship To information at the line item level, if applicable. Otherwise it uses the Ship To information from the invoice header for validation.

If the tax information is specified at the invoice header level, and there are multiple Ship To countries at the line item level, SAP Business Network does not validate the local tax currencies.

## Extrinsics for Invoices Sent by Suppliers from Brazil

When suppliers send an NFe or CTe invoice in an XML format to SAP Business Network, some of the fields in the XML invoice are transformed to an extrinsic on SAP Business Network.

The following are the extrinsics available for the NFe invoices:

Extrinsic	Description
<code>NFeCertificateSerialNumber</code>	The serial number issued by the signing authority of Brazil. This number is retrieved from the encoded base certificate in the NFe invoice.
<code>buyer VATID</code>	The CNPJ number of the Brazilian buyer.
<code>supplier VATID</code>	The CNPJ number of the Brazilian supplier.
<code>paymentTermsCode</code>	The details of the preferred mode of payment for the invoice.  Following values indicate the preferred mode of payment: <ul style="list-style-type: none"> <li>• 0 denotes cash payments</li> <li>• 1 denotes payment in parts</li> <li>• 2 denotes others</li> </ul>
<code>regioncode</code>	The code of the state issuing the invoice.
<code>transactiontype</code>	The type of transaction chosen by the supplier for the invoice.  For example, the transaction type includes operation tasks such as: transfer, return, import, assignment, and shipping.
<code>customersPartNo</code>	The code assigned to the product by the supplier.
<code>invoiceDueDate</code>	The expected date of invoice delivery to the buyer's system.
<code>treasuryAdditionalInformation</code>	Provides additional information of interest to the tax authority of Brazil.
<code>SEFAZEnvironment</code>	The details of the deployed SEFAZ environment.  Following values indicate the specific SEFAZ environment: <ul style="list-style-type: none"> <li>• 1 denotes Production</li> <li>• 2 denotes Approval</li> </ul>
<code>SEFAZSolutionAppVersion</code>	The version number of the SEFAZ application.

Extrinsic	Description
externalInvoiceNumber	The invoice number generated from the supplier's electronic invoicing solution.
SEFAZDate	The date on which SEFAZ authorized the invoice.
protocolNumber	The number issued by the tax authority of Brazil to identify transactions such as authorization, denial, and NFe cancellations.
digitalSignatureValue	The digital signature code issued by the signing authority of Brazil.
SEFAZResponseCode	The authorization code received during SEFAZ validation.
SEFAZResponseDescription	The details of SEFAZ document processing status.
carrierNumberOfVolumes	The details of the total volume of goods dispatched in the carrier.
carrierSpecificationVolume	The detailed specification of the dispatched items for delivery.
carrierNetWeight	The total weight of the invoiced goods in the carrier.
carrierGrossWeight	The gross weight inclusive of the carrier and goods weight.
carrierTermsOfDelivery	The details of the terms of delivery for the goods in the carrier.
carrierInscriptionState	The details of the state registration code on the carrier.
carrierVehiclePlate	The details of the registration number affixed on the number plate of the vehicle.
carrierVehicleUFBoard	The code used to identify the details of the state where the vehicle is registered.
VAT ID	The CNPJ number of the carrier.
finalRecipient	The contact details of the final recipient of the goods.
transportAllowanceOrCharge	The travel expenses covered for shipping the goods.
invoiceReferences	<p>The details of the invoice.</p> <p>Contains the following domains in the <code>IdReference</code> element:</p> <ul style="list-style-type: none"> <li><code>internalControlNumber</code>: The 44 character access key number issued by the signing authority of Brazil to specify document series.</li> <li><code>originalInvoiceNumber</code>: The invoice number generated from the supplier's electronic invoicing solution or a third party service provider.</li> <li><code>NFeKeyFromHeader</code>: Same as the <code>internalControlNumber</code>.</li> <li><code>supplierSequenceNumber</code>: The invoice number generated from the supplier's electronic invoicing solution or a third party service provider.</li> <li><code>legalInvoiceSequence</code>: The fiscal document series.</li> </ul>

The following are the extrinsics available for the CTe invoices:

Extrinsic	Description
supplierVatID	The supplier's CNPJ number.
buyerVatID	The buyer's CNPJ number.

Extrinsic	Description
shipmentMethodOfPayment	The means of payment chosen for the shipped goods.
paymentTermsCode	The code associated with the type of payment selected by the supplier.
regionCode	The code of the state issuing the invoice.
transactionType	The type of transaction chosen by the supplier for the invoice.  For example, the transaction type includes operation tasks such as: transfer, return, import, assignment, and shipping.
invoiceReferences	The details of the invoice.  Contains the following domains in the <code>IdReference</code> element: <ul style="list-style-type: none"> <li>• <code>CTeType</code>: The details of the type of invoice.</li> <li>• <code>internalControlNumber</code>: The 44 character access key number issued by the signing authority of Brazil.</li> <li>• <code>originalInvoiceNumber</code>: The invoice number generated from the supplier's electronic invoicing solution or a third party service provider.</li> <li>• <code>CTeNumber</code>: Same as the <code>internalControlNumber</code>.</li> <li>• <code>legalInvoiceSequence</code>: The serial number of the fiscal document.</li> </ul>
operationFiscalCode	The code associated with the type of operation task selected for the invoice. For example, transport, delivery, import, and return.
netWeight	The details of the total weight of the shipped goods.
carrierVehiclePlate	The number displayed on the vehicle plate.
vehicleType	The type of vehicle used for shipment of goods.
transportTerms	The terms and conditions applied during the transport of invoiced goods.
route	The details of the route followed during the delivery of goods.
customersPartNo	The code assigned to the product by the supplier.
SEFAZEnvironment	The details of the deployed SEFAZ environment.  Following values indicate the specific SEFAZ environment: <ul style="list-style-type: none"> <li>• 1 denotes Production</li> <li>• 2 denotes Approval</li> </ul>
SEFAZSolutionAppVersion	The version number of SEFAZ application.
externalInvoiceNumber	The invoice number generated from the supplier's electronic invoicing solution.
SEFAZDate	The date on which invoice was authorized by SEFAZ.
protocolNumber	The number issued by the tax authority of Brazil to identify transactions such as authorization, denial, and NFe cancellations.
digitalSignatureValue	The digital signature code issued by the signing authority
SEFAZResponseCode	The authorization code received during SEFAZ validation.

Extrinsic	Description
SEFAZResponseDescription	The details of SEFAZ document processing status.
externalversion	The details of the version number of the CTe document.

The following extrinsics support tax invoicing for Brazilian service invoices:

Extrinsic	Description
rpsSeries	The alpha-numeric RPS series number.
rpsNumber	The RPS number.
verificationCode	The verification code provided by the municipality.
isNFSe	The information whether the document is an NFS-e invoice or not.
serviceCode	The five digit numeric service code to identify the service type..
taxationType	The taxation type eligible for the specific service invoice.
isISSRetention	This is an Yes/No field to indicate if the buyer is allowed to retain the ISS amount in the specific service invoice.
CNAECode	The code for economic activity.
regionalEngineerAssociationNum	The regional registration number issued to a supplier for performing construction related services.
culturalIncentive	This is a Yes/No field to indicate whether the supplier is eligible for cultural incentives.
simpleNational	This is a Yes/No field to indicate whether the supplier is a microentrepreneur or small business.
specialTaxRegime	The special regime identification code for taxation.
taxBenefitCode	The three digit code which indicates the eligibility for tax benefits.
issRetentionValue	The value indicates the amount retained for ISS tax.

The following excerpt from a cXML invoice displays the extrinsics that support tax invoicing for Brazilian service invoices:

```
<Extrinsic name="rpsSeries">BBBBB</Extrinsic>
<Extrinsic name="rpsNumber">110</Extrinsic>
<Extrinsic name="verificationCode">QACHQ</Extrinsic>
<Extrinsic name="isNFSe">yes</Extrinsic>
<Extrinsic name="serviceCode"><Classification domain="saoPaulo">123456</
Classification></Extrinsic>
<Extrinsic name="taxationType">T</Extrinsic>
<Extrinsic name="isISSRetention">yes</Extrinsic><Extrinsic name="CNAECode">22222222</
Extrinsic>
<Extrinsic name="regionalEngineerAssociationNum">89765478</Extrinsic>
<Extrinsic name="culturalIncentive">yes</Extrinsic>
<Extrinsic name="simpleNational">no</Extrinsic>
<Extrinsic name="specialTaxRegime">5</Extrinsic>
<Extrinsic name="taxBenefitCode">456</Extrinsic>
<Extrinsic name="issRetentionValue"><Money currency="USD">10.00</Money></Extrinsic>
```

# Extrinsics for Invoices Sent by Hungarian Suppliers

## cXML Changes

To support maintaining invoice number ranges for Hungarian suppliers, the following cXML extrinsic has been added to `InvoiceDetailRequestHeader`:

Extrinsic Name	This Field Stores...
<code>taxInvoiceNumber</code>	Numeric text that stores the current tax invoice number from the range set up by the supplier.

The following cXML excerpt shows the tax invoice number extrinsic in the header of an invoice.

```
<Request deploymentMode="production">
  <InvoiceDetailRequest>
    <InvoiceDetailRequestHeader invoiceDate="2016-02-03T16:41:04+08:00"
invoiceID="INV001" invoiceOrigin="supplier" operation="new" purpose="standard">
      ...
      <Extrinsic name="taxInvoiceNumber">101</Extrinsic>
      ...
    </InvoiceDetailRequestHeader>
  </InvoiceDetailRequest>
</Request>
```

## Extrinsic for Invoices Created Automatically from Receipts

The following cXML extrinsic contained in `InvoiceDetailRequestHeader` makes it possible to identify invoices that have been created automatically from receipts:

Extrinsic Name	This Field Stores...
<code>isAutoflip</code>	No value.

The following cXML excerpt shows the extrinsic element for invoices that have been created automatically from receipts:

```
<InvoiceDetailRequestHeader invoiceID="InvD012043"
purpose="standard" operation="new"
invoiceDate="2015-03-30T17:30:00-07:00">
  <InvoiceDetailHeaderIndicator></InvoiceDetailHeaderIndicator>
  ...
  <Extrinsic name="isAutoflip"/>
</InvoiceDetailRequestHeader>
```

## Extrinsics for Additional Information for Payment Terms

The SAP Business Network provides several extrinsics related to payment terms information on invoices.

The `InvoiceDetailRequestHeader` element can contain the following cXML extrinsic elements to specify additional information for payment terms:

Extrinsic Name	Description
<code>discountInformation</code>	Unstructured information related to discounts.
<code>penaltyInformation</code>	Unstructured information related to penalties.
<code>netTermInformation</code>	Unstructured information related to net term.

The following cXML excerpt shows the extrinsic elements:

```
<Extrinsic name="discountInformation">No discounts are applied</Extrinsic>
<Extrinsic name="penaltyInformation">No penalties are applied</Extrinsic>
<Extrinsic name="netTermInformation">No net term is defined</Extrinsic>
```

## Extrinsic for Referencing a Payment Proposal

Buyers can submit a `PaymentRemittanceRequest` to a supplier for invoices that do not exist on the procurement system. Each remittance detail of a specific payable that has been paid can reference a payment proposal using an extrinsic element named `PaymentProposalID`, as shown in the following cXML example.

```
<RemittanceDetail lineNumber="1">
  <PayableInfo>
    <PayableInvoiceInfo>
      <InvoiceIDInfo invoiceID="INV-skm-0504-1"
        invoiceDate="2011-05-04T04:22:23-07:00"/>
      <PayableOrderInfo>
        <OrderIDInfo orderID="PO-skm-0504-1"/>
      </PayableOrderInfo>
    </PayableInvoiceInfo>
  </PayableInfo>
  <NetAmount>
    <Money currency="USD">1039.90</Money>
  </NetAmount>
  <GrossAmount>
    <Money currency="USD">1039.90</Money>
  </GrossAmount>
  <DiscountAmount>
    <Money currency="USD">0</Money>
  </DiscountAmount>
  <AdjustmentAmount>
    <Money currency="USD">0</Money>
  </AdjustmentAmount>
  <Extrinsic name="PaymentProposalID">PPR-skm-0504-1</Extrinsic>
</RemittanceDetail>
```

## Extrinsics for Country-Specific Fields in the Invoice Header

This topic shows how the country-specific fields from the buyer's and supplier's profiles map to cXML elements or extrinsic elements.

Field	Extrinsic	XPath
Supplier GST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='from']/IdReference domain gstID
Buyer GST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='soldTo']/IdReference domain gstID
Supplier PST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='from']/IdReference domain provincialTaxID
Buyer PST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='soldTo']/IdReference domain provincialTaxID
Supplier QST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='from']/IdReference domain qstId
Buyer QST registration number	N/A	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='soldTo']/IdReference domain qstId
Supplier legal form	LegalStatus	InvoiceDetailRequestHeader/ InvoicePartner/ Contact[@role='from']/ Extrinsic[@name='LegalStatus']
Supplier registered number	supplierCommercialIdentifier	InvoiceDetailRequestHeader/ Extrinsic[@name='supplierCommercialIdentifier']

Field	Extrinsic	XPath
Supplier commercial register court	commercialRegisterCourt	InvoiceDetailRequestHeader/Extrinsic[@name='supplierCommercialRegisterCourt']
Supplier late payment penalty	penaltyInformation	InvoiceDetailRequestHeader/Extrinsic[@name='penaltyInformation']
Supplier company capital	LegalCapital	InvoiceDetailRequestHeader/Extrinsic[@name='LegalCapital']
Supplier discount conditions	discountInformation	InvoiceDetailRequestHeader/Extrinsic[@name='discountInformation']

## Extrinsics for Self-Billing Invoices

SAP Business Network can automatically transmit self-billing invoices to suppliers and buyers based on data in purchase orders, scheduling agreements, and goods receipts using an automated process called Evaluated Receipt Settlement (ERS). The buyer creates a self-billing invoice in an external business system and sends it to the supplier over SAP Business Network. If applicable, the SAP Business Network adds country-specific signatures to the cXML self-billing document based on the supplier's location (country)

The following extrinsic elements in `InvoiceDetailRequestHeader` indicate whether an invoice is a self-billing invoice:

Extrinsic	Description
ERS	Indicates whether the invoice is a self-billing invoice. The value varies per country.
Statements	Provides additional information for the tax authority to meet the legal requirement for self-billing in that country.

The following example shows the self-billing extrinsics:

```
<InvoiceDetailRequestHeader>
  ...
  <Extrinsic name="ERS">Self-Billing</Extrinsic>
  <Extrinsic name="Statements">The VAT shown is your output tax due to HMRC.</Extrinsic>
  ...
</InvoiceDetailRequestHeader>
```

# Invoice Element Field Lengths

Invoice elements have maximum field lengths. Be aware of these maximums when creating invoices.

The field lengths for invoice elements and attributes are as follows:

Element or Attribute	Field Description
invoiceDate attribute	Fixed datetime format, such as: 2004-01-23T00:55:14-04:00
invoiceID attribute	128 characters
invoiceLineNumber attribute	<2,000,000,000
Name element	256 characters
Street element	256 characters
City element	256 characters
State element	256 characters
PostalCode element	256 characters
Country element	256 characters
isoCountryCode attribute	2 characters
agreementID attribute	128 characters
orderID attribute	128 characters
orderDate attribute	Fixed datetime format, such as: 2004-01-23T00:55:14-04:00
quantity attribute	precision 30, scale 15 (30, 15)
UnitOfMeasure element	24 characters
currency attribute	3 characters
Money element	(30, 15)
lineNumber attribute	<2,000,000,000
SupplierPartID element	256 characters
Description element	1000 characters
ShortName element	256 characters
percentageRate attribute	(10, 5)

# PDF Invoice Copy Attachments

In many cases, invoice exception handlers or accounts payable personnel require a rendered format of the invoice data representing the supplier view of the invoice in SAP Business Network.

If your account is enabled for PDF invoice copy attachments, SAP Business Network generates a PDF invoice copy for each invoice and adds it to the cXML invoice as a MIME attachment as follows:

```
<InvoiceDetailRequestHeader>
  Extrinsic name="invoicePDF">
    <Attachment>
      <URL>cid:18040725.1344960046396@cxml.org</URL>
    </Attachment>
  </Extrinsic>
</InvoiceDetailRequestHeader>
```

PDF invoice copies are generated for the following supplier-submitted invoice types:

- Invoices submitted through EDI or cXML that are not self-signed by the supplier
- Manually created PO-based or non-PO invoices
- Invoices created through CSV import

PDF copies of invoices are not generated for the following invoices:

- Invoice Conversion Services (ICS) invoices
- Supplier self-signed invoices

For these invoices, the provider or supplier is expected to include a PDF invoice copy as an invoice attachment if required.

The file name for the invoice copy PDF file attachment is a randomized file name, for example:

kBAIGmcwmN502a7638191182029.pdf

To generate a PDF copy of invoice, the maximum size of the cXML invoice must be less than 1MB.

## Transmission of Invoices to Buying Organizations

Ariba Buyer uses the same GetPending transaction to fetch `InvoiceDetailRequest` documents as it does for other communication with SAP Business Network. The polling interval is determined by Ariba Buyer.

SAP Business Network allows invoices to route only for buying organizations that have enabled their SAP Business Network accounts for invoicing.

### Related Information

[Invoicing Business Rules \[page 278\]](#)

# Invoice Status and Cancel Invoices

Buying organizations can set invoice status. Suppliers can cancel invoices.

## Invoice Status

Buying organizations send `StatusUpdateRequest` documents to set invoice status.

The following table lists valid invoice status settings and what they mean.

Invoice Status	Description
processing	The invoice was received by the buying organization and is undergoing reconciliation.
canceled	The invoice was received by the buying organization and was canceled.
reconciled	(Also called "approved") All amounts in the invoice were matched against amounts in a purchase order or a contract.
paying	The invoice is in the payment process or has been partially paid. This status applies only if the buying organization uses invoices to trigger payment.
paid	The invoice was paid. This status applies only if the buying organization uses invoices to trigger payment.
rejected	The invoice was received by the buying organization and was rejected.

cXML-enabled suppliers can receive these documents. SAP Business Network posts these documents to the URL that suppliers return in their cXML `ProfileResponse`. After a buying organization reconciles an invoice, suppliers cannot change or cancel that invoice. Suppliers cannot invoice against canceled purchase orders.

`StatusUpdateRequest` documents can identify invoices in two possible ways: through either a `DocumentReference` or an `InvoiceIDInfo` element. Buying organizations should use a `DocumentReference` if they know the invoice's `payloadID`, and they should use an `InvoiceIDInfo` element if they know the invoice's `invoiceID` and `invoiceDate`.

## Cancel Invoices

Suppliers can cancel invoices that do not have an invoice status of "reconciled," "paying," or "paid." They cancel invoices by issuing an invoice with `InvoiceDetailRequestHeader operation="delete"`. SAP Business Network sets the document status to "obsoleted." Suppliers cannot cancel an invoice that is already canceled.

Ariba Buyer downloads canceled invoices, but it does not distinguish between new and canceled ones. It continues to operate on the original invoice. It sends invoice status updates for "obsoleted" invoices, but not for cancelling invoices (invoices with `InvoiceDetailRequestHeader operation="delete"`). That is, if invoice B cancels invoice A, Ariba Buyer sends invoice status updates for invoice A, not for invoice B. Some customers modify Ariba Buyer to process cancel invoices differently; suppliers should consult with them to see how cancel invoices are handled.

SAP Ariba Buying and Invoicing downloads canceled invoices, evaluates them, and sends a `StatusUpdateRequest` document to SAP Business Network. While SAP Ariba Buying and Invoicing evaluates

canceled invoices, SAP Business Network sets their document status to "canceling." If SAP Ariba Buying and Invoicing approves them, SAP Business Network sets their document status to "canceled." If SAP Ariba Buying and Invoicing rejects them, SAP Business Network sets their document status back to their original state.

