S/4HANA Conversion with Integration to SAP Cloud for Customer
Experiences from SAP internal Validation Project

Bernd Fleddermann, SAP
Eduard Stelle, SAP
September 2018
PUBLIC
V1.0
Bernd Fleddermann
C/4HANA Expert Service
Global Delivery
SAP SE
Dietmar-Hopp-Allee 16
69190 Walldorf, Germany

Eduard Stelle
C/4HANA Expert Service
Global Delivery
SAP SE
Dietmar-Hopp-Allee 16
69190 Walldorf, Germany
Agenda

- Introduction and Overview on S/4HANA Conversion Project
- The conversion phases and the relevant conversion steps
- Final Assessment and major Differences
Introduction and Overview on S/4HANA Conversion Project
S/4 Conversion Project

SAP Validation requested the C4C Expert Service team to run a conversion of an SAP ERP system to S/4HANA integrated with SAP Cloud for Customer

- Project Start February 2018
- Technical and functional checks with main focus on SAP Cloud for Customer integration
- Create a task list and process description
- Experts from SAP ERP and S/4HANA performed the technical transformation steps in the on-premise system
Considerations

The conversion project was conducted on an SAP internal test landscape with a predefined functional and integration scope

- The required steps and processes in a customer specific environment may vary from the described processes and requires dedicated and individual planning and test
- Future developments might impact the conversion activities as described
- This presentation focuses on the SAP Cloud for Customer integration and their relevant activities. The setup on the SAP ERP, S/4HANA side requires also extensive activities described in dedicated guidelines
- To plan and perform the conversion activities in a productive customer environment it is recommended to get support from SAP ERP, S/4HANA (conversion) experts and SAP Cloud for Customer expert service
S/4HANA Conversion with Cloud for Customer Integration – Scope Overview

Master Data View

Accounts/Prospect
- Standard prospect block in Cloud for Customer (through scoping option)
- Prospect scenario: link ERP customer to former Cloud for Customer prospect
- Segment filter to filter out specific sales organization from account data
- Filter BAdI in ERP to filter out customer with customer Name “DoNotReplicate”
- Integration of ERP Cockpit Mashup
- Extension in the account record on both sides
S/4HANA Conversion with Cloud for Customer Integration – Scope Overview

**Transaction Scenarios**

**SAP Hybris Cloud for Customer**

**Opportunity**
- Opportunity Pricing
- Follow up Quote
- Follow up Attachment
- Document Flow
- Print Preview

**Sales Order**
- Bi-Directional Replication
- External Pricing
- Order Attachment
- Document Flow
- Print Preview
- Sales Order Extension

**Contract**
- Bi-Directional Replication
- External Pricing

**Sales Quote**

**Sales Order**

**Delivery**

**Customer Invoice**

**Service Contract**

**Work Ticket**

Online Pricing with ATP & Credit Limit Check

Create follow-up Business Transaction Document

Basis of the diagram is the standard scope of C4C-ERP integration

Blue boxes/arrows are the scope used for the Conversion project

Revenue

Cost

Cost

Cost

Sales Order Extension
S/4HANA Conversion with Cloud for Customer Integration – Scope Details

Master Data View – major differences

Major integration differences btw. SAP ERP and C/4Hana

- IDOC based Integration with SAP ERP customers is substituted by SOAP based Business Partner Integration
- Different Integration Framework in S/4HANA (e.g. to replace customer filter BAdIs)
- Different iFlows in the Middleware
- No ERP Cockpit available in S/4HANA
- ID Mapping for Business Partner and customer in C4C in parallel
The conversion phases and the relevant conversion steps
Customer Vendor Integration (CVI)
Process Scenarios in S/4HANA

IMPLEMENTATION SCENARIOS

Greenfield S/4HANA

ECC to S/4HANA Conversion

BP upload
Migration Cockpit
Data Services
Webservice
LSMW
IDocs
Manual

S/4 HANA

BP Synchronization

CVI
Synchronization

BP Create Change

S/4 HANA

Customers Vendors Contacts (KN*, LF*)

Preparation

Synchronization

Conversion

Post Processing / Test
S/4HANA Conversion with Cloud for Customer Integration

System Setup

Recommendation
Run complete transformation on a test landscape fully copied from production

- Documentation of ...
  - conversion steps
  - effort and duration (especially downtimes)
  - corrective measures
- ... to plan and schedule productive transformation
- Adjust BAdIs and iFlows where necessary
- Test of adjusted artifacts
- Import adjusted and tested artifacts from Test to Prod

