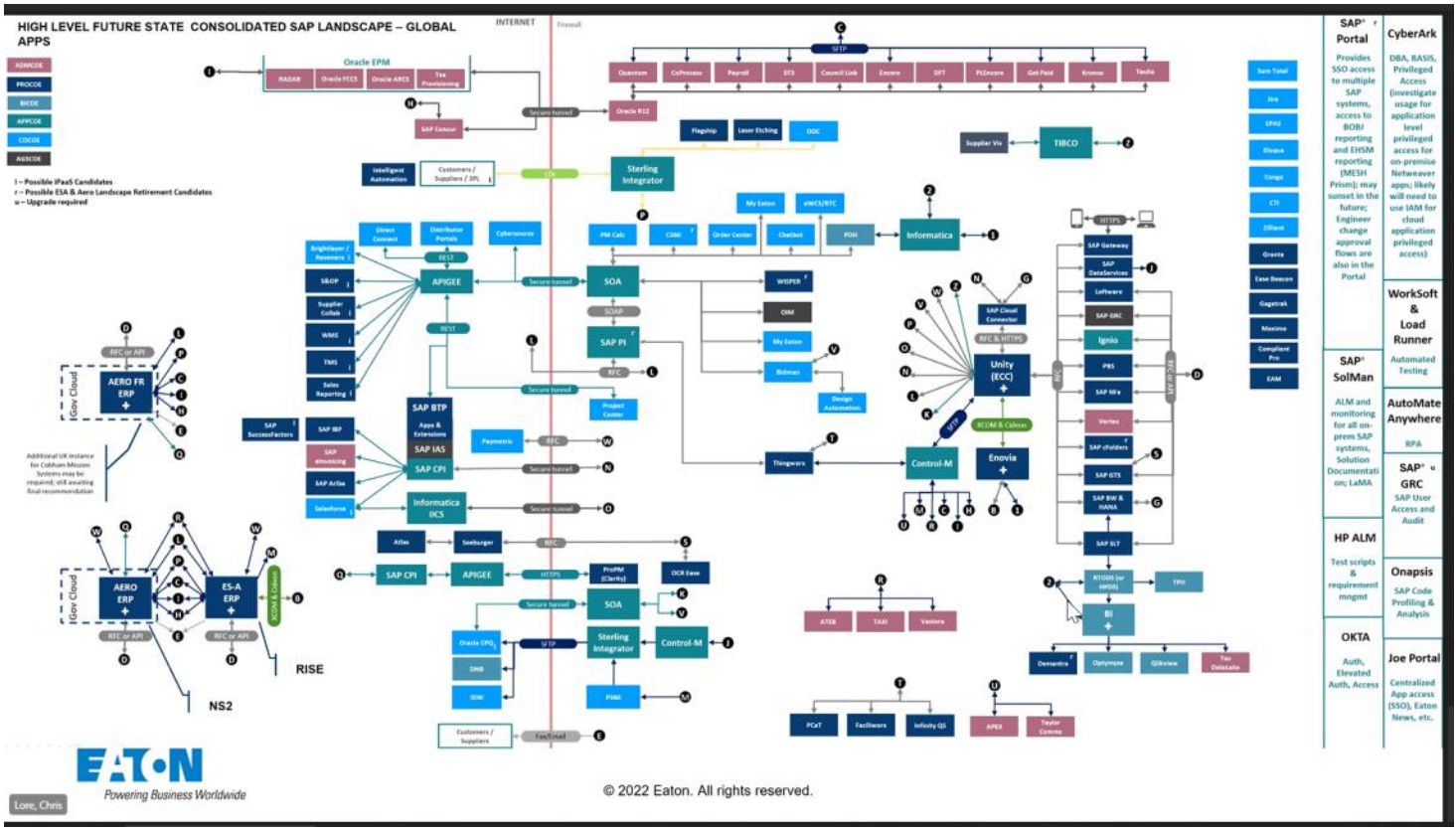
AEROSPACE Interfaces

Monday, November 8, 2021 12:29 PM

Aerospace MFGPro - Interface Inventory	AEROSPACe Interface inventory

ALL interfaces

Monday, March 27, 2023 12:39 PM



Documentation

Wednesday, April 5, 2023 11:06 AM

CPI Docs

RE: CPI Changes through ChaRM

Wednesday, April 5, 2023 11:06 AM

Subject	**RE: CPI Changes through ChaRM**
From	Vedula, Hari
To	Buntin, Mike; Visuvasam, Diana; Joshi, Shilna N; Nalla, Karthikreddy; Jandhyala, Ramesh
Cc	SAP COE; Fontenot, Timothy; Svoboda, Jess R
Sent	Wednesday, April 5, 2023 10:28 AM

Corrected a typo (highlighted in yellow):-

From: Vedula, Hari <NarahariVedula@Eaton.com>
Sent: 05 April 2023 15:36
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>; Jandhyala, Ramesh <RameshJandhyala@Eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Fontenot, Timothy <TimothyFontenot@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Hi All,

We have now cleaned up the old RFCs related to CPI / PI (see attached):-

- Old RFCs:-
  - They are now confirmed, and related CDs are withdrawn.
- RFCs currently in progress (Created with CDs):-
  - We will withdraw the related CDs after the changes are moved to production.
- In the future:-
  - For **CPI** changes (as they are not transportable):-
    1. we use RFC **without** CD.
    2. After the change is moved to production:-
       - Confirm the RFC
  - For **PI** changes (as the changes are transportable and will be eventually linked to CHARM): -
    3. We use RFC **with** CD.
    4. After the change is moved to production:-
       - withdraw the CD and
       - confirm the RFC.

Thanks,
Hari Vedula.

From: Vedula, Hari
Sent: Monday, April 3, 2023 2:53 PM
To: Fontenot, Timothy <TimothyFontenot@Eaton.com>; Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Thanks Tim. It worked. I was able to withdraw the CD and confirm RFC 8000003981.

Hari Vedula
Senior System Architect

SAP Deliver, Op&Enabling, Eaton
Mobile: +1 630 864 9921
harivedula@eaton.com
www.eaton.com

From: Fontenot, Timothy <TimothyFontenot@Eaton.com>
Sent: Monday, April 3, 2023 2:50 PM
To: Vedula, Hari <NarahariVedula@Eaton.com>; Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Hi Hari,

With regard to your ping on RFC 8000003981, the reason you were not able to see a CD for that one is that when the RFC was approved, it was never advanced (by Governance) to "Being Implemented" status. Only once reaching that status does the CD get created. Chris has since advanced the CD to "Being Implemented" status and you should be able to withdraw the CD and then confirm the RFC to

close it.

Thanks

Tim Fontenot
DevSecOps
Mobile: +1 337 831-1278
timothyfontenot@eaton.com
www.eaton.com

From: Vedula, Hari <NarahariVedula@Eaton.com>
Sent: Monday, April 3, 2023 2:31 PM
To: Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Fontenot, Timothy <TimothyFontenot@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Hello Ramesh,

I am in the process of cleaning up the open RFCs. I will let you know when it is done.

Thanks,
Hari Vedula.

From: Jandhyala, Ramesh <RameshJandhyala@Eaton.com>
Sent: Monday, April 3, 2023 2:28 PM
To: Fontenot, Timothy <TimothyFontenot@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>; Vedula, Hari <NarahariVedula@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Thanks for sharing.

Unfortunately I don't have access to with draw CD and also close RFC. Can anyone help?

Regards
Ramesh Jandhyala
Solution Architect , Data Governance & Finance BU Delivery
mobile: +1 732 781 6439

From: Fontenot, Timothy <TimothyFontenot@Eaton.com>
Sent: Wednesday, March 29, 2023 8:58 AM
To: Svoboda, Jess R <JessRSvoboda@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>; Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>; Vedula, Hari <NarahariVedula@Eaton.com>
Subject: RE: CPI Changes through ChaRM

With regard to the "Withdraw the CD" portion of Mike's explanation, you can reference the document Withdrawing a CD.pdffor those steps.

Thanks

Tim Fontenot
DevOps Lead, SAP Support
Mobile: +1 337 831-1278
timothyfontenot@eaton.com
www.eaton.com

Know more -> SAP ERGand SAP FAQ

Use below links for raising SAP support tickets via Employee Center:
To report an issue: Issue/Question-SAP Un1ty - Employee Center (service-now.com)
To make a request: Request Service-SAP Un1ty - Employee Center (service-now.com)

From: Svoboda, Jess R <JessRSvoboda@Eaton.com>
Sent: Wednesday, March 29, 2023 7:54 AM
To: Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>;

Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>; Fontenot, Timothy <TimothyFontenot@Eaton.com>; Vedula, Hari <NarahariVedula@Eaton.com>
Subject: RE: CPI Changes through ChaRM

Adding Hari to the thread since he will be the governance representative for the integration workstream.

From: Buntin, Mike <MikeRBuntin@Eaton.com>
Sent: Wednesday, March 29, 2023 8:23 AM
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>; Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Nalla, Karthikreddy <KarthikreddyNalla@eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>; Fontenot, Timothy <TimothyFontenot@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>
Subject: CPI Changes through ChaRM

Hi CPI team
I think there has been some confusion so let me hopefully help with a little clarity:

- For CPI you are not transporting changes between dev &prod (manual process) and therefore there is no future plan to have ChaRM Change Documents manage CPI changes.
- For RFC you can (and should from now on) create RFC **without** CD – ZOCR Eaton RFC Only.

Transaction Type	Transaction Type Description
ZOCR	Eaton RFC Only

- You still need to go back to the RFC when the change has moved to production and update the RFC to Confirmed status
    - SAP ERG - Confirming an RFC.pdf
    - For those RFCs for which you already have an CD, once the change is in Prod you need to Withdraw the CD and then update the RFC to Confirmed

Could I also ask for a little clean up of your existing RFCs? I see a lot there still in Being Implemented which I'm pretty sure are moved to prod.. keeping them up to date will really help clarity for all.

Hopefully this helps and maybe simplifies slightly.

Let me know of any questions.

Thanks
Mike

Mike Buntin
Director - SAP Solution Design & Governance - Operations & Enabling Value Chain, Eaton
Mobile: +44 (0)7803 858013
mikerbuntin@eaton.com

From: SAP COE <SAPCOE@Eaton.com>
Sent: 28 March 2023 21:56
To: Fontenot, Timothy <TimothyFontenot@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

All,

This is a situation where the documented process was not followed. While CPI changes require an RFC (with no CD), the actual change will be managed by ServiceNow.

Chris Stott
Senior Specialist, SAP Release Management
SAP Solution Design & Governance | Operating & Enabling Value Chain
ChrisStott@Eaton.com| +1 770 733-3244

Eaton Resource Group: SAP ERG / Governance

From: Fontenot, Timothy <TimothyFontenot@Eaton.com>
Sent: Tuesday, March 28, 2023 4:51 PM
To: Buntin, Mike <MikeRBuntin@Eaton.com>; Svoboda, Jess R <JessRSvoboda@Eaton.com>

Cc: SAP COE <SAPCOE@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

The short answer is yes……they should create RFC only.

However, if they create an RFC with CD and the CD does not get used (ie, they use SNOW to manage the change to Production), then it is just a matter of Withdrawing the CD after the given change has moved to Production (no harm done). But, if they create an RFC without CD and it is later determined that a CD is needed, the only fallback is to kill the RFC and create a new RFC with CD

The following is the recommended approach:

If a given system (ie, CPI) **is never intended** to go live in the future within Charm, then yes…..should be RFC only (no CD)

- However, if CD was created, it is just a matter of Withdrawing the CD after the given change has moved to Production (no harm done)

If a given system **is intended** to go live at some point in the future within Charm:

- If there is a chance that the given change will **NOT** migrate to Production before that given Charm Go live, then it would be best to do an RFC with a CD (so that the given change can be managed by Charm after go live)
- If it is likely that the given change **WILL** migrate to Production before that given Charm Go live, then it would be best to do an RFC without a CD
  ** Again, if the CD ends up not getting used, just is just a matter of Withdrawing the CD after the given change has moved to Production (no harm done)

Tim Fontenot
DevOps Lead, SAP Support
Mobile: +1 337 831-1278
timothyfontenot@eaton.com
www.eaton.com

Know more -> SAP ERGand SAP FAQ

Use below links for raising SAP support tickets via Employee Center:
To report an issue: Issue/Question-SAP Un1ty - Employee Center (service-now.com)
To make a request: Request Service-SAP Un1ty - Employee Center (service-now.com)

From: Svoboda, Jess R JessRSvoboda@Eaton.com
Sent: Tuesday, March 28, 2023 3:40 PM
To: Buntin, Mike MikeRBuntin@Eaton.com; Fontenot, Timothy TimothyFontenot@Eaton.com
Cc: SAP COE SAPCOE@Eaton.com
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Mike, I wish I read Chris's comment below because I looked up and referenced the same information just now. According to the documentation there was no requirement for a CD with CPI/PI, so I'm not sure where that requirement came from.

Given it is not transportable and the uncertainty of the CPI product lifecycle, I do not see a reason to implement with a CD nor have it for the near future.

There is no benefit from my vantage.

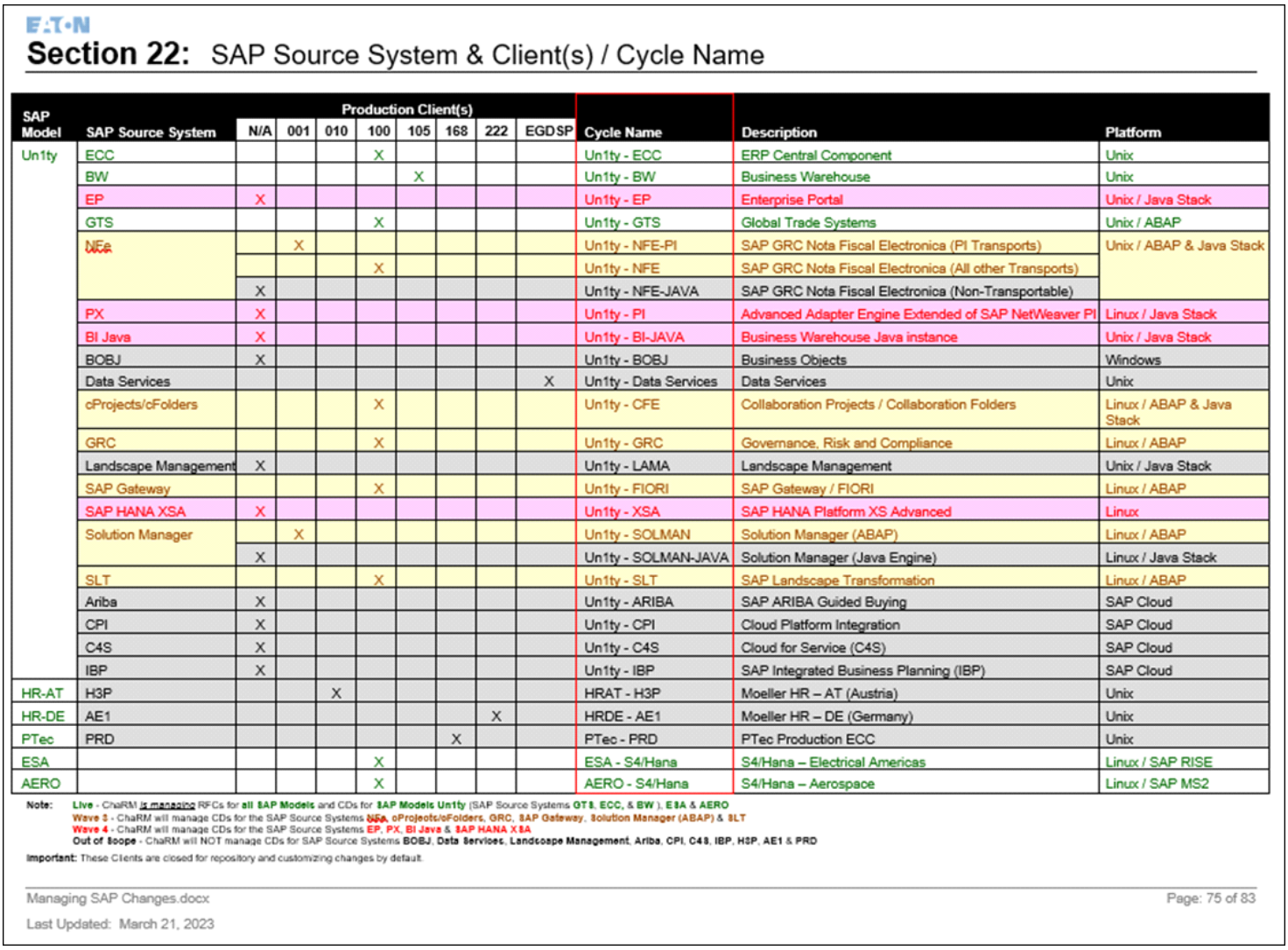
From: Buntin, Mike <MikeRBuntin@Eaton.com>
Sent: Tuesday, March 28, 2023 3:24 PM
To: Svoboda, Jess R <JessRSvoboda@Eaton.com>; Fontenot, Timothy <TimothyFontenot@Eaton.com>
Cc: SAP COE <SAPCOE@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Jess, Tim
If CPI changes are not transportable and CPI is out of scope of ChaRM CDs… would it be better to have them create RFC without CD?
Mike

From: SAP COE <SAPCOE@Eaton.com>
Sent: Monday, March 27, 2023 7:18 PM
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>
Cc: Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>; Lyden, Cahal J <CahalJLyden@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Diana,

Please see Managing SAP Changes(Section 22: SAP Source System & Client(s) / Cycle Name). I've provided an excerpt below for your reference.



EATON

Section 22: SAP Source System & Client(s) / Cycle Name

SAP Model	SAP Source System	Production Client(s) N/A	001	010	100	105	168	222	EGDSP	Cycle Name	Description	Platform
Un1ty	ECC				X					Un1ty - ECC	ERP Central Component	Unix
	BW					X				Un1ty - BW	Business Warehouse	Unix
	EP	X								Un1ty - EP	Enterprise Portal	Unix / Java Stack
	GTS				X					Un1ty - GTS	Global Trade Systems	Unix / ABAP
	NFe		X							Un1ty - NFE-PI	SAP GRC Nota Fiscal Electronica (PI Transports)	Unix / ABAP & Java Stack
					X					Un1ty - NFE	SAP GRC Nota Fiscal Electronica (All other Transports)	
		X								Un1ty - NFE-JAVA	SAP GRC Nota Fiscal Electronica (Non-Transportable)	
	PX	X								Un1ty - PI	Advanced Adapter Engine Extended of SAP NetWeaver PI	Linux / Java Stack
	BI Java	X								Un1ty - BI-JAVA	Business Warehouse Java instance	Unix / Java Stack
	BOBJ	X								Un1ty - BOBJ	Business Objects	Windows
	Data Services								X	Un1ty - Data Services	Data Services	Unix
	cProjects/cFolders				X					Un1ty - CFE	Collaboration Projects / Collaboration Folders	Linux / ABAP & Java Stack
	GRC				X					Un1ty - GRC	Governance, Risk and Compliance	Linux / ABAP
	Landscape Management	X								Un1ty - LAMA	Landscape Management	Unix / Java Stack
	SAP Gateway				X					Un1ty - FIORI	SAP Gateway / FIORI	Linux / ABAP
	SAP HANA XSA	X								Un1ty - XSA	SAP HANA Platform XS Advanced	Linux
	Solution Manager		X							Un1ty - SOLMAN	Solution Manager (ABAP)	Linux / ABAP
		X								Un1ty - SOLMAN-JAVA	Solution Manager (Java Engine)	Linux / Java Stack
	SLT				X					Un1ty - SLT	SAP Landscape Transformation	Linux / ABAP
	Ariba	X								Un1ty - ARIBA	SAP ARIBA Guided Buying	SAP Cloud
	CPI	X								Un1ty - CPI	Cloud Platform Integration	SAP Cloud
	C4S	X								Un1ty - C4S	Cloud for Service (C4S)	SAP Cloud
	IBP	X								Un1ty - IBP	SAP Integrated Business Planning (IBP)	SAP Cloud
HR-AT	H3P			X						HRAT - H3P	Moeller HR – AT (Austria)	Unix
HR-DE	AE1							X		HRDE - AE1	Moeller HR – DE (Germany)	Unix
PTec	PRD						X			PTec - PRD	PTec Production ECC	Unix
ESA					X					ESA - S4/Hana	S4/Hana – Electrical Americas	Linux / SAP RISE
AERO					X					AERO - S4/Hana	S4/Hana – Aerospace	Linux / SAP MS2

Note: **Live** - ChaRM is managing RFCs for **all SAP Models** and CDs for **SAP Models Un1ty** (SAP Source Systems **GTS, ECC, & BW**), **ESA & AERO**
Wave 3 - ChaRM will manage CDs for the SAP Source Systems **NFe, cProjects/cFolders, GRC, SAP Gateway, Solution Manager (ABAP) & SLT**
Wave 4 - ChaRM will manage CDs for the SAP Source Systems **EP, PX, BI Java & SAP HANA XSA**
Out of Scope - ChaRM will NOT manage CDs for SAP Source Systems **BOBJ, Data Services, Landscape Management, Ariba, CPI, C4S, IBP, H3P, AE1 & PRD**

Important: These Clients are closed for repository and customizing changes by default.

Managing SAP Changes.docx Page: 75 of 83
Last Updated: March 21, 2023

Chris Stott
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SAP Solution Design & Governance | Operating & Enabling Value Chain
ChrisStott@Eaton.com | +1 770 733-3244

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Eaton Resource Group: SAP ERG / Governance

From: Visuvasam, Diana <DianaVisuvasam@eaton.com>
Sent: Monday, March 27, 2023 9:28 AM
To: Lyden, Cahal J <CahalJLyden@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>; SAP COE <SAPCOE@Eaton.com>
Cc: Jandhyala, Ramesh <RameshJandhyala@Eaton.com>; Joshi, Shilna N <ShilnaNJoshi@eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

@SAP COE : Kindly let us know whether CPI changes should have CD in RFC.

@Jandhyala, Ramesh& @Joshi, Shilna N: FYI .

Thanks,
Diana V.

From: Lyden, Cahal J <CahalJLyden@Eaton.com>
Sent: Monday, March 27, 2023 6:56 PM
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>

Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Please confirm with SAP COE.

From: Visuvasam, Diana <DianaVisuvasam@eaton.com>
Sent: Monday, March 27, 2023 9:03 AM
To: Lyden, Cahal J <CahalJLyden@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Hi Cahal,

All our CPI RFCs have CD to add CPI as a service and this is the guidance I got from Ramesh.

Thanks,
Diana V.

From: Lyden, Cahal J <CahalJLyden@Eaton.com>
Sent: Monday, March 27, 2023 5:32 PM
To: Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Coming back to my question… The RFC was created with CD. To my knowledge, CPI doesn't use CDs unless something has changed.

From: Buntin, Mike <MikeRBuntin@Eaton.com>
Sent: Monday, March 27, 2023 5:12 AM
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>; Lyden, Cahal J <CahalJLyden@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Ok great – the fact that this now is under Functional Area "Deliver" means it needs Cahal to approve for partner "QTC_FDRB DELIVER DRB"
No approval from me needed in this RFC
Mike

From: Visuvasam, Diana <DianaVisuvasam@eaton.com>
Sent: 27 March 2023 10:07
To: Lyden, Cahal J <CahalJLyden@Eaton.com>; Buntin, Mike <MikeRBuntin@Eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Thank You @Lyden, Cahal Jfor your approval.

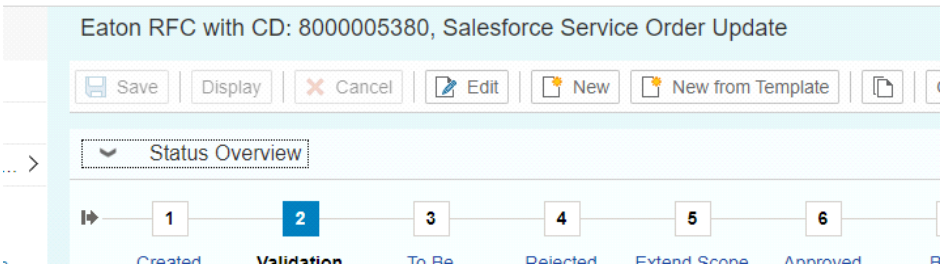
@Buntin, Mike: I have added the Scope and moved it for approval. Requesting you to check and approve the same.

Thanks,
Diana V.

From: Lyden, Cahal J <CahalJLyden@Eaton.com>
Sent: Saturday, March 25, 2023 2:25 AM
To: Buntin, Mike <MikeRBuntin@Eaton.com>; Visuvasam, Diana <DianaVisuvasam@eaton.com>
Subject: RE: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Hey Mike – I reviewed the CPI only change with Diana and I'm fine with moving forward.

Could the problem be the RFC has a CD and CPI doesn't use CDs yet?



From: Buntin, Mike <MikeRBuntin@Eaton.com>
Sent: Friday, March 24, 2023 2:57 PM
To: Visuvasam, Diana <DianaVisuvasam@eaton.com>; Lyden, Cahal J <CahalJLyden@Eaton.com>
Subject: Eaton RFC with CD: 8000005380, Salesforce Service Order Update

Hi Cahal
Can you check this RFC and that you're ok with it?

http://sapuxsmp.tcc.etn.com:8001/sap/bc/ags_workcenter/ags_crm_docln?objectid=8000005380&proctype=ZECR&

Diana, I'm really sorry but I cannot get this to the next stage, it keeps asking me for product ID and I

cannot get around it – if you enter a new RFC exactly like you're original then I'll approve it as soon as Cahal confirms he is ok with the content of this one.

Mike

Mike Buntin
Director - SAP Solution Design & Governance - Operations & Enabling Value Chain, Eaton
Mobile: +44 (0)7803 858013
mikerbuntin@eaton.com

Decoupling: When to use a broker like SAP Event Mesh – integration://excellence – The blog of Whitepaper InterfaceDesign

Clipped from: https://www.integration-excellence.com/decoupling-when-to-use-a-broker-like-sap-event-mesh/

Decoupling: When to use a broker like SAP Event Mesh

0

Published

We often hear "we need a messaging broker to be able to decouple applications". Moving away from Point-To-Point-Integration is really great to remove the dependencies between systems. But what does decoupling (or loose coupling) mean and which dimensions does it bring?

Here´s an overview (for more check out this video from AWS re:invent by Gregor Hohpe):

Decoupling	Runtime (async messaging)	Data Format (XML, JSON, ...)	Data Structure (Address)
Broker (e.g. SAP Event Mesh)	X		
API-M (e.g. SAP API Management)		(X)	(X)
ESB (e.g. SAP Cloud Integration)	X	X	X

Decoupling dimensions

Among all different types of dependencies we look at the most important ones:

- **Runtime** dependencies can be solved with asynchronous messaging, where the sender (system) can submit a message to the middleware and this is independent from the availability of the receiver.
- **Data Format** dependencies, where both systems have to speak the same technical language (XML/JSON/CSV/…). The decoupling takes place via converters. In API-M this can be solved with policies.
- **Data Structure** dependencies look at structural, technical and semantic differences of the fields and elements, which can include
  - the structure and arrangement of field names in a message (e.g. ZipCode vs. ZIP),
  - the data type behind a field (e.g. string/int, null/empty),
  - the semantic content of a field, e.g. the country code (DE vs. GER)

  The decoupling done with mappings like XSLT (for XML) or scripting/programming or via graphical mapping tools. In API-M it can be also done via policies, but we would not recommend that way.

XML) or scripting/programming or via graphical mapping tools. In API-M it can be also done via policies, but we would not recommend that way.

Going further in this article, let´s even combine Data Format and Data Structure into Message Format (for simplification). SAP calls this "aligned APIs", when sender and receiver speak the same language and where no mediation is required through a middleware (which is performing transformations, message mappings and even protocol switch).

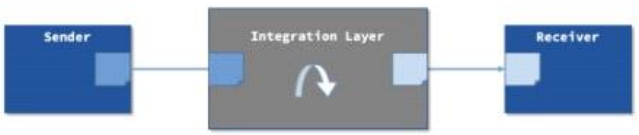
A broker is **decoupling runtime dependencies** through this pattern:

Runtime Decoupling

There are many brokers available in the market, from our experience we see mainly those below, who serve this main purpose, but have different implementation approaches of course. They typically handle (only) protocols like AMQP, MQTT or plain HTTP. Messages are being exchanged through topics and/or queues and sometimes work with Webhooks (to push messages to consumers).

- Rabbit MQ
- Kafka (Confluent)
- Solace
- SAP Event Mesh, SAP Advanced Event Mesh (technology: Solace)
- Microsoft Service Bus
- AWS SQS

An ESB is **decoupling Message Format dependencies** through this pattern:



Message Format decoupling

The main focus is to transform messages from one format to another. One can argue, this is creating a lot of "mediated point-to-point" integrations (which is true), but what is the alternative? Mediation here brings transparency and a clear approach to map the 2 different message formats. Solving this with a canonical data model, where all applications speak the same language is a nice theory, but the reality is hard: Each application has to map to this canonical data model with its own programming technique (which is rarely better)… In the end, connecting the dots (aligned message

theory, but the reality is hard: Each application has to map to this canonical data model with its own programming technique (which is rarely better)… In the end, connecting the dots (aligned message formats) through API Management or decoupled through a broker brings a mediated point-to-point landscape as well (at least from a connectivity point of view)!

Message Mapping in the applications

Actually **SAP Cloud Integration**, as an ESB, can decouple in all areas.

- There are standard transformers and converters to support Data Format Decoupling (JSON <-> XML <-> CSV), Zip/Unzip, Decode/Encode and Data Structure Decoupling (XSLT Mappings, Groovy/JavaScript Mappings, (graphical) Message Mappings in a low-code fashion.
- What many people forget: SAP Cloud Integration can also decouple the runtime through queuing mechanisms like JMS or Data Store. For more information on queuing check out this article. The JMS-Queuing feature is technically based on SAP Event Mesh, which is a white-label product of Solace!

Runtime and Message Format Decoupling with SAP Cloud Integration

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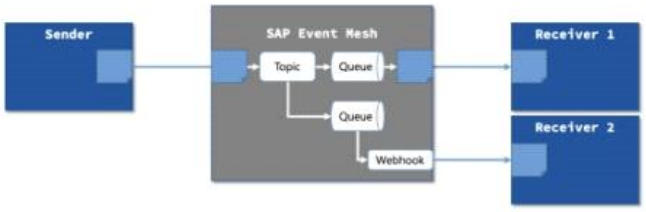
Do I still need a Broker?

SAP Event Mesh can connect directly with event consumers or producers through AMQP, MQTT, JMS or HTTP, such as SAP S/4HANA, where a lot of events are available meanwhile (see SAP API Business Hub), so there is a natural fit. But choosing a broker in all asynchronous messaging depends on the use case.

PubSub

The typical integration pattern is PubSub (Publish & Subscribe). You can easily configure a connection between different event producers and event consumers through topics and queues (or Webhooks where needed). This makes sense, if you dispatch the same event (message) to different receivers. However, please keep in mind, that you can send messages to multiple receivers as well by configuring this in a low-code environment.

this in a low-code environment.



PubSub with SAP Event Mesh

Replay

Another aspect is a replay capability which is available with brokers like Kafka, Solace or SAP Advanced Event Mesh. You can go back e.g. 2 days and replay all messages that were processed through a particular topic or queue (typically for one receiver only).

Additional Aspects

Brokers for Event-Driven Architectures serve the purpose of handling large volumes (but with a limited message size) in a scalable, low-latency way to decouple and ensure reliable messaging.

All of this can be achieved with SAP Cloud Integration, but with a higher price tag. SAP Cloud Integration is depending on the amount of messages (and volume: 1 message = 256 KB, so 1 MB = 4 messages), whereas SAP Event Mesh is licensed by bandwith in GB. The calculation (and comparison) can be done in the SAP discovery center.