## Example Summary (Multi-PO) Invoice

The summary invoice example illustrates a summary invoice against two different purchase orders. Summary invoices are also called multi-PO or consolidated invoices.

The summary invoice contains `payloadID` attributes at the line item level, which refers to the `payloadID` of the two original `OrderRequest` documents. The `invoiceLineNumber` attribute refers to the line item number in the invoice. The `lineNumber` attribute refers to the line item number in the original `OrderRequest`.

### Note

With contract labor invoices, SAP Business Network displays each line item of the invoice in the summary.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML payloadID="125multi-supplierxyzkjlkwxxx-nju"
timestamp="2001-04-20T23:59:45-07:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN0100001234</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000006789</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="DUNS">
        <Identity>556376197</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>cXML V1.2 application</UserAgent>
    </Sender>
  </Header>
  <Request >
    <InvoiceDetailRequest>
      <InvoiceDetailRequestHeader invoiceDate="2001-12-07T00:00:00-07:00"
invoiceID="MULTIINV1" purpose="standard" operation="new">
        <InvoiceDetailHeaderIndicator></InvoiceDetailHeaderIndicator>
        <InvoiceDetailLineIndicator isTaxInLine="yes"
isShippingInLine="yes" isAccountingInLine="yes">
          </InvoiceDetailLineIndicator>
        <InvoicePartner>
          <Contact role="soldTo" addressID="B2.4.353">
            <Name xml:lang="en">Buyer 1</Name>
            <PostalAddress name="default">
              <DeliverTo>Buyer 1</DeliverTo>
              <Street>15 Camino del Cerro</Street>
              <City>Los Gatos</City>
              <State>CA</State>
              <PostalCode>95032</PostalCode>
              <Country isoCountryCode="US">United States</Country>
            </PostalAddress>
          </Contact>
        </InvoicePartner>
      </InvoiceDetailRequestHeader>
    </InvoiceDetailRequest>
  </Request >
</cXML>
```

```

        <Email name="default">test@buyer.com</Email>
        <Phone name="work">
            <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>408</AreaOrCityCode>
                <Number>3582000</Number>
            </TelephoneNumber>
        </Phone>
        <Fax name="work">
            <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>408</AreaOrCityCode>
                <Number>3582100</Number>
            </TelephoneNumber>
        </Fax>
    </Contact>
</InvoicePartner>
<InvoicePartner>
    <Contact role="remitTo" addressID="Billing">
        <Name xml:lang="en">Joan Bill</Name>
        <PostalAddress name="billing department">
            <DeliverTo>Joan Bill</DeliverTo>
            <Street>16 Castro Street</Street>
            <City>Mountain View</City>
            <State>CA</State>
            <PostalCode>95035</PostalCode>
            <Country isoCountryCode="US">United States</Country>
        </PostalAddress>
        <Email name="default">jbill@supplierbank.com</Email>
        <Phone name="work">
            <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>650</AreaOrCityCode>
                <Number>9990000</Number>
            </TelephoneNumber>
        </Phone>
    </Contact>
    <IdReference identifier="011" domain="accountReceivableID">
        <Creator xml:lang="en">Supplier ERP</Creator>
    </IdReference>
    <IdReference identifier="123456789" domain="bankRoutingID">
        <Creator xml:lang="en">Supplier Bank</Creator>
    </IdReference>
</InvoicePartner>
<PaymentTerm payInNumberOfDays="20">
    <Discount>5</Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays="30">
    <Discount>2.5</Discount>
</PaymentTerm>
<PaymentTerm payInNumberOfDays="40">
    <Discount>-2</Discount>
</PaymentTerm>
</InvoiceDetailRequestHeader>
<InvoiceDetailOrder>
    <InvoiceDetailOrderInfo>
        <OrderReference orderID="PO123">
            <DocumentReference
payloadID="277403463.70.7733@acme.com">
                </DocumentReference>
            </OrderReference>
        </InvoiceDetailOrderInfo>
        <InvoiceDetailItem invoiceLineNumber="1" quantity="5">
            <UnitOfMeasure>EA</UnitOfMeasure>
            <UnitPrice>
                <Money currency="USD">10.00</Money>
            </UnitPrice>
        </InvoiceDetailItem>
    </InvoiceDetailOrderInfo>
</InvoiceDetailOrder>

```

```

</UnitPrice>
<InvoiceDetailItemReference lineNumber="1">
  <ItemID>
    <SupplierPartID>A2</SupplierPartID>
  </ItemID>
  <Description xml:lang="en">Cabinet Locks with 2 Keys
</Description>
  <SerialNumber>45993823469876</SerialNumber>
  <SerialNumber>45993823469877</SerialNumber>
  <SerialNumber>45993823469878</SerialNumber>
  <SerialNumber>45993823469879</SerialNumber>
  <SerialNumber>45993823469880</SerialNumber>
</InvoiceDetailItemReference>
<SubtotalAmount>
  <Money currency="USD">50.00</Money>
</SubtotalAmount>
<GrossAmount>
  <Money currency="USD">50.00</Money>
</GrossAmount>
<NetAmount>
  <Money currency="USD">50.00</Money>
</NetAmount>
<Distribution>
  <Accounting name="DistributionCharge">
    <AccountingSegment id="100"
      <Name xml:lang="en-US">Split Percentage</Name>
      <Description xml:lang="en-US">Percentage
    </Description>
    </AccountingSegment>
    <AccountingSegment id="Machine Resources"
      <Name xml:lang="en-US">Cost Center</Name>
      <Description xml:lang="en-US">Department Name
    </Description>
    </AccountingSegment>
    <AccountingSegment id="Office Supplies"
      <Name xml:lang="en-US">Account</Name>
      <Description xml:lang="en-US">Account Name
    </Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">50.00</Money>
  </Charge>
</Distribution>
</InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailOrder>
  <InvoiceDetailOrderInfo>
    <OrderReference orderID="P0123">
      <DocumentReference payloadID="1104750653.65.7733@acme.com">
    </DocumentReference>
    </OrderReference>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailItem invoiceLineNumber="2" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <UnitPrice>
      <Money currency="USD">1.00</Money>
    </UnitPrice>
  <InvoiceDetailItemReference lineNumber="3">
    <ItemID><SupplierPartID>A4</SupplierPartID></ItemID>
    <Description xml:lang="en">Cam Locks without
      Keys </Description>
    <ManufacturerPartID>815-12</ManufacturerPartID>
    <ManufacturerName xml:lang="en-US"></ManufacturerName>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency="USD">10.00</Money>
  </SubtotalAmount>

```

```

        <GrossAmount>
          <Money currency="USD">10.00</Money>
        </GrossAmount>
        <NetAmount>
          <Money currency="USD">10.00</Money>
        </NetAmount>
        <Distribution>
          <Accounting name="DistributionCharge">
            <AccountingSegment id="100">
              <Name xml:lang="en-US">Split Percentage</Name>
              <Description xml:lang="en-US">Percentage
            </Description>
            </AccountingSegment>
            <AccountingSegment id="Machine Resources">
              <Name xml:lang="en-US">Cost Center</Name>
              <Description xml:lang="en-US">Department Name
            </Description>
            </AccountingSegment>
          </Accounting>
          <Charge><Money currency="USD">10.00</Money></Charge>
        </Distribution>
      </InvoiceDetailItem>
    </InvoiceDetailOrder>
    <InvoiceDetailSummary>
      <SubtotalAmount>
        <Money currency="USD">60.00</Money>
      </SubtotalAmount>
      <Tax>
        <Money currency="USD">60.00</Money>
        <Description xml:lang="en-US">Sales Tax</Description>
      </Tax>
      <GrossAmount>
        <Money currency="USD">60.00</Money>
      </GrossAmount>
      <NetAmount>
        <Money currency="USD">60.00</Money>
      </NetAmount>
      <DueAmount><
        Money currency="USD">60.00</Money>
      </DueAmount>
    </InvoiceDetailSummary>
  </InvoiceDetailRequest>
</Request>
</cXML>

```

## Example Header-Level Invoice

If suppliers invoice purchase orders in full, it is not necessary to provide line item detail information; a header level invoice is sufficient.

The `isHeaderInvoice` attribute is set to "yes" to indicate the invoice is of type Header.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML timestamp="2001-12-07T16:23:01-07:00" payloadID="Oct102001_0447pm98788688">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN0100001234</Identity>
      </Credential>
    </From>

```

```

<To>
  <Credential domain="NetworkID">
    <Identity>AN01000004321</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="DUNS">
    <Identity>556376197</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>cXML V1.2 application</UserAgent>
</Sender>
</Header>
<Request>
  <InvoiceDetailRequest>
    <InvoiceDetailRequestHeader invoiceDate="2001-12-07T00:00:00-07:00"
      invoiceID="HEADERINV222" purpose="standard" operation="new">
      InvoiceDetailHeaderIndicator isHeaderInvoice="yes">
    </InvoiceDetailHeaderIndicator>
    <InvoiceDetailLineIndicator isTaxInLine="yes"
      isShippingInLine="yes" />
    <InvoicePartner>
      <Contact role="billTo">
        <Name xml:lang="en-US">Buyer Headquarters</Name>
        <PostalAddress>
          <Street>123 Main Street</Street>
          <City>Anytown</City>
          <State>TX</State>
          <PostalCode>99999</PostalCode>
          <Country isoCountryCode="US">United States</Country>
        </PostalAddress>
      </Contact>
    </InvoicePartner>
    <InvoicePartner>
      <Contact role="remitTo">
        <Name xml:lang="en-US">Joan Bill</Name>
        <PostalAddress>
          <Street>One Test Avenue</Street>
          <City>Sunnyvale</City>
          <State>CA</State>
          <PostalCode>94087</PostalCode>
          <Country isoCountryCode="US">United States</Country>
        </PostalAddress>
      </Contact>
      <IdReference identifier="StandardHeaderLevelIndividual"
        domain="accountID"></IdReference>
    </InvoicePartner>
    <Comments xml:lang="en-US">Sample Header Level Individual
      Invoice</Comments>
    </InvoiceDetailRequestHeader>
  <InvoiceDetailHeaderOrder>
    <InvoiceDetailOrderInfo>
      <OrderIDInfo orderID="DO21756"
        orderDate=" "2007-07-01T09:42:30-05:00" ">
    </OrderIDInfo>
    </InvoiceDetailOrderInfo>
    <InvoiceDetailOrderSummary invoiceLineNumber="1">
      <SubtotalAmount>
        <Money currency="USD">20.00</Money>
      </SubtotalAmount>
      <Tax>
        <Money currency="USD">5.00</Money>
        <Description xml:lang="en-US"></Description>
      </Tax>
      <InvoiceDetailLineSpecialHandling>
        <Money currency="USD">10.00</Money>
      </InvoiceDetailLineSpecialHandling>
      <InvoiceDetailLineShipping>

```

```

<InvoiceDetailShipping>
  <Contact role="shipFrom" addressID="1000487">
    <Name xml:lang="en">Main Shipping</Name>
    <PostalAddress name="default">
      <Street>15 Camino del Cerro</Street>
      <City>Los Gatos</City>
      <State>CA</State>
      <PostalCode>95032</PostalCode>
      <Country isoCountryCode="US">United States
    </Country>
    </PostalAddress>
    <Email name="default">shipping@shipfrm.com</Email>
    <Phone name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1
        </CountryCode>
        <AreaOrCityCode>408</AreaOrCityCode>
        <Number>3582000</Number>
      </TelephoneNumber>
    </Phone>
    <Fax name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1
        </CountryCode>
        <AreaOrCityCode>408</AreaOrCityCode>
        <Number>3582100</Number>
      </TelephoneNumber>
    </Fax>
  </Contact>
  <Contact role="shipTo" addressID="1000487">
    <Name xml:lang="en">Buyer Headquarters</Name>
    <PostalAddress name="default">
      <DeliverTo>Jason Lynch</DeliverTo>
      <Street>34 Castro Street</Street>
      <City>Mountain View</City>
      <State>CA</State>
      <PostalCode>95035</PostalCode>
      <Country isoCountryCode="US">United States
    </Country>
    </PostalAddress>
    <Email name="default">JasonL@shipto.com</Email>
    <Phone name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1
        </CountryCode>
        <AreaOrCityCode>408</AreaOrCityCode>
        <Number>3582000</Number>
      </TelephoneNumber>
    </Phone>
    <Fax name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1
        </CountryCode>
        <AreaOrCityCode>408</AreaOrCityCode>
        <Number>3582100</Number>
      </TelephoneNumber>
    </Fax>
  </Contact>
</InvoiceDetailShipping>
<Money currency="USD">20</Money>
</InvoiceDetailLineShipping>
<GrossAmount>
  <Money currency="USD">35.00</Money>
</GrossAmount>
<InvoiceDetailDiscount percentageRate="10%">
  <Money currency="USD">2.00</Money>
</InvoiceDetailDiscount>
<NetAmount><Money currency="USD">33.00</Money></NetAmount>

```

```

        <Comments>This a Standard Header Level Invoice</Comments>
    </InvoiceDetailOrderSummary>
</InvoiceDetailHeaderOrder>
<InvoiceDetailSummary>
    <SubtotalAmount>
        <Money currency="USD">20.00</Money>
    </SubtotalAmount>
    <Tax>
        <Money currency="USD">5.00</Money>
        <Description xml:lang="en-US"></Description>
    </Tax>
    <SpecialHandlingAmount>
        <Money currency="USD">10.00</Money>
    </SpecialHandlingAmount>
    <ShippingAmount>
        <Money currency="USD">5.00</Money>
    </ShippingAmount>
    <GrossAmount><Money currency="USD">40.00</Money></GrossAmount>
    <InvoiceDetailDiscount percentageRate="10%">
        <Money currency="USD">18.00</Money>
    </InvoiceDetailDiscount>
    <NetAmount><Money currency="USD">18.00</Money></NetAmount>
    <DepositAmount>
        <Money currency="USD">33.00</Money>
    </DepositAmount>
    <DueAmount>
        <Money currency="USD">33.00</Money>
    </DueAmount>
</InvoiceDetailSummary>
</InvoiceDetailRequest>
</Request>
</cXML>

```

## Example Blanket Purchase Order Invoice

The example blanket purchase order invoice illustrates an invoice for a no-release blanket purchase order (a purchase order is not required prior to invoicing).

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://svcdev.ariba.com/schemas/cXML/1.2.018/
InvoiceDetail.dtd">
<cXML payloadID="INV011-Against-BPO55@payload"
timestamp="2007-08-20T08:49:36-07:00">
    <Header>
        <From>
            <Credential domain="AribaNetworkUserId">
                <Identity>AN0100001234</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="AribaNetworkUserId">
                <Identity>AN01000006789</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="DUNS">
                <Identity>556376197</Identity>
                <SharedSecret>abracadabra</SharedSecret>
            </Credential>
            <UserAgent>Ariba Network V1.1</UserAgent>
        </Sender>
    </Header>

```

```

</Header>
<Request deploymentMode="production">
  <InvoiceDetailRequest>
    <InvoiceDetailRequestHeader invoiceDate="2007-08-20T08:49:36-07:00"
      invoiceID="INV011-Against-BPO55" operation="new"
      purpose="standard">
      <InvoiceDetailHeaderIndicator></InvoiceDetailHeaderIndicator>
      <InvoiceDetailLineIndicator></InvoiceDetailLineIndicator>
      <InvoicePartner>
        <Contact role="remitTo">
          <Name xml:lang="en-US">SUPPLIER</Name>
          <PostalAddress>
            <Street>jUnitDummy</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Contact>
      </InvoicePartner>
      <InvoicePartner>
        <Contact role="soldTo">
          <Name xml:lang="en-US">BUYER</Name>
          <PostalAddress>
            <Street>jUnitDummy</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Contact>
      </InvoicePartner>
      <InvoicePartner>
        <Contact role="billTo">
          <Name xml:lang="en-US"></Name>
        </Contact>
      </InvoicePartner>
      <InvoicePartner>
        <Contact role="from">
          <Name xml:lang="en-US">SUPPLIER</Name>
          <PostalAddress>
            <Street>jUnitDummy</Street>
            <City></City>
            <State>CA</State>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Contact>
      </InvoicePartner>
      <InvoiceDetailShipping>
        <Contact role="shipTo">
          <Name xml:lang="en-US">BUYER</Name>
          <PostalAddress>
            <Street>jUnitDummy</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Contact>
        <Contact role="shipFrom">
          <Name xml:lang="en-US">SUPPLIER</Name>
          <PostalAddress>
            <Street>jUnitDummy</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
        </Contact>
      </InvoiceDetailShipping>
    </InvoiceDetailRequestHeader>
  </InvoiceDetailRequest>
</Request>

```

```

        </Contact>
    </InvoiceDetailShipping>
</InvoiceDetailRequestHeader>
<InvoiceDetailOrder>
    <InvoiceDetailOrderInfo>
        <OrderReference orderID="BP055">
            <DocumentReference payloadID="BP055@payloadID">
                </DocumentReference>
            </OrderReference>
        </InvoiceDetailOrderInfo>
    <InvoiceDetailItem invoiceLineNumber="1" quantity="1">
        <UnitOfMeasure>EA</UnitOfMeasure>
        <UnitPrice>
            <Money currency="USD">44.00</Money>
        </UnitPrice>
        <InvoiceDetailItemReference lineNumber="1">
            <ItemID><SupplierPartID>AD4BNC13</SupplierPartID></ItemID>
            <Description xml:lang="en">Adapter SUN Monitor
                4-BNCF/13W3M </Description>
        </InvoiceDetailItemReference>
        <SubtotalAmount>
            <Money currency="USD">44.00</Money>
        </SubtotalAmount>
        <GrossAmount>
            <Money currency="USD">44.00</Money>
        </GrossAmount>
        <NetAmount>
            <Money currency="USD">44.00</Money>
        </NetAmount>
    </InvoiceDetailItem>
    <InvoiceDetailItem invoiceLineNumber="2" quantity="1">
        <UnitOfMeasure>EA</UnitOfMeasure>
        <UnitPrice>
            <Money currency="USD">34.00</Money>
        </UnitPrice>
        <InvoiceDetailItemReference lineNumber="2">
            <ItemID><SupplierPartID>AD1513</SupplierPartID></ItemID>
            <Description xml:lang="en">Adapter SUN Monitor
                HD15F/13W3M </Description>
        </InvoiceDetailItemReference>
        <SubtotalAmount>
            <Money currency="USD">34.00</Money>
        </SubtotalAmount>
        <GrossAmount>
            <Money currency="USD">34.00</Money>
        </GrossAmount>
        <NetAmount>
            <Money currency="USD">34.00</Money>
        </NetAmount>
    </InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailSummary>
    <SubtotalAmount>
        <Money currency="USD">78.00</Money>
    </SubtotalAmount>
    <Tax>
        <Money currency="USD">10.00</Money>
        <Description xml:lang="en-US"></Description>
    </Tax>
    <GrossAmount>
        <Money currency="USD">78.00</Money>
    </GrossAmount>
    <NetAmount>
        <Money currency="USD">78.00</Money>
    </NetAmount>
    <DueAmount>
        <Money currency="USD">78.00</Money>
    </DueAmount>
</InvoiceDetailSummary>

```

```

    </InvoiceDetailSummary>
  </InvoiceDetailRequest>
</Request>
</cXML>

```

For a release BPO (requires purchase orders prior to invoicing), the `OrderRequestHeader` element is present, and the `orderType` is `blanket`, as shown in the following example:

