BUSINESS SUITE ADDON TO CIG FOR BUYER MIGRATION– limit

impact of migration to suppliers

ABSTRACT

A buyer customer connected to Ariba Network through Business Suite AddOn (BSAO) will need to migrate to CIG for buyer. This will happen with BSAO end of life but may also happen as buyer migrate from ECC to S4.

If buyer using BSAO has onboarded suppliers (via standard account, portal, integration), such migration may impact these suppliers unless steps are taken to address this during migration.

This document aims at describing points of attention to limit impact to suppliers

Disclaimer: some additional logic change and points of attention may be identified through BSAO, CIG migration projects. This document would need to be updated to reflect any new findings. Document was handed over to Renee Essig as of 20191129. Renee owns the CIG migration governance. Please route any request for update to the document through her.

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1 UPDATES

Who	When	What
Jakub Mihael	27 Nov 2019	Version 1.
Michael Weil	28 Nov 2019	Version 2.
Michael Weil	29 Nov 2019	Version 3. Incl. review by Jakub Mihal
Michael Weil	20 Dec 2019	Version 4 incl. end point and correspondent segment enhancement
Pierre Sermain	13 Jan 2020	Version 5 documented in 6.1.4 how to update vendor id with leading zeros
Michael Weil	30 Jan 2020	Version 6 documented another customization no longer existing in BSAO related to checking presence of country and city in Delivery address
Jakub Mihal	15 Feb 2020	Version 7. Added more insight onto : 6.1.6 Presence of country and City in delivery address
Michael Weil	06 Mar 2020	Addition under “6.1.4 Leading zeros addition in vendor ID” about the toggle to truncate leading zero

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3 CONTEXT

Migration from Business Suite AddOn to CIG represents a change of logic, in the generation of outbound documents and, in the processing of inbound documents, to buyer ERP.
Consequently, structural changes in transactional documents might occur.

Changes may impact suppliers connected to the buyer through Ariba Network. Suppliers connected Machine to Machine are likely to be more impacted, any change could cause failure in the automated processing of documents. To this extent, it is important to mitigate changes or to alert suppliers about upcoming changes early on.

This document aims at highlighting

- A methodology to minimize impact of migration with suppliers connected machine to machine.
- Known change in logic between BSAO and CIG that resulted in additional customization (other than existing BSAO buyer customization)

Disclaimer: some additional logic change and points of attention may be identified through other BSAO CIG migration projects. This document would need to be updated to reflect any new findings. Document was handed over to Renee Essig as of 20191129. Renee owns the CIG migration governance. Please route any request for update to the document through her.

4 METHODOLOGY

4.1 Identify all BSAO customization

All BSAO buyer customization should be identified.

CIG provides supporting mapping documentation which can be crosschecked with mappings that are currently in place for the legacy integration solution.

Delivery team may also want to compare BSAO vs CIG inbound and outbound document for each procure to pay scenario to confirm no customization has been missed (such as extrinsics). Comparison can be done by extracting cXML of the document from Ariba network.

For the comparison, pick procure to pay documents exchanged with Machine to Machine suppliers. This is recommended because, the structure of procure to pay documents exchanged with Machine to Machine supplier is different from the one generated by Portal suppliers

4.2 Reimplement the customization in the new architecture

To minimize impact to Machine to Machine supplier, BSAO customization will need to be reimplemented strictly when moving to CIG.

Bear in mind that some customization may not sit in CIG and may need to sit in the ERP (via User Exit, via Badi, etc.)

Also bear in mind that some extra customization may be required due to the change in logic that exist between BSAO and CIG.

4.3 Re test with Machine to Machine suppliers

It is recommended to retest with all integrated sellers to confirm the migration will have no impact to them.

The buyer may decide to opt for a full blown test plan with the most strategic machine to machine suppliers (full UAT) and a lighter test plan for less strategic suppliers (One Purchase Order, One Invoice)

To this extent, it is recommended to communicate to integrated suppliers very early on about the migration

5 End point setup - Pending queue clearing

For POs created before migration, follow-up documents (OC, ASN, Invoice,...) will be routed to the old endpoint also after migration if you do not update legacy endpoint.

Mitigation:

- Option 1: Change legacy Commerce Automation endpoint to type "POST", and set CIG URL and P-User password as shared secret in this endpoint. Can be used in all type of setup (CIG for buyer with PI, with ECC, with S4, etc)
- Option 2 (not mandatory but always good to keep in case POST does not work: Use polling agent feature. Bear in mind that if this feature (routing) is activated then the inbound document will not go through CIG. They will post directly to ECC or S4 and an ABAP mapping will occur from cXML to SAP structure. This may obviously require to implement custom mapping implemented in CIG for buyer directly in SAP so inbound document coming through CIG and through direct posting (through polling) have the same structure.