- SAP Cloud for Customer Release 1802
- SAP Cloud Platform Integration
- Integration Packages
  - SAP Hybris Cloud for Customer Integration with SAP ERP – Version 1711
  - SAP Hybris Cloud for Customer Integration with SAP S/4HANA – Version 1802
  - SAP ERP → SAP S/4HANA OnPremise
S/4HANA Conversion with Cloud for Customer Integration

**Process Overview**

**Preparation**
- ERP CAs
- C4C
- ERP Mapping Content
- ERP APIs
- ERP → S/4

**Synchronization**
- Setup Scoping & BADIs for S/4 Hana Integr.
- Clean Message Queues (if relevant)
- Outbound messages not processed
- Restart queued outbound messages

**Conversion (S/4)**
- Set up S/4 CAs
- C4C up with limitations
- No Message Exchange
- Import iFlows from Test (in Prod)
- Setup S/4 iFlows (in Test)
- Setup C4C Integration
- Initial Load of BizPartner

**Post Processing / Test**
- Clean Queues
- ERP Biz Downtime recommended
- Test all Integration Scenarios
- S/4 Biz. Downtime
- Setup ID Mapping for Biz Partner
- Test all Integration Scenarios
- Test
- Activate BP->Cust/Vendor
- Test

**Notes**
- Clean Message Queues
- ERP Biz Downtime recommended
- Restart queued outbound messages
- Outbound messages not processed
- Clean Queues
- No Message Exchange
- Import iFlows from Test (in Prod)
- Setup S/4 iFlows (in Test)
- Setup C4C Integration
- Initial Load of BizPartner
- Test all Integration Scenarios
- Test
- Activate BP->Cust/Vendor
- Test
S/4HANA Conversion with Cloud for Customer Integration

SAP ERP → Up and running
• Primarily configuration of Customer Vendor Integration (CVI) module incl. number assignment

C4C → Up and running
• Check number of unprocessed message at least in the productive system and start message clarification (in case of large number of unprocessed messages)

Preparation Phase

• Plan and prepare the SAP ERP & S/4HANA conversion steps along the guidelines

• Test System: Document effort, duration and issues to plan and schedule productive conversion
S/4HANA Conversion with Cloud for Customer Integration

SAP ERP ➔ Downtime recommended
• synchronizing customers to business partners through CVI

C4C ➔ Up and running with limitations
• No processing of outbound messages to SAP ERP. Unprocessed messages need to be re-started when SAP ERP is active again

Test System
• Document effort, duration and issues to plan and schedule productive conversion

Synchronization Phase

• Plan and prepare the SAP ERP & S/4HANA conversion steps along the guidelines
• Test System: Document effort, duration and issues to plan and schedule productive conversion
S/4HANA Conversion with Cloud for Customer Integration

SAP ERP → Downtime required
- Resolving unprocessed messages
- Technical transformation of the SAP ERP system to S/4HANA

C4C → Business Downtime required
- Resolving all unprocessed messages
- Disconnect Biz Users and other sources causing messages to and from C4C
- Activate scoping and BADIs for S/4HANA relevant integration scenarios (for example prospect block)
- Setup S/4 Communication Arrangements (to catch up any potential message caused by hidden processed not deactivated before)

CPI (Prod Environment only)
- Import validated iFlows from Test Environment

Conversation Phase

- Plan and prepare the SAP ERP & S/4HANA conversion steps along the guidelines
- Test System: Document effort, duration and issues to plan and schedule productive conversion
S/4HANA Conversion with Cloud for Customer Integration

SAP S/4HANA → Downtime required
  • Activation of BP → Customer/Vender synchronization
  • Setup C4C Integration
  • Initiate Initial Load of Business Partner to C4C (after the integration scenarios had been re-established)

CPI (Test Environment only)
  • Setup S/4HANA iFlows and implement customer specific adjustments where relevant

C4C → Business Downtime required
  • Receive Initial Load of Business Partner to build up new ID Mapping
  • Test integration scenarios before reactivating the systems

Post Processing Phase

• Plan and prepare the SAP ERP & S/4HANA conversion steps along the guidelines
• Test System: Document effort, duration and issues to plan and schedule productive conversion
S/4HANA Conversion with Cloud for Customer Integration