When do you need a broker then of you have an ESB already?

- If your event producer/consumer speaks natively with a broker (e.g. via AMQP/MQTT)
- If you need a distribution model to multiple receivers and you want to implement a PubSub pattern
- If you need replay capabilities
- If you need to ensure FIFO (First-In-First-Out)/EOIO (Exactly-Once-In-Order) which is not (yet) available in SAP Cloud Integration
- For high-volume messaging (large volumes with high throughput, e.g. in IoT-scenarios or custom-developed mobile apps to process small messages from sensors or real-time analytics and eventing)

Conclusion

> You can achieve all aspects of decoupling with an ESB/iPaaS like **SAP Cloud Integration**. You might consider brokers like **SAP Event Mesh** for transparency reasons using PubSub when integrating multiple receivers or when you have the need for replay capabilites (SAP Advanced Event Mesh, Solace, Kafka). You can also use it, when you have event

when integrating multiple receivers or when you have the need for replay capabilites (SAP Advanced Event Mesh, Solace, Kafka). You can also use it, when you have event producers like SAP S/4HANA who can connect to your broker via AMQP/MQTT natively.

Please consider there are scenarios, where both components make sense (e.g. SAP Cloud Integration together with SAP Event Mesh (via AMQP-Adapter) or Kafka (via Kafka-Adapter)) and you can use the best of the 2 components together.

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Published in **Architecture**, **Connectivity**, **Integration Cookbook** and **Methodology**

Connectivity | Decoupling | Kafka | RabbitMQ | SAP Event Mesh | Solace

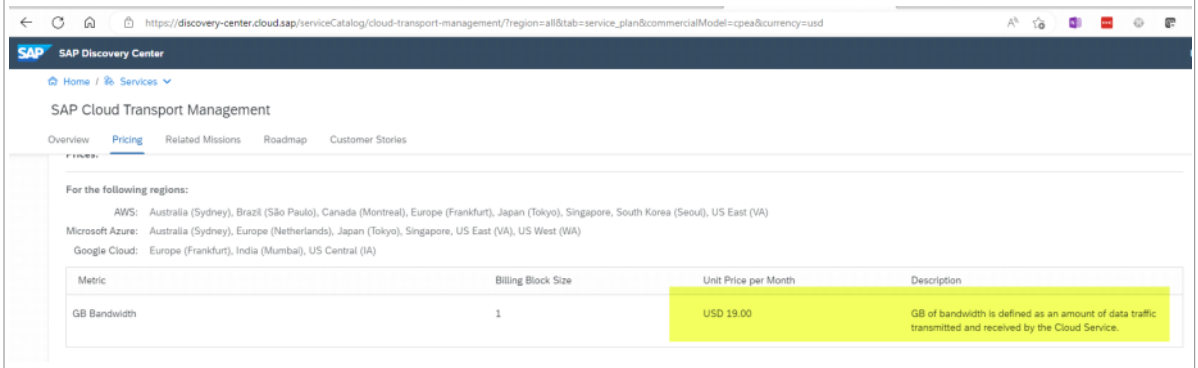
Transport

Wednesday, June 14, 2023 7:46 PM

CPI SAP cloud transport management

Wednesday, April 5, 2023 2:06 PM

https://www.sapstore.com/solutions/80212/SAP-Cloud-Transport-Management	What is it?
https://discovery-center.cloud.sap/serviceCatalog/cloud-transport-management/?region=all&tab=service_plan	Cost $19 per month for 1 GB



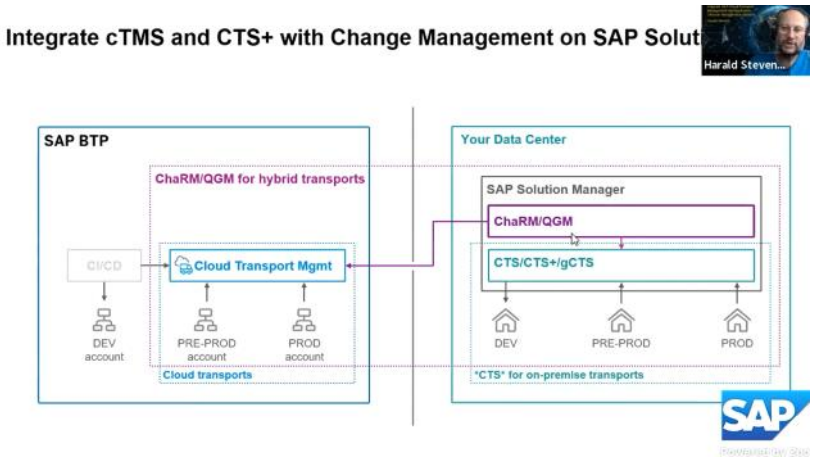
https://answers.sap.com/questions/13414399/transports-set-up-for-sap-cpi.html

Hello Nidhi,
Let me help with this question:

- Both CTS+ and SAP Cloud Transport Management (CTMS) can transport content in the format of Multitarget Application (MTA) archives, both in Neo and in Cloud Foundry environments
- Both can be integrated into change management, such as Change Request Management and Quality Gate Management of SAP Solution Manager today
- CTMS can also handle further application content, not only in the format of MTA files, and we are working on enabling more and more scenarios for CTMS (such as transports for further cloud environments, content types of further SAP BTP cloud services, content of SAP SaaS solutions)
- For CTS+, it is not planned to extend its functionality to further content types beyond MTA
- CTMS is a charged cloud service (for which you get a running service on corresponding cloud infrastructure provided in many data centers without having to take care for updates etc., with a cloud-like experience, such as with a landscape wizard), while CTS+ can be used without additional charge (while you have to consider efforts to operate and run a corresponding ABAP system on your own hardware). I consider costs for CTMS as moderate for what you get, we charge 18 EUR/1GB/month of data uploaded to the service (single transports of uploaded content are not charged separately - that is, you get charged for an archive and then can perform an arbitrary number of transports without additional charge) - this 1 GB can suffice for handling several hundred changes a month (of course, depending on the size of your archives - but especially for SAP Integration Suite, this should suffice for many iFlow packages).

So, as already outlined above, if you already have a CTS+ system and know that MTA-based content does suffice for now and the near future, you can stick to CTS+ and should be fine. Otherwise, our way forward will be the SAP Cloud Transport Management service, which is planned as central service that shall be able to handle the propagation of all relevant SAP cloud artifacts (also beyond MTA, in further environments besides Neo and Cloud Foundry, on SAP BTP and SAP cloud solutions).
We do not have plans to deprecate CTS+, it is only that new features (such as scheduling) will come for CTMS instead. You can find road map information of CTMS in SAP Road Map Explorer here.
BTW: you can try out CTMS free-of-charge in SAP BTP, trial environment.
I hope this helps.
Best regards,
Boris

From <https://answers.sap.com/questions/13414399/transports-set-up-for-sap-cpi.html>



Integrate cTMS with Change Management on SAP Solution Man

SAP Cloud Transport Management (cTMS) can be integrated with the Change Management tools on SAP Solution Manager: **Change Request Management** (ChaRM) or **Quality Gate Management** (QGM).

This allows synchronized transports of ABAP on-premise (via CTS), non-ABAP on-premise (via CTS+) and cloud artifacts (via cTMS) in hybrid projects.

This setup is very important for customers with strict audit requirements (like banking or pharmaceuticals).

The prerequisite for integrating cTMS with SAP Solution Manager is release 7.2 with SPS10 (available as of December 2019).

Interplay of SAP Cloud Platform Transport Management, CTS+ and ChaRM in hybrid landscapes | SAP Blogs

Wednesday, June 14, 2023 7:45 PM

Clipped from: https://blogs.sap.com/2020/01/31/interplay-of-sap-cloud-platform-transport-management-cts-and-charm-in-hybrid-landscapes/

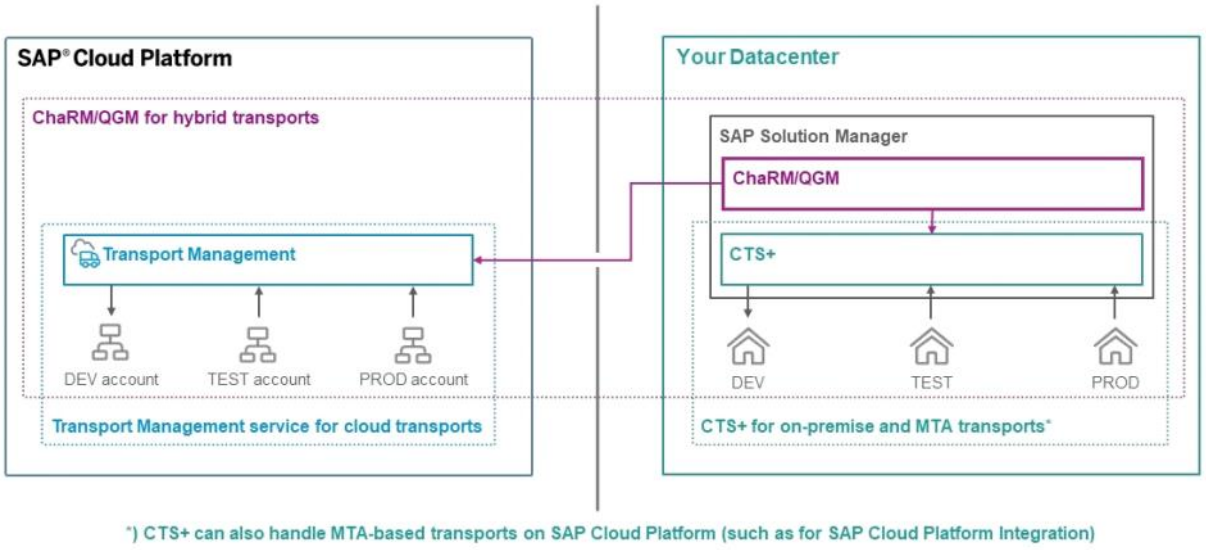
Overview

Many customers are confused which tools to use when it comes to transporting content in hybrid (cloud and on premise) landscapes. This blog describes our recommendations when to use SAP Cloud Platform Transport Management service (TMS) and when to use enhanced Change and Transport System (CTS+). It also talks about how these tools can be combined with each other and with SAP Solution Manager Change Request Management (ChaRM) or Quality Gate Management (QGM).

High-level statements

Let's start with some central statements:

- **Transport Management (TMS) handles transport of development artifacts and application content in the cloud**
- **Enhanced Change and Transport System (CTS+) mainly deals with transport of non-ABAP content on premise**
- **TMS and CTS+ can peacefully coexist**
- **Both tools can be integrated into SAP Solution Manager Change Request Management (ChaRM) or Quality Gate Management**
- **TMS and CTS+ can also be combined with Continuous Integration Pipelines for handling the (Continuous) Delivery**



As all of you know 'the devil is in the details', so let's have a closer look.

The fine print

SAP Cloud Platform Transport Management

SAP Cloud Platform Transport Management (TMS) is THE solution for transporting content in SAP Cloud Platform (Neo and Cloud Foundry environment) and is generally available since December 2018. It is also available in a trial environment.

TMS is a service running in the Cloud Foundry environment, but the transport targets can be subaccounts in Neo environment , spaces in the Cloud Foundry environment and even tenants of multi-tenant enabled content runtimes like SAP Data Hub. The transports can be performed across global accounts and even between different regions (aka data centers).

The architecture of TMS allows the transport of any type of content by offering APIs to the consuming SAP Cloud Platform services or applications. This means that services which want to make TMS available for their content have to implement these APIs. As of December 2019 this has already been done for:

- SAP Cloud Platform Integration in the Neo environment
- Workflow in the Cloud Foundry environment
- SAP Fiori in the Neo environment
- Business Logging in the Cloud Foundry environment
- HTML5 repository in the Cloud Foundry environment

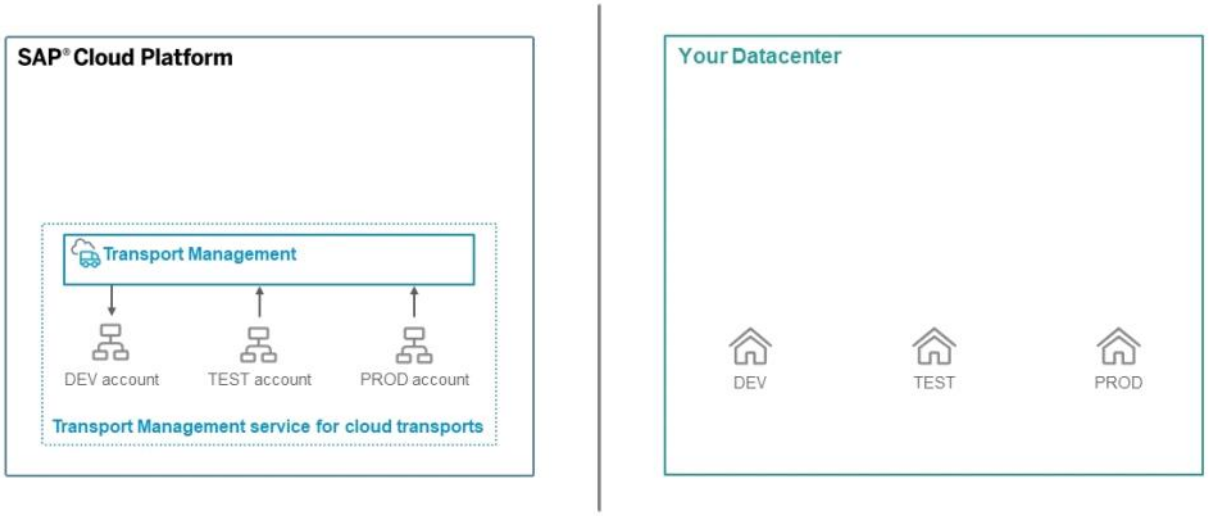
Besides that, TMS can transport development artifacts which can be packaged in Multi-Target Application (MTA) archives and SAP HANA delivery units if the SAP HANA database is hosted in SAP Cloud Platform.

For more details please have a look into the SAP documentation on TMS.

We will step-by-step increase the coverage of Transport Management for SAP Cloud Platform services. We also plan to use TMS for transporting application specific content of some of SAP's SaaS solutions, for example SAP SuccessFactors.

On the other hand, we are not planning to extend the reach of TMS to on-premise systems (exceptions may apply to private cloud scenarios…).

In summary SAP Cloud Platform Transport Management will be further developed to cover a growing part of SAP Cloud Platform content and is therefore the way to go for customers planning to implement projects using SAP Cloud Platform services.



Enhanced Change and Transport System

The enhanced Change and Transport System (CTS+) has been available for many years to transport on premise non-ABAP content (like SAP Netweaver Development Infrastructure) via the ABAP Change and Transport System. You can model your non-ABAP systems as virtual systems in your transport landscape and connect them via transport routes.

This concept has been extended a few years ago to SAP Cloud Platform (Neo and Cloud Foundry environment). Please note that the ABAP server acting as CTS+ control system (in many cases an SAP Solution Manager) resides in your on premise data center even for the SAP Cloud Platform transports.

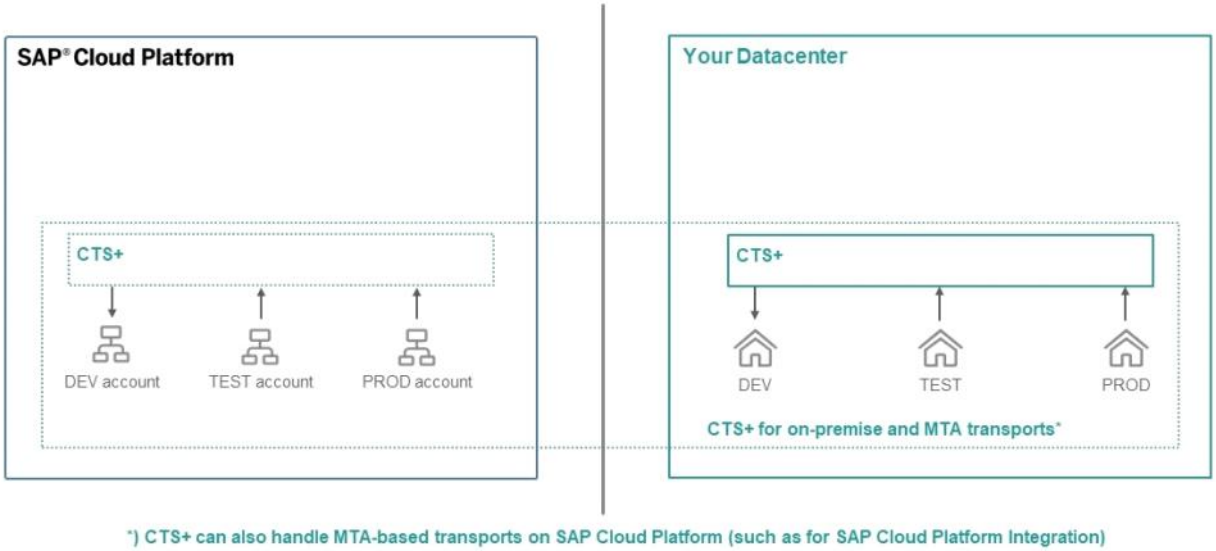
I have described setting up CTS+ for SAP Cloud Platform in this blog.

The basis for transporting SAP Cloud Platform content via CTS+ is the Multi-Target Application (MTA). The content to be transported is packaged into an MTA archive file and attached to the CTS+ transport request.

This in turn means that only cloud content that can be packaged into an MTA can be transported with CTS+. For a detailed list of which artifact types are covered by MTA see here for Neo and here for Cloud Foundry. Basically we are talking about development artifacts like HTML5 or NodeJS applications and some application content like SAP Cloud Platform Integration packages in the Neo environment.

We will continue to support the MTA based transport of SAP Cloud Platform content via CTS+ but we are not planning to extend the CTS+ coverage to other content types in SAP Cloud Platform or other SAP cloud based SaaS solutions.

So if you use MTA based content only in SAP Cloud Platform, CTS+ can be a valid choice.

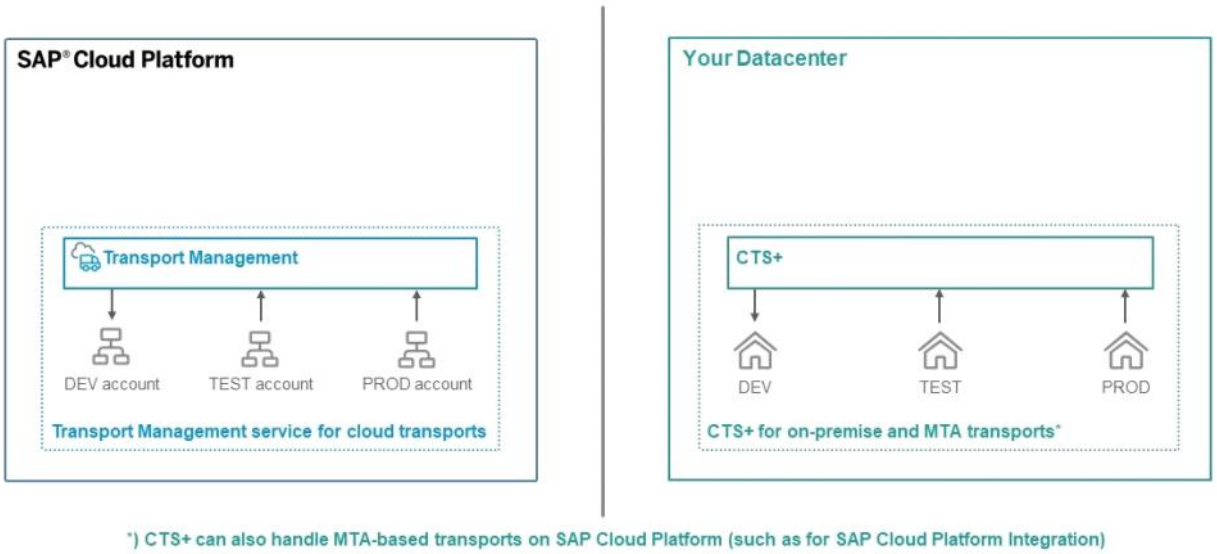


Coexistence of TMS and CTS+

As I have written in the previous section CTS+ supports only SAP Cloud Platform artifacts which can be bundled into a Multi-Target Application. This is not the case for many service specific artifact types in SAP Cloud Platform. Therefore, there might come the time to use the cloud based Transport Management service and the on premise based enhanced Change and Transport System in parallel.

Technically this is not a problem, even when targeting the same subaccounts (or spaces) in SAP Cloud Platform. The challenge lies more on the governance level. A typical approach would be to clearly define which content types are transported with which tool. For the MTA enabled artifacts you have the choice between TMS and CTS+, whereas the rest always calls for TMS.

In the long run we recommend performing all cloud related transports via TMS and the on premise transports with CTS+.

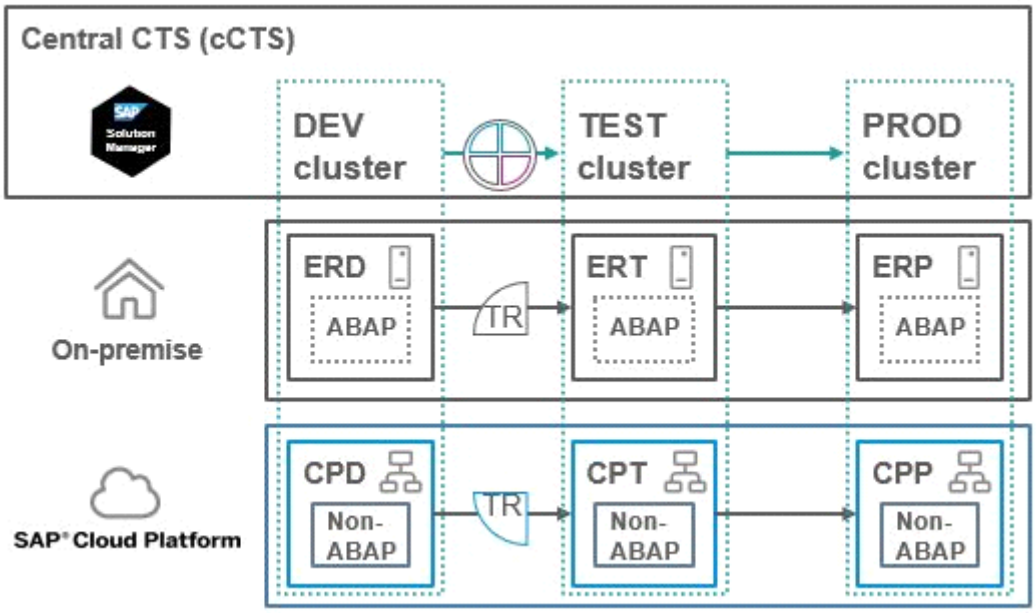


Integration with SAP Solution Manager Change Request Management

In many cases an application involves several parts which run in separate systems in your landscape. A typical example would be a functionality running in a backend system (like SAP S/4HANA) running on premise which is extended by a nice frontend running on SAP Cloud Platform. These kinds of projects call for a hybrid change management covering all environments and allowing to synchronize the changes in the different systems respectively subaccounts or spaces.

We offer tools in SAP Solution Manager for this requirement, named Change Request Management (ChaRM) and Quality Gate Management (QGM). The good news is that both CTS+ and TMS can be integrated into the ChaRM or QGM processes.

The **integration of CTS+ into ChaRM** is available for quite a while so that MTA based CTS+ transports of SAP Cloud Platform content can be included into and managed via change documents in SAP Solution Manager. Via the central Change and Transport System (cCTS) it is even possible to make SAP Cloud Platform Neo subaccounts or Cloud Foundry spaces members of so-called system clusters which group several systems of different landscapes with the same role (development, test, production, …) into one 'super-system'. The transports from the different source systems in the development cluster are also bundled forming so called transport collections. For more information about cCTS please check the corresponding SAP documentation.



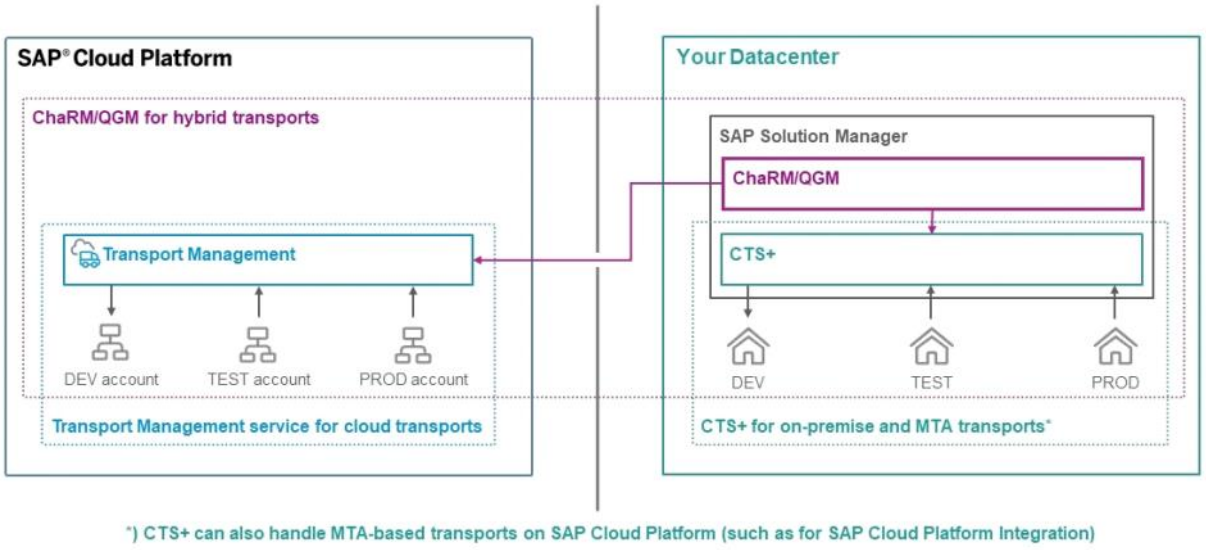
The default configuration for this scenario would be that the SAP Solution Manager would not only run the Change Request Management functionality but would also be the central transport server for CTS+. Here it is important to know that the CTS+ integration of SAP Cloud Platform requires an SAP Netweaver release of 7.40 SP10 or above. Therefore, this setup requires an SAP Solution Manager 7.2 (but you all should have upgraded your SolMan 7.1 by now…).

The integration of SAP Cloud Platform Transport Management into ChaRM, however, is quite new. It has been released in December 2019 with SPS 10 for SAP Solution Manager 7.2. The configuration is described in this document on SAP Help Portal.

Basically, the TMS transport nodes are modeled as external services in SAP Solution Manager and then assigned to a solution. When using the integration, you can select which transport requests in TMS belong to a specific change document in Change Request Management. With this information SAP Solution Manager is able to trigger the imports into the corresponding subaccounts whenever the change document reaches the appropriate state, for example 'To be tested'.

On the side of TMS the corresponding transport nodes are marked as being 'controlled by SAP Solution Manager'. This prevents these nodes from performing imports directly from within TMS.

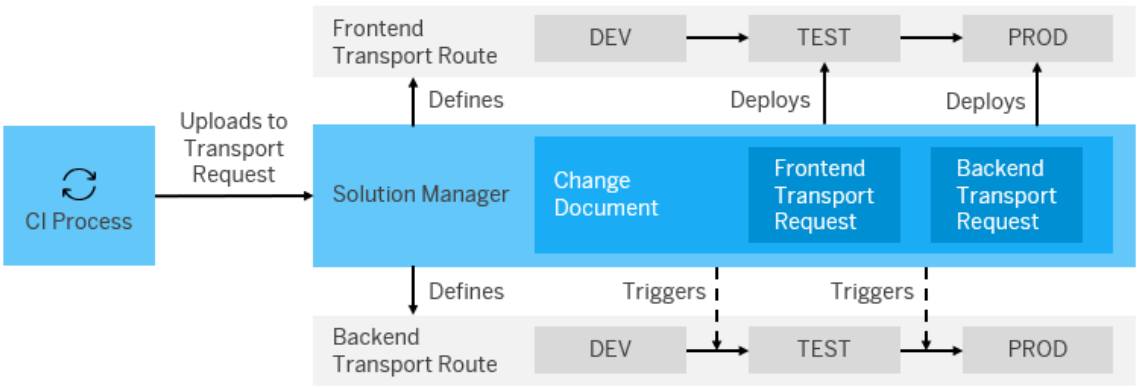
The overall architecture for using TMS and CTS+ with SAP Solution Manager looks like this:

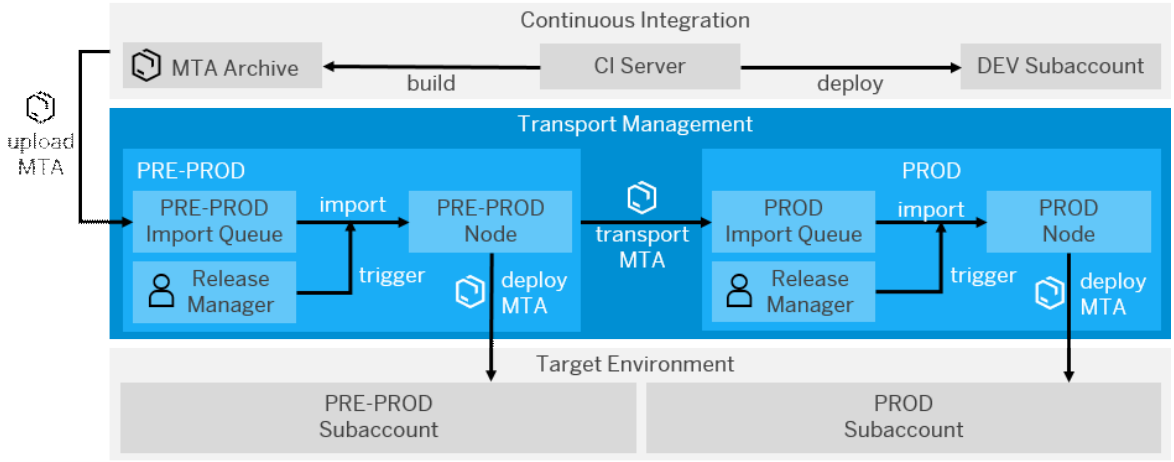


Usage of TMS and CTS+ in CI pipelines

Development teams in SAP Cloud Platform very often make use of Continuous Integration processes by storing the development artifacts in a central source code repository like Git. Upon committing a change towards this source code repository a continuous integration server like Jenkins is triggered and runs a CI pipeline which involves steps like building the development artifacts, deploying them to a test environment, running automated tests and code scans, etc.

In the context of the [project 'Piper'] SAP offers pre-configured CI pipelines for typical scenarios and also a library of pipeline steps that can be used by you. These steps include the ones necessary to communicate with CTS+ and/or TMS. Built on these pipeline steps there are two template scenarios for using CTS+ or TMS in a Continuous Integration / Continuous Delivery context:

- 



Summary

You should see enhanced Change and Transport System and SAP Cloud Platform Transport Management as two independent transport tools with different target environments. CTS+ (mainly) for on premise non-ABAP transports and TMS for transports in the cloud. In many hybrid environments both tools will be used in parallel. The overlap on Multi-Target Application based content allows for a smooth transition from CTS+ to TMS where needed.

An integration into higher level change management tools like SAP Solution Manager Change Request Management is possible for both, CTS+ and TMS. On the development side both tools can be integrated into Continuous Integration / Continuous Delivery scenarios.

I hope to have clarified the uses cases for CTS+ and TMS in the context of hybrid landscapes and look forward to your feedback and questions.