```

<OrderRequest>
  <OrderRequestHeader orderID="D012042" orderDate="2008-12-04T15:26:00-07:00"
    type="new" orderType="blanket">
  </OrderRequestHeader>
</OrderRequest>

```

## Example of a Complex Buyer/Supplier Scenario

The example documents in the complex buyer/supplier scenario illustrate a buyer purchase order, a standard invoice, a credit memo, and a debit memo.

The following cXML documents describe an example complex business scenario

1. Ariba Buyer generates a purchase order containing two line items:
  - **Line 1:** Ten items at \$20 = \$200
  - **Line 2:** Five items at \$20 = \$100
2. The supplier sends a **standard invoice** that includes shipping charges, but mistakenly charges the buying organization for eight items on line 2 instead of five.
3. The supplier sends a **credit memo** for \$110, which includes tax charges.
4. The supplier realizes that it used incorrect math in the credit memo; it should have credited the buying organization \$66. The supplier then sends a **debit memo** for \$44 (\$110 - \$66).

## Example Purchase Order: Complex Buyer/Supplier Scenario

The example purchase order contains two line items.

- **Line 1:** Ten items at \$20 = \$200
- **Line 2:** Five items at \$20 = \$100

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="1002700953000.152865612.2314.120401002@bigcompany.com"
  timestamp="2001-12-04T15:26:00-07:00">
  <Header>
    <From>
      <Credential domain="AribaNetworkUserId">
        <Identity>bettybuyer@bigcompany.com</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="AribaNetworkUserId">
        <Identity>samsupplier@acme.com</Identity>
      </Credential>

```

```

</To>
<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>bettybuyer@bigcompany.com</Identity>
    <SharedSecret>OurPassword</SharedSecret>
  </Credential>
  <UserAgent>Ariba Buyer 7.0</UserAgent>
</Sender>
</Header>
<Request>
  <OrderRequest>
    <OrderRequestHeader orderID="D012042"
      orderDate="2001-12-04T15:26:00-07:00" type="new"
      orderType="regular">
      <Total>
        <Money currency="USD">300.00</Money>
      </Total>
      <ShipTo>
        <Address isoCountryCode="US" addressID="1000467">
          <Name xml:lang="en">Bigcompany Headquarters</Name>
          <PostalAddress name="default">
            <DeliverTo>Betty Buyer</DeliverTo>
            <DeliverTo>Bigcompany Headquarters</DeliverTo>
            <Street>1314 Chesapeake Terrace</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
          <Email name="default">username@ariba.com</Email>
          <Phone name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode>800</AreaOrCityCode>
              <Number>5555555</Number>
            </TelephoneNumber>
          </Phone>
          <Fax name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode></AreaOrCityCode>
              <Number></Number>
            </TelephoneNumber>
          </Fax>
        </Address>
      </ShipTo>
      <BillTo>
        <Address isoCountryCode="US" addressID="15">
          <Name xml:lang="en">Bigcompany Headquarters</Name>
          <PostalAddress name="Accounts Payable">
            <Street>1314 Chesapeake Terrace</Street>
            <City>Sunnyvale</City>
            <State>CA</State>
            <PostalCode>94089</PostalCode>
            <Country isoCountryCode="US">United States</Country>
          </PostalAddress>
          <Phone name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode></AreaOrCityCode>
              <Number></Number>
            </TelephoneNumber>
          </Phone>
          <Fax name="work">
            <TelephoneNumber>
              <CountryCode isoCountryCode="US">1</CountryCode>
              <AreaOrCityCode></AreaOrCityCode>
              <Number></Number>
            </TelephoneNumber>
          </Fax>
        </Address>
      </BillTo>
    </OrderRequestHeader>
  </OrderRequest>
</Request>

```

```

        </TelephoneNumber>
    </Fax>
    </Address>
</BillTo>
</OrderRequestHeader>
<ItemOut quantity="10" lineNumber="1">
    <ItemID>
        <SupplierPartID>BTM00107</SupplierPartID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency="USD">20.00</Money>
        </UnitPrice>
        <Description xml:lang="en">Computer Audio Cables</Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
        <Classification domain="UNSPSC">43173609</Classification>
        <ManufacturerPartID>JJ11P28</ManufacturerPartID>
        <Extrinsic name="PR No.">PR1026</Extrinsic>
    </ItemDetail>
    <Distribution>
        <Accounting name="DistributionCharge">
            <AccountingSegment id="Production Control">
                <Name xml:lang="en-US">Cost Center</Name>
                <Description xml:lang="en-US"> Department Name
            </Description>
            </AccountingSegment>
            <AccountingSegment id="Computer Accessories">
                <Name xml:lang="en-US">Account</Name>
                <Description xml:lang="en-US"> Account Name
            </Description>
            </AccountingSegment>
        </Accounting>
        <Charge>
            <Money currency="USD">200.00</Money>
        </Charge>
    </Distribution>
</ItemOut>
<ItemOut quantity="5" lineNumber="2">
    <ItemID>
        <SupplierPartID>BTM00108</SupplierPartID>
    </ItemID>
    <ItemDetail>
        <UnitPrice>
            <Money currency="USD">20.00</Money>
        </UnitPrice>
        <Description xml:lang="en">Computer Video Cables</Description>
        <UnitOfMeasure>EA</UnitOfMeasure>
        <Classification domain="UNSPSC">43173610</Classification>
        <ManufacturerPartID>JJ11P29</ManufacturerPartID>
        <Extrinsic name="PR No.">PR1026</Extrinsic>
    </ItemDetail>
    <Distribution>
        <Accounting name="DistributionCharge">
            <AccountingSegment id="Production Control">
                <Name xml:lang="en-US">Cost Center</Name>
                <Description xml:lang="en-US"> Department Name
            </Description>
            </AccountingSegment>
            <AccountingSegment id="Computer Accessories">
                <Name xml:lang="en-US">Account</Name>
                <Description xml:lang="en-US"> Account Name
            </Description>
            </AccountingSegment>
        </Accounting>
        <Charge>
            <Money currency="USD">100.00</Money>
        </Charge>
    </Distribution>

```

```

    </ItemOut>
  </OrderRequest>
</Request>
</cXML>

```

## Example Standard Invoice: Complex Buyer/Supplier Scenario

The example standard invoice includes shipping charges, but mistakenly charges the buying organization for eight items instead of five items on line 2.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML payloadID="INVDO12042.120402" timestamp="2001-12-04T17:30:00-07:00">
  <Header>
    <From>
      <Credential domain="AribaNetworkUserId">
        <Identity>samsupplier@acme.com</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="AribaNetworkUserId">
        <Identity>bettybuyer@bigcompany.com</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="AribaNetworkUserId">
        <Identity>samsupplier@acme.com</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Our Invoicing App 2.0</UserAgent>
    </Sender>
  </Header>
  <Request>
    <InvoiceDetailRequest>
      <InvoiceDetailRequestHeader invoiceID="InvDO12042" purpose="standard"
        operation="new" invoiceDate="2001-12-04T17:30:00-07:00">
        <InvoiceDetailHeaderIndicator></InvoiceDetailHeaderIndicator>
        <InvoiceDetailLineIndicator isTaxInLine="yes"
          isShippingInLine="yes" isAccountingInLine="yes">
        </InvoiceDetailLineIndicator>
        <InvoicePartner>
          <Contact role="billTo" addressID="Billing">
            <Name xml:lang="en">Bigcompany Headquarters</Name>
            <PostalAddress name="Accounts Payable">
              <DeliverTo>Joe Accountant</DeliverTo>
              <Street>1314 Chesapeake Terrace</Street>
              <City>Sunnayvale</City>
              <State>CA</State>
              <PostalCode>94089</PostalCode>
              <Country isoCountryCode="US">United States</Country>
            </PostalAddress>
            <Email name="default">JoeTheAccountant@bigcompany.com
            </Email>
            <Phone name="work">
              <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>215</AreaOrCityCode>
                <Number>9990000</Number>
              </TelephoneNumber>
            </Phone>
          </Contact>
        </InvoicePartner>
      </InvoiceDetailRequestHeader>
    </InvoiceDetailRequest>
  </Request>
</cXML>

```

```

        <IdReference identifier="11280630" domain="accountReceivableID">
          <Creator xml:lang="en">Acme</Creator>
        </IdReference>
      </InvoicePartner>
    </InvoiceDetailRequestHeader>
    <InvoiceDetailOrder>
      <InvoiceDetailOrderInfo>
        <OrderReference orderID="P0123">
          <DocumentReference payloadID =
            "1002700953000.152865612.2314.120401002@bigcompany.com">
          </DocumentReference>
        </OrderReference>
      </InvoiceDetailOrderInfo>
      <InvoiceDetailItem invoiceLineNumber="1" quantity="4">
        <UnitOfMeasure>EA</UnitOfMeasure>
        <UnitPrice>
          <Money currency="USD">50.00</Money>
        </UnitPrice>
        <InvoiceDetailItemReference lineNumber="1">
          <ItemID>
            <SupplierPartID>BTM00107</SupplierPartID>
          </ItemID>
          <Description xml:lang="en">Computer Audio Cables
          </Description>
          <SerialNumber>69876</SerialNumber>
          <SerialNumber>69877</SerialNumber>
          <SerialNumber>69878</SerialNumber>
          <SerialNumber>69879</SerialNumber>
        </InvoiceDetailItemReference>
        <SubtotalAmount>
          <Money currency="USD">200.00</Money>
        </SubtotalAmount>
        <InvoiceDetailLineShipping>
          <InvoiceDetailShipping>
            <Contact role="shipFrom" addressID="1000467">
              <Name xml:lang="en">Acme</Name>
              <PostalAddress name="Acme">
                <Street>123 Main Street</Street>
                <City>Anytown</City>
                <State>PA</State>
                <PostalCode>99999</PostalCode>
                <Country isoCountryCode="US"> United
                  States</Country>
              </PostalAddress>
              <Email name="default">shipping@acme.com</Email>
              <Phone name="work">
                <TelephoneNumber>
                  <CountryCode isoCountryCode="US">1
                  </CountryCode>
                  <AreaOrCityCode>800</AreaOrCityCode>
                  <Number>5555555</Number>
                </TelephoneNumber>
              </Phone>
              <Fax name="work">
                <TelephoneNumber>
                  <CountryCode isoCountryCode="US">1
                  </CountryCode>
                  AreaOrCityCode</AreaOrCityCode>
                  <Number></Number>
                </TelephoneNumber>
              </Fax>
            </Contact>
            <Contact role="shipTo" addressID="1000487">
              <Name xml:lang="en">Betty Buyer</Name>
              <PostalAddress name="default">
                <DeliverTo>Betty Buyer</DeliverTo>
                <Street>1314 Chesapeake Terrace</Street>
                <City>Sunnyvale</City>
              </PostalAddress>
            </Contact>
          </InvoiceDetailShipping>
        </InvoiceDetailLineShipping>
      </InvoiceDetailOrder>
    </InvoiceDetailOrder>
  </InvoiceDetailRequestHeader>
</InvoiceDetailRequestHeader>

```

```

        <State>CA</State>
        <PostalCode>94089</PostalCode>
        <Country isoCountryCode="US"> United
          States</Country>
      </PostalAddress>
      <Email name="default">bettybuyer@bigcompany.com
    </Email>
    <Phone name="work">
      <TelephoneNumber>
        <CountryCode isoCountryCode="US">1
      </CountryCode>
      <AreaOrCityCode>800</AreaOrCityCode>
      <Number>6666666</Number>
    </TelephoneNumber>
  </Phone>
  <Fax name="work">
    <TelephoneNumber>
      <CountryCode isoCountryCode="US">1
    </CountryCode>
    <AreaOrCityCode>215</AreaOrCityCode>
    <Number>5555555</Number>
  </TelephoneNumber>
</Fax>
</Contact>
</InvoiceDetailShipping>
  <Money currency="USD">5.00</Money>
</InvoiceDetailLineShipping>
<GrossAmount>
  <Money currency="USD">205.00</Money>
</GrossAmount>
<NetAmount>
  <Money currency="USD">205.00</Money>
</NetAmount>
<Distribution>
  <Accounting name="Buyer assigned accounting code 1">
    <AccountingSegment id="ABC123456789">
      <Name xml:lang="en">Purchase</Name>
      <Description xml:lang="en"> Production
        Control</Description>
    </AccountingSegment>
  </Accounting>
  <Charge>
    <Money currency="USD">205.00</Money>
  </Charge>
</Distribution>
</InvoiceDetailItem>
<InvoiceDetailItem invoiceLineNumber="2" quantity="8">
  <UnitOfMeasure>EA</UnitOfMeasure>
  <UnitPrice>
    <Money currency="USD">20.00</Money>
  </UnitPrice>
  <InvoiceDetailItemReference lineNumber="2">
    <ItemID>
      <SupplierPartID>BTM00108</SupplierPartID>
    </ItemID>
    <Description xml:lang="en"> Computer Video
      Cables</Description>
  </InvoiceDetailItemReference>
  <SubtotalAmount>
    <Money currency="USD">160.00</Money>
  </SubtotalAmount>
<InvoiceDetailLineShipping>
  <InvoiceDetailShipping>
    <Contact role="shipFrom" addressID="1000467">
      <Name xml:lang="en">Acme </Name>
      <PostalAddress name="Acme">
        <Street>123 Main Street</Street>
        <City>Anytown</City>
    </Contact>
  </InvoiceDetailShipping>
</InvoiceDetailLineShipping>

```

```

        <State>PA</State>
        <PostalCode>99999</PostalCode>
        <Country isoCountryCode="US">United
          States</Country>
      </PostalAddress>
      <Email name="default">shipping@acme.com</Email>
      <Phone name="work">
        <TelephoneNumber>
          <CountryCode isoCountryCode="US">1
            </CountryCode>
          <AreaOrCityCode>800</AreaOrCityCode>
          <Number>5555555</Number>
        </TelephoneNumber>
      </Phone>
      <Fax name="work">
        <TelephoneNumber>
          <CountryCode isoCountryCode="US">1
            </CountryCode>
          <AreaOrCityCode></AreaOrCityCode>
          <Number></Number>
        </TelephoneNumber>
      </Fax>
    </Contact>
    <Contact role="shipTo" addressID="1000487">
      <Name xml:lang="en">Betty Buyer</Name>
      <PostalAddress name="default">
        <DeliverTo>Betty Buyer</DeliverTo>
        <Street>1314 Chesapeake Terrace</Street>
        <City>Sunnyvale</City>
        <State>CA</State>
        <PostalCode>94089</PostalCode>
        <Country isoCountryCode="US">United
          States</Country>
      </PostalAddress>
      <Email name="default">bettybuyer@bigcompany.com
      </Email>
      <Phone name="work">
        <TelephoneNumber>
          <CountryCode isoCountryCode="US">1
            </CountryCode>
          <AreaOrCityCode>800</AreaOrCityCode>
          <Number>66666666</Number>
        </TelephoneNumber>
      </Phone>
      <Fax name="work">
        <TelephoneNumber>
          <CountryCode isoCountryCode="US">1
            </CountryCode>
          <AreaOrCityCode>215</AreaOrCityCode>
          <Number>5555555</Number>
        </TelephoneNumber>
      </Fax>
    </Contact>
  </InvoiceDetailShipping>
  <Money currency="USD">16.00</Money>
</InvoiceDetailLineShipping>
<GrossAmount>
  <Money currency="USD">176.00</Money>
</GrossAmount>
<NetAmount>
  <Money currency="USD">176.00</Money>
</NetAmount>
<Distribution>
  <Accounting name="Buyer assigned accounting code 1">
    <AccountingSegment id="ABC123456789">
      <Name xml:lang="en">Purchase</Name>
      <Description xml:lang="en"> Production
        Control</Description>
    </AccountingSegment>
  </Accounting>

```

```

        </AccountingSegment>
        </Accounting>
        <Charge>
            <Money currency="USD">176.00</Money>
        </Charge>
        </Distribution>
    </InvoiceDetailItem>
</InvoiceDetailOrder>
<InvoiceDetailSummary>
    <SubtotalAmount>
        <Money currency="USD">360.00</Money>
    </SubtotalAmount>
    <Tax>
        <Money currency="USD">36.00</Money>
        <Description xml:lang="en">total tax</Description>
        <TaxDetail purpose="tax" category="State sales tax"
            percentageRate="10">
            <TaxableAmount>
                <Money currency="USD">360.00</Money>
            </TaxableAmount>
            <TaxAmount>
                <Money currency="USD">36.00</Money>
            </TaxAmount>
            <TaxLocation xml:lang="en">PA</TaxLocation>
        </TaxDetail>
    </Tax>
    <ShippingAmount>
        <Money currency="USD">21.00</Money>
    </ShippingAmount>
    <GrossAmount>
        <Money currency="USD">417.00</Money>
    </GrossAmount>
    <NetAmount>
        <Money currency="USD">417.00</Money>
    </NetAmount>
    <DueAmount>
        <Money currency="USD">417.00</Money>
    </DueAmount>
</InvoiceDetailSummary>
</InvoiceDetailRequest>
</Request>
</cXML>

```

## Example Credit Memo: Complex Buyer/Supplier Scenario

The example credit memo illustrates how a supplier applies a credit including tax charges.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML payloadID="CRD012042-120402" timestamp="2001-12-04T18:00:00-07:00">
    <Header>
        <From>
            <Credential domain="AribaNetworkUserId">
                <Identity>samsupplier@acme.com</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="AribaNetworkUserId">
                <Identity>bettybuyer@bigcompany.com</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="AribaNetworkUserId">

```

```

        <Identity>samsupplier@acme.com</Identity>
        <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our Invoicing App 2.0</UserAgent>
</Sender>
</Header>
<Request>
    <InvoiceDetailRequest>
        <InvoiceDetailRequestHeader invoiceID="CRD012042" purpose="creditMemo"
            operation="new" invoiceDate="2001-12-04T18:00:00-07:00">
            <InvoiceDetailHeaderIndicator isHeaderInvoice="yes"/>
            <InvoiceDetailLineIndicator/>
            <Comments xml:lang="en-US"> Buyer ordered 5 Computer Video
                Cables. We invoiced the customer for 8 by mistake.
            </Comments>
        </InvoiceDetailRequestHeader>
        <InvoiceDetailHeaderOrder>
            <InvoiceDetailOrderInfo>
                <OrderReference>
                    <DocumentReference
payloadID="1002700953000.152865612.2314.120401002@ariba.com"/>
                </OrderReference>
            </InvoiceDetailOrderInfo>
            <InvoiceDetailOrderSummary invoiceLineNumber="2">
                <SubtotalAmount>
                    <Money currency="USD">-100.00</Money>
                </SubtotalAmount>
            </InvoiceDetailOrderSummary>
        </InvoiceDetailHeaderOrder>
        <InvoiceDetailSummary>
            <SubtotalAmount>
                <Money currency="USD">-100.00</Money>
            </SubtotalAmount>
            <Tax>
                <Money currency="USD">-10</Money>
                <Description xml:lang="en">total tax</Description>
            </Tax>
            <NetAmount>
                <Money currency="USD">-110.00</Money>
            </NetAmount>
            <DueAmount>
                <Money currency="USD">-110.00</Money>
            </DueAmount>
        </InvoiceDetailSummary>
    </InvoiceDetailRequest>
</Request>
</cXML>

```

## Example Debit Memo: Complex Buyer/Supplier Scenario

The example debit memo illustrates how a supplier corrects an error in a credit memo.

The supplier realizes that it used incorrect math in the credit memo. It should have credited the buying organization \$66.

The following debit memo is for \$44 (\$110 - \$66).