Reduced Cloud for Customer Downtime Approach

**Preparation**
- Setup Scoping & BADIs for S/4 Hana Integr.
- Clean Message Queues (if relevant)

**Synchronization**
- C4C up with limitations
- Restart queued outbound messages
- Outbound messages not processed
- Check Customizing - CVI enhancements - CVI Configuration

**Conversion (S/4)**
- Set up S/4 CAs
- Clean Queues
- C4C up with limitations
- ERP Biz Downtime recommended
- No Message Exchange
- Outbound messages not processed

**Post Processing / Test**
- Test all Integration Scenarios
- Deploy iFlows
- Import iFlows from Test in Prod
- Initial Load of BizPartner
- Setup C4C Integration
- Test all Integration Scenarios

**ERP**
- Test
- Deploy
- Import iFlows
- Setup ID Mapping for Biz Partner

**C4C**
- ERP CAs
- S/4 CAs
- Clean Queues
- Clean Queues

**CPI**
- ERP Mapping Content
- S/4 Mapping Content

**ERP**
- ERP APIs
- S/4 APIs
- ERP S/4
- S/4 ERP

**S/4HANA**
- ERP
- ERP APIs
- ERP CAs
- C4C
- CPI
- S/4 CAs
- S/4 APIs
- S/4 Mapping Content
- ERP Mapping Content

© 2018 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC

18
S/4HANA Conversion with Cloud for Customer Integration

Cloud for Customer uptime possible with limited functionality during conversion and post processing
• Set up S/4HANA Communication Arrangements in C4C to log upcoming outbound messages in the Message Monitor
• Outbound messages will not be processed
• No synchronous messages (e.g. external pricing; document flow; fact sheets, etc.)
• Some transactional documents which require confirmations remains in read-only until confirmation message is received
• Logged messages need to be restarted on chronological order when the connectivity is back
• Changes on C4C business partner must be re-done when connectivity is back (no message processing possible)

Reduced C4C Downtime

• Plan and prepare the SAP ERP & S/4HANA conversion steps along the guidelines
• Test System: Document effort, duration and issues to plan and schedule productive conversion
Conversion in Test vs. Productive Environment

Some integration artifacts (e.g. iFlows, BADIs, PDI logic) can be setup and tested in **Test** and imported to **Prod**

Document conversion steps during test conversion

Some conversion phases in **Prod** shorter as the necessary steps are documented from test and artifacts changes copied over
Final Assessment and major Differences
Final Assessment

- The conversion project must carefully be planned with expert involvement (S/4HANA, CVI, C4C Integration)
- The total transformation time depends on different factors
  - Know How
  - Customer/Vendor/BP set up complexity (e.g. number ranges)
  - Data volume
  - Customer specific enhancements/ extensions
- We recommend to run the conversion with a complete set of productive data and a productive like setup in a specific test environment (Sandbox) before
  - Adjustments on integration artifacts (e.g. iFlows, BADIs) need to be tested and imported from Test to Prod
  - Conversion steps and durations need to be tested and logged during test and used to plan the productive conversion and downtime management
Main Differences encountered from Cloud for Customer Perspective

- Business Partner Model deviates from Customer/Vendor Model
  - Numbering
  - Replication Messages and message structure for BizPartner
- The integration with the new Business Partner leads to two external IDs for accounts in Cloud for Customer which can be different
  - Some UIs and reports show only one external ID
  - In the Account/Contact UI a new facet can be added “Mapping for Integration” to see all external IDs
- ERP cockpit no longer available in S/4HANA
  - Need to be substituted by alternate S/HANA approaches (e.g. standard mashup available in C4C with 1808)
- Different Integration Framework in S/4HANA
- S/4HANA has differences in the supported integration scenarios. SAP note 2293815 – “S/4HANA Enterprise Management: Information about Integration Scenarios with SAP Cloud for Customer” lists the supported scenarios.
Links

Blog post with further details

Blog post as pdf file

deropenSAP course on System Conversion to SAP S/4HANA
https://open.sap.com/courses/s4h11

Blog on alternate mashup integration approached to substitute ERP Cockpit with S/4HANA Fiori App

SAP S/4HANA Cookbook – Customer/Vendor Integration (further updates planned)
https://support.sap.com/content/dam/saap/sap_activate/s4h.0781%20sap%20s4hana%20cookbook%20customer%20vendor%20integration.pdf

Conversion Guide for SAP S/4HANA 1610
Thank you.

Contact information:

Bernd Fleddermann
C/4HANA Expert Service
Global Delivery

SAP SE
Dietmar-Hopp-Allee 16
69190 Walldorf, Germany