6 CUSTOMIZATION DUE TO CHANGE IN LOGIC BETWEEN BSAO and CIG

The purpose of the following section is to highlight customization which were not due to existing buyer customization in BSAO but rather to change in the product logic BSAO vs CIG.

These impacts were identified whilst working on an ECC BSAO to S4 CIG migration project.

The version of CIG AddOn installed in S4 system was ARBCI10004. It is possible that some of the points mentioned in this document get resolved in newer releases.

Impacts identified could generally be resolved through 3 different approaches:

1. Modification of IDOC date in S4
2. Modification of mapping/data in CIG – mapping tool / mapping SR
3. Modification of target data/structure on the supplier sideside of supplier
   Nota: **should be avoided whenever Machine to Machine suppliers are connected to the buyer. Any change could lead to lengthy reimplementation on the supplier side and hence impact CIG migration timeline on the buyer side**

In this document, we only focus on the 4 documents that were most affected:

- Purchase Order
- Order confirmation
- Invoice
- CC Invoice (both MM & FI)

Note that all information in this document have been anonymized

6.1 Purchase order

6.1.1 Order version (specific to S4)

E1EDK01/E1ARBCIG_HDR/VERSION ->
/cXML/Request/OrderRequest/OrderRequestHeader/@orderVersion

The source field is not filled by standard CIG AddOn yet. It is planned to be included Q1/2020. This results in missing version of order on AN, subsequently in supplier's system.

Resolution: Workaround applied in this case represented additional filling of the IDOC field in S4 system by a custom programming logic.

6.1.2 <deliverTo> structure in cXML

CIG maps the E1EDKA1/BNAME / E1EDKA1/NAME1 fields to <deliverTo> in following way. Change of structure and inclusion of empty elements might cause an issue for suppliers that are processing the <deliverTo> element in their system and are expecting the old structure.

```
<ShipTo>
    <Address addressID="LU54" isoCountryCode="DE">
        <Name xml:lang="EN">W6582 Wünnenberg-Hegensdorf</Name>
        <PostalAddress>
            <DeliverTo>Katja Erfurth</DeliverTo>
            <DeliverTo/>
            <DeliverTo/>
            <DeliverTo/>
            <DeliverTo/>
            <Street>Aftetal 6</Street>
            <City>Büren</City>
            <Municipality/>
            <State/>
            <PostalCode>33142</PostalCode>
            <Country isoCountryCode="DE"/>
        </PostalAddress>
    </Address>
    <IdReference domain="buyerLocationID" identifier="LU54"/>
</ShipTo>
```

Previous structure of <deliverTo> element:

```
31          <ShipTo>
32            <Address isoCountryCode="DE" addressID="LU54">
33              <Name xml:lang="EN" xmlns:xml="http://www.w3.org/XML/1998/na
34              <PostalAddress>
35                <DeliverTo>Katja Erfurth</DeliverTo>
36                <Street>Aftetal 6</Street>
37                <City>Büren</City>
38                <Municipality />
39                <State />
40                <PostalCode>33142</PostalCode>
41                <Country isoCountryCode="DE" />
42              </PostalAddress>
43            </Address>
44            <IdReference domain="buyerLocationID" identifier="LU54" />
45          </ShipTo>
```

Resolution: deletion of <deliverTo> element generated by standard, creation of new element with function “create/replace” in CIG. E1EDKA1-BNAME is mapped to this newly created element.

6.1.3 Addition of <correspondent> segment into <to> credentials

In Ariba Network the <Correspondent> segment is used to send the dynamic PO email to the standard account suppliers.

With BSAO this tag was populated in the PO only for standard account suppliers. Any other suppliers incl. integrated did not have this tag. This difference in behavior in PO structure based on type of account was driven in BSAO by adding each standard account supplier to table ARBERP_C_VENANID

With CIG this tag is always populated independently of whether the supplier is a standard account or an enterprise account (portal or integrated). For suppliers integrated prior to CIG for buyer migration, such change in PO structure can cause suppliers to no longer be able to process PO. In CIG for buyer ARBERP_C_VENANID table no longer exists.

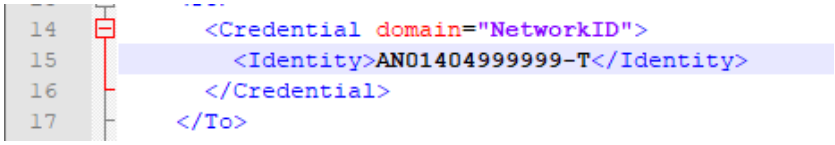
Resolution

Conditional deletion of <correspondent> segment.