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML payloadID="DBD012042-120402" timestamp="2001-12-04T18:50:00-07:00">
    <Header>
        <From>

```

```

    <Credential domain="AribaNetworkUserId">
      <Identity>samsupplier@acme.com</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="AribaNetworkUserId">
      <Identity>bettybuyer@bigcompany.com</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="AribaNetworkUserId">
      <Identity>samsupplier@acme.com</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our Invoicing App 2.0</UserAgent>
  </Sender>
</Header>
<Request>
  <InvoiceDetailRequest>
    <InvoiceDetailRequestHeader invoiceID="DBD012042" purpose="debitMemo"
      operation="new" invoiceDate="2001-12-04T18:50:00-07:00">
      <InvoiceDetailHeaderIndicator isHeaderInvoice="yes"/>
      <InvoiceDetailLineIndicator/>
      <Comments xml:lang="en-US">
        Bigcompany ordered five Computer Video Cables at 20.00 a piece.
        We invoiced the customer for eight by mistake. We sent out a
        credit memo for 100.00 instead of 60.00, so now we are issuing
        this debit memo in the amount of 2 X 20 = 40.00. The customer
        received all 5 items. Sorry for the confusion.
      </Comments>
    </InvoiceDetailRequestHeader>
    <InvoiceDetailHeaderOrder>
      <InvoiceDetailOrderInfo>
        <OrderReference>
          <DocumentReference payloadID =
            "1002700953000.152865612.2314.120401002@ariba.com"/>
        </OrderReference>
      </InvoiceDetailOrderInfo>
      <InvoiceDetailOrderSummary invoiceLineNumber="2">
        <SubtotalAmount>
          <Money currency="USD">40.00</Money>
        </SubtotalAmount>
      </InvoiceDetailOrderSummary>
    </InvoiceDetailHeaderOrder>
    <InvoiceDetailSummary>
      <SubtotalAmount>
        <Money currency="USD">40.00</Money>
      </SubtotalAmount>
      <Tax>
        <Money currency="USD">4.00</Money>
        <Description xml:lang="en">total tax</Description>
      </Tax>
      <NetAmount>
        <Money currency="USD">44.00</Money>
      </NetAmount>
      <DueAmount>
        <Money currency="USD">44.00</Money>
      </DueAmount>
    </InvoiceDetailSummary>
  </InvoiceDetailRequest>
</Request>
</cXML>

```

## Example Cancel Invoice

This example illustrates a cancel invoice. InvoiceDetailRequestHeader element contains the attribute operation="delete" and the InvoiceID attribute reflects that this is a cancel invoice. There is also a DocumentReference element containing the payloadID of the original invoice, as required by the cXML DTDs.

As always, this document has a unique payloadID.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/InvoiceDetail.dtd">
<cXML payloadID="
  INV123.DELETE
  " timestamp="2001-12-05T10:22:00-07:00">
  <Header>
    <From>
      <Credential domain="AribaNetworkUserId">
        <Identity>supplier@supplier.com </Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="AribaNetworkUserId">
        <Identity>buyer@buyer.com</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="AribaNetworkUserId">
        <Identity>supplier@supplier.com </Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Mega Invoicing App 1.0</UserAgent>
    </Sender>
  </Header>
  <Request>
    <InvoiceDetailRequest>
      <InvoiceDetailRequestHeader purpose="standard"
        operation="delete" invoiceID="INV123.DELETE"
        invoiceDate="2001-12-05T09:30:00-07:00">
        <InvoiceDetailHeaderIndicator></InvoiceDetailHeaderIndicator>
        <InvoiceDetailLineIndicator isTaxInLine="yes"
          isShippingInLine="yes" isAccountingInLine="yes">
        </InvoiceDetailLineIndicator>
        <InvoicePartner>
          <Contact role="billTo" addressID="Billing">
            <Name xml:lang="en">Test User</Name>
            <PostalAddress name="billing department">
              <DeliverTo>Test User</DeliverTo>
              <Street>16 Castro Street</Street>
              <City>Mountain View</City>
              <State>CA</State>
              <PostalCode>95035</PostalCode>
              <Country isoCountryCode="US">United States</Country>
            </PostalAddress>
            <Email name="default">testuser@company.com</Email>
            <Phone name="work">
              <TelephoneNumber>
                <CountryCode isoCountryCode="US">1</CountryCode>
                <AreaOrCityCode>215</AreaOrCityCode>
                <Number>9990000</Number>
              </TelephoneNumber>
            </Phone>
          </Contact>
          <IdReference identifier="11280630" domain="accountReceivableID">
            <Creator xml:lang="en">Test Supplier</Creator>
          </IdReference>
        </InvoicePartner>
        <DocumentReference payloadID="INV123">
```

```

    </DocumentReference>
  </InvoiceDetailRequestHeader>
<InvoiceDetailOrder>
  <InvoiceDetailOrderInfo>
    <OrderReference orderID="P0123">
      <DocumentReference
        payloadID="1002700953000.152865612">
      </DocumentReference>
    </OrderReference>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailItem invoiceLineNumber="1" quantity="10">
    <UnitOfMeasure>EA</UnitOfMeasure>
    <UnitPrice>
      .
      .
      .
    </UnitPrice>
  </InvoiceDetailItem>
</InvoiceDetailOrder>

```

## Scheduled Payments

Buying organizations use scheduled payments (`PaymentProposalRequest` documents) to tell SAP Business Network and their suppliers about planned payments. These documents list scheduled payment dates, discount amounts, and net amounts. Ariba Buyer 8.2 and later supports them.

By default, scheduled payments are for information only. After approving invoices from suppliers, the procurement application sends scheduled payments to SAP Business Network. SAP Business Network forwards them to suppliers through email or displays them in their online Inboxes.

[EFT Payment \[page 359\]](#)

[Discount Management \[page 360\]](#)

[Example Scheduled Payment \[page 361\]](#)

## EFT Payment

Buying organizations can use scheduled payments for automated payment through Electronic Funds Transfer (EFT) on SAP Business Network.

After the procurement application approves invoices from suppliers, it sends scheduled payments to SAP Business Network, which forwards them to suppliers. On the scheduled payment date, SAP Business Network instructs the buying organization's bank to pay the supplier's bank.

Scheduled payments for EFT payment contain the `isNetworkPayment` attribute:

```

<PaymentProposalRequest paymentDate="2005-01-14T14:34:45-07:00"
  operation="new" paymentProposalID="PAY123" isNetworkPayment="yes">

```

# Discount Management

Scheduled payments can be used for buyer-initiated discounts (formerly called Dynamic Discounting), supplier-initiated discounts, and standing early payment term offers, which allow buying organizations and suppliers to negotiate early settlement in return for discounts.

After a buying organization approves an invoice, their invoicing application sends a scheduled payment to SAP Business Network, which displays it to suppliers. If the buying organization activates discount management, SAP Business Network allows suppliers to request an accelerated payment, using a discount rate configured by the buying organization. If the supplier activates discount management, SAP Business Network allows the buying organization to review and either accept or reject the early settlement terms. If necessary, the supplier can revise the offer.

Scheduled payments for discount management contain a special `Extrinsic` element named `immediatepay`:

```
<PaymentProposalRequest paymentDate="2021-04-20T23:59:20-07:00"
  operation="new" paymentProposalID="PAY123">
  . . .
  <Extrinsic name="immediatepay">yes</Extrinsic>
</PaymentProposalRequest>
```

If a supplier selects a scheduled payment for early settlement, SAP Business Network sends a `CopyRequest` document containing the attached scheduled payment back to the buying organization with an updated net amount and payment date. This `PaymentProposalRequest` document contains the attribute `operation="update"`.

## Note

After a discount is applied to a `PaymentProposalRequest`, subsequent `PaymentProposalRequest` updates fail if either `GrossAmount` or `NetAmount` values do not match those of the original discounted `PaymentProposalRequest`.

The following example shows the `earlyPaymentDiscount` extrinsic. This amount is used to offset the early payment discount included in the discount portion of the payment proposal to make sure that double-dipping does not occur. The value indicates the actual discount amount.

```
<PaymentProposalRequest paymentDate="2021-04-20T23:59:20-07:00"
  operation="new" paymentProposalID="PAY123">
  . . .
  <Extrinsic name="earlyPaymentDiscount">
    <Money currency="USD">100</Money>
  </Extrinsic>
</PaymentProposalRequest>
```

## Dynamic Discounting Tax Adjustments

Buyers can pass discount basis on payment proposals from their ERP to the SAP Business Network, allowing SAP Ariba Discount Management to exclude taxes and other potential ERP-defined elements from the discount calculation. SAP Business Network passes discount amount, tax rebates, and revised settlement amounts back to the buyer and supplier ERPs when a supplier accepts a discount offer, and displays adjustments resulting from tax rebates clearly in the remittance advice. Buyers can configure the combinations of tax categories and tax location

code (which can be mapped to ERP-defined country, region, or province) for which SAP Business Network should calculate a tax rebate.

Discount basis must be equal to the taxable amount. You should not exclude other tax elements from the discount basis for countries in which tax adjustment applies.

Work with your IT department to configure your ERP to send tax adjustment information on payment proposals.

For additional information about configuring tax categories and tax location codes, see [Tax Adjustment Rules](#).

## Payment Term Offers

Payment Term Offers allow buyers and suppliers to agree to different payment terms at the invoice level when business requirements necessitate more flexibility on payment terms than standing payment terms allow. SAP Business Network applies payment terms according to the `paymentTermCode` attribute that buyers include in cXML `PaymentProposalRequest` documents. If the `paymentTermCode` attribute matches a configured **Payment Term Offer** on SAP Business Network, SAP Ariba Discount Management applies that payment term. If the `paymentTermCode` attribute is not present or does not match a configured **Payment Term Offer** on SAP Business Network, SAP Ariba Discount Management instead uses any payment term that would have otherwise been applied. Example `PaymentProposalRequest` with `paymentTermCode` attribute:

```
<PaymentProposalRequest paymentDate="2021-08-05T11:59:20-07:00"
  paymentProposalID="5300000322" operation="new">
  <PayableInfo>
    <PayableInvoiceInfo>
      <InvoiceIDInfo invoiceID="INV322" invoiceDate="2021-07-06"/>
    </PayableInvoiceInfo>
  </PayableInfo>
  <PaymentMethod type="ach"/>
  <PaymentTerms paymentTermCode="210A"/>
```

### Note

Although `PaymentTerms` has several optional child elements, SAP Business Network ignores them. Only its `paymentTermCode` attribute is used.

Please work with your IT department to pass the `paymentTermCode` attribute in cXML `PaymentProposalRequest` documents. For more information about how to configure payment term offers, see [Discount Offers Configuration](#).

## Example Scheduled Payment

The example scheduled payment demonstrates an ACH payment. It instructs SAP Business Network to present the payment to suppliers for discount management.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.014/
PaymentRemittance.dtd">
<cXML payloadID="123@bigbuyer.com" timestamp="2005-04-20T23:59:45-07:00">
  <Header>
    <From>
```

```

    <Credential domain="AribaNetworkUserId">
      <Identity>joe@bigbuyer.com</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="AribaNetworkUserId">
      <Identity>judy@workchairs.com</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="AribaNetworkUserId">
      <Identity>joe@bigbuyer.com</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Super Procurement Application 1.2</UserAgent>
  </Sender>
</Header>
<Request>
  <PaymentProposalRequest paymentProposalID="proposal123"
    operation="new" paymentDate="2005-05-20T23:59:20-07:00">
    <Extrinsic name="immediatepay">yes</Extrinsic>
    <PayableInfo>
      <PayableInvoiceInfo>
        <InvoiceIDInfo invoiceID="ABC"
invoiceDate="2005-05-20T22:00:00-07:00">
          </InvoiceIDInfo>
        <PayableOrderInfo>
          <OrderReference orderID="DEF">
            <DocumentReference payloadID="25510.10.81.002"/>
          </OrderReference>
        </PayableOrderInfo>
      </PayableInvoiceInfo>
    </PayableInfo>
    <PaymentMethod type="ach"/>
    <Contact role="remitTo" addressID="Billing">
      <Name xml:lang="en">Lisa Dollar</Name>
      <PostalAddress name="billing department">
        <DeliverTo>Lisa Dollar</DeliverTo>
        <Street>100 Castro Street</Street>
        <City>Mountain View</City>
        <State>CA</State>
        <PostalCode>95035</PostalCode>
        <Country isoCountryCode="US">United States</Country>
      </PostalAddress>
      <Email name="default">ldollar@workchairs.com</Email>
      <Phone name="work">
        <TelephoneNumber>
          <CountryCode isoCountryCode="US">1</CountryCode>
          <AreaOrCityCode>650</AreaOrCityCode>
          <Number>9990000</Number>
        </TelephoneNumber>
      </Phone>
    </Contact>
    <GrossAmount>
      <Money currency="USD">3000.00</Money>
    </GrossAmount>
    <DiscountAmount>
      <Money currency="USD">160.00</Money>
    </DiscountAmount>
    <AdjustmentAmount>
      <Money currency="USD">30.00</Money>
    </AdjustmentAmount>
    <NetAmount>
      <Money currency="USD">2810.00</Money>
    </NetAmount>
  </PaymentProposalRequest>
</Request>

```

```
</cXML>
```

## Example Scheduled Payment with Tax Adjustments

The following is an example updated payment proposal that passes a discount basis and tax amount for the Goods and Services Tax (GST) of British Columbia:

```
<PaymentProposalRequest paymentProposalID="1100000124" operation="update"
paymentDate="2016-04-05T11:59:20-07:00">
  <PayableInfo>
    <PayableInvoiceInfo>
      <InvoiceIDInfo invoiceID="INV8291087"
invoiceDate="2016-04-01T18:31:35+05:30"></InvoiceIDInfo>
    </PayableInvoiceInfo>
  </PayableInfo>
  <PaymentMethod type="ach"></PaymentMethod>
  <GrossAmount>
    <Money currency="CAD">13440</Money>
  </GrossAmount>
  <DiscountBasis>
    <Money currency="CAD">12000</Money>
  </DiscountBasis>
  <DiscountAmount>
    <Money currency="CAD">1200</Money>
  </DiscountAmount>
  <AdjustmentAmount>
    <Money currency="CAD">0</Money>
  </AdjustmentAmount>
  <Tax>
    <Money currency="CAD">1440.00</Money>
    <Description xml:lang="en-US"></Description>
    <TaxDetail category="gst" percentageRate="5">
      <TaxableAmount>
        <Money currency="CAD">12000.00</Money>
      </TaxableAmount>
      <TaxAmount>
        <Money currency="CAD">600.00</Money>
      </TaxAmount>
      <Description xml:lang="en-US"></Description>
    </TaxDetail>
    <TaxDetail category="pst" percentageRate="7">
      <TaxableAmount>
        <Money currency="CAD">12000.00</Money>
      </TaxableAmount>
      <TaxAmount>
        <Money currency="CAD">840.00</Money>
      </TaxAmount>
      <Description xml:lang="en-US"></Description>
    </TaxDetail>
  </Tax>
  <TaxAdjustment>
    <Money currency="CAD">60</Money>
    <TaxAdjustmentDetail category="gst" location="BC">
      <Money currency="CAD">60</Money>
    </TaxAdjustmentDetail>
  </TaxAdjustment>
  <NetAmount>
    <Money currency="CAD">12180</Money>
  </NetAmount>
  <Extrinsic name="Scheduling"></Extrinsic>
  <Extrinsic name="Scheduled">yes</Extrinsic>
  <Extrinsic name="immediatepay">yes</Extrinsic>
</PaymentProposalRequest>
```

```
</PaymentProposalRequest>
```

# Receipts

Receipts indicate that your organization received ordered products or services. Your shipping clerks or requisitioners create them and send them to SAP Ariba Invoice Management through SAP Business Network. Accounts payable personnel use them (in addition to purchase orders and invoices) to determine when and how much to pay suppliers.

[ReceiptRequest Routing \[page 365\]](#)

[ReceiptRequest Document \[page 365\]](#)

[Example ReceiptRequest Document \[page 371\]](#)

## ReceiptRequest **Routing**

Your organization generates receipts and addresses them to suppliers. SAP Business Network routes them to SAP Ariba Invoice Management. The `TO` credential in the document header specifies the supplier.

SAP Business Network routes receipts immediately to SAP Ariba Invoice Management and sends copies to the **Receipts** page in your online Outbox tab. It does not match receipts to corresponding documents. This allows you to send receipts for expired purchase orders or master agreements, or for purchase orders that were not routed through SAP Business Network.

In SAP Ariba Invoice Management, users use the receipts (if required) and purchase orders to ensure the invoices they receive from suppliers are correct. See [Receiving Types in SAP Ariba Invoice Management \[page 159\]](#) for information about configuring receipt requirements for order items

## ReceiptRequest **Document**

The cXML `ReceiptRequest` document represents receipts. It defines the receipt information of a purchase order or master agreement with item details. A receipt line is an `ReceiptItem` element with a receipt line number.

Each `ReceiptRequest` document represents details about a receipt against a purchase order or a master agreement sent from a buying organization to a supplier. You can use it for any portion of all or selected line items from single or multiple purchase orders.

### Note

The `ReceiptRequest` document is defined in `Fulfill.dtd` rather than `cXML.dtd`.

[ReceiptRequestHeader \[page 366\]](#)

[ReceiptOrder \[page 367\]](#)

## ReceiptRequestHeader

The `ReceiptRequestHeader` element contains header information for this receipt.

The `ReceiptRequestHeader` has the following attributes:

Attribute	Description
<code>receiptID</code> (required)	A buyer-generated unique identifier for this receipt.
<code>receiptDate</code> (required)	The date and time the items or services were received by the buying organization. This date and time should be earlier than the document's timestamp.
<code>operation</code>	The operation described by this receipt document. Must be "new".

## Comments

The optional `Comments` attribute enables you to provide comments with the receipt.

## Extrinsic

The optional `Extrinsic` element allows you to provide additional information related to a receipt. The information in an extrinsic element should not duplicate information elsewhere in the `ReceiptRequest` document.

## Extrinsics for Receipt References in Return Receipts

For goods receipt-based invoice verification, cXML for return receipts must include a reference to the original receipt to specify which goods receipt the return is for. The extrinsics `ReceiptReference` and `ReceiptReferenceDate` carry this information in the `ReceiptRequestHeader` section of the `CopyReceipt`.