How to use the integration of SAP Cloud Platform Transport Management into SAP Solution Manager Change Request Management and Quality Gate Management | SAP Blogs

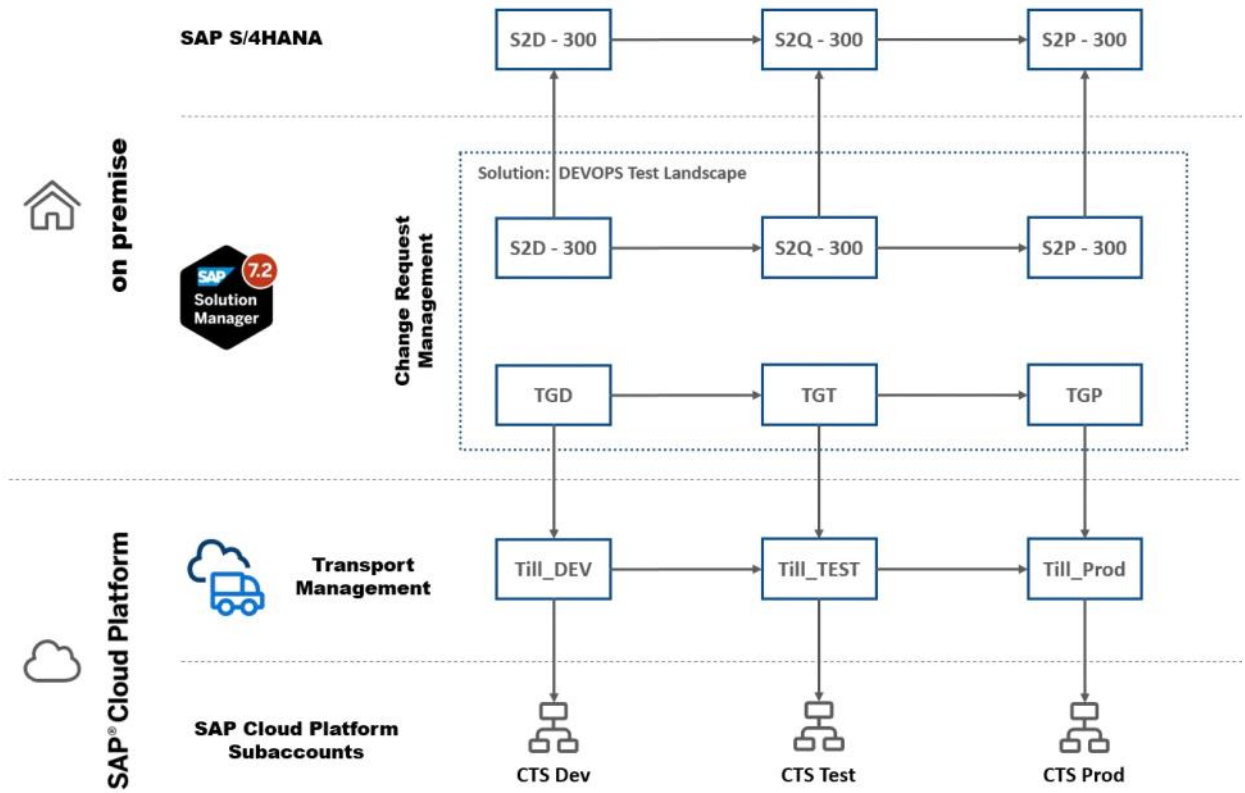
Clipped from: https://blogs.sap.com/2020/04/27/how-to-use-the-integration-of-sap-cloud-platform-transport-management-into-sap-solution-manager-change-request-management-and-quality-gate-management/

Overview

In this blog I will describe how to use the integration of SAP Cloud Platform Transport Management (TMS) into SAP Solution Manager Change Request Management (ChaRM) and Quality Gate Management (QGM). This integration is available since December 2019 with SPS10 for SAP Solution Manager 7.2. In this blog I will concentrate on Change Request Management but Quality Gate Management uses exactly the same infrastructure.

I will start with describing some prerequisites you need to fulfill for this scenario to work. This will be followed by some preparations in SAP Solution Manager ChaRM and Transport Management. After that I will create a TMS transport request, assign it to a ChaRM change document and trigger the imports into the SAP Cloud Platfrom subaccounts by the corresponding status changes in ChaRM. The whole process will be documented by tons of screenshots.

The overall landsacpe looks like this:



Prerequisites

- The SAP Solution Manager 7.2 has at least SPS10 implemented, which is available since December 2019 and ChaRM or QGM are configured.
- Optionally you can make on premise systems available in SAP Solution Manager. In this example I have connected the SAP S/4HANA on premise systems S2D, S2Q and S2P to the SAP Solution Manager.

Preparations in Transport Management

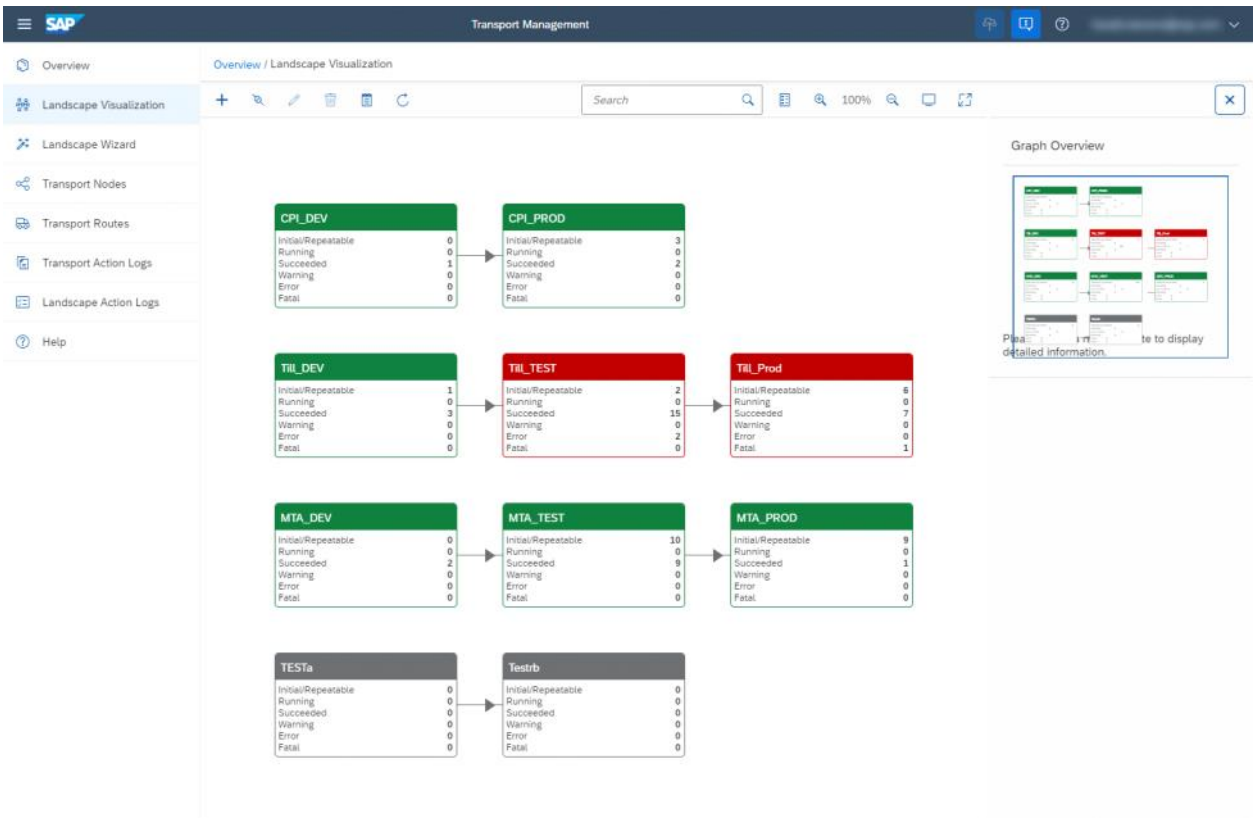
I have set up SAP Cloud Platform Transport Management following the documentation at Set Up the Environment to Transport Content Archives directly in an Application including the creation of a TMS service instance with a service key. This information is later needed to configure the RFC connections from SAP Solution Manager to Transport Management.

I have also created a transport landscape in TMS which consists of three transport nodes connected to three SAP Cloud Platform Neo subaccounts. This is described in the chapter Configuring the landscape in the SAP documentation. The destinations pointing from Transport Management to the Neo subaccounts are of the format 'https://slservice.<landscape-host>/slservice/slp/basic/<account-id>/slp/' where the <landscape-host> part depends on the data center your subaccount runs in. It can be derived for example when you access the 'Overview' tab in the SAP Cloud Platform Cockpit. The URL of this page is of the format 'https://account.<landscape-host>/cockpit#/…'. For subaccounts running in the SAP datacenter Europe in Rot <landscape-host> has the value 'eu1.hana.ondemand.com'. The <account-id> can also be found on the overview page in the section 'Subaccount Information – Technical Name'.

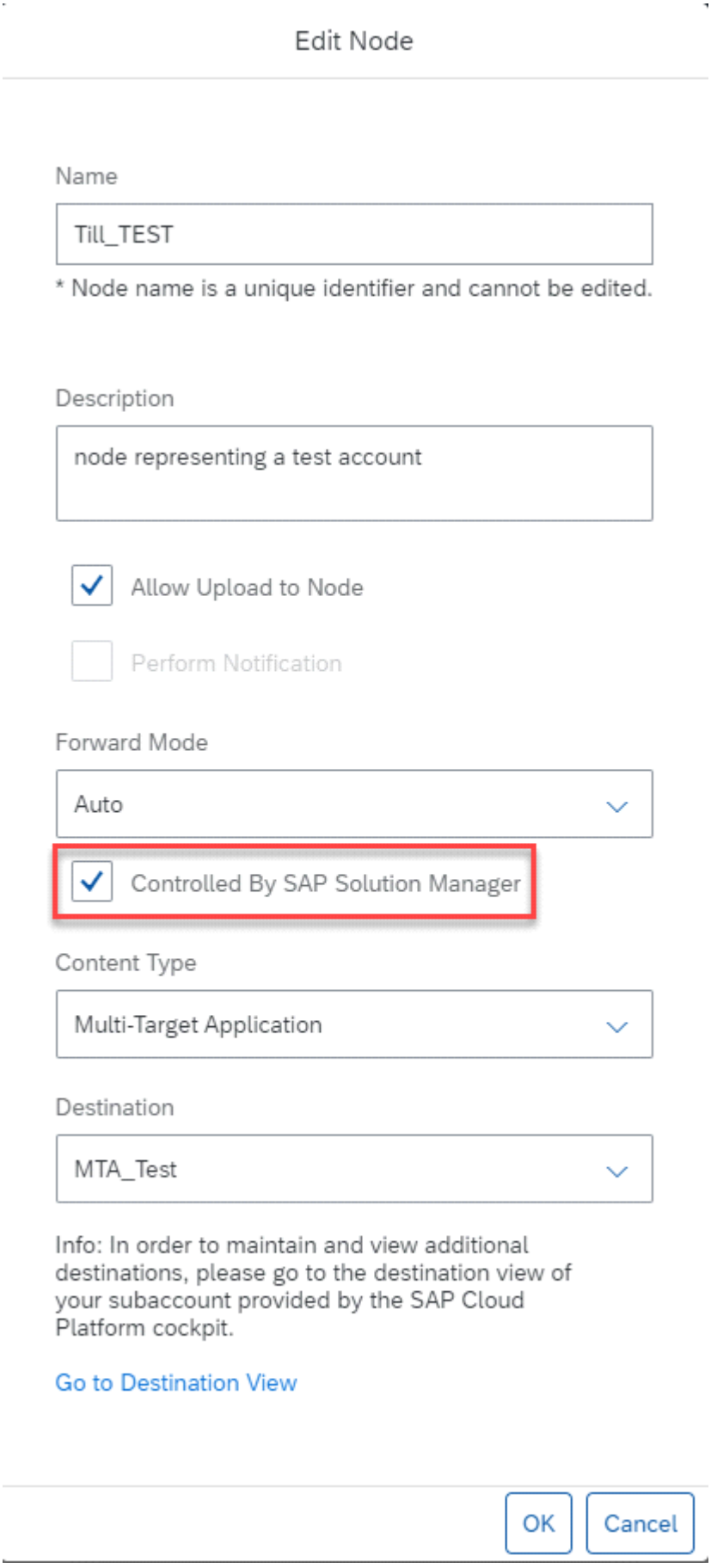
In this scenario I am using the Solution Export Wizard to create the TMS transports to be handled by SAP Solution Manager. Therefore the configuration needed for the Solution Export Wizard has to be performed in the Neo development subaccount. Please see the documentation 'Set Up Direct Uploads of MTA Archives Using the Transport Management Service'. Basically you are creating a destination to the TMS in the Solution Lifecycle Management service of the development subaccount. You will be using input from the service key of the TMS service instance. Don't forget the property 'sourceSystemId' of the destination to connect to the development node in your TMS landscape.

In the SAP Cloud Platform Cloud Foundry environment the integration works as well, only the creation of a TMS transport request would work differently, because the Solution Export Wizard (which I will be using later) is only available in the Neo environment. In Cloud Foundry environment you would have to either create the MTA from WebIDE and attach it manually to a new transport request or make these steps part of your CI/CD pipeline.

The scenario uses the nodes Till_DEV, Till_TEST and Till_PROD.



What differs from ‘normal’ transport landscapes is that I have set the flag ‘Controlled by SAP Solution Manager’ for the test and production nodes.



I have not set this flag for the development node, because I will use this node for creating transport requests. This is the recommended approach for

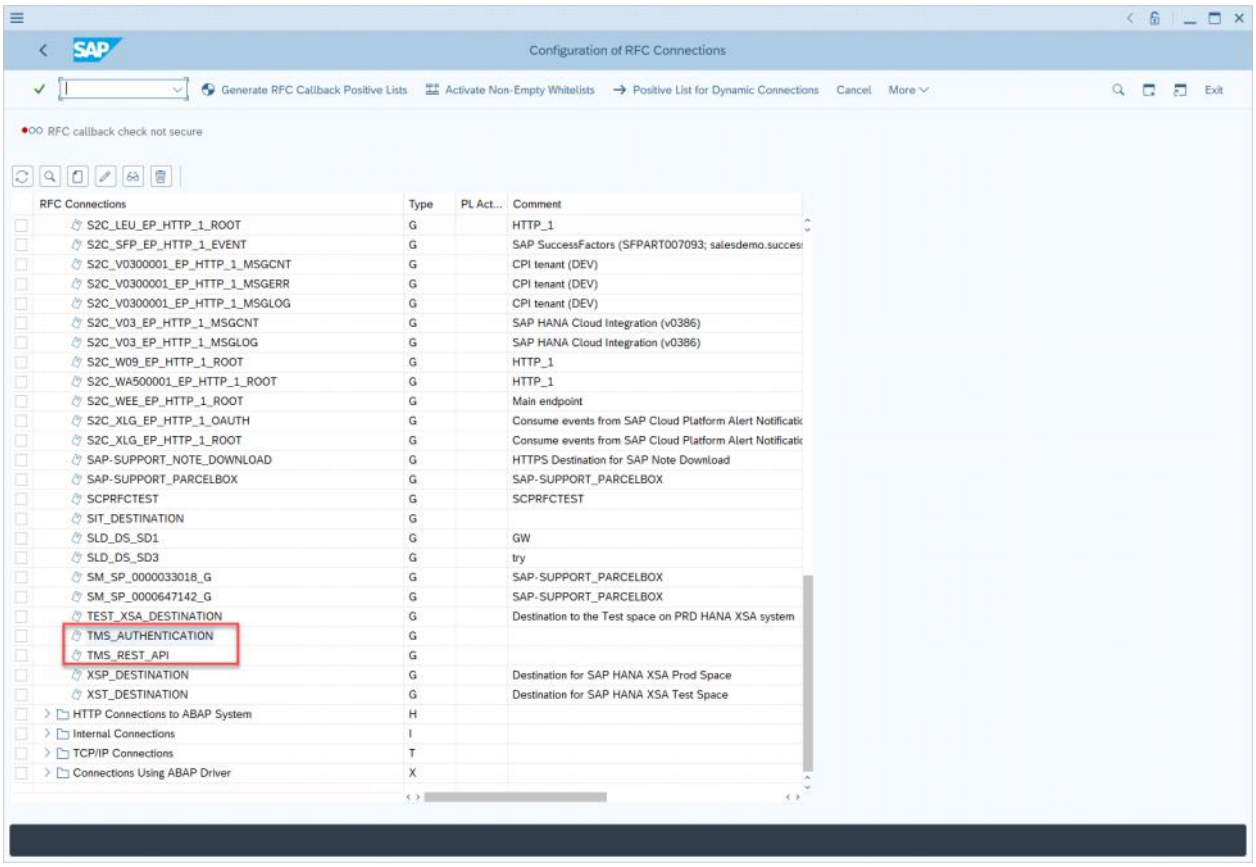
the TMS – ChaRM integration scenario.

Preparations in SAP Solution Manager

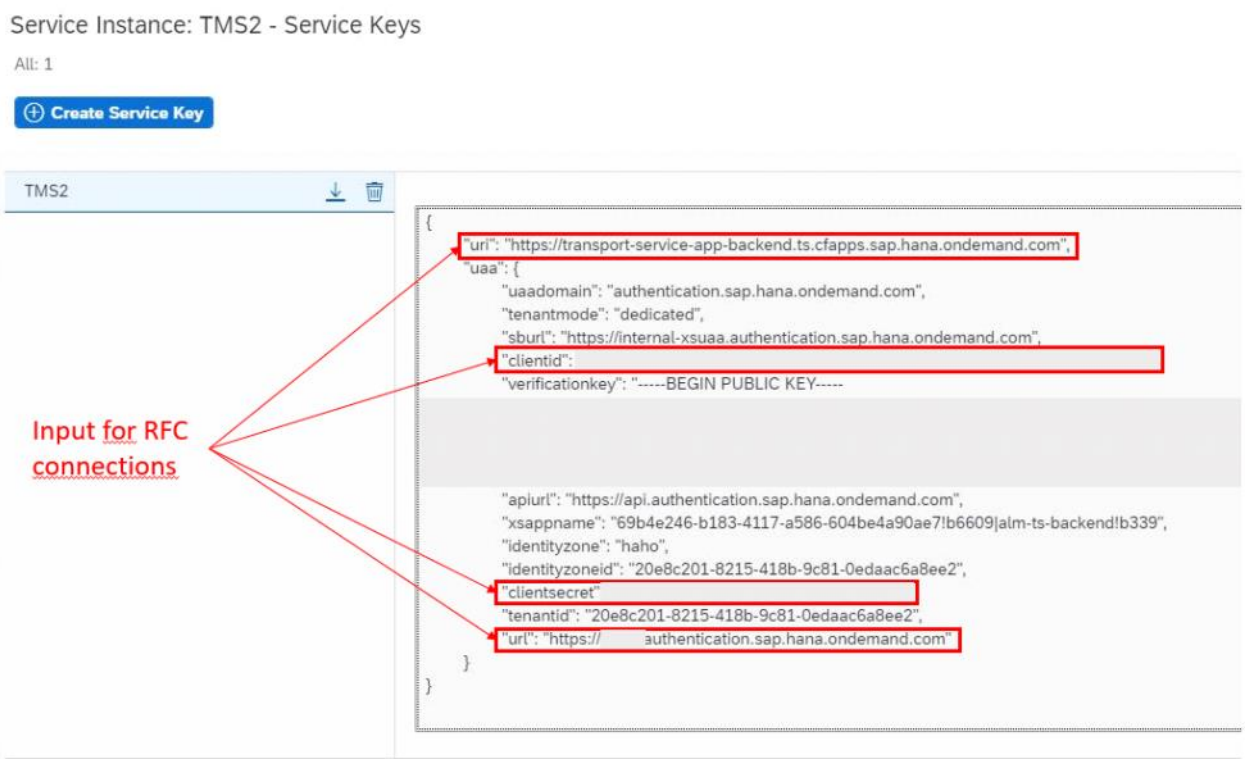
The overall setup procedure for the integration of Transport Management and SAP Solution Manager ChaRM is described in '[Change Control Management Using SAP Cloud Platform Transport Management Service]'. In detail the following things have to be done:

Create RFC connections to Transport Management (transaction SM59)

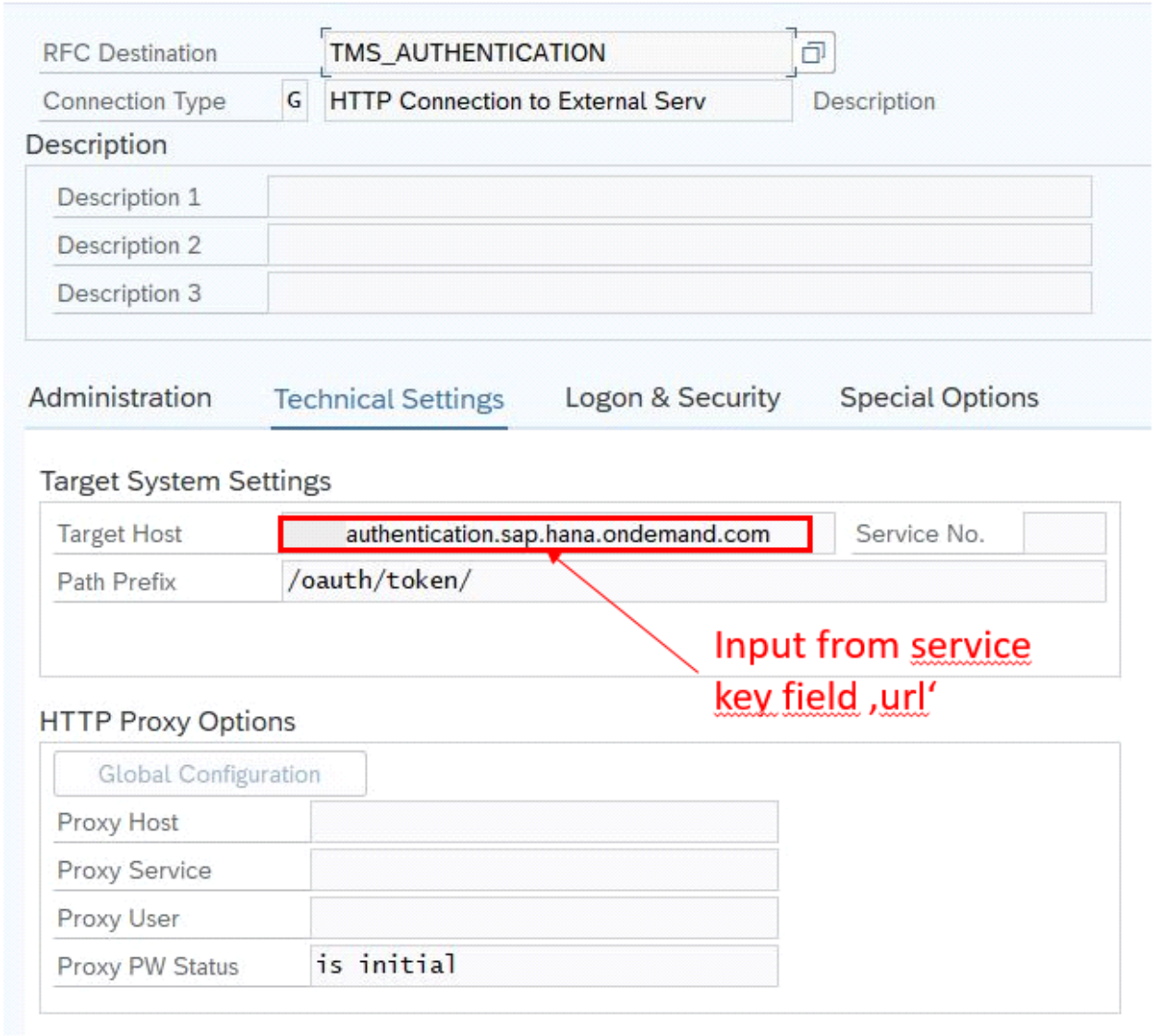
I created two RFC connections to allow SAP Solution Manager to communicate with Transport Management:



One connection (TMS_AUTHENTICATION) is used to obtain an oauth token for the API calls from SAP Solution Manager to Transport Management. For this connection I used the information from the Transport Management service instance service key.



These value are used in the SM59 input screens:


RFC Destination
TMS_AUTHENTICATION
Connection Type
G
HTTP Connection to External Serv
Description
Description
Description 1
Description 2
Description 3
Administration
Technical Settings
Logon & Security
Special Options
Target System Settings
Target Host
authentication.sap.hana.ondemand.com
Service No.
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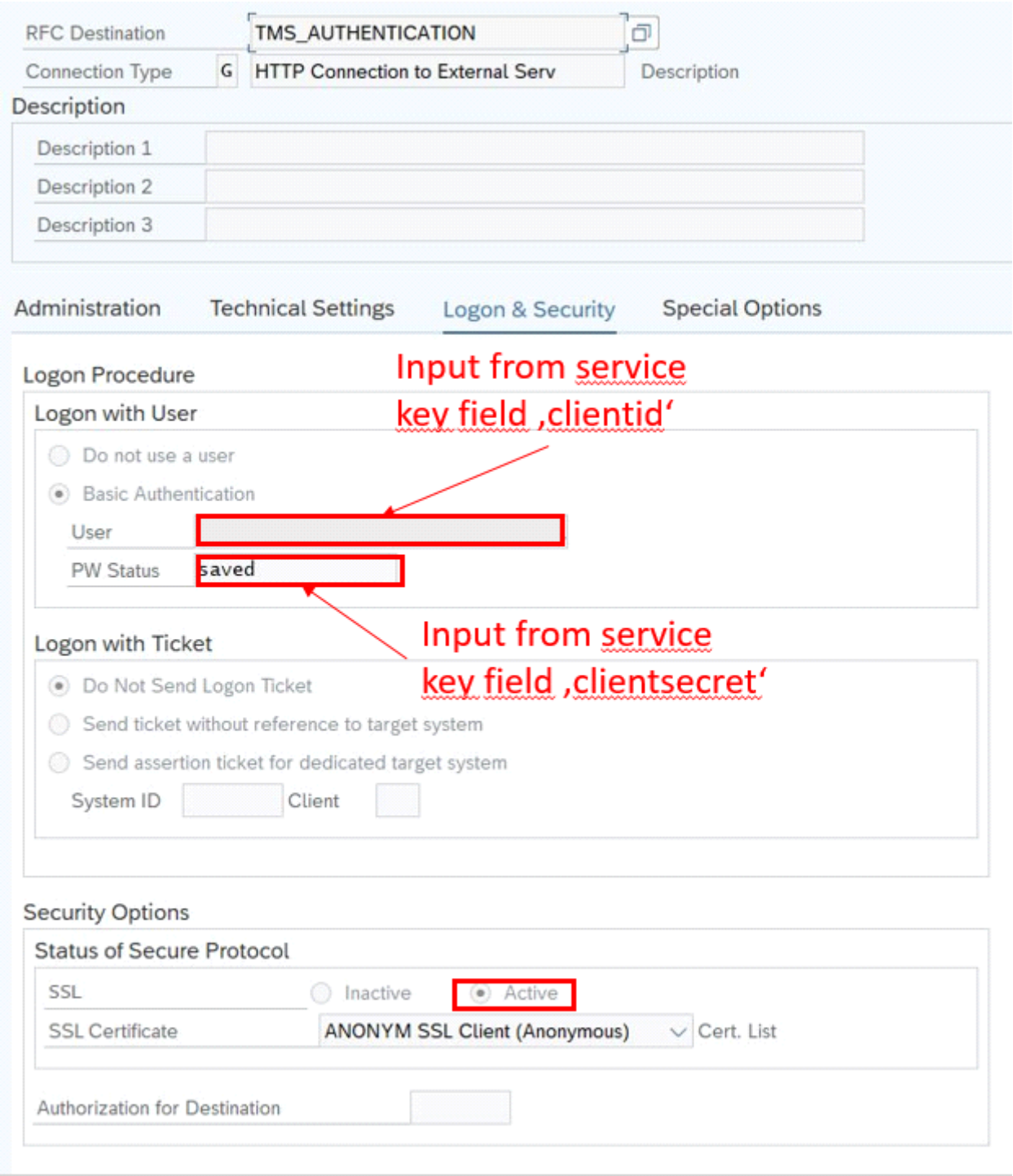
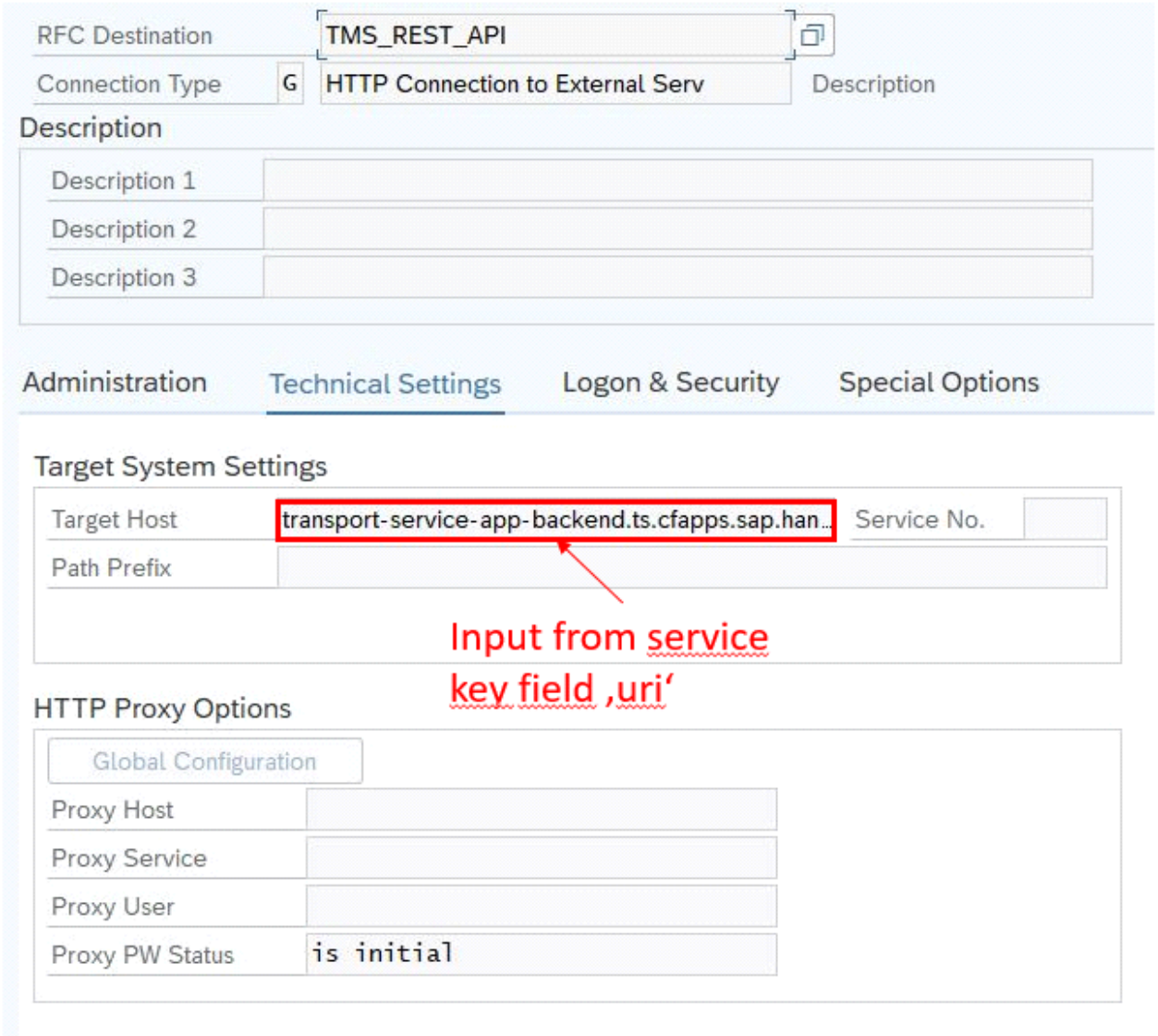
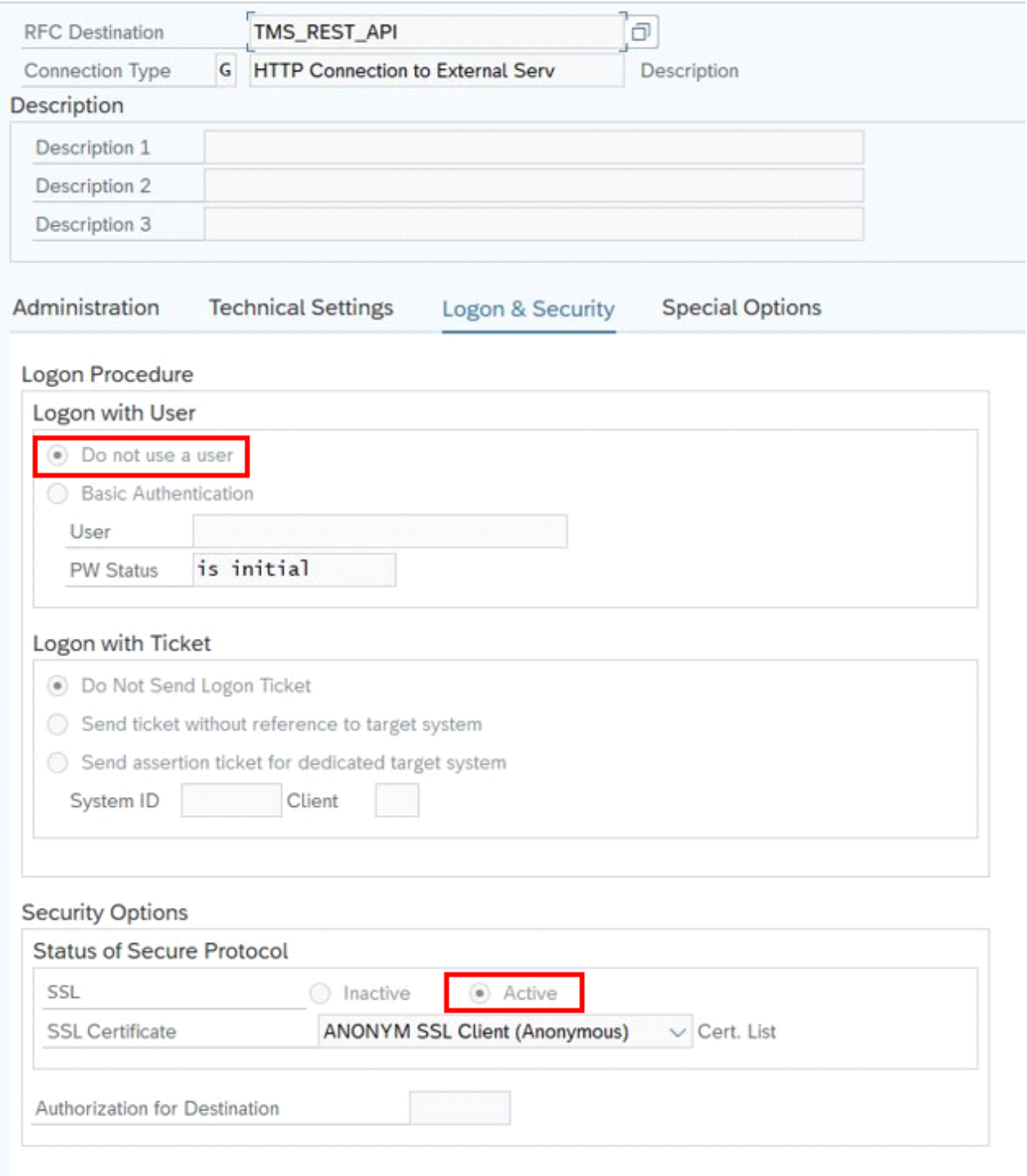


The second RFC connection is used for calls to the REST API of Transport Management.