Buyer should implement a custom Z table in SAP. In this table buyer should store vendor ID for integrated sellers and add custom logic so any PO for supplier stored in this table to not have the <correspondent> segment whilst PO for all other suppliers will contain the <correspondent> segment

<correspondent> to be conditionally deleted in CIG via xslt transformation -> based on a custom helper field in IDOC e.g. <E1ARBCIG_HDREXTN> if integrated vendor is in custom table

Integrated vendor PO:



```
      <Credential domain="NetworkID">
        <Identity>AN01404999999-T</Identity>
      </Credential>
    </To>
```

Non Integrated vendor PO:

```
<To>
  <Credential domain="NetworkID">
    <Identity>AN0139XXXXXX-T</Identity>
  </Credential>
  <Correspondent>
    <Contact role="correspondent">
      <Name xml:lang="EN">Supplier</Name>
      <PostalAddress>
        <Street>22 STREET</Street>
        <City>CITY</City>
        <Country isoCountryCode="ZA">Country</Country>
      </PostalAddress>
      <Email name="">name@domain.com</Email>
      <Fax name="routing">
        <TelephoneNumber>
          <CountryCode isoCountryCode="ZA" />
          <AreaOrCityCode />
          <Number>999999999</Number>
        </TelephoneNumber>
      </Fax>
    </Contact>
  </Correspondent>
</To>
```

6.1.4 Leading zeros addition in vendor ID

Point of attention: the below is only applicable if the buyer decides to not activate the toggle to truncate vendor id in CIG for buyer. Some clients may not be able to do that depending on their architectural landscape and long terms master data management strategy

POs were previously sent with <to> credentials containing a VendorID without leading zeros.

e.g. 400115127

Currently, as a result of IDOC being generated by standard SAP function modules it is sent with a leading zero

e.g. 0400115127

As suppliers containing a vendorID with leading zeros do not exist in Ariba Network, it will have the following consequences once CIG is live:

- New POs sent to existing vendors will generate new ANIDs
- CC invoices sent to existing vendors will generate new ANIDs
- Change or Cancel POs sent to existing vendors who received POs under their existing ANID will fail

In order to anticipate and avoid the above issues, the following steps must be taken prior to the go-live:

- **Existing Public suppliers:** add a second vendorID with leading zeros to the existing ANIDs. This can be done manually or through a Vendor Upload File (CSV).
- **Existing Standard Private suppliers:** as the vendorID cannot be modified, modify the Legacy VendorID field to include the vendorID with leading zeros:
    - Request a data fix to Engineering to update the targeted suppliers => vendorID with leading zeros value should be added in the LegacyVendorID field of the suppliers
    - In CIG, an additional credential segment including PrivateID as the vendorID with leading zeros value must be added in the cXML structure in order for Ariba Network to route documents to the right suppliers. This must be done for every outbound document (PO, Change PO, Cancel PO, CC invoice, etc...). Example:

```
<To>
        <Credential domain="vendorID">
            <Identity>0000217480</Identity>
        </Credential>
        <Credential domain="privateID">
            <Identity>0000217480</Identity>
        </Credential>
</To>
```

    - The addition of the credential segment must not be done for integrated suppliers. Therefore, the same logic as for 6.1.3 should be implemented

- **Existing Enterprise Private suppliers:** add a second vendorID with leading zeros to the existing ANIDs. This can be done manually or through a Vendor Upload File (CSV).

If these changes are not anticipated before the go-live, additional corrective actions may be needed as duplicate ANIDs will need to be cleansed.

- Merge of duplicate ANID (Private to Public)
- Resend of existing POs to new ANIDs to allow Change POs to go through

6.1.5 Other elements that were deleted

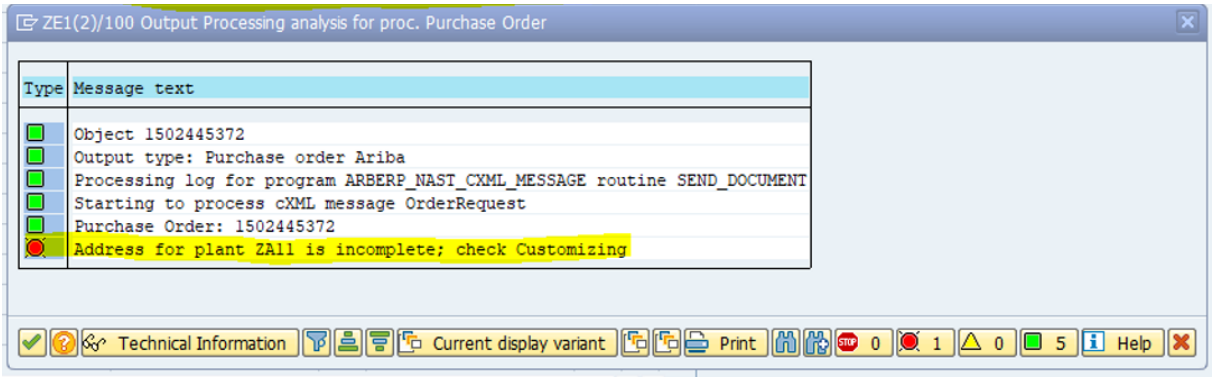
Following elements/attribute were deleted in CIG as part of structural alignment process of BSAO and CIG generated cXML for the migration used as a case study in this document. This might be necessary for other customers as well.