```
<ReceiptRequestHeader receiptID="ReversalOfGR1"
receiptDate="2017-08-15T15:42:11-07:00" operation="new">
  <Extrinsic name="ReceiptReference">GR1</Extrinsic>
  <Extrinsic name="ReceiptReferenceDate">2017-08-15T15:42:11-07:00</Extrinsic>
</ReceiptRequestHeader>
```

## ReceiptOrder

The `ReceiptOrder` element defines information related to a purchase order or master agreement. A `ReceiptRequest` document may contain multiple `ReceiptOrder` elements.

The `ReceiptOrder` element has the following attribute:

Attribute	Description
<code>closeForReceiving</code>	<p>Flag that indicated that the underlying order or master agreement needs should be closed for further receiving on approval of this receipt. It is false (no), by default.</p> <p>If this receipt is against a purchase order or release order, this flag indicates that the corresponding order should be closed for receiving. If this receipt is against a no-release master agreement, this flag indicates that the master agreement should be closed for receiving.</p>

[ReceiptOrderInfo \[page 368\]](#)

[ReceiptItem \[page 368\]](#)

[Total \[page 371\]](#)

## ReceiptOrderInfo

The `ReceiptOrderInfo` element contains the reference information of the purchase order or master agreement. The various content options are, in order of preference: `OrderReference`, `MasterAgreementReference`, `MasterAgreementIDInfo`, or `OrderIDInfo`.

## OrderReference

A reference to the purchase order containing the items or services being received.

## MasterAgreementReference

A reference to the master agreement containing the items or services being received.

## OrderIDInfo

The buyer ID of the corresponding purchase order.

## MasterAgreementIDInfo

The buyer ID of the corresponding master agreement.

## ReceiptItem

The `ReceiptItem` element defines a receipt line item using information from the purchase order or master agreement.

If this receipt is against a release order, specify both the release order and the master agreement.

If the receipt is against a no-release master agreement, specify only the master agreement.

If the receipt is against a purchase order, specify the purchase order.

This element has the following attributes:

Attribute	Description
<code>receiptLineNumber</code> (required)	A buyer-defined ID for the current line item. It must be unique across all receipt line items of the same <code>ReceiptRequest</code> document.

Attribute	Description
quantity (required)	<p>The quantity received for the current receipt line.</p> <p>Negative values in the <code>quantity</code> attribute indicate corrective action against an order that was received or returned with errors. For example, if there is an order that has one line item with the quantity as 20, and you originally specified the received quantity as 20; later found out the received quantity was only 15 and not 20, you can do a negative receiving to correct this mistake.</p> <pre>&lt;ReceiptItem receiptLineNumber="1"   quantity="-5"   type="received"&gt;</pre>
type	<p>To indicate if the buyer has received or returned the items from the supplier. This attribute can have the following values:</p> <ul style="list-style-type: none"> <li><b>received</b>: Indicates the goods have been received by the buyer. For example: <pre>&lt;ReceiptItem   receiptLineNumber="1" quantity="20"   type="received"&gt;</pre> </li> <li><b>returned</b>: Indicates the goods have been returned by the buyer. For example: <pre>&lt;ReceiptItem   receiptLineNumber="1" quantity="10"   type="returned"&gt;</pre> </li> </ul>

### ReceiptItemReference

The `ReceiptItem` reference indicates the line number of a referenced line item.

`ReceiptItemReference` has the following attribute:

Attribute	Description
lineNumber (required)	Line number of the line item, copied from the <code>OrderRequest</code>

#### ItemID

The supplier part number of current line item, copied from the OrderRequest.

#### Description

The line item description, copied from the OrderRequest.

#### ManufacturerPartID

The manufacturer part number.

#### ManufacturerName

The name of the manufacturer.

#### ShipNoticeReference

Reference to the supplier's ShipNoticeRequest document.

#### ShipNoticeIDInfo

ID of the ShipNoticeRequest. This ID is used when the ShipNoticeReference element is omitted.

#### UnitRate

The amount to be paid per unit of specified measure.

#### ReceivedAmount

Money amount of goods or services received for the receipt line item. The total received amount must equal to  $\text{quantity} \times \text{UnitRate}$ .

## AssetInfo

The `AssetInfo` element contains optional asset data for each quantity of each receipt line item.

This element has the following attributes:

Attribute	Description
<code>tagNumber</code>	Internal tag number for this asset
<code>serialNumber</code>	Manufactures serial number for this asset
<code>location</code>	Location of this asset

## Comments

The `Comments` element enables you to add comments for this line item

## Total

The `Total` element provides a summary of the total amount of all receipt line item amounts.

## Money

The `Money` attribute specifies the currency type of the total money amount represented by the receipt.

# Example ReceiptRequest Document

The example receipt document is for two computer monitors. It closes the corresponding purchase order for further receiving.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://svcdev.ariba.com/schemas/cXML/1.2.015/Private.dtd">
<cXML xml:lang="en-US" payloadID="xyz-u44pdate@buyer.com"
timestamp="2005-11-13T23:00:00-08:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN13000001260</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN12000002259</Identity>
      </Credential>
    </To>
  </Header>
  <ReceiptLineItem>
    <Quantity>1</Quantity>
    <AssetInfo tagNumber="12345" serialNumber="67890" location="Warehouse A">
      <Comments>Computer monitor</Comments>
    </AssetInfo>
  </ReceiptLineItem>
  <ReceiptLineItem>
    <Quantity>1</Quantity>
    <AssetInfo tagNumber="12345" serialNumber="67890" location="Warehouse A">
      <Comments>Computer monitor</Comments>
    </AssetInfo>
  </ReceiptLineItem>
  <Total>
    <Money>USD</Money>
    <Amount>100.00</Amount>
  </Total>
</cXML>
```

```

</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN13000001260</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Our Receiving Application, V1.2</UserAgent>
</Sender>
</Header>
<Request>
  <ReceiptRequest>
    <ReceiptRequestHeader receiptID="RC1234"
      receiptDate="2005-11-13T22:00:00-08:00" operation="new"/>
    <ReceiptOrder closeForReceiving="yes">
      <ReceiptOrderInfo>
        <OrderReference orderID="D019">
          <DocumentReference payloadID="112.334.44.=90"/>
        </OrderReference>
      </ReceiptOrderInfo>
      <ReceiptItem receiptLineNumber="1" quantity="2" type="
received
">
        <ReceiptItemReference lineNumber="1">
          <ItemID>
            <SupplierPartID>RCA15</SupplierPartID>
          </ItemID>
          <Description xml:lang="en">Computer Monitor</Description>
          <ManufacturerPartID>718177215</ManufacturerPartID>
          <ManufacturerName>RCA</ManufacturerName>
        </ReceiptItemReference>
        <UnitRate>
          <Money currency="USD">150.50</Money>
          <UnitOfMeasure>EA</UnitOfMeasure>
        </UnitRate>
        <ReceivedAmount>
          <Money currency="USD">301.00</Money>
        </ReceivedAmount>
        <AssetInfo serialNumber="SER20201" tagNumber="tag000005"
          location="Sunnyvale"/>
        <AssetInfo serialNumber="SER20202" tagNumber="tag000006"
          location="Sunnyvale"/>
      </ReceiptItem>
    </ReceiptOrder>
    <Total>
      <Money currency="USD">301.00</Money>
    </Total>
  </ReceiptRequest>
</Request>
</cXML>

```

# Catalog Upload Transaction

The cXML Catalog Upload transaction enables suppliers to upload and publish customer catalogs on SAP Business Network programmatically. The transaction provides an alternative to logging in to SAP Business Network to upload and publish customer catalogs interactively. Use it to distribute updated customer catalogs automatically whenever you change pricing or availability of products or services.

SAP Business Network supports any customer catalog in CIF, cXML, or BMEcat format. A CIF catalog can be either a text file saved with a `.cif` extension or an Excel file saved with a `.xls` extension. If you use the Catalog Upload transaction, the customer catalog cannot exceed 10 MB.

SAP Business Network allows only suppliers, not buying organizations, to upload customer catalogs.

Before uploading an Excel file as your customer catalog, be sure the file does not exceed 1 MB. Compress any Excel file that exceeds that limit before trying to upload it.

The transaction gives you an alternative to logging in to SAP Business Network to interactively upload and publish customer catalogs. You can use it to automatically distribute updated catalogs whenever you change pricing or availability of your products or services.

[Catalog Upload Transaction Overview \[page 373\]](#)

[CatalogUploadRequest Prerequisites \[page 374\]](#)

[CatalogUploadRequest Document \[page 375\]](#)

[Attaching Your Customer Catalog \[page 378\]](#)

[Example of Sending a CatalogUploadRequest Document \[page 379\]](#)

[Receiving the Response \[page 380\]](#)

[Receiving Later Customer Catalog Status \[page 381\]](#)

## Catalog Upload Transaction Overview

The Catalog Upload transaction consists of two cXML documents, `CatalogUploadRequest` and `Response`.

The purpose of these documents is as follows:

cXML Document	Purpose
<code>CatalogUploadRequest</code>	Sent by suppliers to upload a customer catalog. It contains the customer catalog as an attachment and specifies whether the customer catalog is new or an update, and whether to automatically publish it after upload.
<code>Response</code>	Sent by SAP Business Network to acknowledge the receipt of a <code>CatalogUploadRequest</code> .

These documents use the standard cXML transport mechanism to travel between your cXML-enabled catalog-management application and SAP Business Network:

1. Your catalog-management application opens an HTTPS connection to SAP Business Network and perform a POST to send the `CatalogUploadRequest` document.

2. SAP Business Network receives the document, validates it, and parses it.
3. After verifying your credential, Ariba sends a `Response` document through the same HTTPS connection.
4. Your application receives the `Response` document and closes the HTTPS connection.

You can receive further status regarding the customer catalog through email or cXML.

## CatalogUploadRequest **Prerequisites**

The `CatalogUploadRequest` transaction has requirements for your SAP Business Network account, cXML-enabled applications, and cXML document authentication. It also requires valid customer catalogs.

### **SAP Business Network Account**

You can have a standard or enterprise supplier account on SAP Business Network to load the `CatalogUploadRequest` transaction. However, if you have a standard supplier account, you must have an active buyer relationship.

### **cXML-Enabled Application**

You must have a cXML-enabled application that can initiate HTTPS POST operations.

cXML-enabled applications must support sending and receiving the `ProfileRequest` transaction. This transaction is important for the Catalog Upload transaction because:

- You will use it to find out URL to which to post the `CatalogUploadRequest` document.
- SAP Business Network will use it to find out the URL to which to post `StatusUpdateRequest` documents to you for later customer catalog-status notification.

### **cXML-Document Authentication**

You must have configured your SAP Business Network account and your cXML-enabled application to [authenticate received cXML documents \[page 31\]](#).

You must be the account administrator to change your account settings, such as cXML authentication method.

### **Valid Catalogs**

You must have valid customer catalogs. Customer catalogs can be in CIF 2.1, CIF 3.0, cXML, BMEcat, or Excel format.

To debug your customer catalogs as you develop them, use your SAP Business Network account to upload them. SAP Business Network automatically validates them and flags any syntactic errors. Your customer catalogs are validated when you use the `CatalogUploadRequest` transaction, but [solving catalog problems \[page 380\]](#) is easier in interactive sessions. Interactive sessions also allow you to use the order tester to exercise customer catalogs and generate test purchase orders. Compress (zip) large customer catalogs before uploading.

### Note

You can't use the `CatalogUploadRequest` transaction to publish new customer catalogs to buyers. You can publish a customer catalog using the `CatalogUploadRequest` transaction only if there is a previous version of the customer catalog already existing on SAP Business Network.

However, in the case of BMEcat catalogs, you can use the `CatalogUploadRequest` transaction to publish both new catalogs as well as updates to existing catalogs to CMS-enabled buyers. These catalogs are not validated by SAP Business Network and are automatically published to the CMS in the buyer's SAP Ariba solution. You do not have to log on to your account and manually publish these catalogs.

For Information About...	See...
Creating CIF and cXML catalogs	<a href="#">Customer Catalog Format Reference</a>
Creating Excel format catalogs	<a href="#">Creating and Managing Customer Catalogs</a>
Uploading, validating, and testing catalogs	<a href="#">Creating and Managing Customer Catalogs</a>

## CatalogUploadRequest Document

A `CatalogUploadRequest` document contains `To` and `CatalogUploadRequest`, and requires you to attach your valid customer catalog.

### To Element

The `To` element can specify either SAP Business Network or the buying organization.

If you address the document to SAP Business Network, SAP Business Network performs generic customer catalog validation, not buyer-specific customer catalog validation. If you address the document to a buying organization, SAP Business Network performs validation against the customer's catalog rules.

## CatalogUploadRequest **Element**

CatalogUploadRequest has an Operation attribute that specifies the type of upload to perform. It also contains several elements that detail aspects of the request.

The Operation attribute is one of:

- `new`: Uploads a new customer catalog. A customer catalog with the same name must not exist.
- `update`: Overwrites an existing customer catalog. A customer catalog with the same name must exist.

## CatalogName **Element**

CatalogName specifies the name of the uploaded customer catalog. This value is the user-visible name, not the file name of the customer catalog.

CatalogName has an `xml:lang` attribute that specifies the language used for the customer catalog name. Language codes are defined in the XML 1.0 Specification (at <http://www.w3.org/TR/1998/REC-xml-19980210.html>). In the most common case, this includes an ISO 639 Language Code and, optionally, an ISO 3166 Country Code separated by a hyphen. The recommended cXML language code format is `xx[-YY[-zzz]*]` where `xx` is an ISO 639 Language code, `YY` is an ISO 3166 Country Code, and `zzz` is an IANA or private subcode for the language in question. Again, use of the Country Code is always recommended. By convention, the language code is lowercase and the country code is uppercase. This is not required for correct matching of the codes.

### Description

Description briefly describes the customer catalog contents. Buying organizations can search and view this information.

Description has an `xml:lang` attribute that specifies the language of the description text.

## Attachment **Element**

Attachment specifies the URL of the attached customer catalog. It contains one URL element with the scheme "cid:".

## Related Information

[Receiving the Response \[page 380\]](#)

## Commodities **Element**

`Commodities` specifies the top-level commodity codes for the items in your customer catalog. Buying organizations use these codes to search for new customer catalogs. It contains one or more `CommodityCode` elements.

Use **two-digit** UNSPSC (United Nations Standard Products and Services Code) segment codes.

### Related Information

[Recommended Coding Systems \[page 413\]](#)

## AutoPublish **Element**

`AutoPublish` automatically publishes the customer catalog to buying organizations after upload.

You can automatically publish only if the following requirements are met:

- A previous version of the customer catalog exists in your account and you are performing an `update` operation.
- The previous version is in the “published” state. It must have been published private (with a list of buying organizations) or public.
- The `CatalogUploadRequest` (the `To` element) is addressed to one of your customers, not SAP Business Network.

`AutoPublish` has an `Enabled` attribute that specifies whether to automatically publish the customer catalog:

- `true`—Publishes the customer catalog. It must be an update to a previously published customer catalog.
- `false`—Does not publish the customer catalog. You can log on to your account and manually publish the customer catalog.

### Note

BMEcat catalogs are automatically published after upload irrespective of whether the `AutoPublish` element in the `CatalogUploadRequest` cXML document is set to `true` or `false`.

## Notification **Element**

`Notification` sends customer catalog-status notifications through email or cXML POST.

For examples of these messages, see [Receiving Later Customer Catalog Status \[page 381\]](#).

`Notification` contains one or both of the `Email` element and `URLPost` elements.

## Email Element

`Email` specifies the mailbox to which SAP Business Network emails status messages. You can use only one `Email` element, and it can contain only one email address.

## URLPost Element

`URLPost` specifies whether SAP Business Network sends customer catalog status messages as cXML `StatusUpdateRequest` documents.

The URL destination of the `StatusUpdateRequest` is determined by your Website's response to SAP Business Network's `ProfileRequest` transaction.

`URLPost` has an `Enabled` attribute that specifies whether SAP Business Network sends customer catalog-status notifications through `StatusUpdateRequest`:

- `true`: Enables this feature.
- `false`: Disables this feature.

## Related Information

[Profile Transaction \[page 66\]](#)

# Attaching Your Customer Catalog

Send your customer catalog attached to the `CatalogUploadRequest` document as MIME attachment. Large customer catalogs must be zipped to compress them before uploading.

## Use a MIME Envelope

Include the customer catalog file in the `CatalogUpdateRequest` as a Multipurpose Internet Mail Extensions (MIME) attachment. cXML contains only references to external MIME parts sent within one multipart MIME envelope.

The referenced customer catalog file must reside within a multipart MIME envelope with the cXML document. A cXML requirement for this envelope (over the basics described in RFC 2046 "Multipurpose Internet Mail Extensions Part Two: Media Types") is the inclusion of Content-ID headers with the attached file.

### Note

The cXML specification allows attachments to reside outside of the MIME envelope, but the Catalog Upload transaction does not support that attachment method.

The `Attachment` element contains only a reference to the external MIME part of the attachment. `Attachment` contains a single URL with the scheme "cid:". Do not use any encoding for the customer catalog, except the appropriate character set encoding (for example, UTF-8). Do not base64 encode the customer catalog.

For more information about attachments in cXML, see the discussion of the `Attachment` element in the *cXML reference guide* at <http://www.cxml.org>.

## Compressing Customer Catalogs

Before attaching customer catalogs larger than 3 MB, compress them with a Zip utility, such as WinZip.

Customer catalog files must have a `.xml`, `.cif`, `.xls`, or `.zip` file extension.

## Example of Sending a `CatalogUploadRequest` Document

The example of sending a `CatalogUploadRequest` document contains two documents enclosed in a MIME envelope: a `CatalogUploadRequest` document and a CIF 3.0 catalog.

```
--kdfkajfdksadjfklasdjfkljdfdsfdkf
Content-type: text/xml; charset=UTF-8
Content-ID: <part0.PC028.975529413484@saturn.workchairs.com>
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.023/cXML.dtd">
<cXML timestamp="2011-12-28T16:56:03-08:00"
payloadID="123456669138--1234567899555556789@10.10.83.39">
  <Header>
    <From>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN0100000001</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>MyHomemadeCatalogManager</UserAgent>
    </Sender>
  </Header>
  <Request>
    <CatalogUploadRequest operation="update">
      <CatalogName xml:lang="en">Winter Prices</CatalogName>
      <Description xml:lang="en">This catalog contains our
        premiere-level prices for office chairs and other durable
        furniture.</Description>
      <Attachment>
        <URL>cid: part2.PC028.975529413154@saturn.workchairs.com</URL>
      </Attachment>
      <Commodities>
        <CommodityCode>52</CommodityCode>
      </Commodities>
    </CatalogUploadRequest>
  </Request>
</cXML>
```

```

        </Commodities>
        <AutoPublish enabled="true"/>
        <Notification>
            <Email>judy@workchairs.com</Email>
            <URLPost enabled="true"/>
        </Notification>
    </CatalogUploadRequest>
</Request>
</cXML>
--kdfkajfdksadjfkldsjfkljdfdsfdkf
Content-type: text/plain; charset=US-ASCII
Content-Disposition: attachment; filename=PremiereCatalog.cif
Content-ID: <part2.PC028.975529413154@saturn.workchairs.com>
Content-length: 364
CIF_I_V3.0
LOADMODE: F
CODEFORMAT: UNSPSC
CURRENCY: USD
SUPPLIERID_DOMAIN: DUNS
ITEMCOUNT: 3
TIMESTAMP: 2006-01-15 15:25:04
DATA
942888710,34A11,C11,"Eames Chair",11116767,400.00,EA,3,"Fast MFG",,,400.00
942888710,56A12,C12,"Eames Ottoman",11116767,100.00,EA,3,"Fast MFG",,,100.00
942888710,78A13,C13,"Folding Chair",11116767,25.95,EA,3,"Fast MFG",,,25.95
ENDOFDATA
--kdfkajfdksadjfkldsjfkljdfdsfdkf--

```

## Receiving the Response

After you send a `CatalogUploadRequest`, SAP Business Network replies with a standard cXML Response document.