RFC Destination
TMS_REST_API
Connection Type
G
HTTP Connection to External Serv
Description
Description
Description 1
Description 2
Description 3
Administration
Technical Settings
Logon & Security
Special Options
Target System Settings
Target Host
transport-service-app-backend.ts.cfapps.sap.han...
Service No.
Path Prefix
Input from service key field ‚uri‘
HTTP Proxy Options
Global Configuration
Proxy Host
Proxy Service
Proxy User
Proxy PW Status
is initial



Please make sure to activate the SSL protocol for both RFC connections.

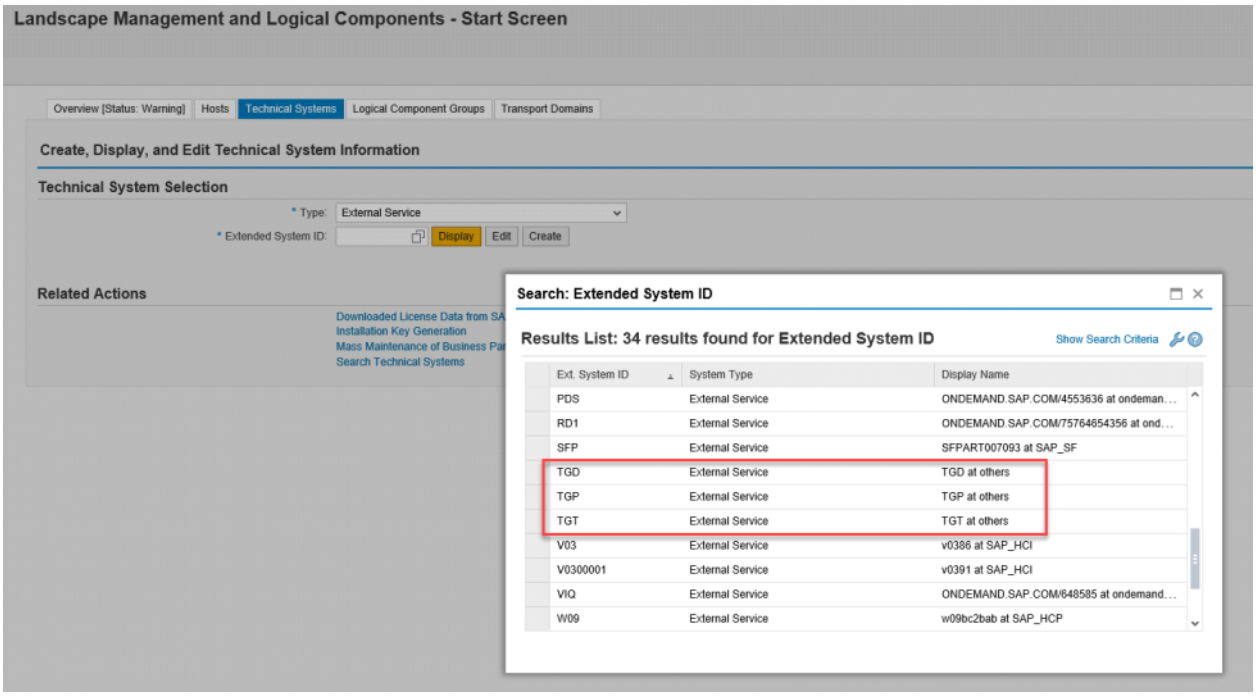
Unfortunately the RFC connection checks do not deliver really useful information. For the authentication RFC the connection check results in error 400 (bad request). This is the expected message and does not indicate a real error. The REST API RFC connection check asks for a user name and password as the expected result.

In some cases we encountered the error message SSSLERR_SERVER_CERT_MISMATCH for the REST API RFC. This can be fixed by setting the paramenter 'icm/HTTPS/client_sni_enabled' to TRUE. For more information please check SAP note 510007.

These RFC connections will be used in the subsequent steps.

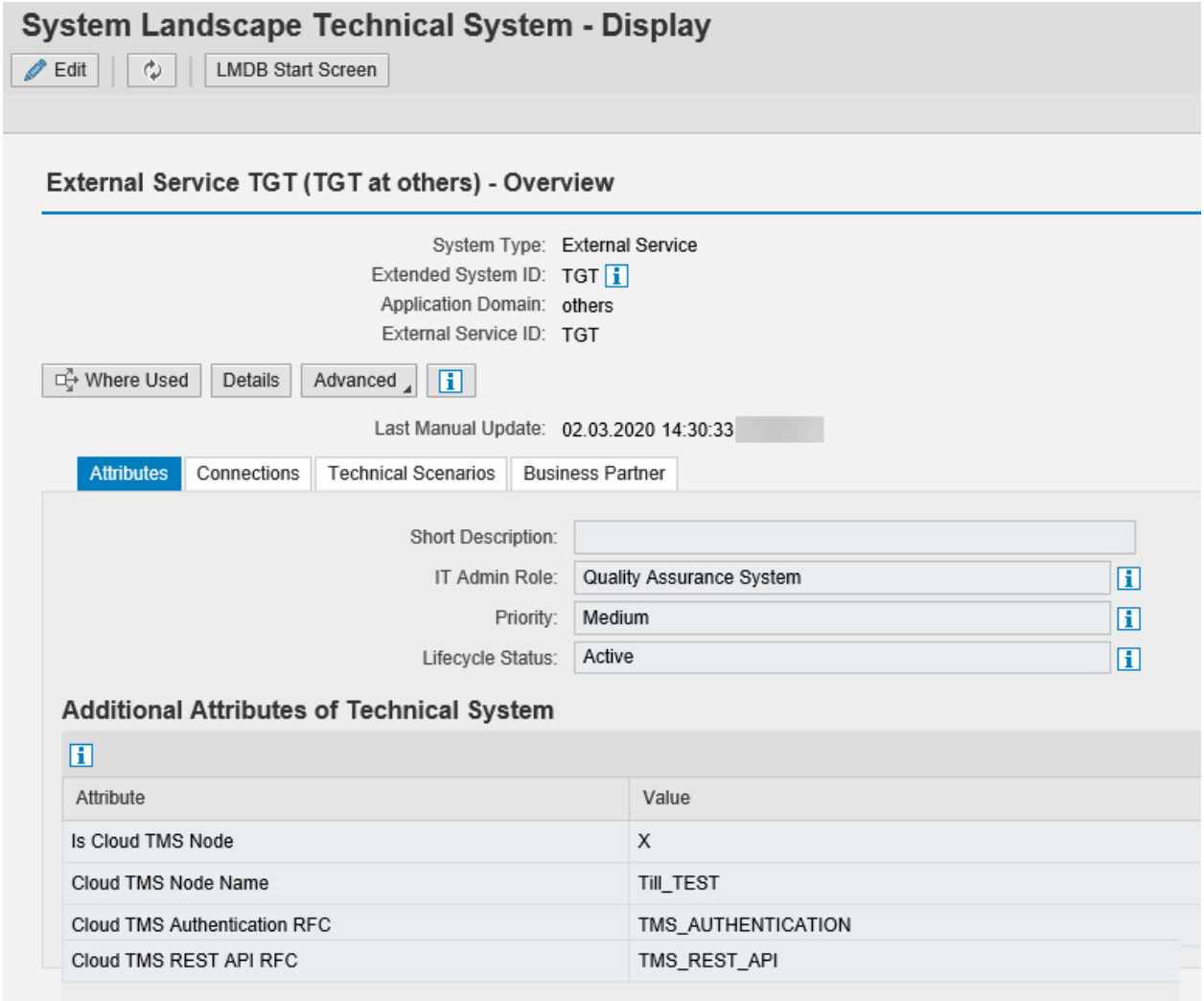
Create external service systems for the Transport Management nodes (transaction LMDB)

All nodes in Transport Management which should be reflected in ChaRM have to created as external services in LMDB. I have created three external services for the three nodes in my landscape.



There are four special attributes which have to be configured for each node:

- **Is Cloud TMS Node**: X
- **Cloud TMS Node Name**: The name of the node in TMS, here Till_TEST. Please observe that this name is case sensitive.
- **Cloud TMS Authentication RFC**: The RFC connection used for authentication, here TMS_AUTHENTICATION
- **Cloud TMS REST API RFC**: The RFC connection used for API calls, here TMS_REST_API

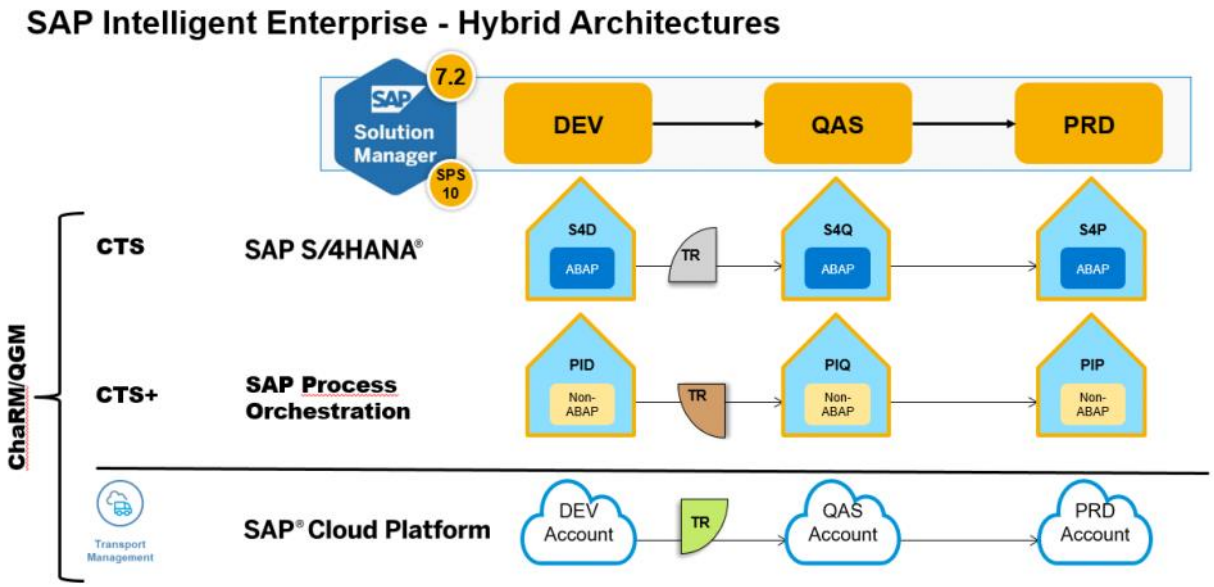


Create a solution using the external service systems (transaction SLAN)

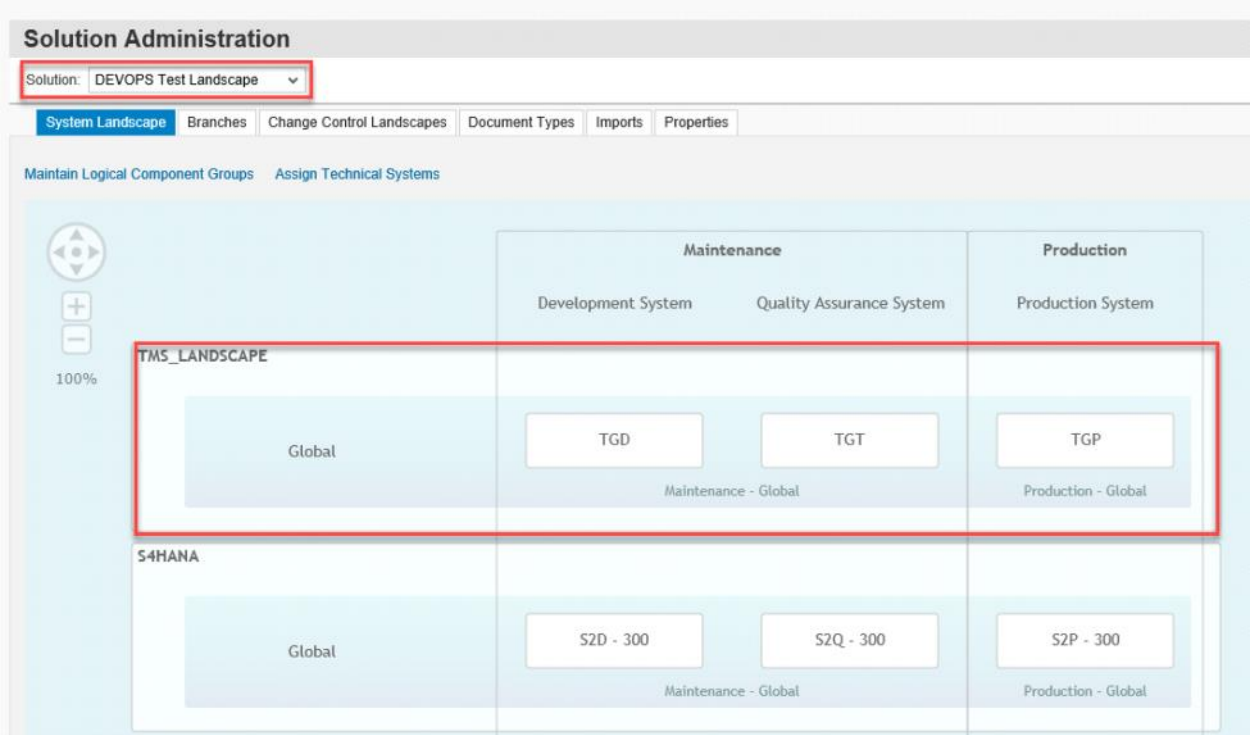
These are the steps which I performed for setting up the solution:

1. Create a dedicated solution for the SAP Cloud Platform TMS landscape.
2. Create a logical component group for the SAP Cloud Platform TMS landscape and assign it to the solution.
3. Assign dedicated external service systems to the related branches of the logical component group.

Additionally, I have added three S/4HANA clients to the solution to show that combined landscapes including ABAP (and non-ABAP) systems are possible. Please observe that central CTS cannot be combined with Transport Management. However, it is possible to have several ABAP and non-ABAB landscapes together with Transport Management within one Change Request Management cycle or Quality Gate Management Scenario. See example below:



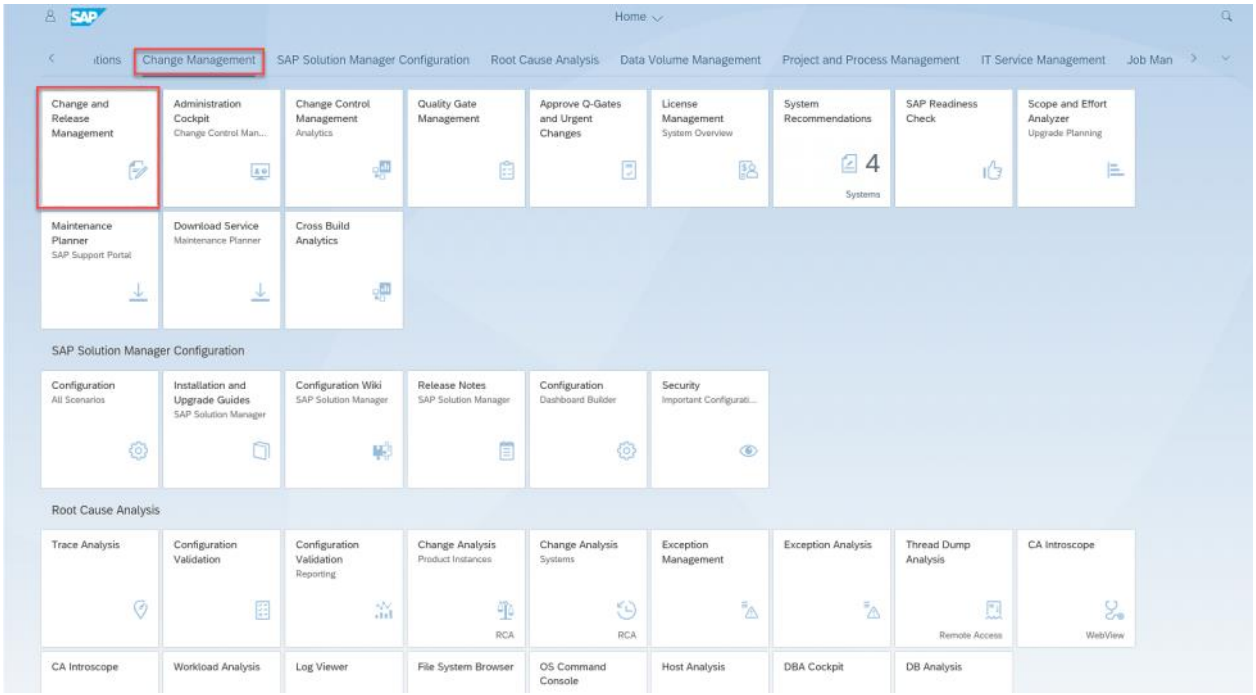
My overall landscape looks like this:



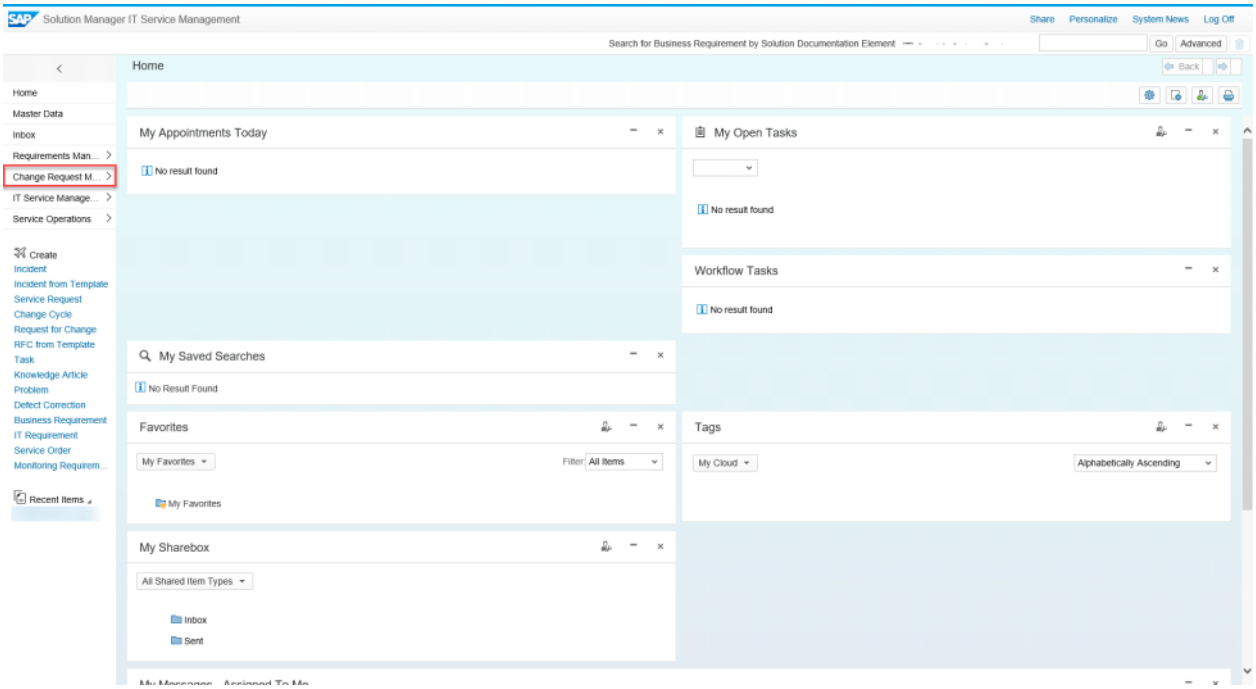
Create a change cycle with the solution landscape

Now it is time to create a change cycle in which the change documents will be created later.

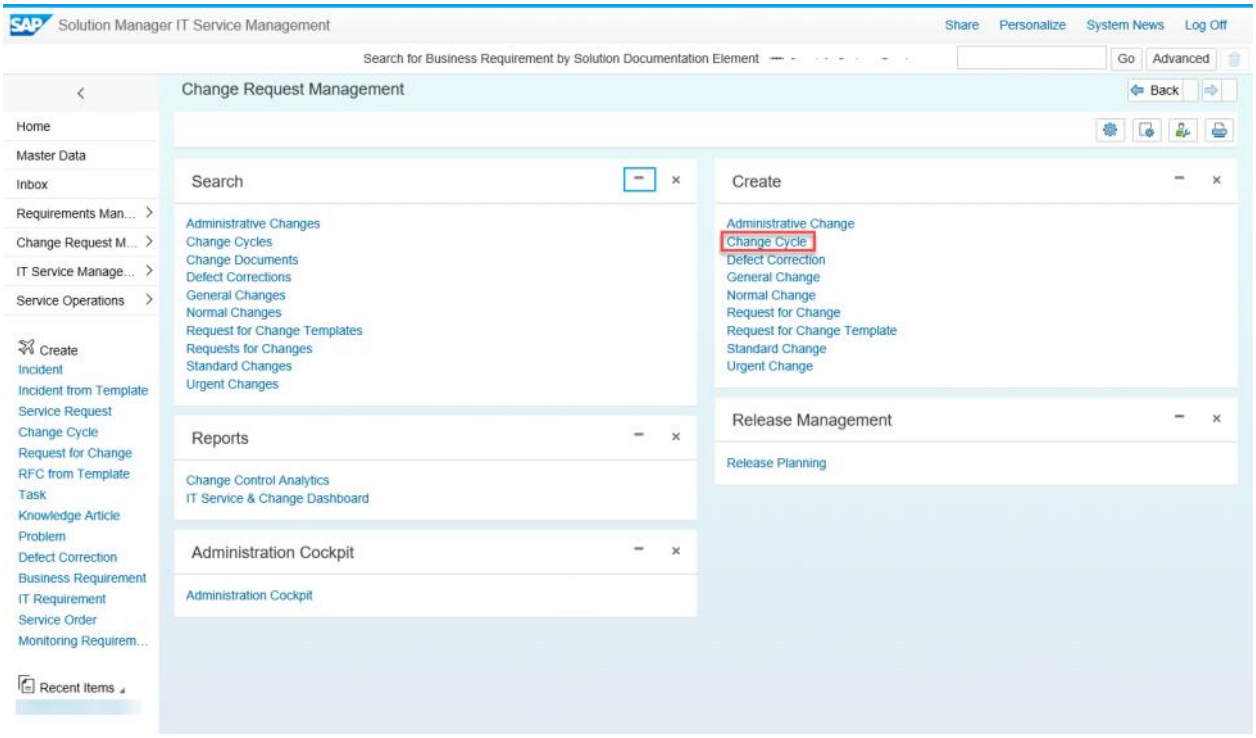
Start the ‘Change and Release Management’.



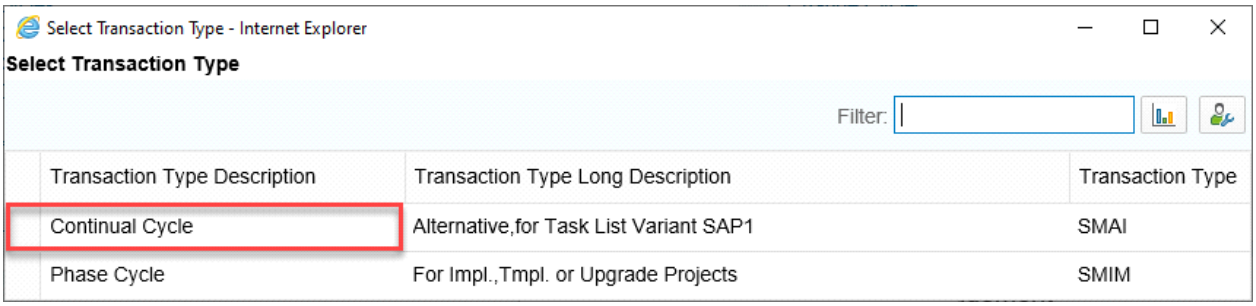
Go to the ‘Change Request Management’.



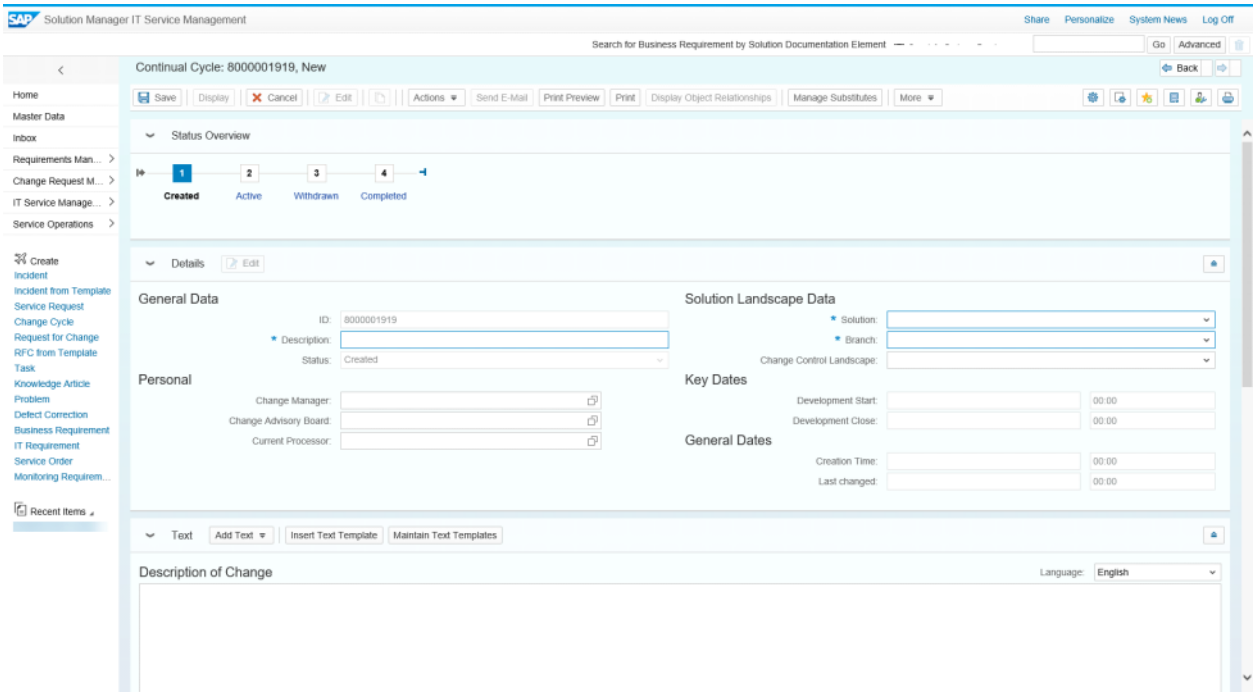
Create a Change Cycle.