- /cXML/Request/OrderRequest/OrderRequestHeader/@agreementID
- /cXML/Request/OrderRequest/OrderRequestHeader/SupplierOrderInfo
- /cXML/Request/OrderRequest/OrderRequestHeader/Extrinsic [@name='partyAdditionalID']

- /cXML/Request/OrderRequest/OrderRequestHeader/Extrinsic [@name='Ariba.availableAmount']
- /cXML/Request/OrderRequest/ItemOut/Distribution
- /cXML/Request/OrderRequest/ItemOut/ControlKeys/SESInstruction
- /cXML/Request/OrderRequest/ItemOut/ItemDetail/Extrinsic [@name='ReceivingType']

6.1.6 Presence of country and City in delivery address

In BSAO PO was not send to Ariba Network if Country and/or City in delivery address were not populated in PO generated from SAP. The check was part of the standard program ARBERP_NAST_CXML_MESSAGE which was generating the cXML from SAP purchase order.



Since the underlying generation logic has changed, this check is not part of the standard CIG Add-On. Function module which is compiling the IDOC from an SAP purchase order is not checking existence of the delivery address. If such check is required, it needs to be added by a custom development in User Exit or other suitable location within SAP system.

6.2 Order Confirmation

6.2.1 type = “detail” / “allDetail”

SAP ERP need the “allDetail structure on Order Confirmation (OC) to process OC.

The “allDetail” structure is systematically generated by Ariba on OC for portal suppliers.

Machine to Machine suppliers seldom have the technical ability to generate this structure, they generally use the “detail” structure.

Whilst BSAO was enriching the “allDetail” structure whenever missing, at the time where this document was written this was not possible in CIG.

To avoid impact on Machine to Machine supplier it was proposed to implement mitigation measures in the backend system. Some of these measures might include IDOC preprocessing logic which would fetch these details from PO prior to the IDOC processing. More information on how this implementation can be handled in attached document

ARBCIG_ORDSP_detail_spec_1.pdf

6.3 Invoice

Following invoice modifications were handled in CIG mapping tool.

6.3.1 Tax jurisdiction & Tax category

Current CIG logic maps /cXML/Request/InvoiceDetailRequest/InvoiceDetailOrder/InvoiceDetailItem/InvoiceDetailItemReference/@lineNumber to ARBCIG_INVOIC/IDOC/E1EDP01/E1EDP04/TXJCD

Since the values of lineNumber in TXJCD field was influencing subsequent processing of IDOC, it had to be deleted in CIG.

Note: Client also required deletion of E1EDP04-MWSKZ due to same reason as TXJCD.

6.3.2 Company code mapping

Below mapping was not part of standard CIG mapping yet (might be included I later releases). Therefore, it had to be added to allow IDOC processing.

/cXML/Request/InvoiceDetailRequest/InvoiceDetailRequestHeader/Extrinsic[@name='CompanyCode'] → /ARBCIG_INVOIC/IDOC/E1EDK14/ORGID

6.3.3 Bank account ID mapping

Below mapping was not part of standard CIG mapping yet (might be included I later releases). Therefore, it had to be added to allow IDOC processing.

/cXML/Request/InvoiceDetailRequest/InvoiceDetailRequestHeader/InvoicePartner[Contact/@role='wireReceivingBank']/IdReference[@domain='accountID']/@identifier → /ARBCIG_INVOIC/IDOC/E1EDK28/ACNUM

6.3.4 Tax exchange rate mapping

Below mapping was not part of standard CIG mapping yet (might be included I later releases). Therefore, it had to be added to allow IDOC processing.

/cXML/Request/InvoiceDetailRequest/InvoiceDetailRequestHeader/Extrinsic[@name='taxExchangeRate'] → /ARBCIG_INVOIC/IDOC/E1EDK01/WKURS

6.3.5 Subtotal & Gross Amount mapping

Below mapping was not part of standard CIG mapping yet (might be included I later releases). Therefore, it had to be added to allow IDOC processing.

Both information needed for inbound processing and both mapped to

/ARBCIG_INVOIC/IDOC/E1EDS0/1SUMME with different/customer specific SUMID value.

6.4 CC Invoice

There were several misalignments between cXML generated by CIG vs. cXML generated by Business Suite AddOn.

Most of the differences had to be resolved through raising mapping modification SRs:

- Incorrect mapping and IDOC population of field for fiscal year
- Exchanged XBLNR/BELNR