### Example

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.024/cXML.dtd">
<cXML payloadID="980306507433-6714998277961341012@10.10.83.39"
    timestamp="2011-01-23T19:21:47-08:00">
    <Response>
        <Status code="201" text="Accepted">The catalog upload request is
processing</Status>
    </Response>
</cXML>

```

The following table lists possible status codes:

Status Code	Meaning
200 Success	The customer catalog-upload request succeeded.
201 Accepted	The customer catalog-upload request is processing.
461 Bad Commodity Code	The commodity code you assigned to the customer catalog is invalid.

Status Code	Meaning
462 Notification Error	No notification method (email or URL) provided.
463 Bad Catalog Format	The zip file is invalid.
464 Bad Catalog	No customer catalog is attached, or more than one is attached.
465 Duplicate Catalog Name	The name of the customer catalog exists.
466 No Catalog to Update	The customer catalog to be updated does not exist.
467 Publish Not Allowed	You attempted to publish a customer catalog that was not previously published.
468 Catalog Too Large	The size of the customer catalog exceeds the 10 MB limit.
469 Bad Catalog Extension	The file name of the customer catalog must have .cif, .xml, or .zip extensions.
470 Catalog Has Errors	The message is the status of the customer catalog. (HasErrors)
499 Document Size Error	The cXML document is too large.
561 Too Many Catalogs	You cannot upload more than a specific number of customer catalogs per hour.
562 Publish Disabled	Customer catalog publishing is temporarily unavailable due to scheduled maintenance. It will be back online by the specified date and time.
563 Catalog Validating	You attempted to update a customer catalog before validation finished on a previous version of the customer catalog.
564 Upload Disabled	Customer catalog uploading is temporarily unavailable due to scheduled maintenance. Try again later.

For other status codes, see the *cXML reference guide* at <http://www.cxml.org> .

## Receiving Later Customer Catalog Status

If you include the `Notification` element to request later customer catalog-status notification, SAP Business Network sends a message when the customer catalog reaches its final status.

The possible final customer catalog states are:

State	Meaning
<code>Validated</code>	The customer catalog contains no syntax errors.
<code>BadZipFormat</code>	The zip format is incorrect.
<code>HasErrors</code>	The customer catalog contains syntax errors, and it cannot be published.
<code>Published</code>	The customer catalog has been published (private or public).

This notification does not appear in your SAP Business Network Inbox. You receive it only through email or URLPost.

## Email Notification of Customer Catalog Status

If you specify an email mailbox to receive customer catalog status updates in `CatalogUpdateRequest`, then SAP Business Network sends status notifications there.

The following example shows an email status notification:

```
From: SAPBusinessNetworkAdmin@sapariba.com
To: judy@workchairs.com
Subject: Status of CatalogUploadRequest for Winter Prices from the SAP Business
Network
Catalog Name: Winter Prices
Status: Published
Payload ID: 123456669138--1234567899555556789@10.10.83.39
Please sign in to your SAP Business Network account to view or edit the catalog
file.
Thank you,
SAP Business Network Customer Service
```

## URLPost Notification of Customer Catalog Status

If you specify `URLPost` to receive customer catalog status updates in `CatalogUpdateRequest`, then SAP Business Network sends a cXML message to the URL you specified.

The following example shows a `StatusUpdateRequest` notification sent by SAP Business Network:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML timestamp="2001-01-23T18:39:44-08:00"
payloadID="980303984882--3544419350291593786@10.10.83.39">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN0100000001</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="DUNS">
        <Identity>123456789</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN0100000001</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>ANValidator</UserAgent>
    </Sender>
  </Header>
  <Request>
    <StatusUpdateRequest>
      <DocumentReference
        payloadID="123456669131-1234567899555556789@10.10.83.39">
      </DocumentReference>
      <Status text="Success" code="200">
        Validated
      </Status>
    </StatusUpdateRequest>
  </Request>
</cXML>
```

The possible status codes are:

<b>Status Code</b>	<b>Meaning</b>
200 Success	The customer catalog-upload request succeeded.
463 Bad Catalog Format	The zip file is invalid.
470 Catalog Has Errors	The message is the status of the customer catalog. (HasErrors)

# Supply Chain Financing Trades

TradeRequest cXML documents are used for the supply chain financing discount method. Each cXML TradeRequest corresponds to a Trade document on the SAP Business Network.

Trade documents are associated with PaymentProposalRequest documents that are traded on the PrimeRevenue trading platform. payment proposals can be traded automatically or manually as indicated by the autoTrade attribute of the TradeRequestHeader.

TradeRequest documents travel from the supply chain financing provider to the SAP Business Network. Updated PaymentProposalRequests are then generated by the SAP Business Network and sent to the buyer and supplier as needed.

A TradeRequest has the following basic structure:

- TradeRequestHeader: indicates the buyer, supplier, and third-party funder
- TradeRequestSummary: indicates the original value of the scheduled payment, credits and fees, and the amount traded.
- TradeItems that indicate the specific payables that have been traded to third-party funders.

The following is an example of a TradeRequest document:

```
<TradeRequest>
  <TradeRequestHeader operation="new" status="accepted" tradeID="trade200922"
    tradeDate="2015-09-30T10:43:36-07:00"
    tradeApprovedDate="2015-09-30T12:43:36-07:00"
    settlementDate="2015-10-02T10:43:36-07:00" autoTrade="no">
    <PaymentPartner>
      <!--Funder information-->
      <Contact role="payer">
        <Name xml:lang="en">Bank Of America</Name>
        <IdReference domain="financialInstitutionID" identifier="987654321">
        </IdReference>
      </Contact>
    </PaymentPartner>
    <PaymentPartner>
      <!-- supplier information -->
      <Contact role="payee">
        <Name xml:lang="en">Supplier Name</Name>
      </Contact>
    </PaymentPartner>
    <Contact>
      <Name xml:lang = "en">John Smith</Name>
      <Phone> <!--optional -->
        <TelephoneNumber>
          <CountryCode isoCountryCode = "BE">32</CountryCode>
          <AreaOrCityCode/>
          <Number>0477 07 26 41</Number>
        </TelephoneNumber>
      </Phone>
    </Contact>
    <Comments>Optional comments</Commets>
  </TradeRequestHeader>
  <TradeRequestSummary>
    <!-- trade level totals -->
    <OriginalAmount> <!-- sum of all OriginalAmount of all TradeItems -->
      <Money currency="USD">1000</Money>
    </OriginalAmount>
  </TradeRequestSummary>
</TradeRequest>
```

```

<CreditApplied>      <!-- sum of all credit applied of all TradeItems -->
  <Money currency="USD">100</Money>
</CreditApplied >
<FeeAmount>         <!-- total fee -->
  <Money currency="USD">20</Money>
</FeeAmount >
<Amount >          <!-- total projected amount to be paid to supplier -->
  <Money currency="USD">880</Money>
</Amount >
</TradeRequestSummary>
<TradeItem lineNumber="1" paymentProposalID="PPR910"
maturityDate="2015-04-30T10:43:36-07:00">
  <PayableInfo>
    <PayableInvoiceInfo>
      <InvoiceIDInfo invoiceDate="2015-03-30T10:43:36-07:00"
        invoiceID="330invl"></InvoiceIDInfo>
    </PayableInvoiceInfo>
  </PayableInfo>
  <OriginalAmount > <!-- payment amount of the original PPR -->
    <Money currency="USD">1000</Money>
  </OriginalAmount >
  <AdjustmentAmount>
    <Money currency="USD">100.00</Money>
    <Modifications>
      <Modification>
        <AdditionalDeduction type="creditApplied">
          <DeductionAmount>
            <Money currency="USD">100.00</Money>
          </DeductionAmount>
        </AdditionalDeduction>
      </Modification>
    </Modifications>
  </AdjustmentAmount>
  <DaysPaidEarly>10</DaysPaidEarly>
  <Amount> <!-- trade amount: GrossAmount - AdjustmentAmount - FeeAmount-->
    <Money currency="USD">900</Money>
  </Amount >
  <!-- fee information, optional and not in credit memo -->
  <FeeAmount>
    <Money currency="USD">15.00</Money> <!-- total fee -->
    <Fee type="serviceProvider">
      <Money currency="USD">5.00</Money>
    </Fee>
    <Fee type="community">
      <Money currency="USD">5.00</Money>
    </Fee>
    <Fee type="funder">
      <Money currency="USD">5.00</Money>
    </Fee>
  </FeeAmount>
</TradeItem>
<TradeItem lineNumber="2" paymentProposalID="PPR911">
maturityDate="2015-04-30T10:43:36-07:00"> <!-- credit memo -->
  <PayableInfo>
    <PayableInvoiceInfo>
      <InvoiceIDInfo invoiceDate="2015-03-30T10:43:36-07:00"
        invoiceID="cm123"></InvoiceIDInfo>
    </PayableInvoiceInfo>
  </PayableInfo>
  <OriginalAmount>
    <Money currency="USD">-100</Money>
  </OriginalAmount>
  <AdjustmentAmount>
    <Money currency="USD">-100.00</Money>
    <Modifications>
      <Modification>
        <AdditionalDeduction type="creditApplied">
          <DeductionAmount>

```

```
        <Money currency="USD">-100.00</Money>
      </DeductionAmount>
    </AdditionalDeduction>
  </Modification>
</Modifications>
</AdjustmentAmount>
<DaysPaidEarly>0</DaysPaidEarly>
<Amount>
  <Money currency="USD">0</Money>
</Amount>
</TradeItem>
</TradeRequest>
```

# Get Pending/Data Download Transaction

SAP Business Network buyers and suppliers can receive documents from SAP Business Network by polling for them and downloading them.

Most SAP Business Network buyers and suppliers use cXML routing to push incoming documents over the Internet to their cXML application on the web. Optionally, buyers and suppliers can also use polling and downloading to receive data from SAP Business Network. In the polling scenario, the SAP Business Network queues data by document type for downloading initiated by applications later. Ariba Buyer, non-Ariba procurement applications, and suppliers that have integrated their SAP Business Network accounts with their external ERP system using cXML can also receive documents from SAP Business Network by polling and downloading.

Users use the cXML get pending transaction (`GetPendingRequest/GetPendingResponse`) to poll for waiting documents. They use the cXML data download transaction (`DataRequest/DataResponse`) to retrieve those documents.

## Note

In SAP Ariba Buying and Invoicing, SAP Business Network sends the document to SAP Ariba Buying and Invoicing by posting the document. By posting the document, customers can immediately view order confirmations, ship notices, invoices, and other documents sent by suppliers. SAP Ariba Buying and Invoicing does not use the cXML get pending and download transactions.

[Polling Frequency \[page 388\]](#)

[Polling Time \[page 388\]](#)

[Download All Waiting Documents \[page 388\]](#)

[Confirm the Receipt of Documents \[page 389\]](#)

[GetPendingRequest \[page 389\]](#)

[GetPendingResponse \[page 391\]](#)

[DataRequest \[page 392\]](#)

[DataResponse \[page 393\]](#)

# Polling Frequency

Procurement and supplier applications should poll for new documents and download them at least once per hour. They can poll for `StatusUpdateRequest` documents more often than once per hour for the current status of purchase orders.

# Polling Time

For better response from SAP Business Network, procurement and supplier applications should schedule polling and downloading for a random offset from the top of the hour. For example, if polling and downloading once per hour, choose a random time from 0 to 59 minutes past the hour (ideally, randomize the seconds, too).

Polling and downloading can occur at the same time every hour, but avoid times such as zero or thirty minutes past the hour. This technique spaces downloading so all buying and supplier organizations do not request downloads at the same time.

# Download All Waiting Documents

The `get pending` transaction has a `maxMessages` attribute that allows procurement and supplier applications to limit the number of documents returned by SAP Business Network. Use this attribute to prevent SAP Business Network, procurement, or supplier applications from timing out during downloading.

For example, if there are 99 waiting documents, the procurement or supplier application can download them in batches of 20 (`maxMessages="20"`):

Poll Iteration	Documents Returned
get pending/data download 1	20
get pending/data download 2	20
get pending/data download 3	20
get pending/data download 4	20
get pending/data download 5	19
get pending 6	0

Every time a procurement or supplier application polls and downloads, it should completely empty the pending document queue on SAP Business Network. It must initiate multiple `get pending` and download transactions until SAP Business Network indicates that there are no documents waiting. It should not stop polling and downloading after a predetermined number of `get pending` and download transactions.

# Confirm the Receipt of Documents

After downloading `ConfirmationRequest`, `ShipNoticeRequest`, or `InvoiceDetailRequest` documents, procurement applications should send `StatusUpdateRequest` documents to SAP Business Network to indicate that it received them. Supplier applications must also send the `StatusUpdateRequest` documents to SAP Business Network after receiving the documents.

If required, the `Extrinsic` element can be used for additional information about the status of the document being updated.

Procurement applications should not send a `StatusUpdateRequest` document to confirm a `StatusUpdateRequest` document, because that action could lead to circular confirmations.

## `GetPendingRequest`

Procurement and supplier applications use the cXML `GetPendingRequest` document to poll SAP Business Network for waiting documents. Generate a `GetPendingRequest` document for each type of cXML document that the procurement or supplier application can download.

Procurement or supplier application can download these documents:

- `StatusUpdateRequest`
- `ConfirmationRequest`
- `ShipNoticeRequest`
- `ServiceEntryRequest`
- `InvoiceDetailRequest`
- `SupplierChangeMessage`
- `SalesOrderRequest`
- `CopyRequest`
- `PaymentProposalRequest`
- `CopyRequest`
- `PaymentRemittanceRequest`
- `CopyRequest`
- `PaymentRemittanceStatusUpdateRequest`
- `SubscriptionChangeMessage`
- `OrganizationChangeMessage`

SAP Business Network suppliers must configure their SAP Business Network accounts to retrieve cXML documents through the pending queue using the `GetPending/Data Download` transaction method. For more information, see the *Configuring document routing* in the help center.

The following example polls for cXML `StatusUpdateRequest` documents:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="1105574416.19583@hydra.buyer.com"
timestamp="2005-01-13T00:00:16+00:00">
```

```

<Header>
  <From>
    <Credential domain="NetworkID">
      <Identity>AN13000000259</Identity>
    </Credential>
  </From>
  <To>
    <Credential domain="NetworkID">
      <Identity>AN01000000001</Identity>
    </Credential>
  </To>
  <Sender>
    <Credential domain="NetworkID">
      <Identity>AN13000000259</Identity>
      <SharedSecret>abracadabra</SharedSecret>
    </Credential>
    <UserAgent>Our Procurement System 3.0</UserAgent>
  </Sender>
</Header>
<Request>
  <GetPendingRequest lastReceivedTimestamp="2005-01-12T00:00:25+00:00"
    maxMessages="20">
    <MessageType>StatusUpdateRequest</MessageType>
  </GetPendingRequest>
</Request>
</cXML>

```

The `lastReceivedTimestamp` attribute [page 394] specifies the oldest message to be returned by SAP Business Network. Use the cXML `timestamp` attribute of the last received `GetPendingResponse` document as the `lastReceivedTimestamp` attribute in the next `GetPendingRequest` document for that document type. When SAP Business Network receives a `GetPendingRequest`, it discards waiting messages referenced in previous `GetPendingResponse` documents with timestamps equal to or earlier than the specified `lastReceivedTimestamp`.

The `maxMessages` attribute specifies the maximum number of documents to return. This attribute helps prevent SAP Business Network, procurement, or supplier applications from timing out if there are many waiting documents. Generally, you should use a value between 10 and 100 for this attribute. Procurement and supplier applications should continue using the get pending/data download transactions until the waiting document queue on SAP Business Network empties. If the application times out due to excessive attachment sizes, limit the `maxMessages` attribute to a number less than 10, for example:

```

<GetPendingRequest lastReceivedTimestamp="2015-12-01T16:00:00-08:00"
  maxMessages="1">
  <MessageType>InvoiceArchive</MessageType>
</GetPendingRequest>

```

If your organization is enabled for multiple ERP systems, you can include a `SystemID` that equates to one of your ERP accounts. SAP Business Network searches for and returns all documents for the specified ERP system. If a `SystemID` is not specified, SAP Business Network returns documents for all of your ERP accounts.

The following example polls for cXML documents for a single ERP account:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="1105574416.19583@hydra.buyer.com"
  timestamp="2005-01-13T00:00:16+00:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN13000000259</Identity>
      </Credential>
    </From>

```

```

<To>
  <Credential domain="SystemID">
    <Identity>ERP01</Identity>
  </Credential>
</To>
<Sender>
  <Credential domain="NetworkID">
    <Identity>AN13000000259</Identity>
    <SharedSecret>abracadabra</SharedSecret>
  </Credential>
  <UserAgent>Our Procurement System 3.0</UserAgent>
</Sender>
</Header>
<Request>
  <GetPendingRequest lastReceivedTimestamp="2005-01-12T00:00:25+00:00"
    maxMessages="20">
    <MessageType>StatusUpdateRequest</MessageType>
  </GetPendingRequest>
</Request>
</cXML>

```

#### GetPendingResponse

SAP Business Network returns a Response document that either contains or does not contain a GetPendingResponse document in the same HTTP connection. If there is no GetPendingResponse, no documents are waiting. If there is a GetPendingResponse, there are documents waiting.

The following example indicates that one or more documents are waiting:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML timestamp="2005-01-12T16:00:18-08:00"
  payloadID="1105574420906--451266344000288275@10.10.13.125">
  <Response>
    <Status code="200" text="OK"/>
    <GetPendingResponse>
      cXML timestamp="2005-01-12T16:00:18-08:00"
      payloadID="1105574420141-977399960268715709@10.10.13.125">
        <Header>
          <From>
            <Credential domain="NetworkID">
              <Identity>AN01000000001</Identity>
            </Credential>
          </From>
          <To>
            <Credential domain="NetworkID">
              <Identity>AN13000000259</Identity>
            </Credential>
          </To>
          <Sender>
            <Credential domain="NetworkID">
              <Identity>AN01000000001</Identity>
            </Credential>
            <UserAgent>ANCXMLDispatcher</UserAgent>
          </Sender>
        </Header>
        <Message>
          <DataAvailableMessage>
            <InternalID domain="PendingMessages">3738</InternalID>
          </DataAvailableMessage>
        </Message>
      </GetPendingResponse>
    </Response>
  </cXML>

```

```

    </GetPendingResponse>
  </Response>
</cXML>

```

The `DataAvailableMessage` element contains an internal ID, which corresponds to one or more documents waiting for download.

## DataRequest

After procurement and supplier applications obtain a `DataAvailableMessage`, they use its internal ID value to download the waiting documents by sending a cXML `DataRequest` document.

### Note

SAP Business Network's URL for receiving `DataRequest` documents is different than the URL for `GetPendingRequest` documents; the only way to obtain it is by issuing a [ProfileRequest document \[page 66\]](#).

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="1105574421.19583@hydra.buyer.com"
timestamp="2005-01-13T00:00:21+00:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN13000000259</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN01000000001</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN13000000259</Identity>
        <SharedSecret>abracadabra</SharedSecret>
      </Credential>
      <UserAgent>Our Procurement System 3.0</UserAgent>
    </Sender>
  </Header>
  <Request>
    <DataRequest>
      <InternalID domain="PendingMessages">3738</InternalID>
    </DataRequest>
  </Request>
</cXML>

```

## DataResponse

SAP Business Network responds to the cXML DataRequest with a DataResponse document and the requested documents included together in a MIME envelope using the same HTTP connection. The Content-Type HTTP header defines the MIME boundary.

The following DataResponse document has one StatusUpdateRequest document attached.

```
Content-Type: multipart/mixed; boundary="-----_Part_0_10550230.1105574425445"
-----_Part_0_10550230.1105574425445
Content-Type: text/xml; charset=UTF-8
Content-ID: <1105574425572.1197583259@cetus.ariba.com>
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML timestamp="2005-01-12T16:00:25-08:00"
      payloadID="1105574425428-5167970095322563427@10.10.13.103">
  <Response>
    <Status code="200" text="OK"/>
    <DataResponse>
      <Attachment>
        <URL>cid:1105574422695.1816707419@cetus.ariba.com</URL>
      </Attachment>
    </DataResponse>
  </Response>
</cXML>
-----_Part_0_10550230.1105574425445
Content-Type: text/xml; charset=UTF-8
Content-ID: <1105574422695.1816707419@cetus.ariba.com>
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.014/cXML.dtd">
<cXML payloadID="1105573919487--7116204576911739136@10.10.13.125"
      timestamp="2005-01-12T15:51:59-08:00">
  <Header>
    <From>
      <Credential domain="NetworkID">
        <Identity>AN12000000259</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="NetworkID">
        <Identity>AN13000000259</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="NetworkID">
        <Identity>AN01000000001</Identity>
      </Credential>
      <UserAgent>AN</UserAgent>
    </Sender>
  </Header>
  <Request deploymentMode="production">
    <StatusUpdateRequest>
      <DocumentReference payloadID="D0123@hydra.buyer.com"/>
      <Status code="200" message="OK"/>
    </StatusUpdateRequest>
  </Request>
</cXML>
-----_Part_0_10550230.1105574425445--
```

## DataResponse and Invoice Attachments

If invoices have attachments, the `DataResponse` contains `InvoiceDetailRequest` attachments that also have attachments. SAP Business Network sends invoices with attachments in multi-level MIME envelopes.