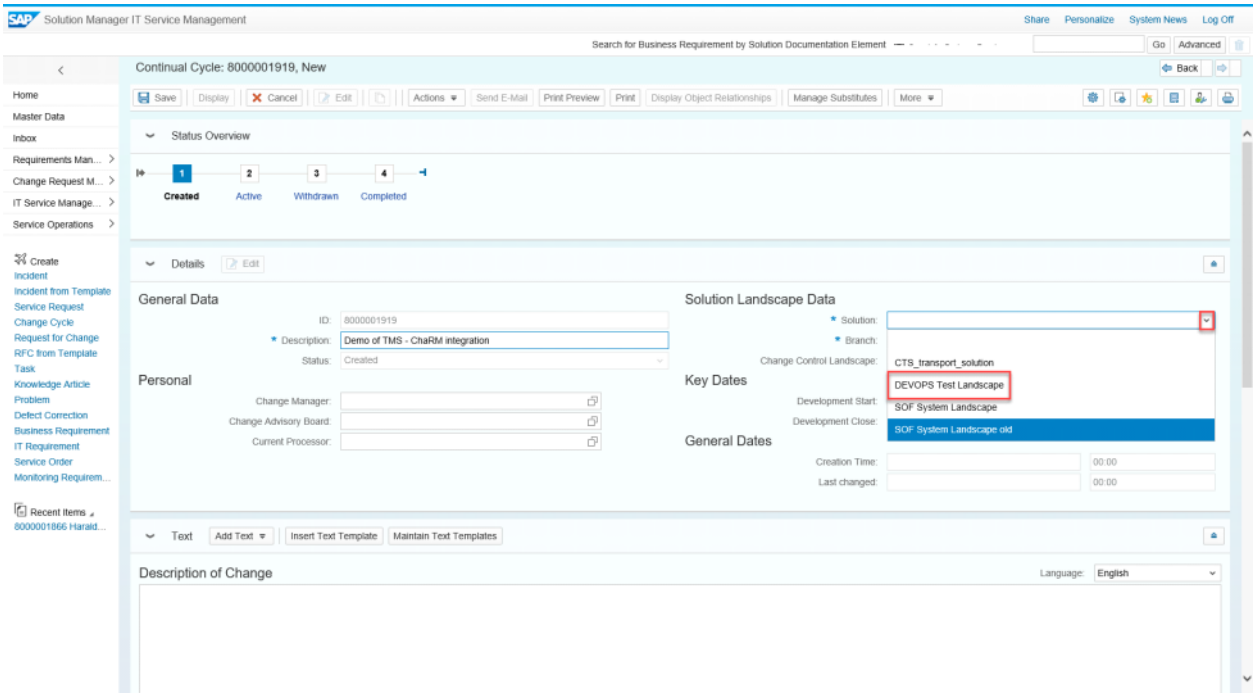
I selected 'Continual Cycle'.



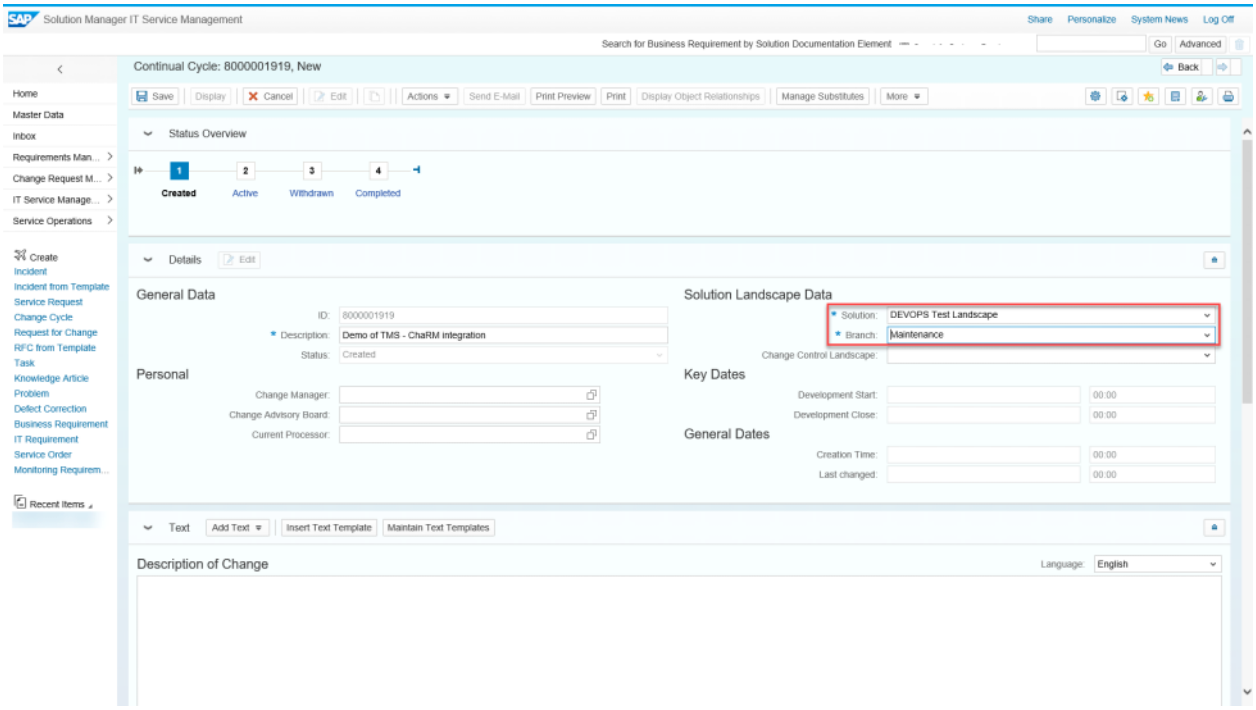
The cycle is created in an initial state.



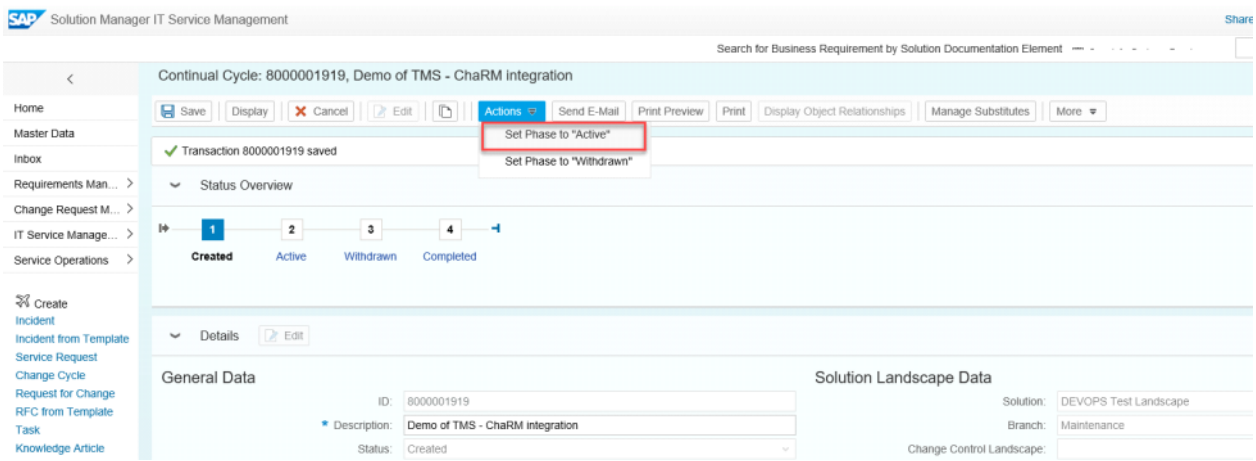
I entered a description and selected the solution which contains the Transport Management nodes.



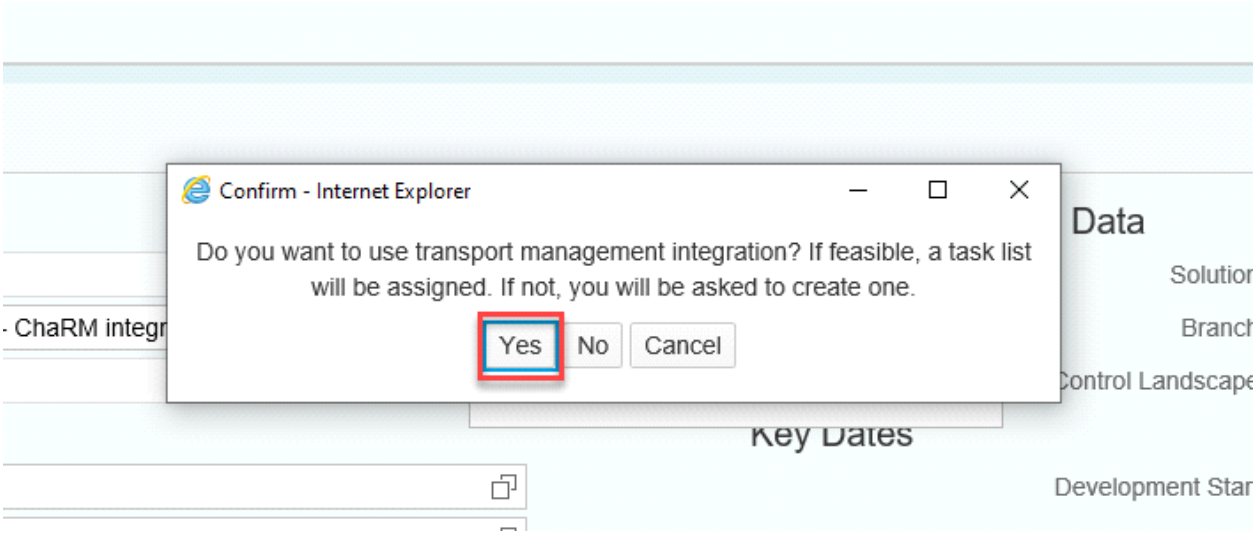
I selected the branch of the solution. In this example only ‘Maintenance’ is available.



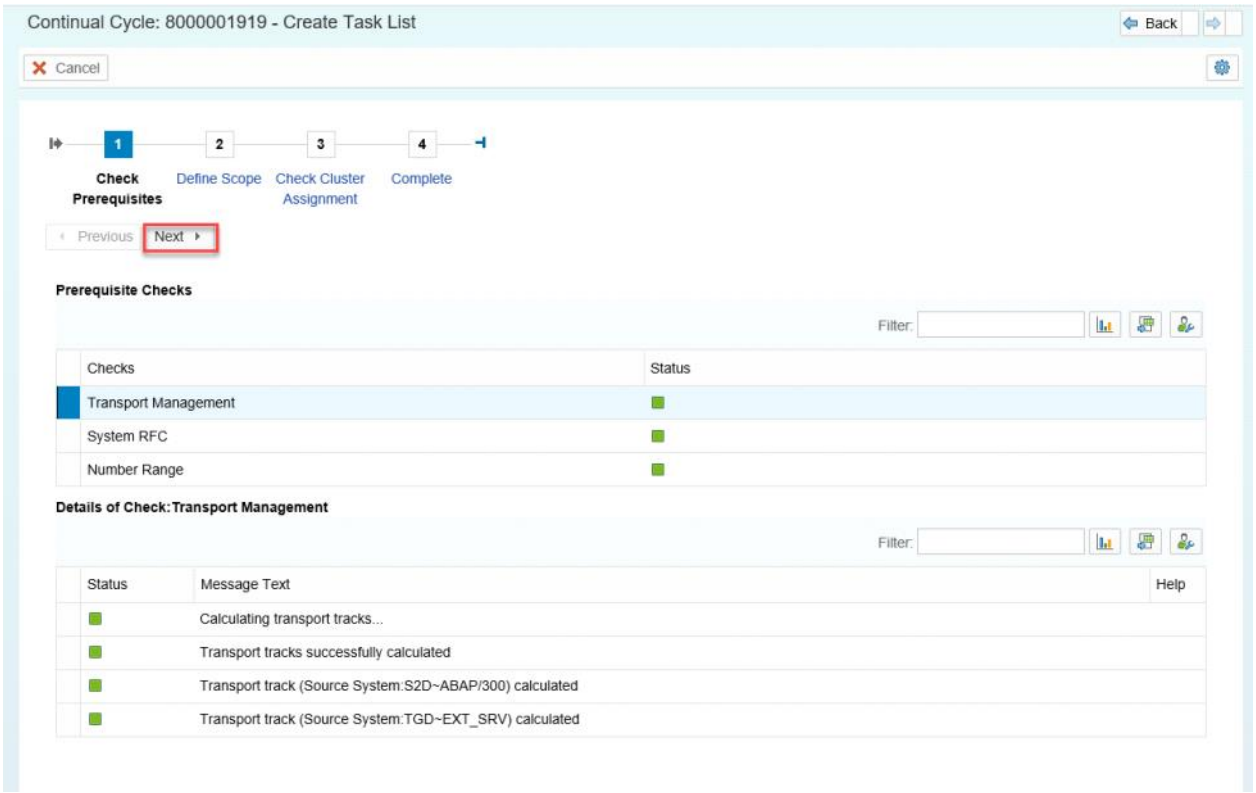
Now the cycle had to be saved and activated.



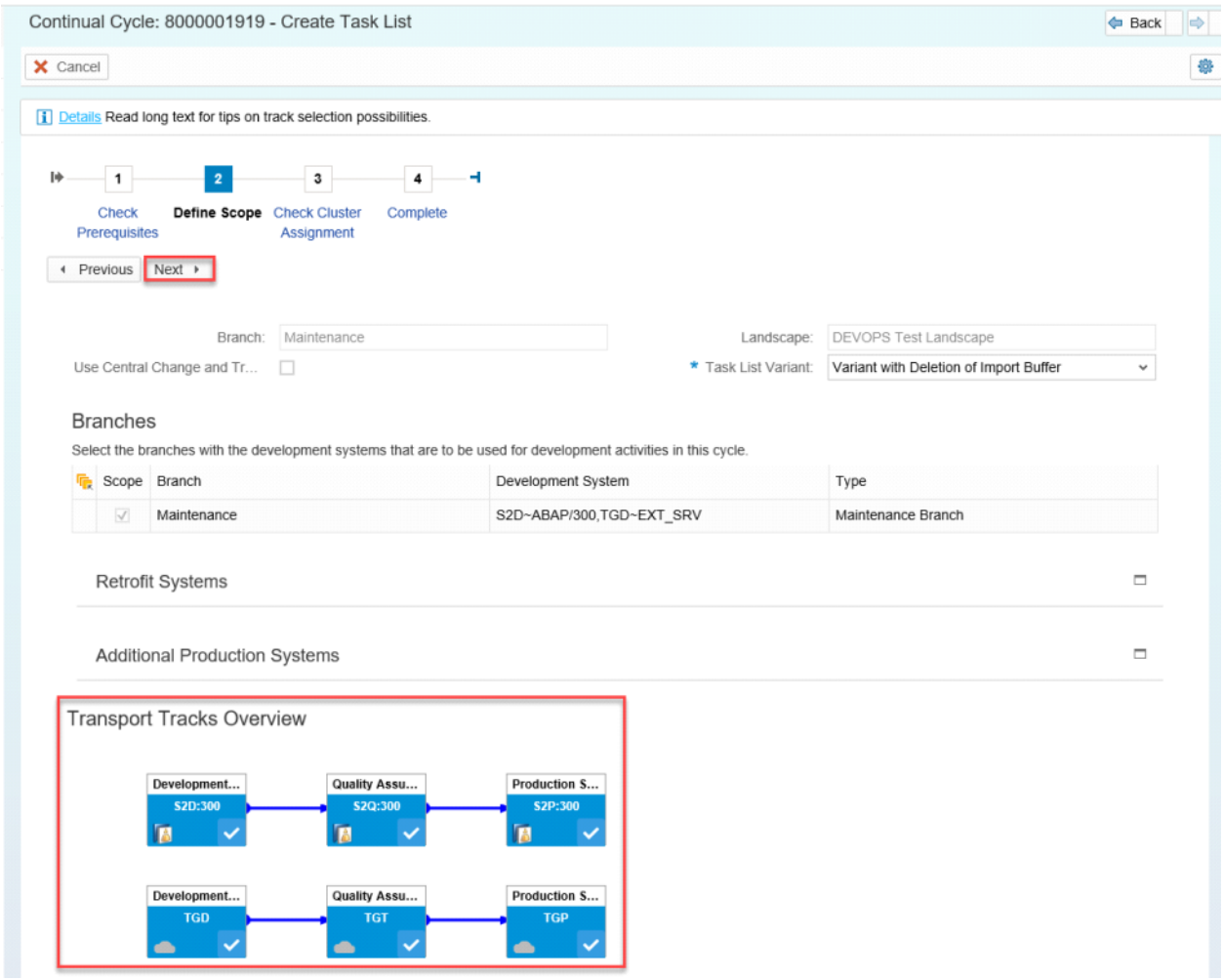
I confirmed the use of Transport Management integration.



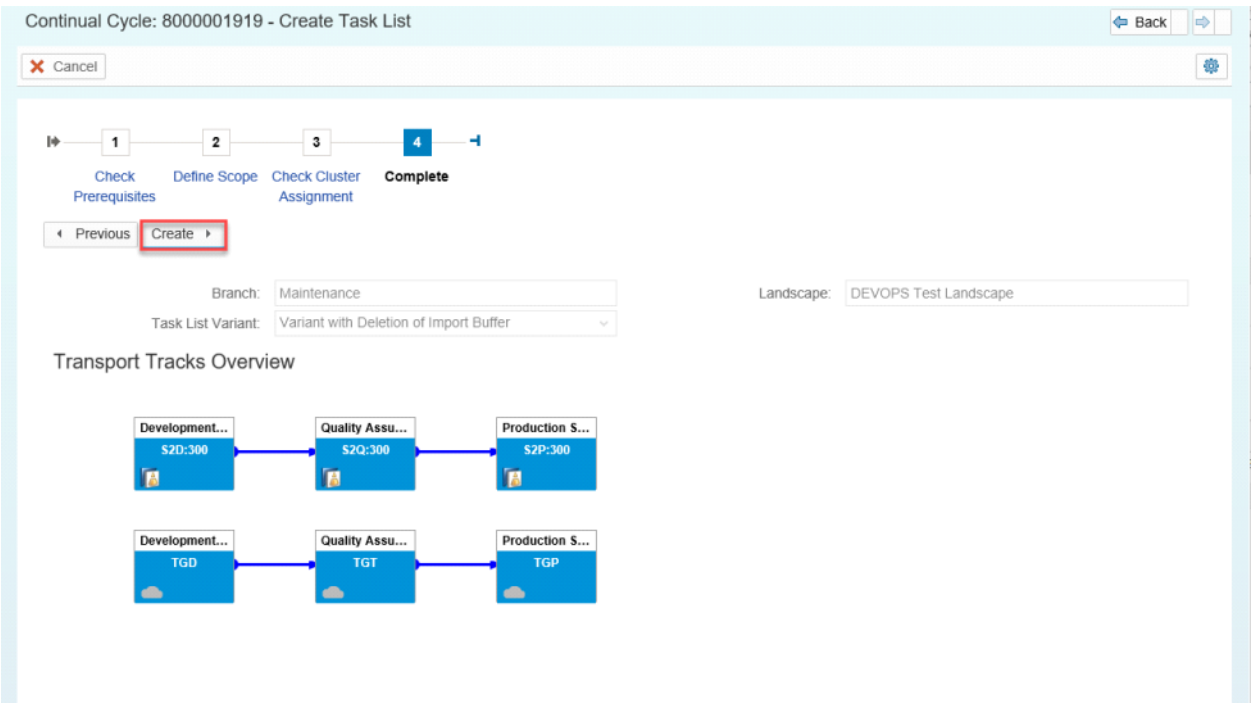
Now the task list for this cycle is created. The prerequisite checks completed successfully, so I clicked 'Next'.



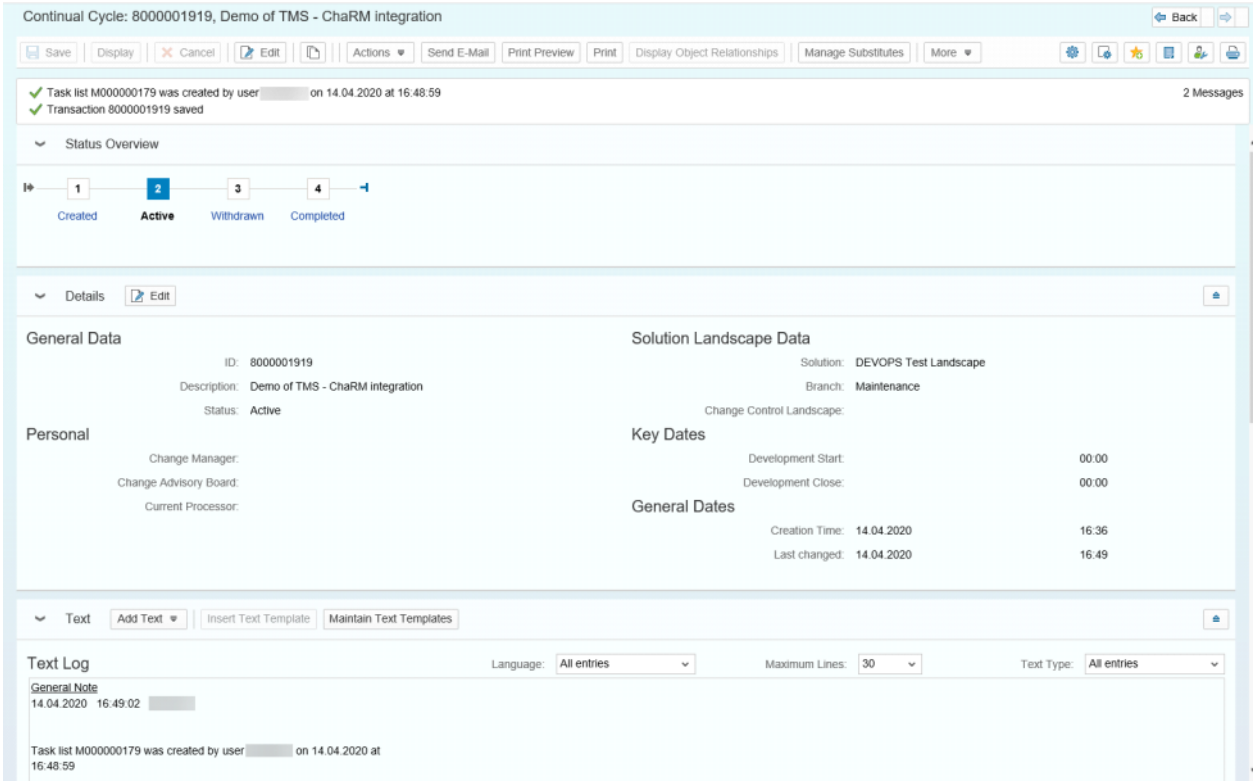
I double-checked the scope. The transport tracks look as expected.



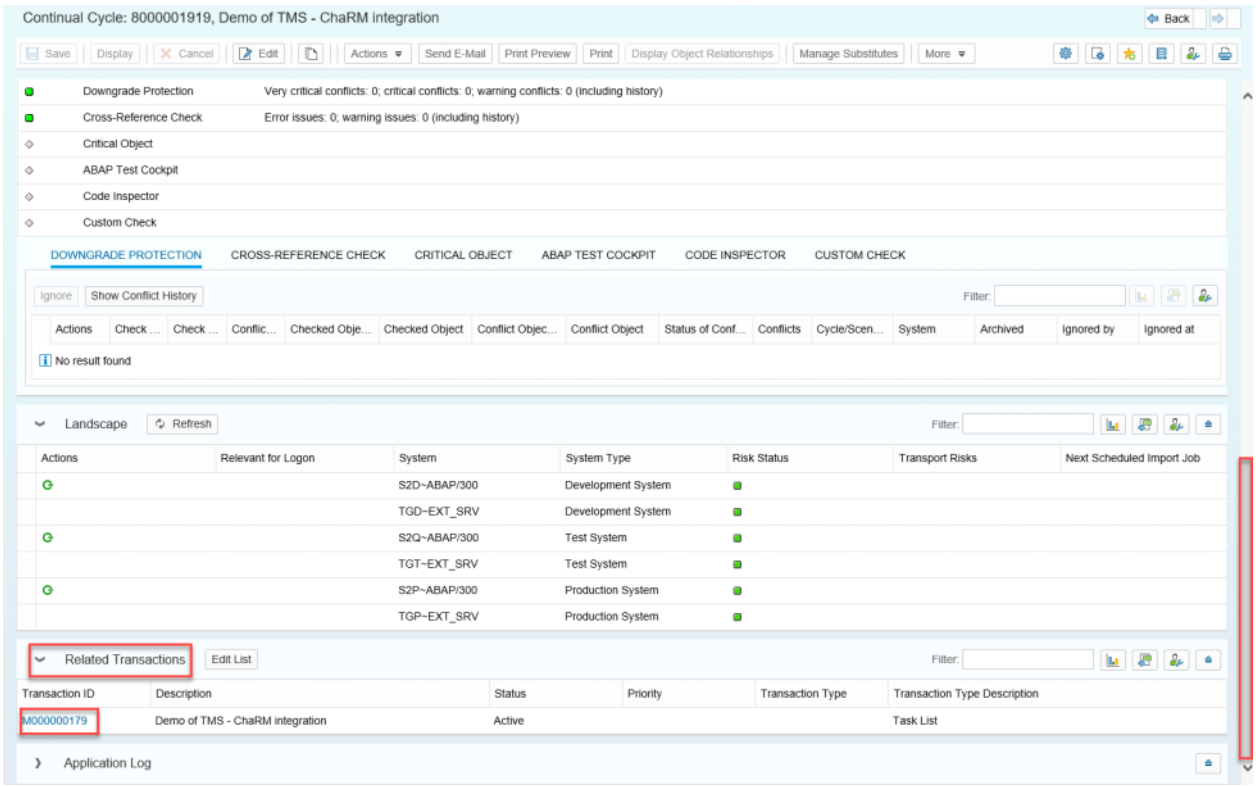
The task list creation can now be triggered.



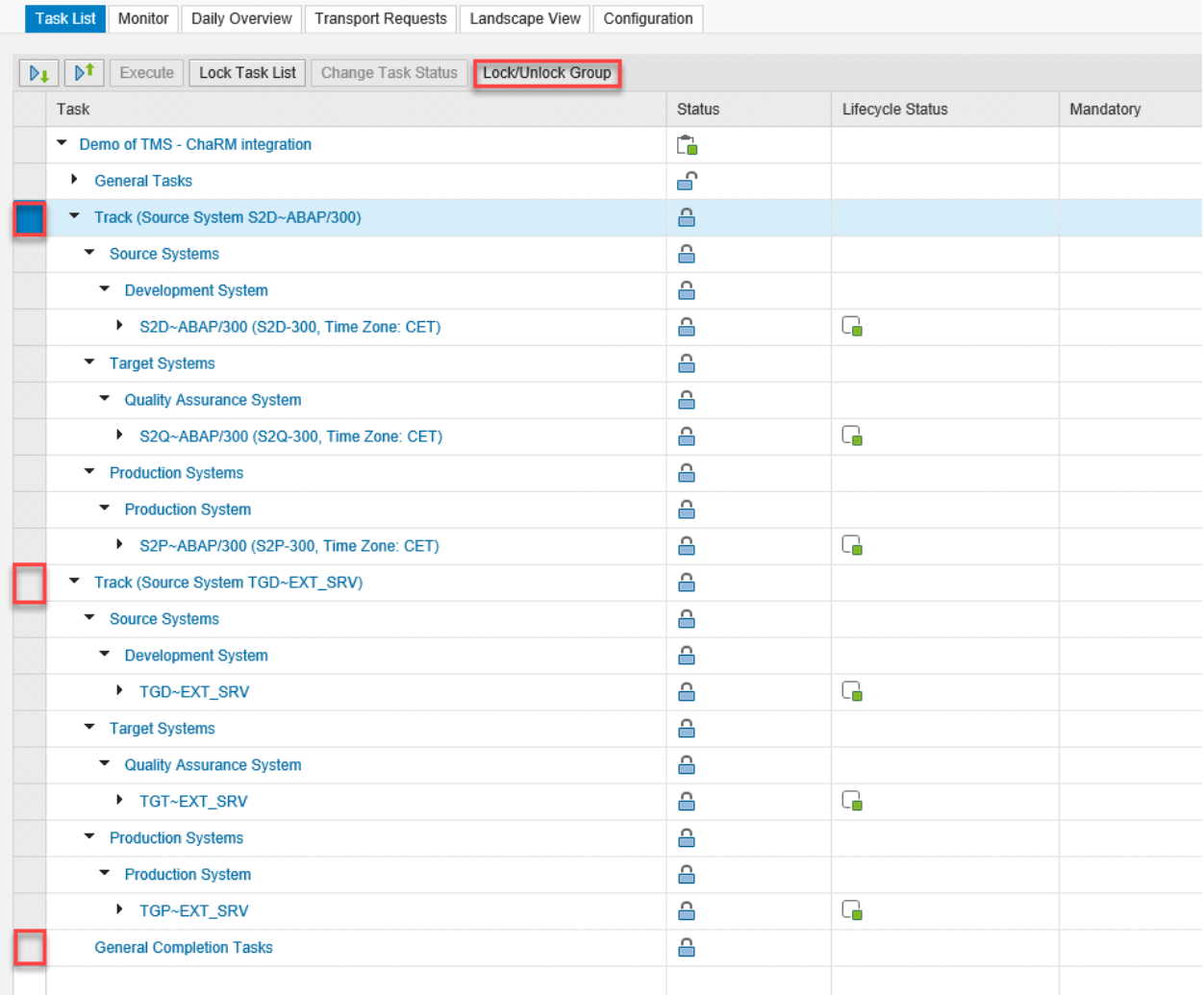
The task list has been successfully created and the change cycle is active.



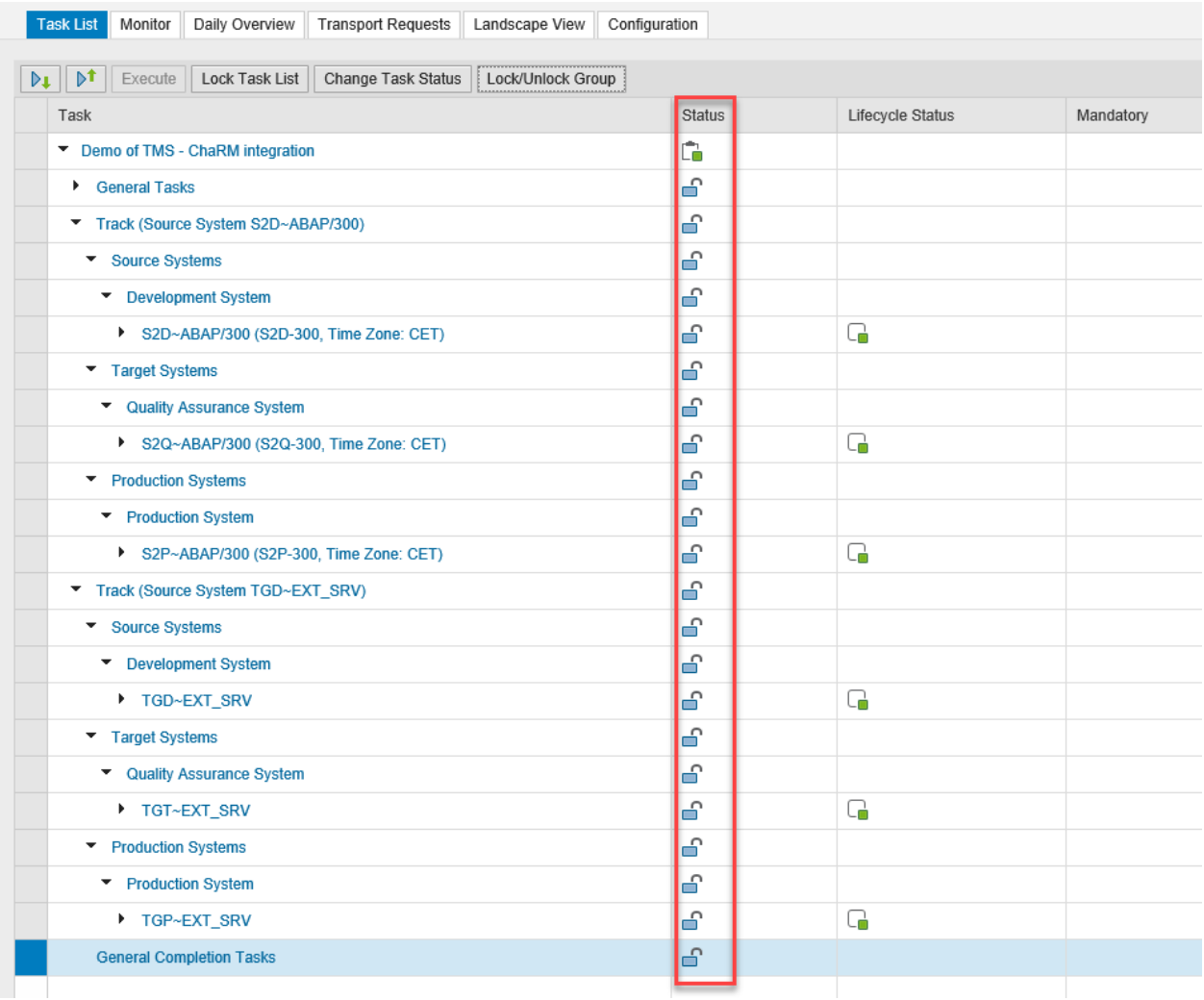
However, the task list is created in a locked status and must be unlocked. For this I opened the task list in the 'Related Transactions' of the change cycle (scroll down for this).