Downloading of invoice attachments is configurable in SAP Business Network buyer accounts. Turning it on affects only newly-submitted invoices, not existing queued invoices.

## lastReceivedTimeStamp and Waiting Documents

SAP Business Network deletes the referenced documents from the waiting documents queue when it receives the next `GetPendingRequest` for that document type. Therefore procurement and supplier applications should not skip waiting documents.

After sending a `DataRequest` document, they must receive the referenced documents before sending another `GetPendingRequest` document. If `DataRequest` documents fail, they should retry the transaction. If they fail again, they should notify the procurement and supplier application administrator.

Here is an example of using the `lastReceivedTimeStamp` attribute:

1. The procurement application sends a `GetPendingRequest`:

```
<GetPendingRequest lastReceivedTimeStamp="
    time1
"/>
```

SAP Business Network responds with

```
<cXML timestamp="
    time2
">
  <GetPendingResponse>
    <DataAvailableMessage>
      <InternalID domain="PendingMessages">
        id1
      </InternalID>
    </DataAvailableMessage>
  </GetPendingResponse>
</cXML>
```

2. The procurement application retrieves the waiting documents by sending a `DataRequest`:

```
<DataRequest>
  <InternalID domain="PendingMessages">
    id1
  </InternalID>
</DataRequest>
```

SAP Business Network responds with

```
<DataResponse>...</DataResponse>
```

At this point, the procurement application can download `id1` over and over again.

3. Later, the procurement application sends another `GetPendingRequest`:

```
<GetPendingRequest lastReceivedTimestamp="
    time2
"/
```

The procurement application acknowledges receipt of the documents referenced by the first `GetPendingResponse` by sending the second `GetPendingRequest`. SAP Business Network deletes all waiting documents associated with `id1` and the procurement application can no longer download `id1`. SAP Business Network responds with

```
<cXML timestamp="
    time3
">
  <GetPendingResponse>
    <DataAvailableMessage>
      <InternalID domain="PendingMessages">
        id2
      </InternalID>
    </DataAvailableMessage>
  </GetPendingResponse>
</cXML>
```

At this point, the procurement application can download `iid2` over and over again.

## Authenticating Waiting Documents

Procurement and supplier applications do not need to authenticate documents downloaded through the data download transaction; they come from a trusted source, SAP Business Network. They can validate SAP Business Network's TLS server certificate when they initiate HTTPS connections.

# SAP Business Network for Supply Chain Overview

This extension of SAP Business Network provides additional capabilities for buyers and suppliers.

With SAP Business Network for Supply Chain enabled, an array of features become available to buyers and suppliers on SAP Business Network. These features facilitate collaboration between buyers and suppliers, for example on transactions pertinent to direct material supply chains.

As a buyer, the SAP Business Network for Supply Chain solution allows you to do the following:

- Collaborate efficiently with all supply chain partners through a single global solution.
- Improve visibility into supply with continuous monitoring, benchmarking, and enhancement of supplier performance
- Easily manage all direct materials procurement and typical retail and manufacturing collaborative processes - including consigned inventory, rolling delivery schedules, and contract manufacturing - all in one place
- Respond intelligently to changes in supply and demand with real-time visibility into supply chain metrics
- Rapidly connect to thousands of suppliers with minimal IT costs
- Instantly identify errors through configurable business rules with automated validation and reconciliation

## ⓘ Note

SAP Ariba Supply Chain Collaboration features entail enhancements to the SAP Business Network user interface. Fields and tabs that do not appear in the regular SAP Business Network interface may appear in the SAP Ariba Supply Chain Collaboration user interface. Also, the same tab may be labeled with one name in the regular SAP Business Network user interface, and with another in the SAP Ariba Supply Chain Collaboration user interface. Users should take note of these differences, especially when they first switch from the regular SAP Business Network user interface to the SAP Ariba Supply Chain Collaboration user interface.

[Consignment Collaboration \[page 396\]](#)

[Business Scenarios and Assumptions for Forecast and Commit B2B \[page 399\]](#)

## Consignment Collaboration

A consignment sale means that goods are sent from the supplier to the buyer, but the supplier retains ownership of the consignments until the buyer pays for the consignments the buyer consumes through a pre-arranged purchase-order method. Consignments stocked in the buyer's warehouses or production facilities are not paid for until they have been used. The transfer of ownership, and often of location, to the buyer at the time of consumption is called a **consignment movement**.

SAP Business Network for Supply Chain provides ways for suppliers to view a list of materials on consignment, for suppliers to create invoices for consignment movements, and for buyers to create self-billing invoices for consignment movements.

The following elements support consignment inventory collaboration:

Element	Contained In	Description
ProductActivityMessage	n/a	Transmits component inventory, consignment movement, and forecast information from the buyer's ERP system. The buyer-provided inventory summary view includes the components issued to the supplier. The information provided gives a snapshot of the component inventory and forecast situation at a certain point in time.
ProductActivityHeader	ProductActivityMessage	Contains information about a single component inventory, the product forecast details, or a consignment movement for the product.
ProductActivityDetails	ProductActivityMessage	Contains the details about a product activity.
Inventory	ProductActivityDetails	Inventory that is in the possession of the buyer, and is owned and managed by the buyer.
ConsignmentInventory	ProductActivityDetails	Inventory that is in the possession of the buyer, but is owned by the supplier.
ConsignmentMovement	ProductActivityDetails	Contains information about the movement of material from the consignment inventory to the buyer inventory.
ProductMovementItem- IDInfo	ConsignmentMovement	A reference to the line item in a movement document.
InvoiceItemIDInfo	ConsignmentMovement	Line item of an invoice created by the buyer against the movement item.

## ConsignmentMovement **Example**

The following example shows a ProductActivityMessage used to communicate the movement of material from the consignment inventory to the buyer inventory:

```
<ProductActivityMessage>
  <ProductActivityHeader messageID="PRO_ACT_1001"
  creationDate="2014-11-10T22:00:00-08:00" />
  <ProductActivityDetails>
    <ItemID>
      <SupplierPartID>ZEEEE25</SupplierPartID>
      <BuyerPartID>REEEA25</BuyerPartID>
    </ItemID>
    <Description xml:lang="en">Movement of Consignment</Description>
    <Batch productionDate="2014-11-10T22:00:00-08:00"
    expirationDate="2014-12-10T22:00:00-08:00" originCountryCode="US">
      <BuyerBatchID>BWWBRCA25</BuyerBatchID>
      <SupplierBatchID>SWWBRCA25</SupplierBatchID>
    <PropertyValuation>
    <PropertyReference>
      <IdReference identifier="CHEMICAL" domain="ID" />
      <IdReference identifier="1" domain="VersionID" />
    </PropertyReference>
  </ProductActivityDetails>
</ProductActivityMessage>
```

```

        <IdReference identifier="MEDICINE_PROPERTIES"
domain="PropertyDefinitionClassReferenceID"/>
        <IdReference identifier="1"
domain="PropertyDefinitionClassReferenceVersionID"/>
    </PropertyReference>
    <ValueGroup>
        <IdReference identifier="2" domain="ID"/>
    </ValueGroup>
</PropertyValuation>
</Batch>
<Contact role="locationTo">
    <Name xml:lang="en">Palo Alto - Plant1</Name>
    <IdReference domain="buyerLocationID" identifier="0001">
    <Description xml:lang="en">Sunnyvale Plant</Description >
    </IdReference>
</Contact>
<ConsignmentMovement>
    <ProductMovementItemIDInfo movementLineNumber="3"
movementID="MADOC421304_r" movementDate="2015-03-10T11:00:00-08:00"/>
    <MovementQuantity quantity="200">
        <UnitOfMeasure>TOK</UnitOfMeasure>
    </MovementQuantity>
    <SubtotalAmount>
        <Money currency="USD">2400</Money>
    </SubtotalAmount>
    <UnitPrice>
        <Money currency="USD">12</Money>
    </UnitPrice>
</ConsignmentMovement>
<ConsignmentMovement>
    <ProductMovementItemIDInfo movementLineNumber="4"
movementID="MADOC421305_r" movementDate="2015-03-12T11:00:00-08:00"/>
    <MovementQuantity quantity="500">
        <UnitOfMeasure>TOK</UnitOfMeasure>
    </MovementQuantity>
    <SubtotalAmount>
        <Money currency="USD">6000</Money>
    </SubtotalAmount>
    <UnitPrice>
        <Money currency="USD">12</Money>
    </UnitPrice>
</ConsignmentMovement>
<ConsignmentMovement>
    <ProductMovementItemIDInfo movementLineNumber="5"
movementID="MADOC421306_r" movementDate="2015-03-14T11:00:00-08:00"/>
    <InvoiceItemIDInfo invoiceLineNumber="1"
invoiceID="INVD1000" />
    <MovementQuantity quantity="300">
        <UnitOfMeasure>TOK</UnitOfMeasure>
    </MovementQuantity>
    <SubtotalAmount>
        <Money currency="USD">3600</Money>
    </SubtotalAmount>
    <UnitPrice>
        <Money currency="USD">12</Money>
    </UnitPrice>
</ConsignmentMovement>
</ProductActivityDetails>
</ProductActivityMessage>

```

# Business Scenarios and Assumptions for Forecast and Commit B2B

Following are the business scenarios and assumptions for Forecast and Commit.

## Forecast

The forecast message is always considered a full snapshot of a product. The occurrence of the same combination of product and plant in the cxml will overwrite earlier data for that product and plant.

Any consecutive forecasts received will also be considered as overwrites if the same product exists in the system.

The forecast quantity will be overwritten in the database if the product already exists in the database. This is determined by the following factors:

- If the buyer part id, supplier part id and plant match with an existing record.
- If the buyer part id and plant match with an existing record, and the supplier part id is different it will be overwritten.
- If the supplier part id and plant match with an existing record where the buyer part id is null and the current product has the buyer part id, then the buyer part id will be updated to the same record.

A new record will be created in the database if the product does not exist in the system. This is determined by the following factors:

- If the buyer part id does not match with the existing record
- If the plant does not match with the existing record

The forecast data will be overwritten from the current date or the earliest date that has come in the cxml. This means that the past data will be retained and all the future quantities will be zeroed.

If the same date appears for a product within the product details of the product, then the quantities will be aggregated.

Java calendar is considered for all the date calculations.

For weekly aggregation, a week is considered as running Monday to Sunday.

Java calendar will consider the last few days of the year to be part of first week of next year in cases of years having more than 52 weeks.

For daily calculation we consider only the date and ignore the timestamp and the timezone.

The overwrite/update of forecast is done by moving the existing forecast quantity to the change column and moving the current quantity in the forecast quantity column.

If a forecast document comes with an empty start date, then all the forecast data for that product, past and present, will be removed. However, the product will still be present in the system

## Commit

The commit message is handled similar to the forecast document.

The commit message also is considered a full snapshot for a product.

A consecutive commit message will overwrite the commit and upside quantities for the product.

The update is done based on the following. Check to see if the product exists in the system:

- If the buyer part id, supplier part id and plant match with an existing record.
- If the buyer part id and plant match with an existing record and the supplier part id is different, it will be overwritten

In no case is a new record created by a commit message. This means the commit quantities will be saved in the system only if there is an existing forecast for that product.

Rules for commit calendar and date are similar to those for forecast calendar and date.

If a commit document comes with an empty start date, then the commit data will be cleared from the current date or the earliest date from the cxml. It will not clear the forecast data.

# Contracts

If SAP Ariba Contracts is integrated with an SAP ERP, users can send items from the line items document and project header fields in a procurement contract workspace to the ERP.

When a user selects the **Send to External System** option from a line items document menu, SAP Ariba Contracts sends the line items and information from the project header fields to the ERP. The information is sent in a cXML `ContractRequest` document to SAP Business Network, and SAP Business Network forwards the request to the ERP. The ERP sends back status information in a cXML `ContractStatusUpdateRequest` document to SAP Business Network, and SAP Business Network forwards the request to SAP Ariba Contracts.

[ContractRequest \[page 401\]](#)

[ContractStatusUpdateRequest \[page 406\]](#)

## ContractRequest

SAP Ariba sends a `ContractRequest` document to an SAP ERP when a user selects **Send to External System** from the menu of a contract line items document. The **Send to External System** menu option is available when the line items document and the workspace are both published.

A `ContractRequest` document contains information from the contract workspace header and the contents of the line items document, including the `type` element, which specifies the type of SAP contract document to create (value contract or quantity contract). The value of the `type` element is determined by the **Document Category** field for the contract workspace.

The `operation` in a `ContractRequest` document is `new` the first time the line items document is sent to the ERP. If the ERP successfully processes the `ContractRequest`, the ERP sends back a `ContractStatusUpdateRequest` document with the `Status Succeeded`, and `IDReference` elements with the ID of the SAP contract document and corresponding line numbers.

If the line items document has already been sent to the SAP ERP and the user re-sends the document, the `operation` is `update`. SAP Ariba sends `ReferenceDocumentInfo` with values from the `IDReference` elements in the `ContractStatusUpdateRequest` to identify the SAP contract document and line items.

## ContractRequest with Pricing Conditions

A `ContractRequest` cXML document can contain pricing conditions for line items. The pricing conditions can be defined within an intrinsic element or an extrinsic element in the `ContractRequest` cXML document.

You can integrate a `ContractRequest` cXML document that contains pricing conditions as an outline agreement (contract) between SAP Ariba Sourcing or SAP Ariba Contracts and SAP ERP through SAP Ariba Cloud Integration Gateway by using the `PricingConditions` intrinsic element or the `AdvancedPriceConditions` extrinsic element.

For more information, see the *About pricing conditions in SAP RFQ and award integration with SAP Ariba Sourcing* section in the [RFQ and award integration with SAP Ariba Sourcing guide](#).

## SAP Service Items

A `ContractRequest` document can contain data that SAP uses to create SAP service items (SAP Item Category D items) that have a single-level hierarchy.

SAP Ariba sends a parent `ContractItemIn` and child `ContractItemIn` pair for each contract line item with the term `Item Category` set to D (services). A child `ContractItemIn` element is linked to a parent `ContractItemIn` element using the `parentLineNumber` attribute in the `ItemIn` element; the `ContractItemIn` element with the matching `lineNumber` attribute in its `ItemIn` element is the parent.

The `ItemIn` element in a `ContractItemIn` element for a service line item also contains an `ItemClassification` attribute set to `service`.

The `ItemDetail` element for a service line item includes a `Classification` element; the `Classification` element's `domain` attribute and value are mapped to an SAP Ariba strategic sourcing solutions commodity code domain and value.

## Example

```
<Request deploymentMode="production">
  <ContractRequest>
    <ContractRequestHeader
      operation="new"
      xml:lang="en"
      expirationDate="2016-01-30T00:00:00-00:00"
      effectiveDate="2016-01-11T00:00:00-00:00"
      type="value"
      agreementDate="2016-01-12T00:00:00-00:00"
      createDate="2016-01-11T23:36:18+08:00"
      contractID="CW2009">
      <LegalEntity domain="CompanyCode">100</LegalEntity>
      <OrganizationID>
        <Credential domain="NetworkID">
          <Identity>AN02000000120</Identity>
        </Credential>
        <Credential domain="sap">
          <Identity>0000000100</Identity>
        </Credential>
      </OrganizationID>
      <OrganizationalUnit domain="PurchasingOrganization">
        1001
      </OrganizationalUnit>
      <OrganizationalUnit domain="PurchasingGroup">
        10101
      </OrganizationalUnit>
      <PaymentTerm payInNumberOfDays="10">
        <Discount>
          <DiscountPercent percent="2"></DiscountPercent>
        </Discount>
        <Extrinsic name="Id">0001</Extrinsic>
      </PaymentTerm>
      <MaxAmount>
```

```

    <Money currency="USD">2000.00</Money>
  </MaxAmount>
  <TermsOfDelivery>
    <TermsOfDeliveryCode value="TransportCondition"/>
    <ShippingPaymentMethod value="Other"/>
    <TransportTerms value="FOB">Free on board vessel</TransportTerms>
  </TermsOfDelivery>
</ContractRequestHeader>
<ContractItemIn>
  <TermsOfDelivery>
    <TermsOfDeliveryCode value="TransportCondition"/>
    <ShippingPaymentMethod value="Other"/>
    <TransportTerms value="FOB">Free on board vessel</TransportTerms>
  </TermsOfDelivery>
  <ItemIn lineNumber="1" quantity="100" itemClassification="material">
    <ItemID>
      <SupplierPartID>1</SupplierPartID>
      <SupplierPartAuxiliaryID></SupplierPartAuxiliaryID>
      <BuyerPartID>992</BuyerPartID> <!-- Material code -->
    </ItemID>
    <ItemDetail>
      <UnitPrice>
        <Money currency="USD">1000.00</Money>
        <Modifications>
          <Modification>
            <AdditionalDeduction type="DISCOUNT">
              <DeductionAmount>
                <Money currency="USD">10.00</Money>
              </DeductionAmount>
            </AdditionalDeduction>
          </Modification>
          <Modification>
            <AdditionalDeduction type="DISCOUNT">
              <DeductionPercent percent="20"/>
            </AdditionalDeduction>
          </Modification>
          <Modification>
            <AdditionalCost>
              <Money currency="USD">30.00</Money>
            </AdditionalCost>
          </Modification>
          <Modification>
            <AdditionalCost>
              <Percentage percent="20"/>
            </AdditionalCost>
          </Modification>
        </Modifications>
      </UnitPrice>
      <Description xml:lang="en">Laptops</Description>
      <UnitOfMeasure>EA</UnitOfMeasure>
      <Classification domain="unspsc">43211503</Classification>
      <Classification domain="MaterialGroup">29</Classification>
      <ManufacturerPartID></ManufacturerPartID>
      <ManufacturerName></ManufacturerName>
      <URL></URL>
      <LeadTime>2</LeadTime>
    </ItemDetail>
    <ShipTo>
      <Address>
        addressID="3000"
        addressIDDomain="buyerLocationID"
        isoCountryCode="US">
          <Name xml:lang="en">Plant 3000</Name>
        </Address>
      </ShipTo>
    </ItemIn>
    <ReferenceDocumentInfo lineNumber="10">
      <DocumentInfo documentID="PR1234"

```

```

    documentType = "Requisition"
    documentDate = "2015-11-07T07:03:34-05:00">
  </DocumentInfo>
</ReferenceDocumentInfo>
<ReferenceDocumentInfo lineNumber = "3">
  <DocumentInfo documentID = "RFQ2345"
    documentType = "RFQ"
    documentDate = "2015-11-07T07:03:34-05:00">
  </DocumentInfo>
</ReferenceDocumentInfo>
</ContractItemIn>
</ContractRequest>
</Request>

```

## ContractRequestHeader

ContractRequestHeader is the header element for ContractRequest. It has the following attributes:

Attribute	Description
contractID (required)	SAP Ariba Contracts contract ID for this request.
type	Identifies whether the contract is value-based or quantity-based. Possible values are "value" or "quantity".
createDate	The date and time the contract workspace was created.
agreementDate	<b>Agreement Date</b> for the workspace.
effectiveDate (required)	<b>Effective Date</b> for the workspace.
expirationDate	<b>Expiration Date</b> for the workspace.
xml:lang (required)	The language or locale in which the ContractRequest content is written.
operation	The operational mode of the ContractRequest. Possible values are: <ul style="list-style-type: none"> <li>new—Identifies a new contract transaction.</li> <li>update—Identifies an update to an existing transaction. The DocumentInfo element is used to indicate the contract in the external system.</li> </ul>

ContractRequestHeader has the following elements:

Element	Description
LegalEntity (required)	A legal entity in the ERP. It has an IdReference element.
OrganizationID (required)	Provides credentials for the organization ID.
OrganizationalUnit	Identifies the Purchase Unit or Purchase group in the ERP. It has an IdReference element.
PaymentTerm	Defines a payment term in an invoice or order. Payment term can be the net term (without discount) or discount term (with discount).