I unlocked all tasks of the task list by selecting a group and pressing the ‘Lock/Unlock Group’ button.



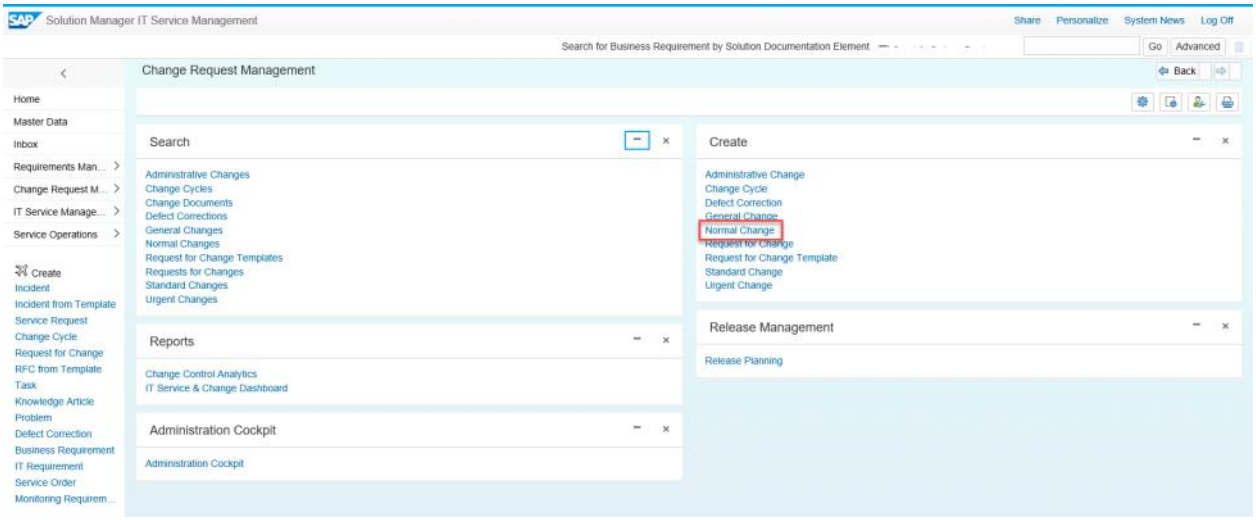
After that all tasks should have the status unlocked.



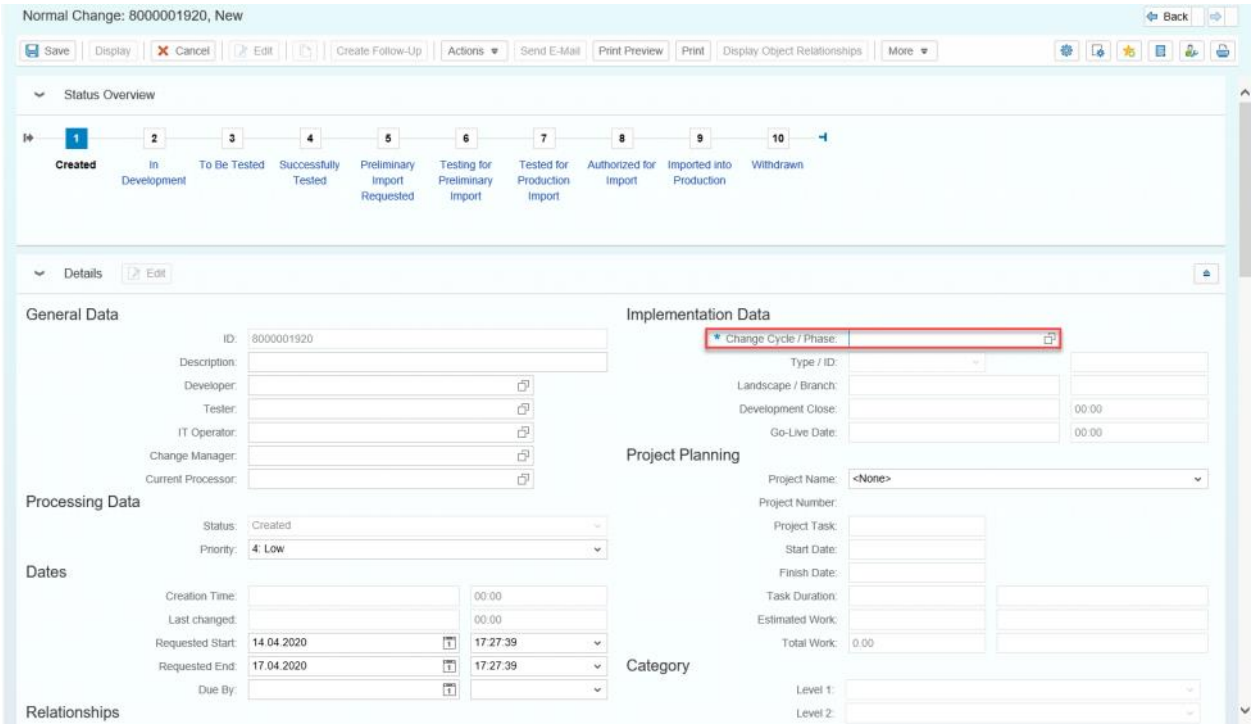
Create a change document within the change cycle

In the next step I created a change document in the change cycle I just created.

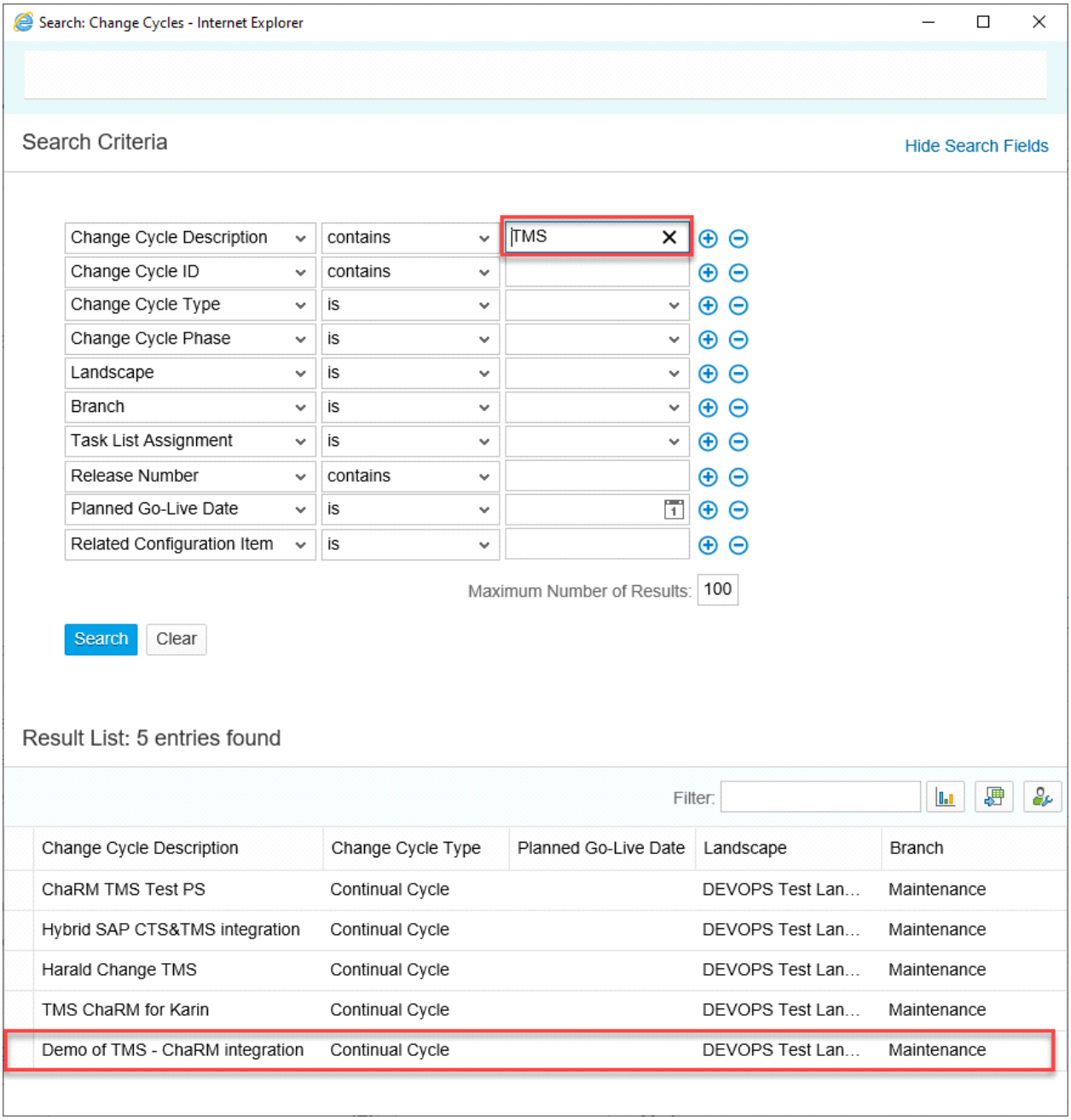
Currently the Transport Management integration is based on normal changes only, so I created a normal change.



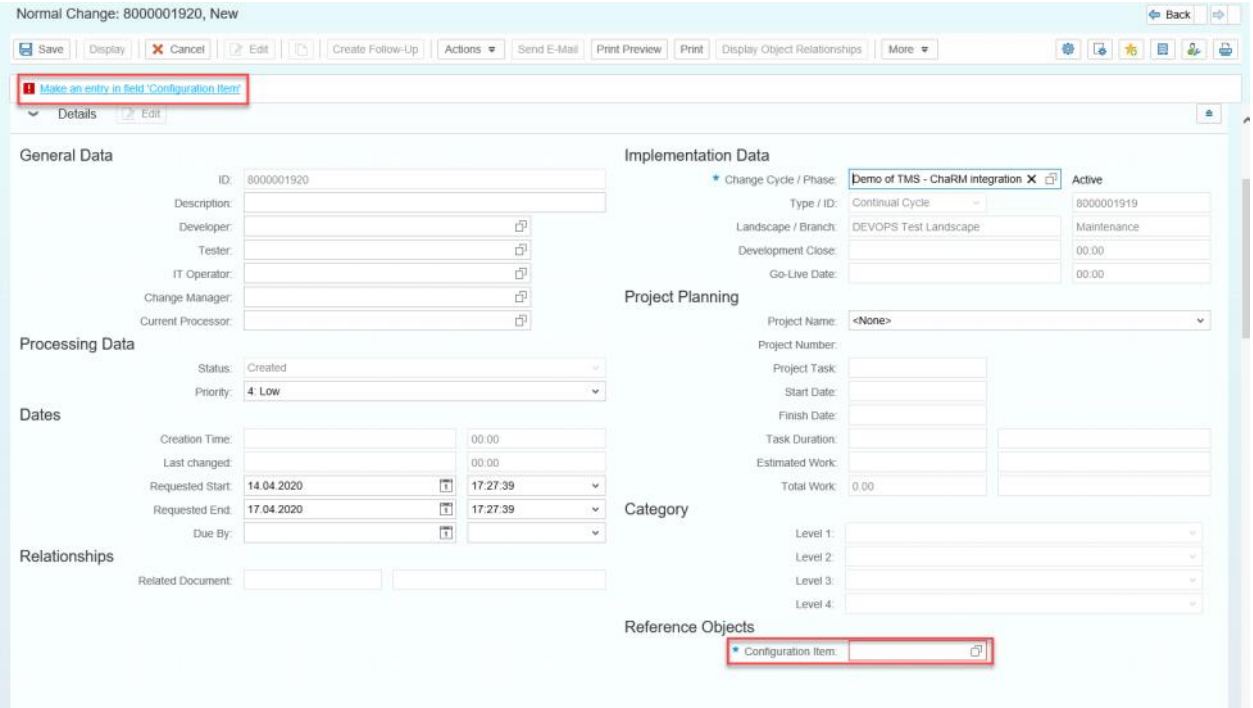
The change is created in an initial state. I now to select the change cycle I just created.



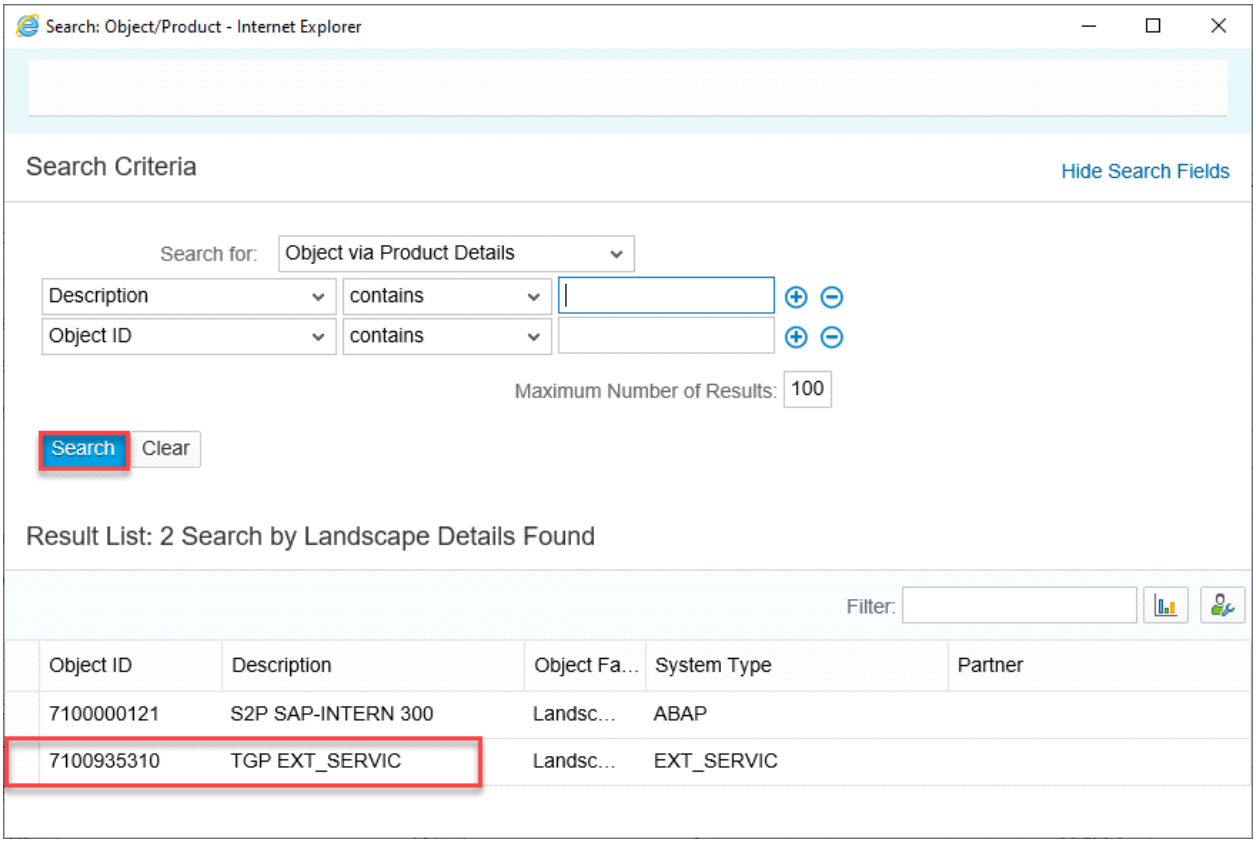
I used the term ‘TMS’ which was part of the change cycle description.



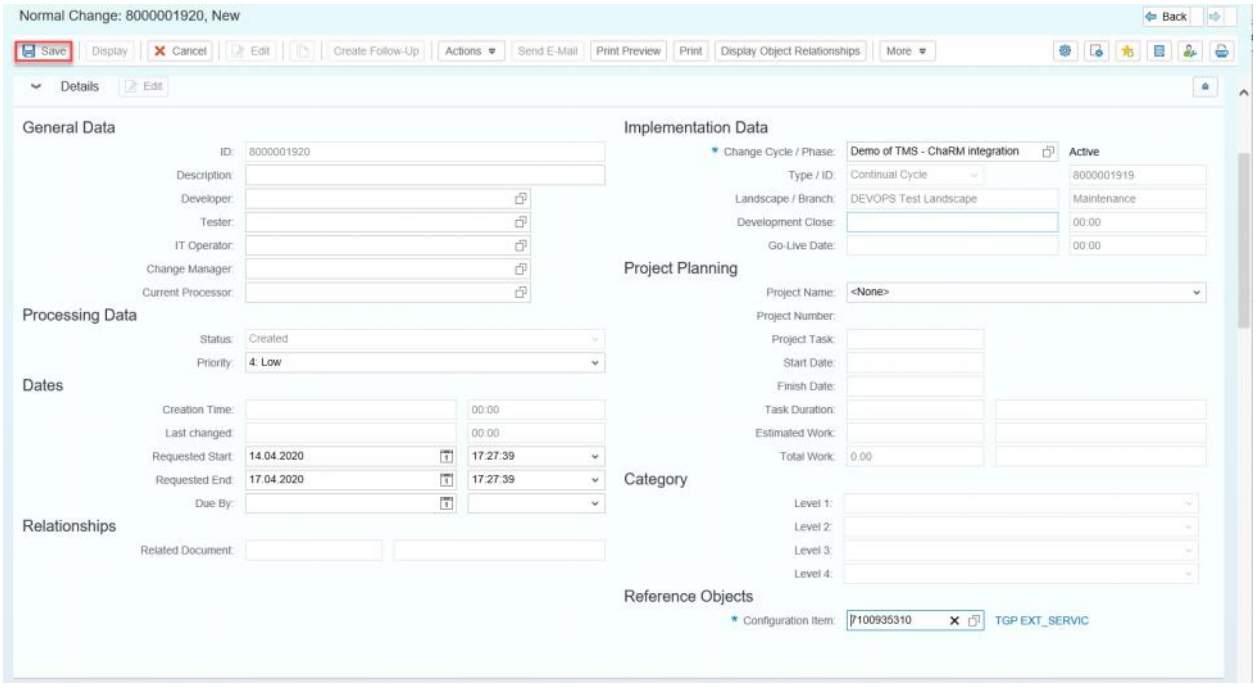
I now had to provide a Configuration Item for this change.



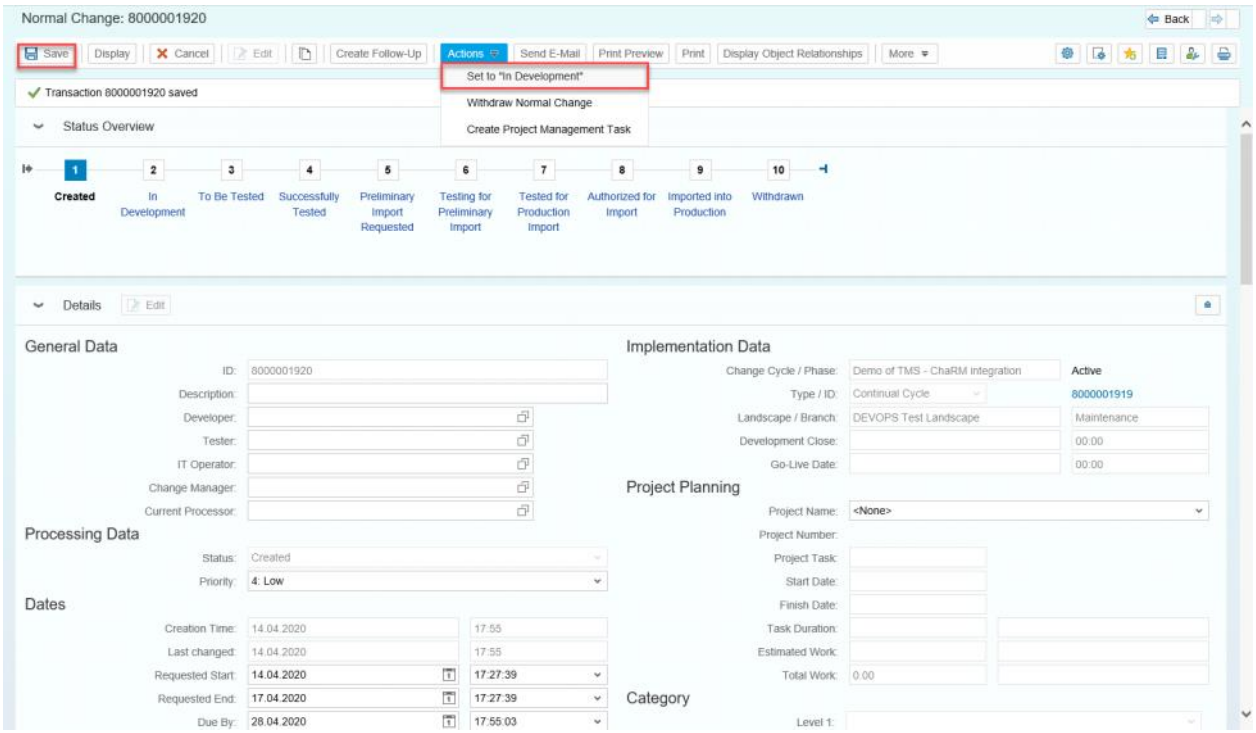
In this example I chose the productive node of the Transport Management landscape. However, this choice does not influence the transport behavior.



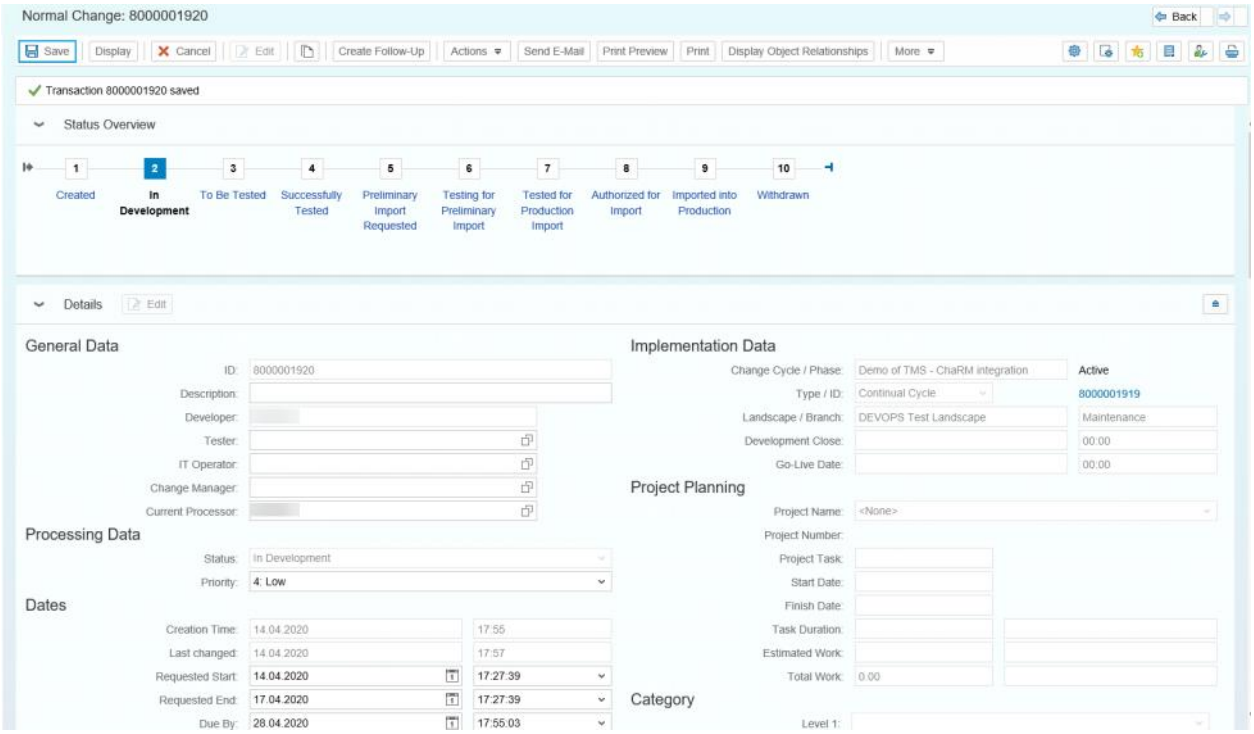
The change document is now complete and can be saved.



In order to attach transport requests to the change document it must be set to ‘In Development’ (and saved).



The change document is now ready for the assignment of transport requests.



Create content for transport

In contrast to the ABAP world for Transport Management the transport requests are not created from within the change document but rather assigned to it after they have been added to the import queue of the test node in Transport Management (pointing to the test subaccount in SAP Cloud platform).

There are several options to achieve this:

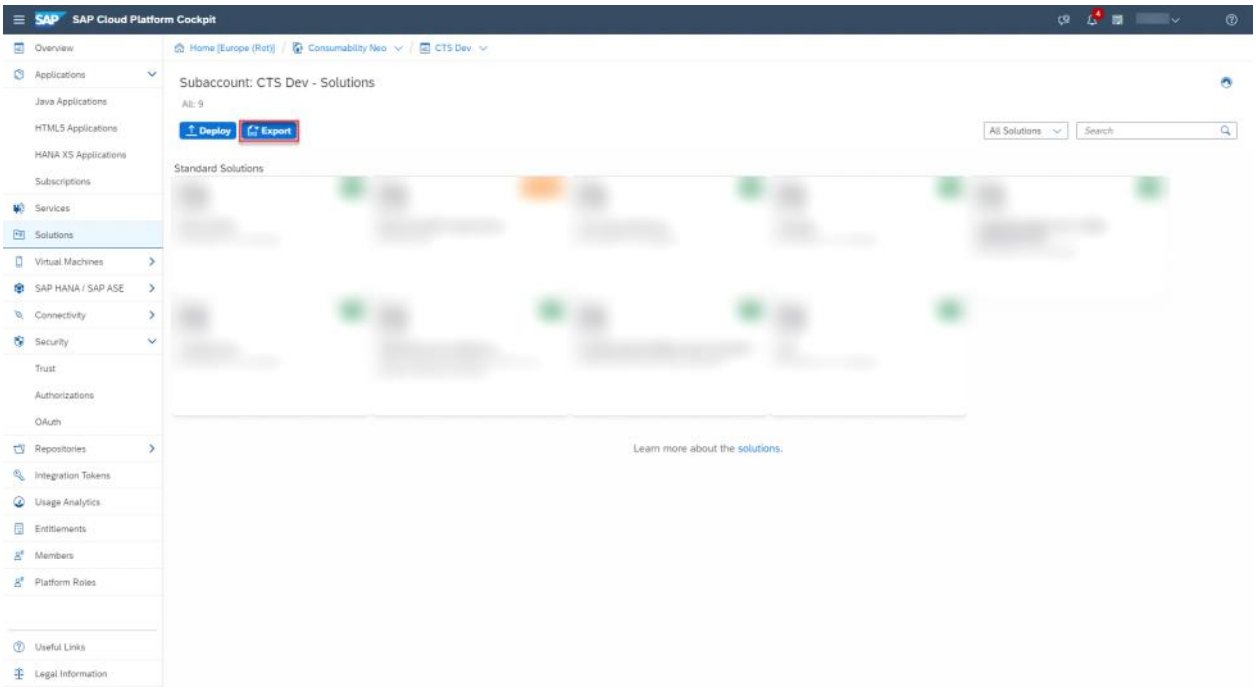
- Manual upload of the content to the development node and import into the development node. By this the transport request is forwarded into the test node queue.
- Automated upload to the development node from a CI/CD pipeline and manual import into the development node. By this the transport request is forwarded into the test node queue.
- Direct export from the development subaccount using the Solution Export Wizard (only available for SAP Cloud Platform Neo environment).

Currently we are working to enable the direct upload of the content to the test node, so that the manual import into the development node is not necessary anymore.

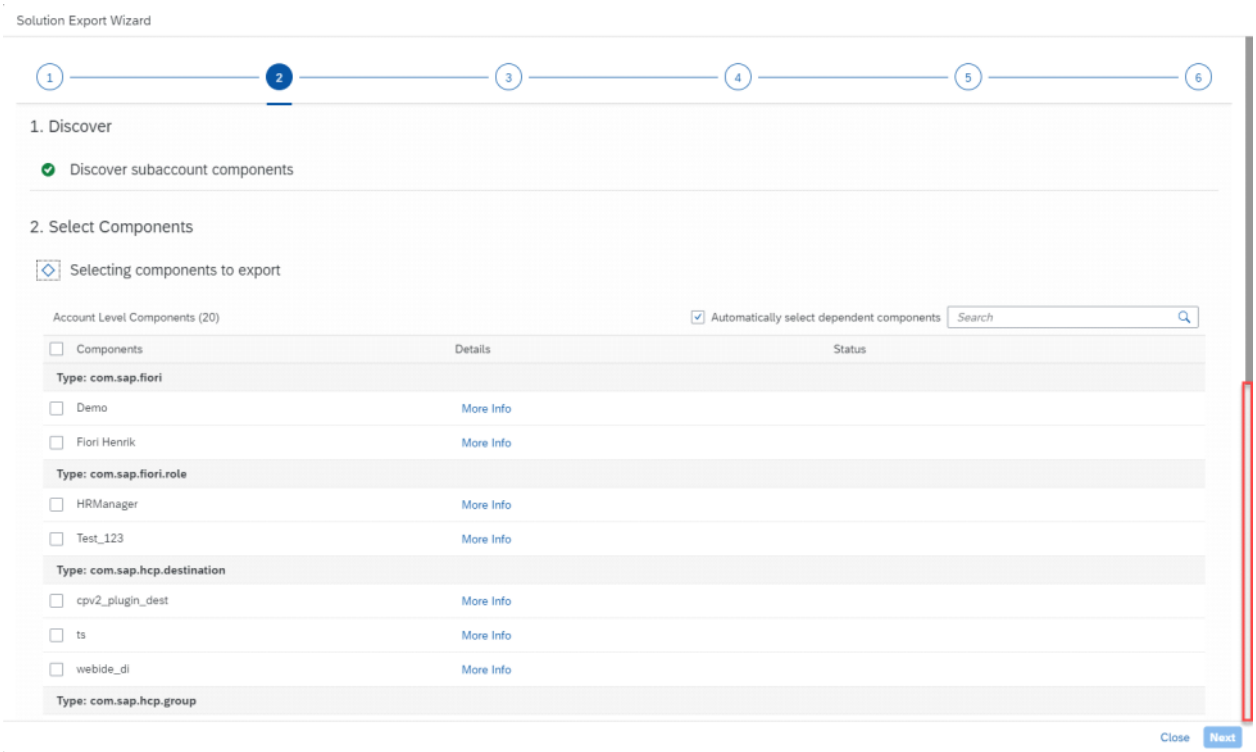
For this example, I have used the Solution Export Wizard approach.

In my SAP Cloud Platform development subaccount, I opened the ‘Solutions’

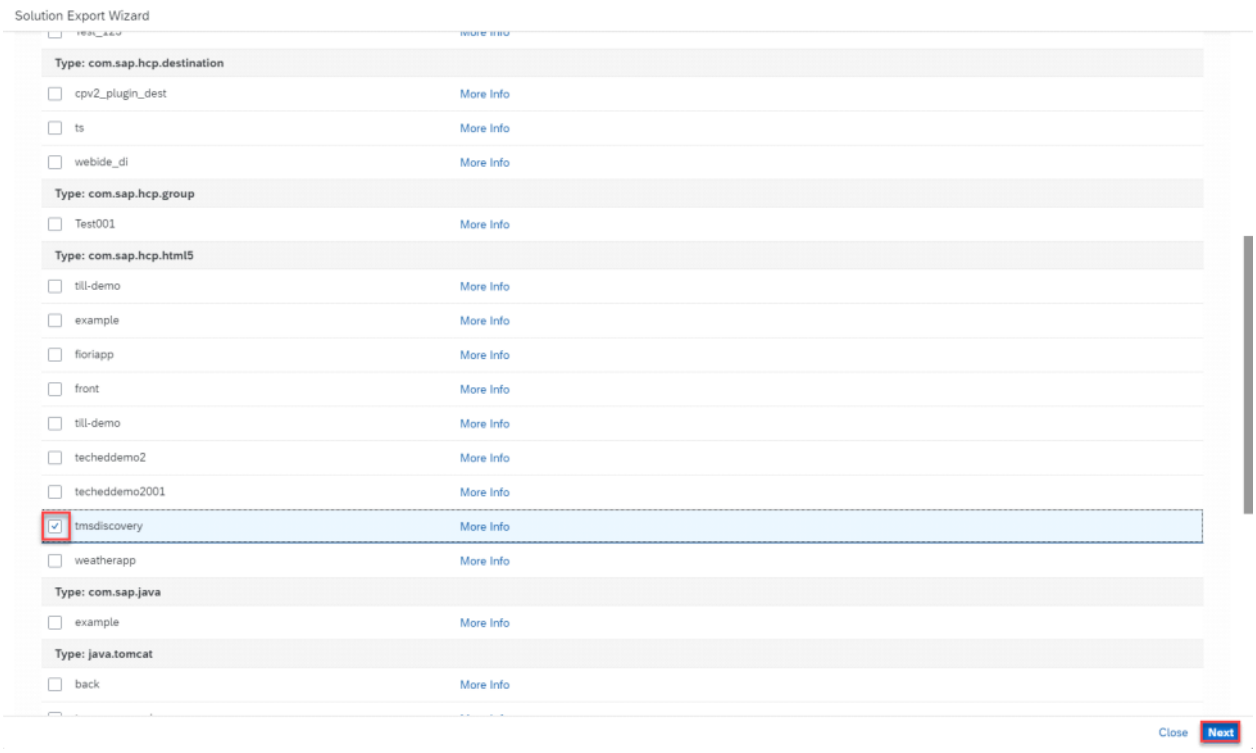
tab and clicked on ‘Export’. This starts the Solution Export Wizard.



The Solution Export Wizard now analyzes which applications are running in this subaccount and puts them into a list sorted by application type.



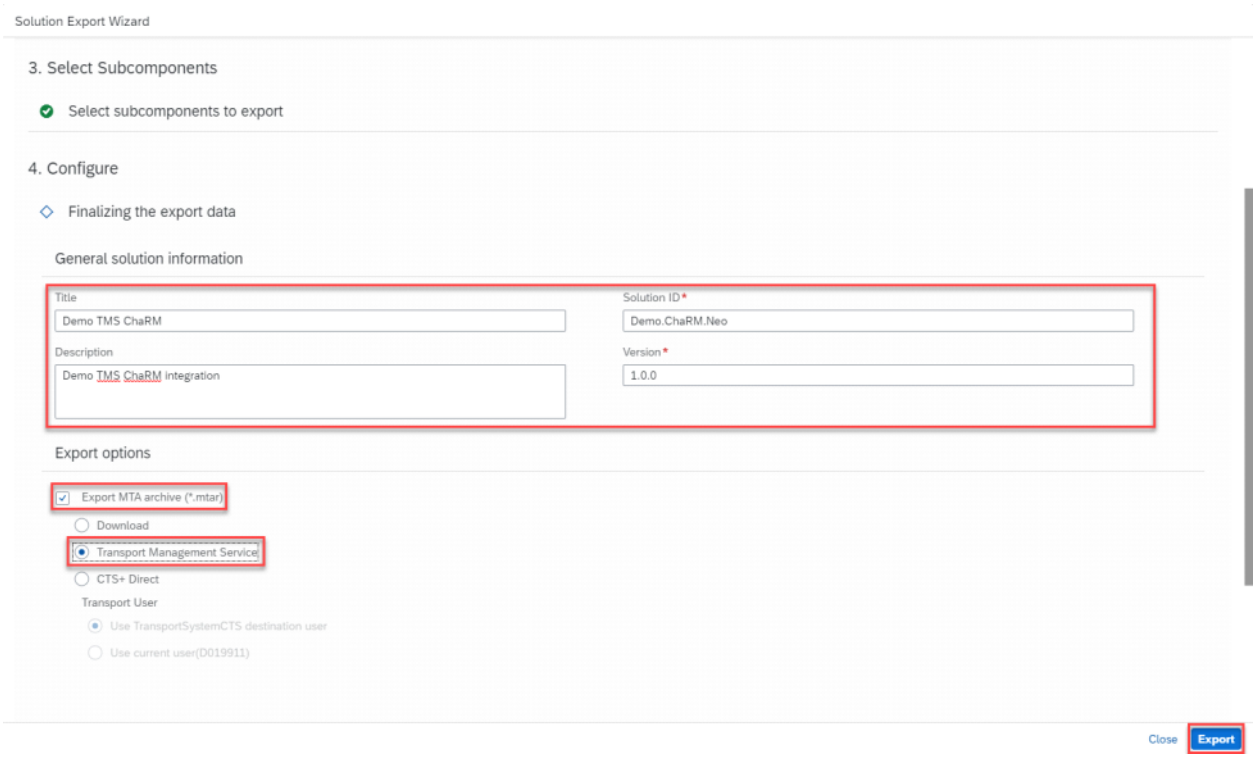
I selected the content I wanted to transport (in this case an HTML5 application). It is also possible to select several items. Please note that Java applications can currently not be exported.



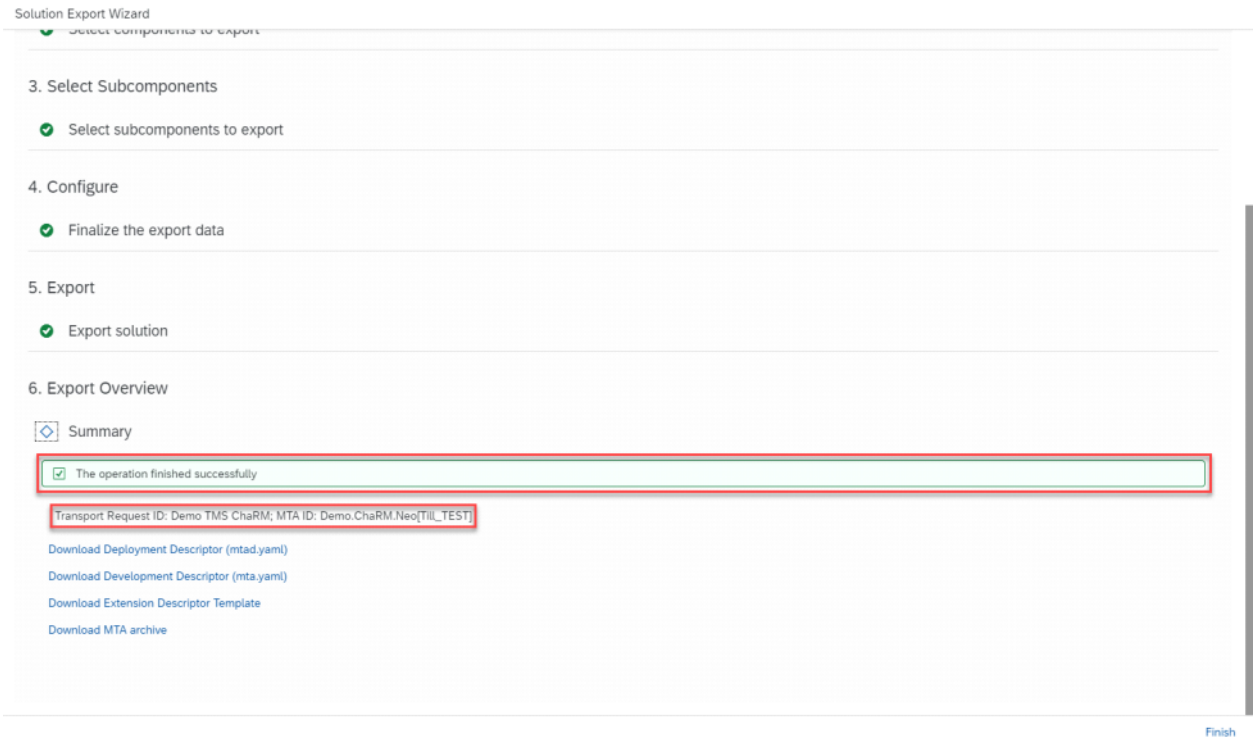
I now had to provide some information for the export:

- Title and description
- Solution ID (here ‘Demo.ChaRM.Neo’)
- Three part version number

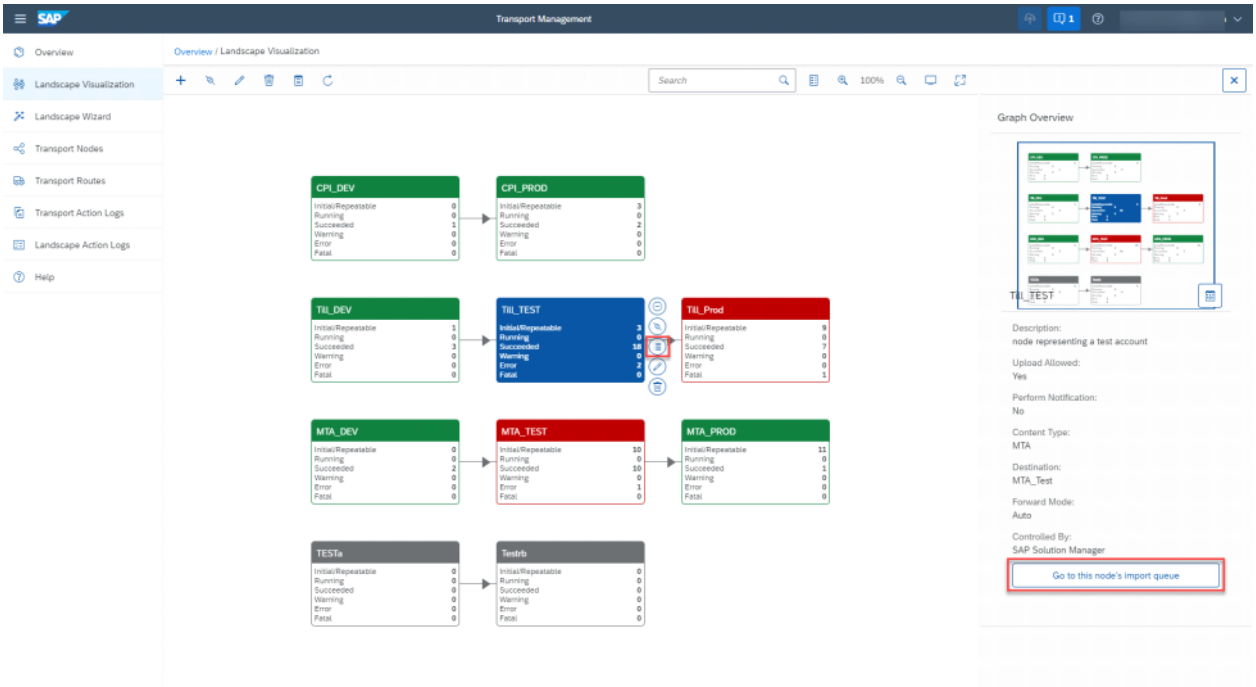
I also selected the Export of the MTA archive to Transport Management Service. This subaccount was configured to act as transport node ‘Till_DEV’ in my transport landscape as described here. I confirmed my entries by pressing ‘Export’.



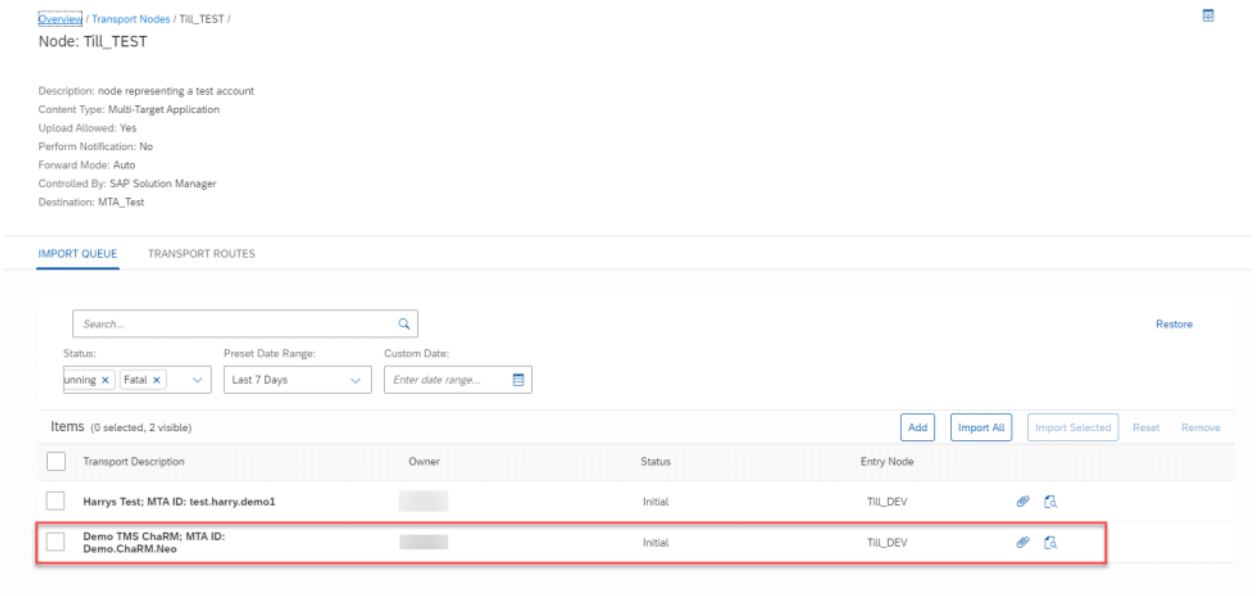
The export completed successfully and created a transport request in the queue of the node 'Till_TEST'.



To verify the success, I switched to Transport Management and opened the queue of the transport node 'Till_TEST'.

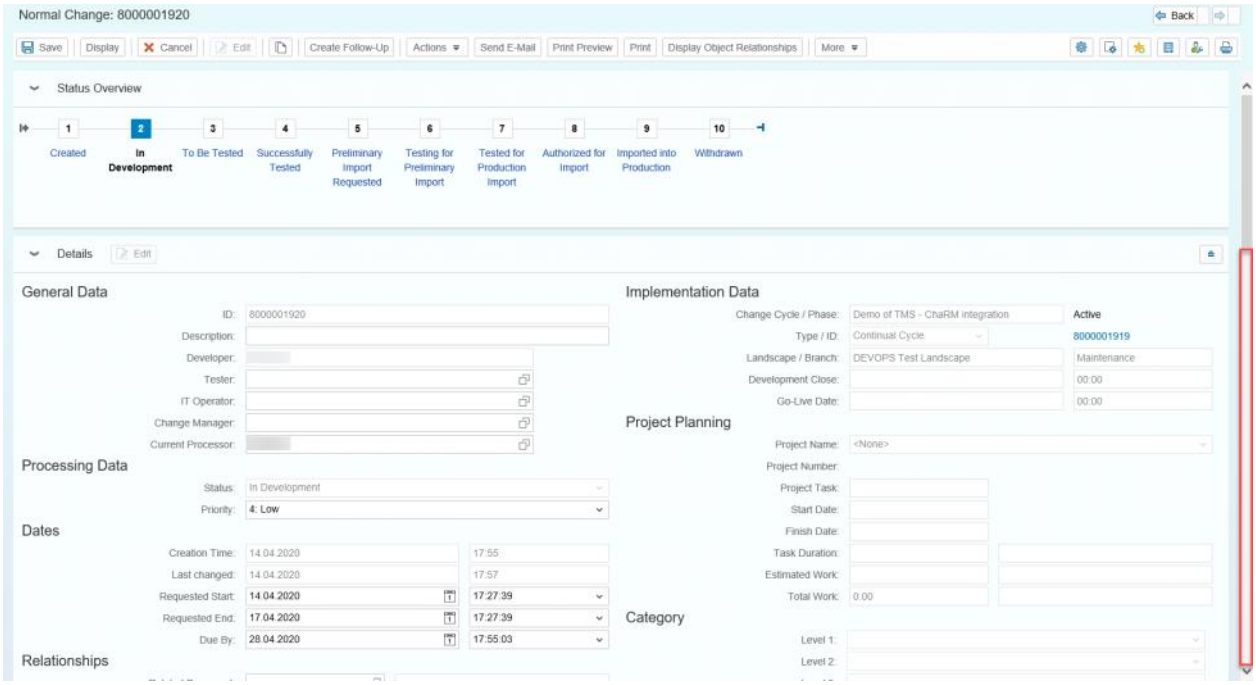


You can see the newly created transport request in the import queue of the node. As the node is controlled by Solution Manager, it is not possible to manually trigger the import.

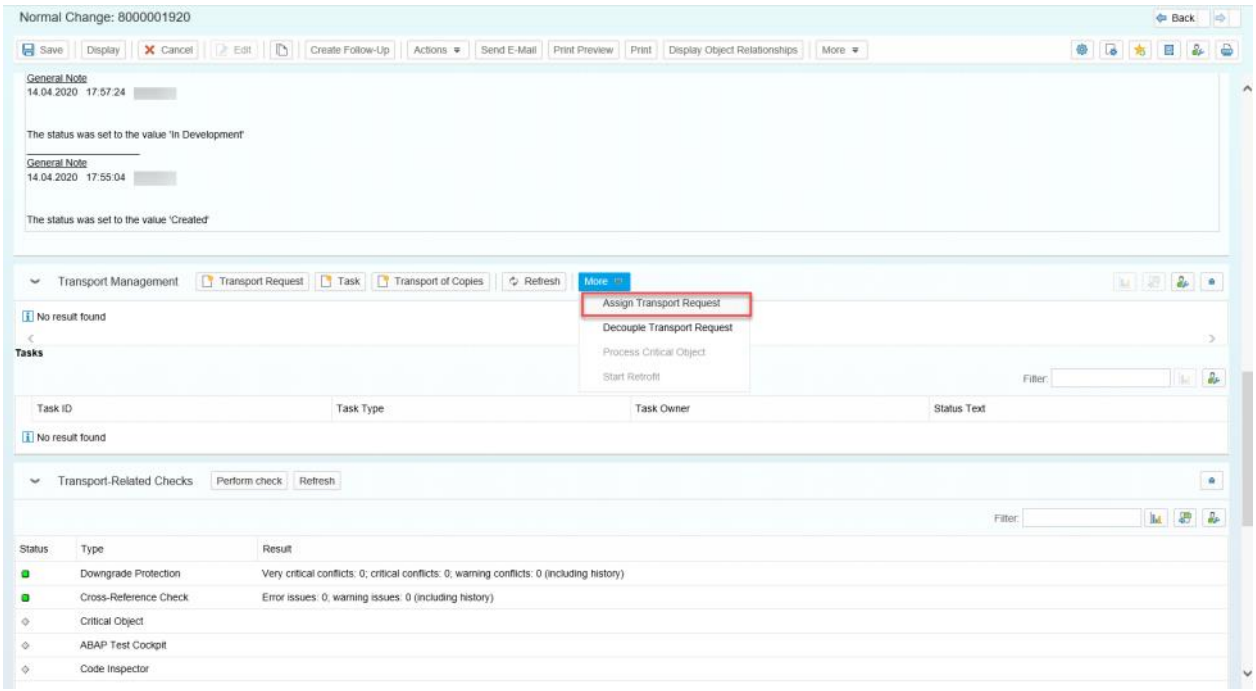


Assign Transport Request to Change Document

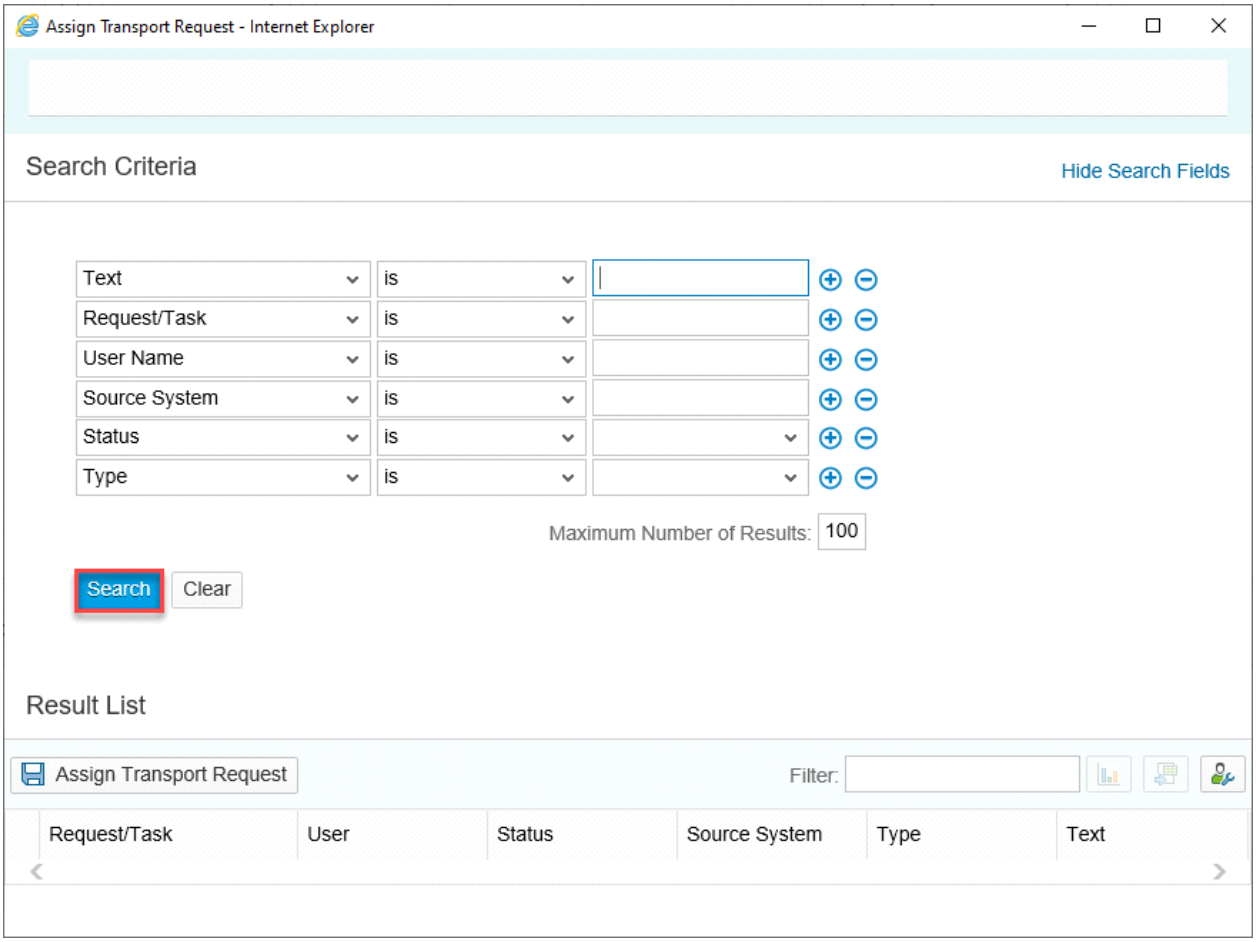
Now it is possible to assign this transport request to the change document in SAP Solution Manager ChaRM. The corresponding functionality can be found when scrolling down on the change document screen.



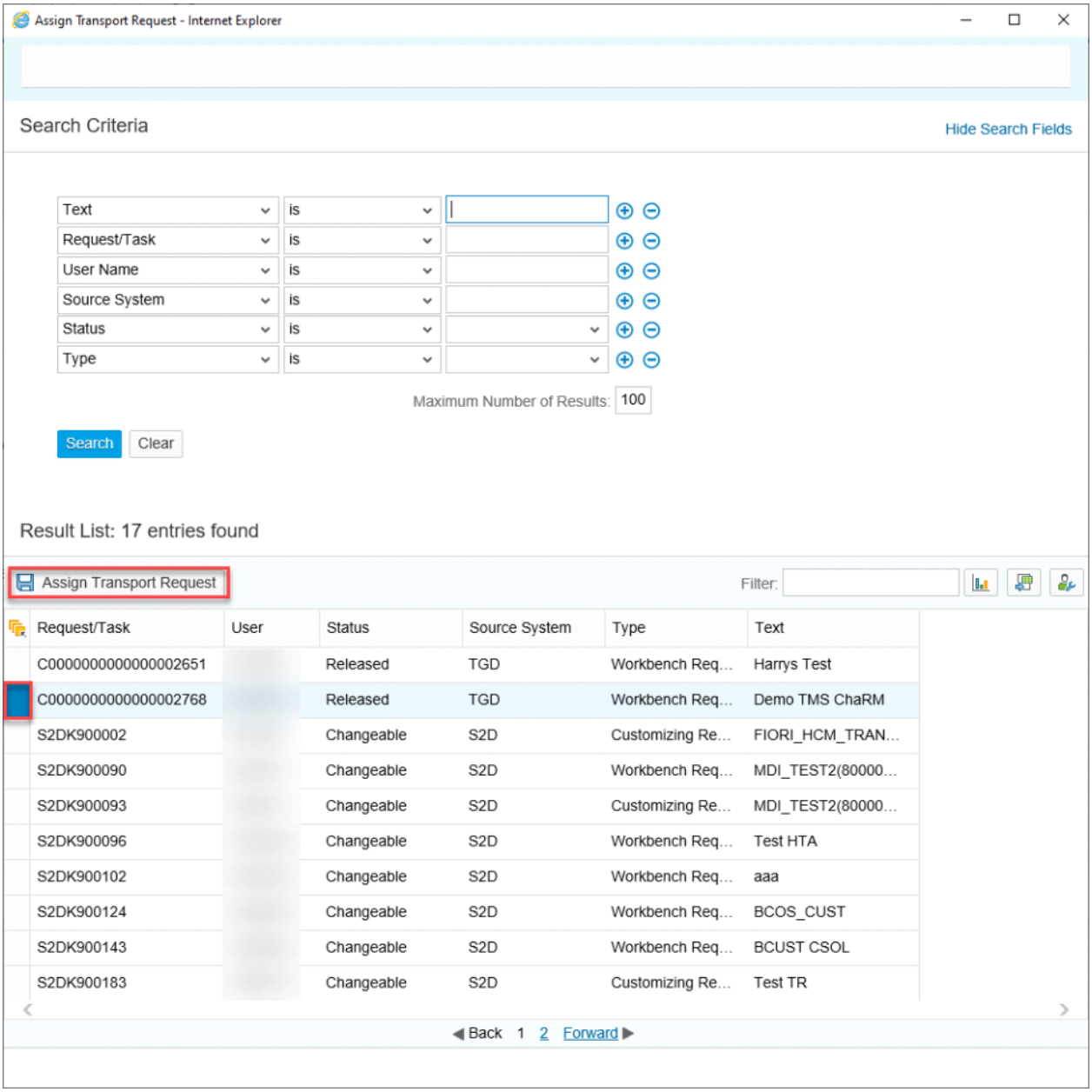
In the ‘Transport Management’ section I opened the drop-down ‘More’ and started ‘Assign Transport Request’.



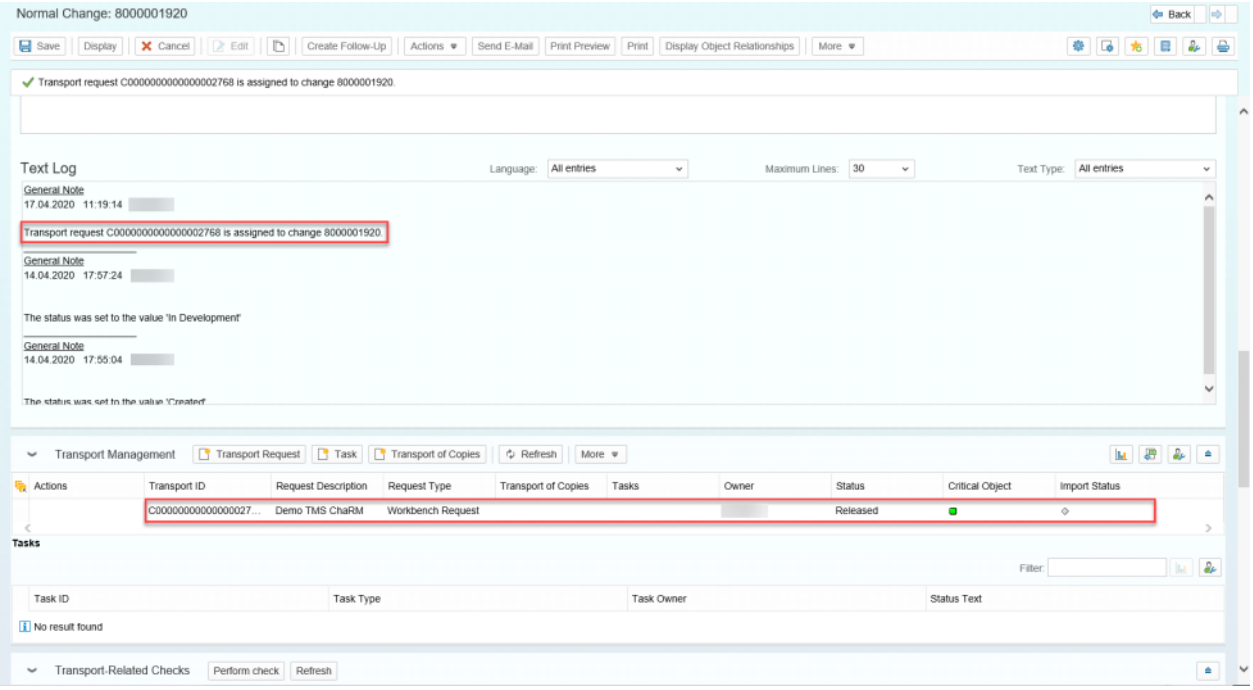
The search can be specified by search criteria (which I didn’t do).



The Transport Management transport requests appear with an internal request ID. Therefore, it is important to identify the correct transport request by the descriptive text. After selecting the required requests, I pressed 'Assign Transport Request'.