Element	Description
QuoteRequestReference	Reference to a quote request originated in the ERP.
MaxAmount	The maximum amount for the contract.
MinAmount	The minimum amount for the contract.
MaxReleaseAmount	The contractual maximum quantity per release of a contract.
MinReleaseAmount	The contractual minimum quantity per release of a contract.
Contact	Supplies additional Address or Location information for the requesting company.
Comments	Any additional comments about the contract request.
DocumentInfo	Contract ID managed in the ERP. Included if the operation is "update".
ParentContractInfo	Parent contract ID from the ERP if the current contract is part of a hierarchy.
TermsOfDelivery	Optional shipping terms (incoTerms) as defined by the International Chamber of Commerce.
Extrinsic	Additional information about the contract request header.

## ContractItemIn

ContractItemIn represents a contract line item to be sent to the ERP. It has the following elements:

Element	Description
MaxAmount	The maximum amount for an item.
MinAmount	The minimum amount for an item.
MaxReleaseAmount	The contractual maximum quantity for an item per release (order).
MinReleaseAmount	The contractual minimum quantity for an item per release (order).
MaxQuantity	The maximum quantity for an item.
MinQuantity	The minimum quantity for an item.
MaxReleaseQuantity	The contractual maximum quantity for an item per release (order).
MinReleaseQuantity	The contractual minimum quantity for an item per release (order).
TermsOfDelivery	Optional shipping terms (incoTerms) as defined by the International Chamber of Commerce.
ItemIn (required)	An item from the source buyer system.
ReferenceDocumentInfo	Optional reference document info for this line item. For example, the Requisition or RFQ in the ERP.

## ContractStatusUpdateRequest

The SAP ERP sends a `ContractStatusUpdateRequest` document after it receives a `ContractRequest` from SAP Ariba.

The `ContractStatusUpdateRequest` document contains the `Status` element to indicate if the ERP successfully created or updated a corresponding contract document. It also contains `IDReference` elements inside `ContractIDInfo` and `ContractItemStatus` elements to identify the corresponding document and items on the ERP.

### Example

```
<Request deploymentMode="production">
  <ContractStatusUpdateRequest>
    <Status xml:lang="en-US" code="200" text="OK">Succeeded</Status>
    <ContractStatus type="created">
      <ContractIDInfo contractID="CW2009">
        <IdReference identifier="55000000" domain="SAPAgreementId"/>
      </ContractIDInfo>
      <ContractItemStatus>
        <ItemStatus type="created">
          <ReferenceDocumentInfo lineNumber="1"/>
        </ItemStatus>
        <IdReference identifier="010" domain="SAPLineNumber"/>
      </ContractItemStatus>
      <ContractItemStatus>
        <ItemStatus type="created">
          <ReferenceDocumentInfo lineNumber="2"/>
        </ItemStatus>
        <IdReference identifier="020" domain="SAPLineNumber"/>
      </ContractItemStatus>
    </ContractStatus>
  </ContractStatusUpdateRequest>
</Request>
```

### Status

Status of a Response or Message. It has the following attributes:

Attribute	Description
code (required)	HTTP or cXML-specific status code.
text (required)	Textual version of the status code.
xml:lang	The language or locale in which the <code>ContractStatusUpdateRequest</code> content is written..

## ContractStatus

ContractStatus contains item-level status updates for a contract. It has the following attribute:

Attribute	Description
type (required)	Type of the contract status, for example, "created".

ContractStatus has the following elements:

Element	Description
ContractIDInfo (required)	The contract ID information created/updated in the source buyer system.
ContractItemStatus	Represents a line item in a contract status update request.
Comments	Optional field for communicating arbitrary comments or description of an item.

# cXML Transformations on SAP Business Network

When SAP Business Network routes cXML `OrderRequest` or `PunchOutSetupRequest` documents from buying organizations to suppliers, it can perform transformations that fix common semantic problems. These transformations are needed because Ariba Buyer installations might use extrinsics to specify commonly used data, such as addresses.

To be most useful to suppliers, this data should appear in dedicated cXML elements, not extrinsic elements. SAP Business Network can also change custom extrinsics to standard SAP Business Network extrinsics, which enables suppliers to integrate with multiple customers more easily.

[Turning on Transformations \[page 408\]](#)

[Moving Extrinsics to the Contact Element \[page 408\]](#)

[Transforming ItemOut Extrinsics \[page 410\]](#)

[Consolidating ItemOut to OrderRequestHeader \[page 411\]](#)

[Mapping Custom Extrinsics to SAP Business Network Extrinsics \[page 411\]](#)

[Mapping Extrinsics from cXML to EDI \[page 412\]](#)

## Turning on Transformations

Suppliers can enable transformations on a per-customer basis by clicking **cXML/EDI Transformation** in the Customer Relationships area of their accounts.

Suppliers can turn on transformations for `OrderRequest` and `PunchOutSetupRequest` separately. Note that transformation controls are not available in the main Order Routing pages; they are only available in the cXML/EDI Transformation page. These transformations are described below.

## Moving Extrinsics to the `Contact` Element

If you activate `OrderRequest` transformations, SAP Business Network moves contact information from a variety of extrinsics to the `Contact` element.

1. Names move from a variety of extrinsics to the `Name` element.

```
<Extrinsic name="Name"
<Extrinsic name="Requester"
<Extrinsic name="RequesterName"
<Extrinsic name="Requisition.Requester.Name">
<Extrinsic name="BuyerName"
<Extrinsic name="OriginalRequester"
```

SAP Business Network moves the above data to:

```
<Contact><Name>
```

2. Addresses move from extrinsics to the `PostalAddress` element.

```
<Extrinsic name="Street"
<Extrinsic name="City"
<Extrinsic name="State"
<Extrinsic name="Country"
<Extrinsic name="isoCountryCode"
```

SAP Business Network moves the above data to:

```
<Contact>
  <PostalAddress>
    <Street>
    <City>
    <State>
    <Country isoCountryCode>
  </Contact>
```

A multiline `Street` extrinsic converts to a multiline `Street` element; it does not transform into separate `Street` elements for each line.

3. Deliver To information moves from a variety of extrinsics to the `DeliverTo` element within `PostalAddress`.

```
<Extrinsic name="DeliverTo"
<Extrinsic name="MailStop"
<Extrinsic name="PoleNumber"
```

SAP Business Network moves the above data to:

```
<Contact>
  <PostalAddress><DeliverTo>
  ...
```

4. Phone number moves from a variety of extrinsics to the `Phone` element.

```
<Extrinsic name="Phone"
<Extrinsic name="Buyer Phone"
<Extrinsic name="Requester Phone Number"
```

SAP Business Network moves the above data to:

```
<Contact><Phone>...
```

5. Fax number moves from an extrinsic to the `Fax` element.

```
<Extrinsic name="Fax">
```

SAP Business Network moves the above data to:

```
<Contact><Fax>...
```

6. Email address is moved from an extrinsic to the `Email` element.

```
<Extrinsic name="EmailAddress">
```

SAP Business Network moves the above data to:

```
<Contact><Email>...
```

## Transforming `ItemOut` Extrinsic

If you activate `OrderRequest` or `PunchOutSetupRequest` transformations, SAP Business Network moves data from `ItemOut` Extrinsic elements into intrinsic elements.

1. Requisition ID is moved from a variety of extrinsics to the `requisitionID` attribute.

```
<ItemOut>
  <Extrinsic name="ReqNumber">value</Extrinsic>
  <Extrinsic name="Requisition #">value</Extrinsic>
  <Extrinsic name="PR No.">value</Extrinsic>
  <Extrinsic name="Requisition.PR">value</Extrinsic>
  <Extrinsic name="No.">value</Extrinsic>
```

SAP Business Network moves this extrinsic data to:

```
<ItemOut requisitionID="value">...
```

If there are multiple requisition ID extrinsics, SAP Business Network transforms only the last one into `requisitionID`.

2. URL is moved from an extrinsic to the `URL` element.

```
<Extrinsic name="URL">
```

SAP Business Network moves the above data to:

```
<URL>...
```

3. Requested Ship Date is moved from a variety of extrinsics to the `requestedDeliveryDate` attribute in the `ItemOut` element.

```
<ItemOut>
  <Extrinsic name="ETA">value</Extrinsic>
  <Extrinsic name="RequestedShipDate">value</Extrinsic>
  <Extrinsic name="RequestedDeliveryDate">value</Extrinsic>
  .
  .
  .
</ItemOut>
```

SAP Business Network moves this extrinsic data to:

```
<ItemOut requestedDeliveryDate="value">
```

## Consolidating `ItemOut` to `OrderRequestHeader`

If you activate `OrderRequest` transformations, SAP Business Network reduces redundancy by consolidating duplicate line item information in the `OrderRequestHeader` element.

1. If there are identical `Extrinsic` elements within every `ItemOut`, SAP Business Network deletes them and creates a single `Extrinsic` at the `OrderRequestHeader` level. If there is only one `ItemOut`, SAP Business Network moves any `Extrinsic` elements within it to the `OrderRequestHeader` level.
2. If there are identical `Contact` elements within every `ItemOut`, SAP Business Network deletes them and creates a single `Contact` at the `OrderRequestHeader` level.
3. If there are identical `requisitionID` attributes within every `ItemOut`, SAP Business Network deletes them and creates a single `requisitionID` at the `OrderRequestHeader` level.

## Mapping Custom Extrinsics to SAP Business Network Extrinsics

If you enable **Map customer specific extrinsics to standard Ariba Network Extrinsics**, SAP Business Network changes custom extrinsics to standard SAP Business Network extrinsics in purchase orders, which allow you to more easily integrate with multiple customers.

### Note

This control is available only if buying organizations define maps on SAP Business Network to change custom extrinsics to standard extrinsics. They must contact SAP Ariba's Global Services Organization (GSO) to define these maps.

SAP Business Network has a list of approximately 1,500 standard SAP Business Network extrinsics that covers concepts such as "billing account," "mortgage ID," and "docket number." It can map buying organizations' custom extrinsics to these standard extrinsics as it routes purchase orders. See the SAP Business Network documentation for the list of standard SAP Business Network extrinsics.

For example, SAP Business Network can change the custom extrinsic

```
<Extrinsic name="Loan Number">1234</Extrinsic>
```

to the standard SAP Business Network extrinsic

```
<Extrinsic name="mortgageIdNumber">1234</Extrinsic>
```

By default, this control is off, so suppliers receive extrinsics exactly as buying organizations send them in purchase orders.

# Mapping Extrinsic from cXML to EDI

If you enable **Map standard Ariba Network extrinsics to ANSI X12 REF segments**, SAP Business Network maps standard SAP Business Network extrinsic data to X12 REF segments in purchase orders.

If buying organizations either use standard SAP Business Network extrinsics in purchase orders, or map custom extrinsics to standard SAP Business Network extrinsics in purchase orders, SAP Business Network converts those extrinsics to equivalent X12 REF elements. See the SAP Business Network documentation for the list of standard SAP Business Network extrinsics.

By default, this control is off, so SAP Business Network maps extrinsic data to EDI comment elements in purchase orders.

## 📌 Note

Depending on their needs and technical capabilities, suppliers may choose to integrate with SAP Business Network to transfer EDI or cXML documents, or they can use the SAP Business Network supplier portal to manage documents. For more information about supplier integration options for EDI and cXML documents, see the following documentation:

- [SAP Integration Suite, Managed Gateway for Spend Management and SAP Business Network Overview Guide for ERP Integration for Suppliers](#)
- [SAP Integration Suite, Managed Gateway for Spend Management and SAP Business Network Installation Guide for ERP Integration for Suppliers](#)
- [SAP Integration Suite, Managed Gateway for Spend Management and SAP Business Network Installation Guide for ERP Integration for Suppliers](#)

# Recommended Coding Systems

SAP Ariba applications make use of standard coding systems for commodity, currency, unit of measure, country, language, and telephone dialing codes.

[Commodity Codes \[page 413\]](#)

[Currency Codes \[page 414\]](#)

[Unit of Measure Codes \[page 414\]](#)

[State and Country Codes \[page 415\]](#)

[Language Codes \[page 417\]](#)

[Dialing Codes \[page 418\]](#)

## Commodity Codes

The United Nations Standard Products and Services Code (UNSPSC) standard is the SAP Ariba-preferred commodity coding system. The UNSPSC is free and contains descriptions of more than 12,000 products and services.

The UNSPSC coding structure is hierarchical. It combines similar items in standardized groups. The finer the granularity of the item description, the more digits in the UNSPSC code, up to 8 digits.

Two organizations manage the UNSPSC:

- Electronic Commerce Code Management Association (ECCMA). For a list of codes, go to: <https://www.eccma.org/unspsc>
- United Nations Development Programme (UNDP). For a list of codes, go to: <http://www.unspsc.org>

UNSPSC codes use a period to separate every two digits (for example 44 . 12 . 21 . 04), but cXML requires codes to contain no punctuation (for example, 44122104).

### Examples

Code	Meaning
44122104	Paper clips
22101522	Track bulldozers
82111502	Manual writing services

# Currency Codes

Specify currency names with ISO 4217 three-letter (CodeA) currency codes.

For a list of codes ISO 4217 currency codes, go to:

<http://www.currency-iso.org/en/home/tables/table-a1.html> 

Click **Table A.1 (XLS)** to download a Microsoft Excel file with the currency codes.

## Examples

Code	Meaning
BRL	Brazilian Real
JPY	Japanese Yen
USD	United States Dollar

# Unit of Measure Codes

Specify how items are packaged with the United Nations Units of Measure (UNUOM) Common Code system.

This standard is also known as:

- United Nations Center for the Facilitation of Procedure and Practices for Administration, Commerce, and Transport (UN/CEFACT) codes
- United Nations Trade Data Elements Directory (UNTDDED) common codes
- United Nations Economic Commission for Europe (UN/ECE) Trade Facilitation Recommendation 20 - Codes for Units of Measurement used in International Trade

For a list of codes, go to:

[https://www.unece.org/cefact/codesfortrade/codes\\_index.html](https://www.unece.org/cefact/codesfortrade/codes_index.html) 

## Examples

Code	Meaning
AY	Assembly
BX	Box
DZN	Dozen

# State and Country Codes

Specify state and country codes using the XX-YY(Y) format. Where XX is the country code and YY(Y) is the state code (which can be 2 or 3 bytes).

For a list of country codes, refer to:

<https://www.iso.org/iso-3166-country-codes.html>

Examples

Code	Meaning
BR	Brazil
JP	Japan
US	United States

For a list of state (and region) codes, refer to:

<http://www.unece.org/cefact/locode/subdivisions.html>

**Warning:** We have implemented some variations from the UNECE list. For a list of deviations, see the table below.

Table 12:

Code	State/Region Name	Country
FR-ARA	Auvergne-Rhône-Alpes	FR
FR-BFC	Bourgogne-Franche-Comté	FR
FR-BRE	Bretagne	FR
FR-CVL	Centre-Val de Loire	FR
FR-COR	Corse	FR
FR-GES	Grand-Est	FR
FR-GUA	Guadeloupe	FR
FR-HDF	Hauts-de-France	FR
FR-IDF	Île-de-France	FR
FR-MAY	Mayotte	FR
FR-NOR	Normandie	FR
FR-NAQ	Nouvelle-Aquitaine	FR
FR-OCC	Occitanie	FR
FR-PDL	Pays-de-la-Loire	FR
FR-PAC	Provence-Alpes-Côte-d'Azur	FR
FR-LRE	La Réunion	FR
BD-A	Barisal	BD
BD-B	Chittagong	BD

Code	State/Region Name	Country
BD-C	Dhaka	BD
BD-D	Khulna	BD
BD-E	Rajshahi	BD
BD-F	Rangpur	BD
BD-G	Sylhet	BD
BD-H	Mymensingh	BD
CN-AH	Anhui Sheng	CN
CN-BJ	Beijing Shi	CN
CN-CQ	Chongqing Shi	CN
CN-FJ	Fujian Sheng	CN
CN-GD	Guangdong Sheng	CN
CN-GS	Gansu Sheng	CN
CN-GX	Guangxi Zhuangzu Zizhiqu	CN
CN-GZ	Guizhou Sheng	CN
CN-HA	Henan Sheng	CN
CN-HB	Hubei Sheng	CN
CN-HE	Hebei Sheng	CN
CN-HI	Hainan Sheng	CN
CN-HK	Hong Kong SAR	CN
CN-HL	Heilongjiang Sheng	CN
CN-HN	Hunan Sheng	CN
CN-JL	Jilin Sheng	CN
CN-JS	Jiangsu Sheng	CN
CN-JX	Jiangxi Sheng	CN
CN-LN	Liaoning Sheng	CN
CN-MO	Macao SAR	CN
CN-NM	Inner mongolia	CN
CN-NX	Ningxia Huizi Zizhiqu	CN
CN-QH	Qinghai Sheng	CN
CN-SC	Sichuan Sheng	CN
CN-SD	Shandong Sheng	CN
CN-SH	Shanghai Shi	CN
CN-SN	Shaanxi Sheng	CN
CN-SX	Shanxi Sheng	CN
CN-TJ	Tianjin Shi	CN

Code	State/Region Name	Country
CN-TW	Taiwan Sheng	CN
CN-XJ	Xinjiang Uygur Zizhiqu	CN
CN-XZ	Xizang Zizhiqu	CN
CN-YN	Yunnan Sheng	CN
CN-ZJ	Zhejiang Sheng	CN
ES-CB	Cantabria	ES
ES-IB	Balearic islands	ES
FJ-C	Central	FJ
FJ-E	Eastern	FJ
FJ-N	Northern	FJ
FJ-W	Western	FJ
FJ-R	Rotuma	FJ
NO-50	Trøndelag	NO
SZ-HH	Hhohho	SZ
SZ-LU	Lubombo	SZ
SZ-MA	Manzini	SZ
SZ-SH	Shiselweni	SZ
UG-214	Mayuge	UG
UG-322	Agago	UG
UG-323	Alebtong	UG
UG-324	Amudat	UG

## Language Codes

Specify language names with Java locale codes.

For a list of codes, go to:

<https://www.oracle.com/technetwork/java/javase/documentation/java11locales-5069639.html> 

Java uses an underbar ( \_ ) within the codes, but cXML uses a dash (-). Examples:

## Examples

Code	Meaning
pt-BR	Brazilian Portuguese
ja-JP	Japanese
en-US	United States English

In cases where you do not need to specify the geographic region, you can leave off the country portion of the locale code. For example, English text that is the same for US English and UK English can be labeled with the shortened code "en".

## Dialing Codes

Specify international dialing codes with International Telecommunication Union (ITU) Recommendation E.164 country codes.

For a list of codes, go to:

[https://www.itu.int/itudoc/itu-t/ob-lists/icc/e164\\_763.html](https://www.itu.int/itudoc/itu-t/ob-lists/icc/e164_763.html) 

## Examples

Code	Meaning
55	Brazil
81	Japan
1	United States

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U.S. Patent Nos. 6,199,050, 6,216,114, 6,223,167, 6,230,146, 6,230,147, 6,285,989, 6,408,283, 6,499,018, 6,564,192, 6,584,451, 6,606,603, 6,714,939, 6,871,191, 6,952,682, 7,010,511, 7,047,318, 7,072,061, 7,084,998, 7,117,165; 7,225,145; 7,324,936; 7,536,362; 8,364,577; and 8,392,317. Patents pending.

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