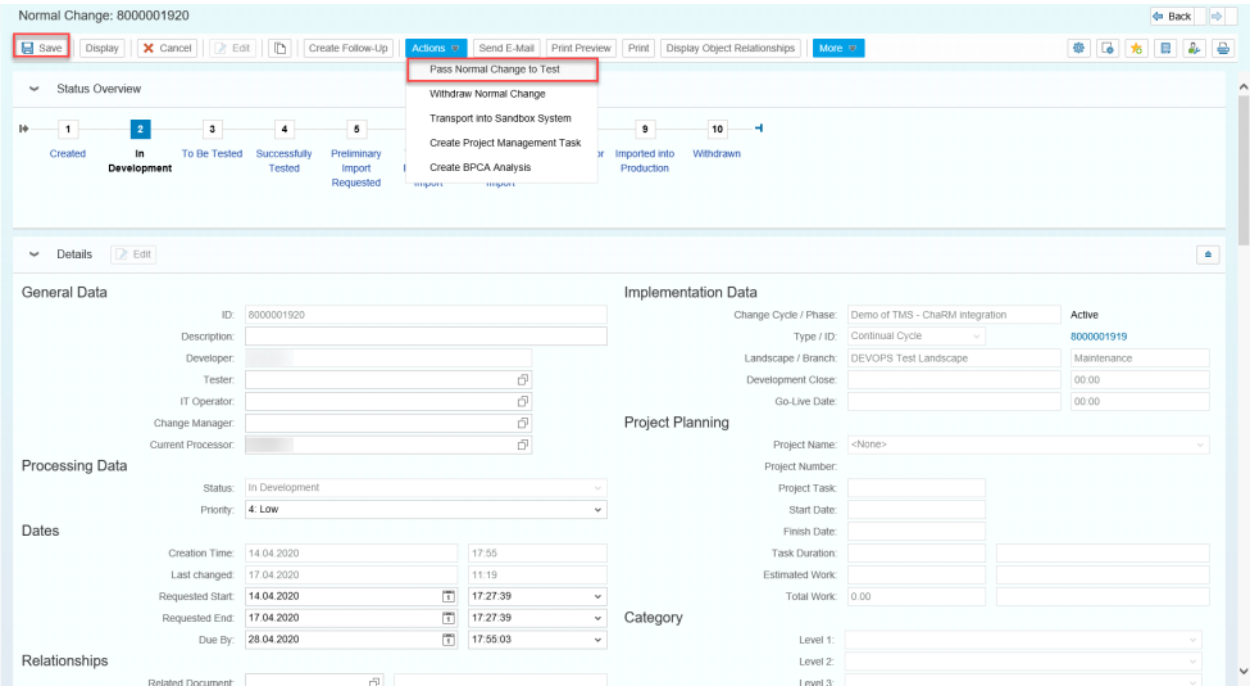
The transport request is now assigned to the change document. It is not yet imported to the test subaccount.



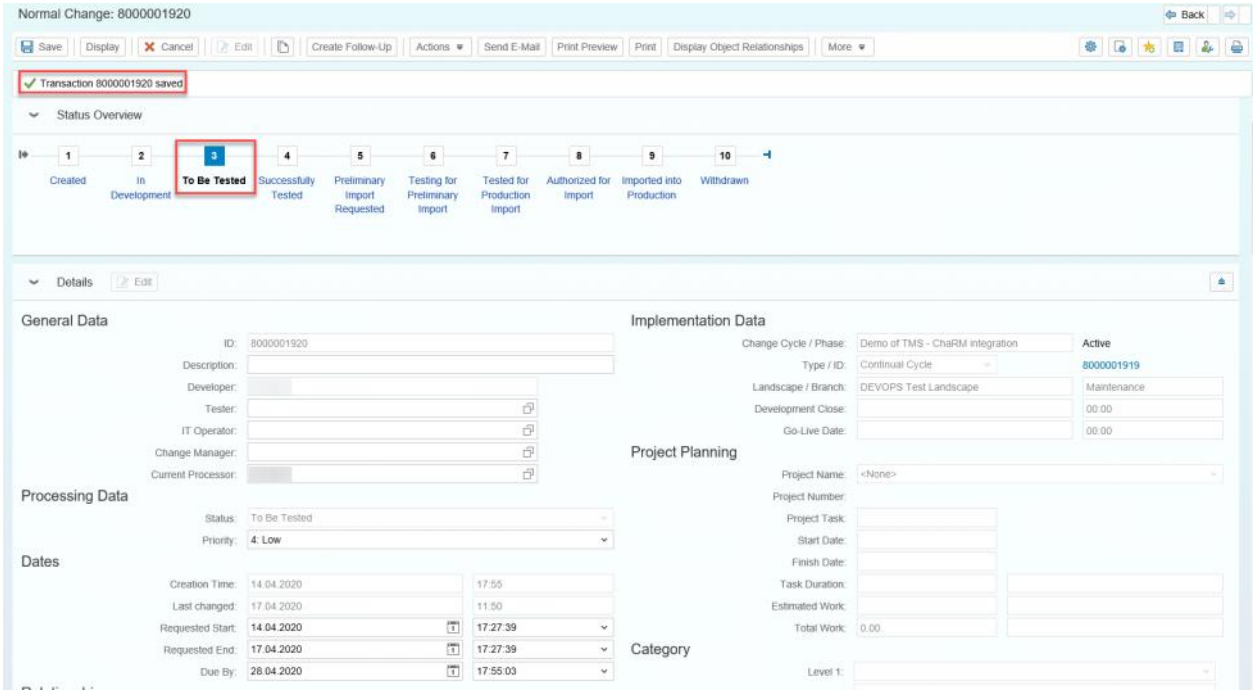
Set Change Document to 'To be Tested'

I now changed the status of the change document to 'To be Tested'. This triggers the import of the assigned transport request into the test subaccount.

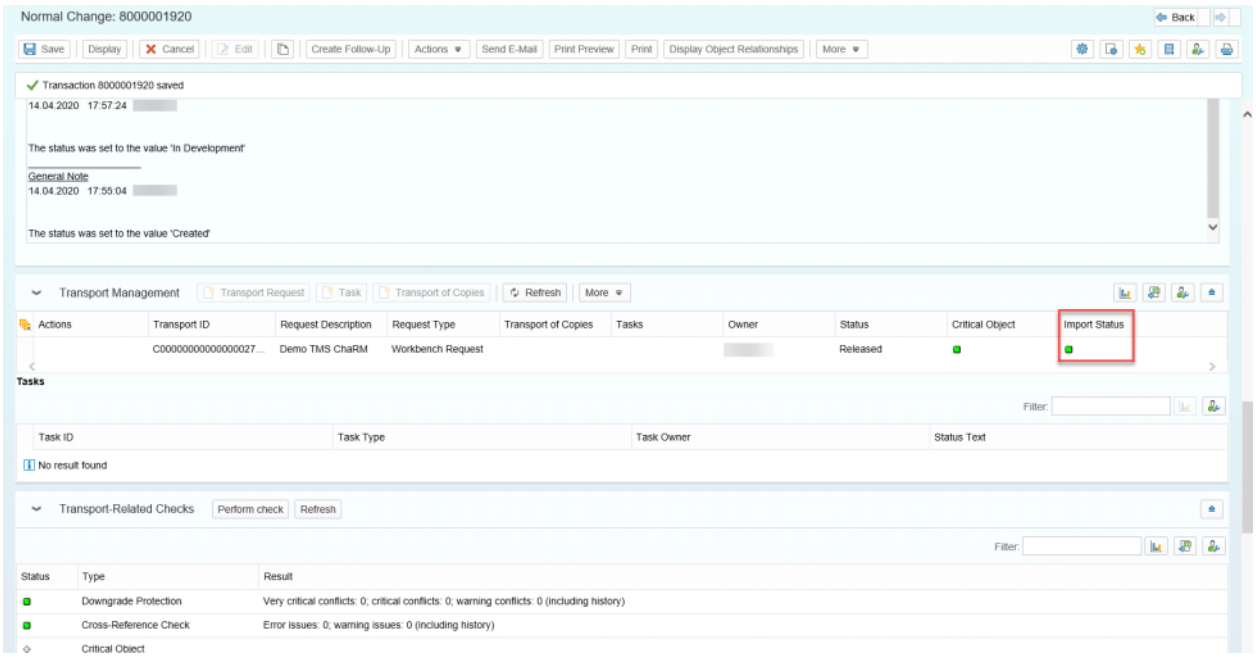
I selected 'Pass Normal Change to Test' from the 'Actions' menu and saved the change document. This triggers the import of the assigned Transport Management transport requests (and also a transport of copies of potentially assigned ABAP transports).



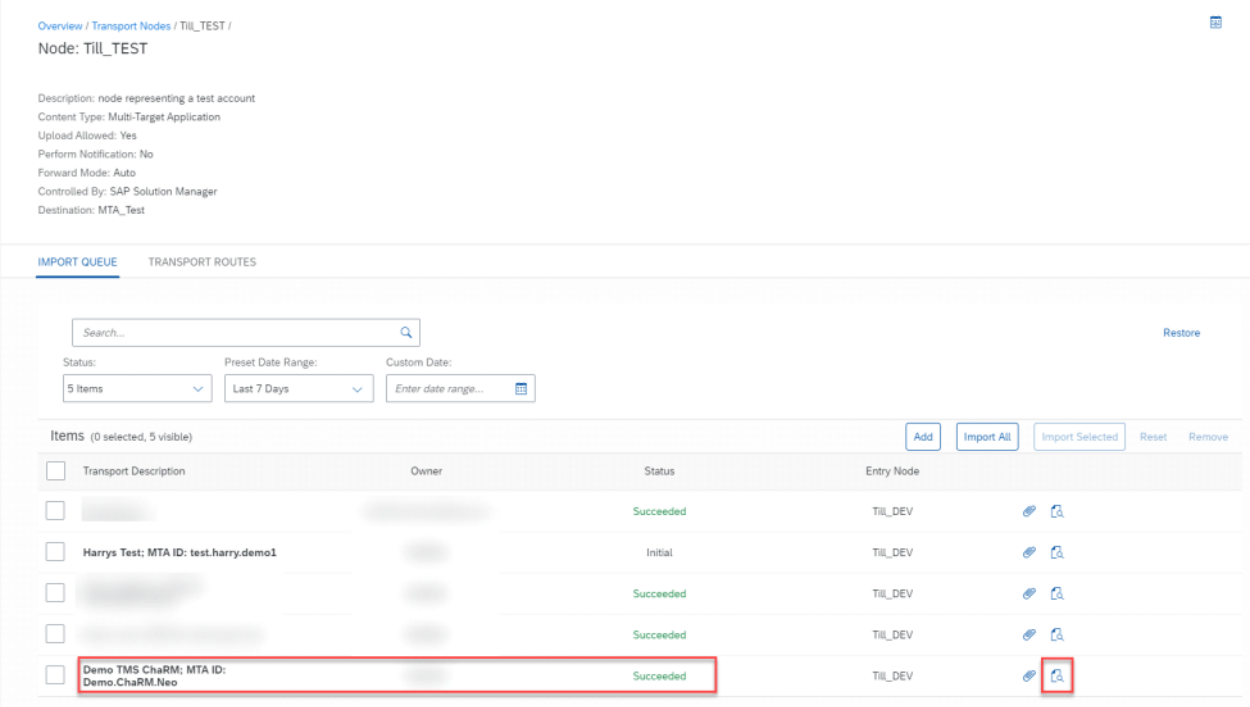
The change document is now in the status ‘To be Tested’.



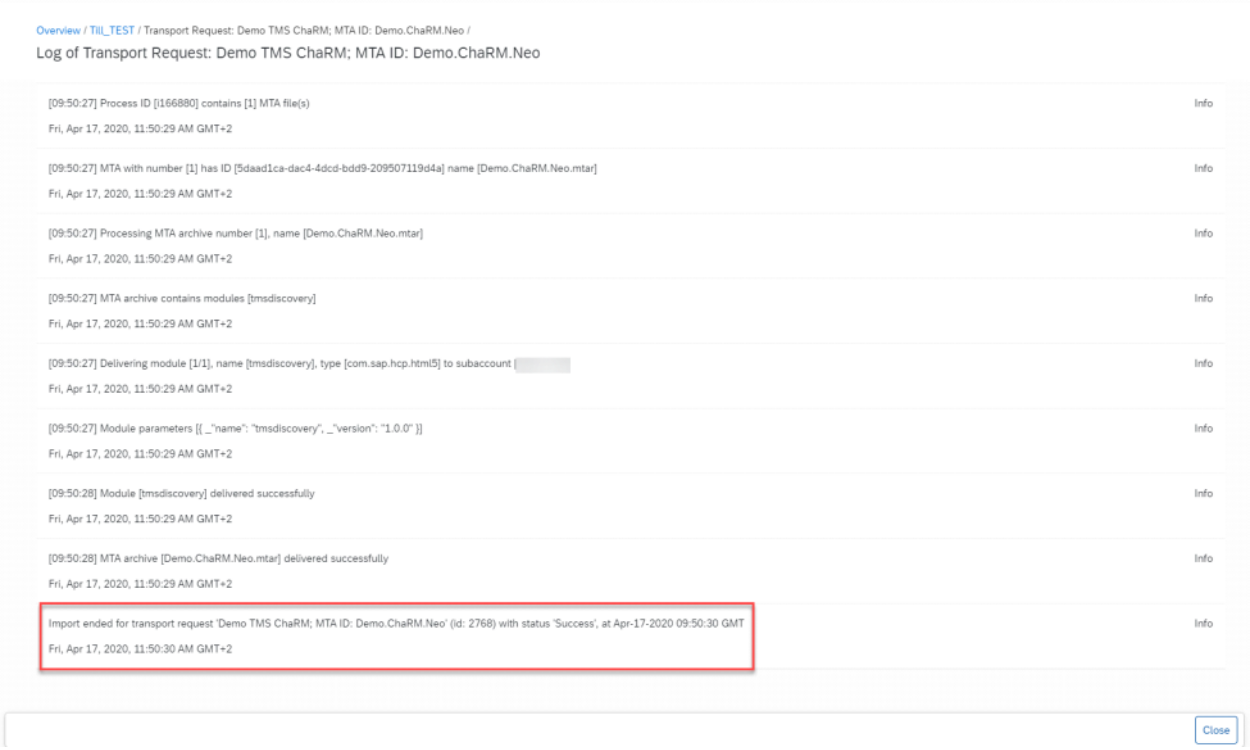
The import status of the request has changed to green (= imported).



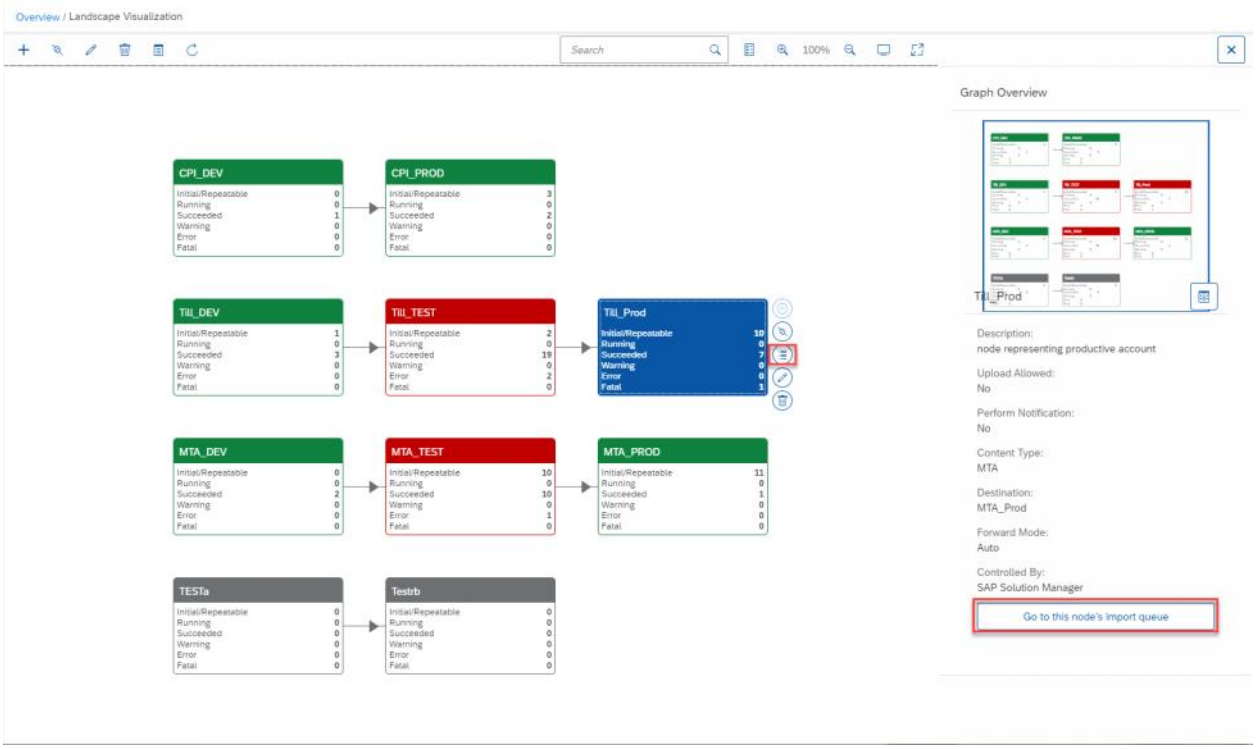
I checked the status of the transport request in the queue of the test node in Transport Management. It has been successfully imported. I also opened the transport log by clicking on the corresponding icon.



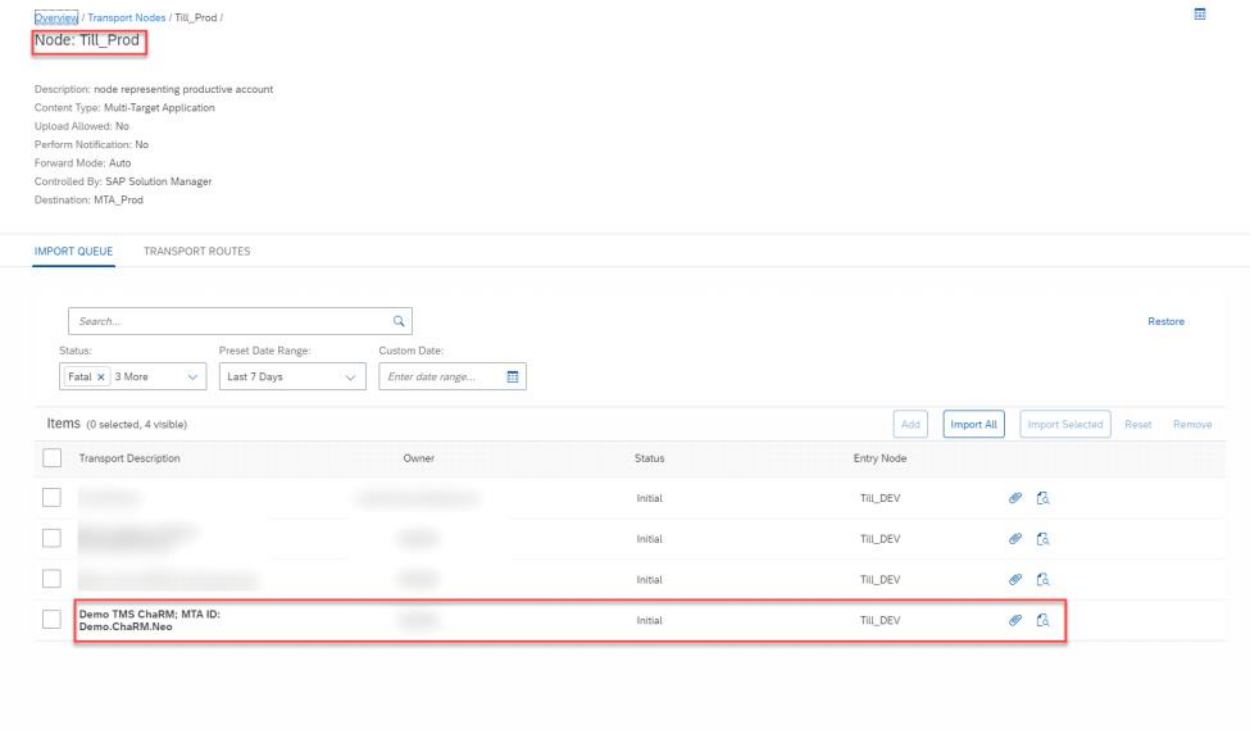
The transport log shows the successful import.



Additionally, I checked the import queue of the production node.



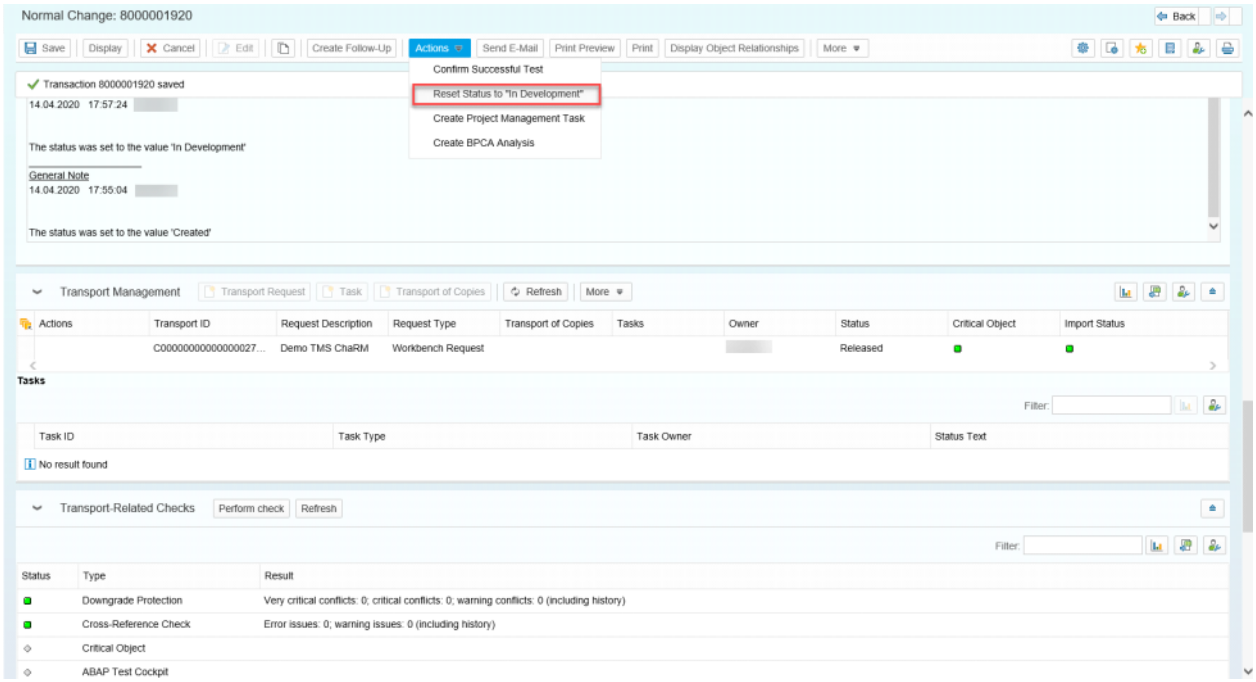
The transport request has automatically been forwarded to the import queue of the production node and is waiting there to be imported when the change document reaches the corresponding status.



Handling of errors during test

Please note that in contrast to the ABAP transport request there is no transport of copies for the Transport Management transport requests. If you find errors during testing which require development changes on the SAP Cloud Platform you have to create a new transport request and add it to the queue of the test node (with the methods discussed above). However, in order to assign it to the change document you have to reset the status of the change document to 'In Development'. The import of the new transport request is then triggered upon the status change to 'To be Tested'.

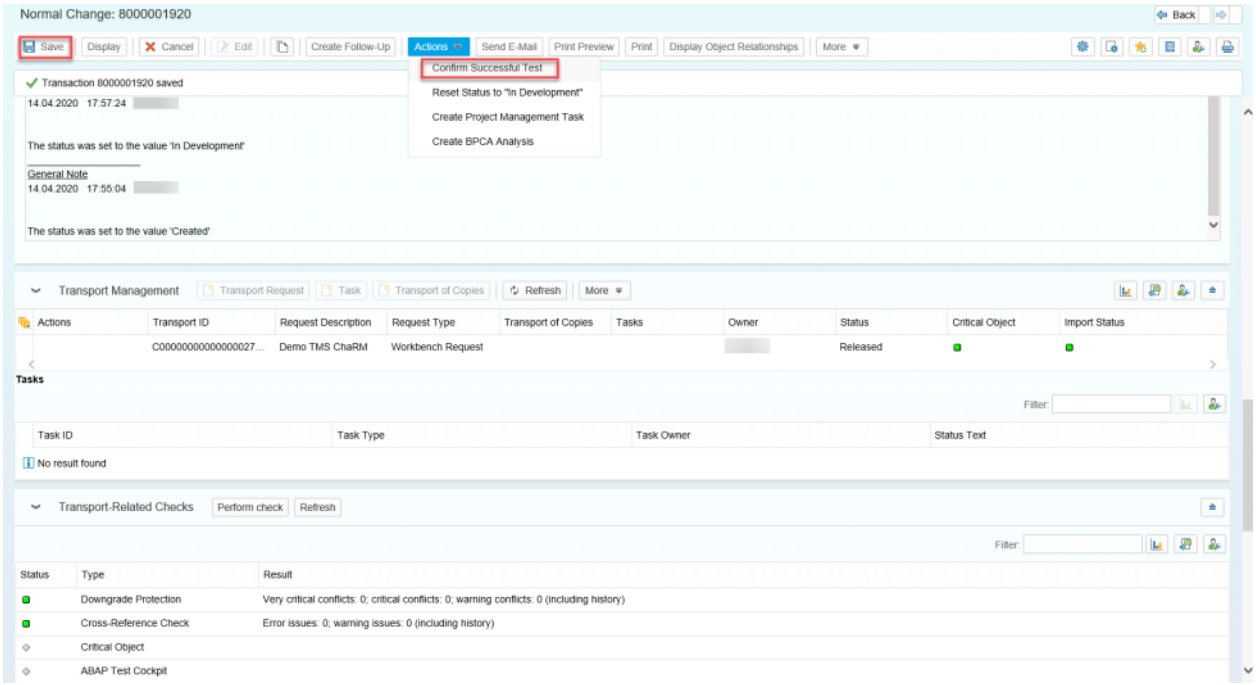
I did not use this option in this example.



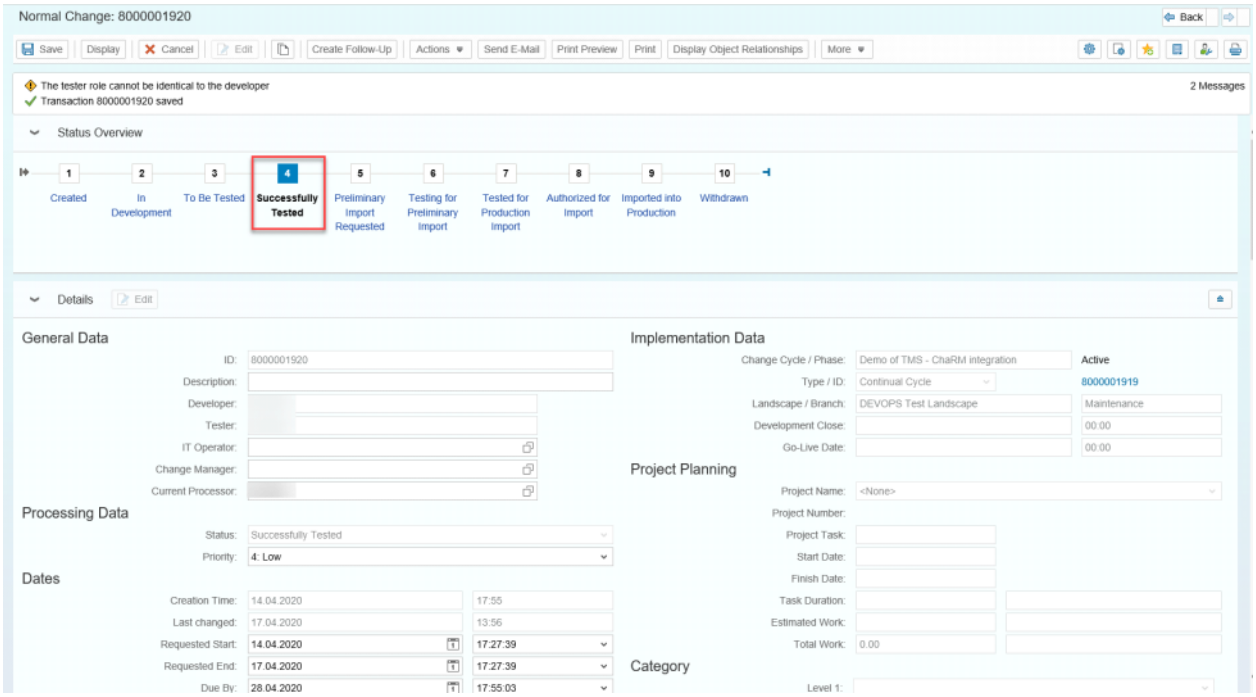
Perform further status changes

I now ran through the next status changes of the change document in SAP Solution Manager ChaRM. Due to my comparably simple landscape this resulted not in further transports (of Transport Management Requests).

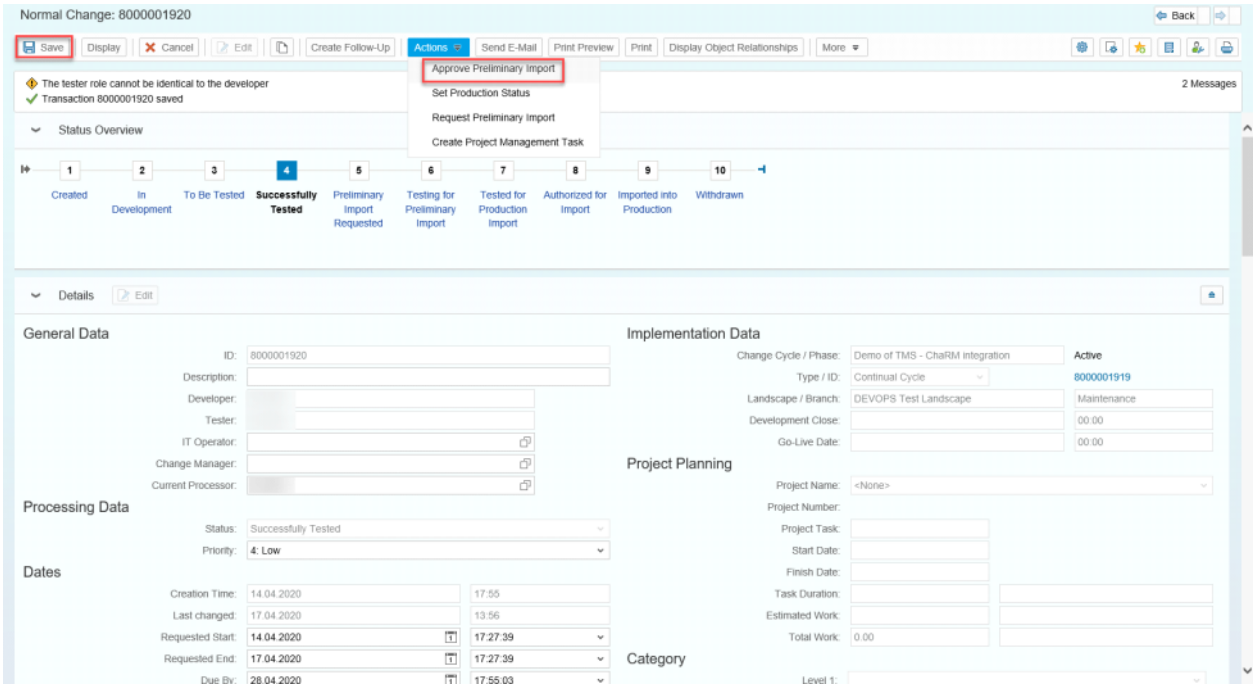
I confirmed the successful test.



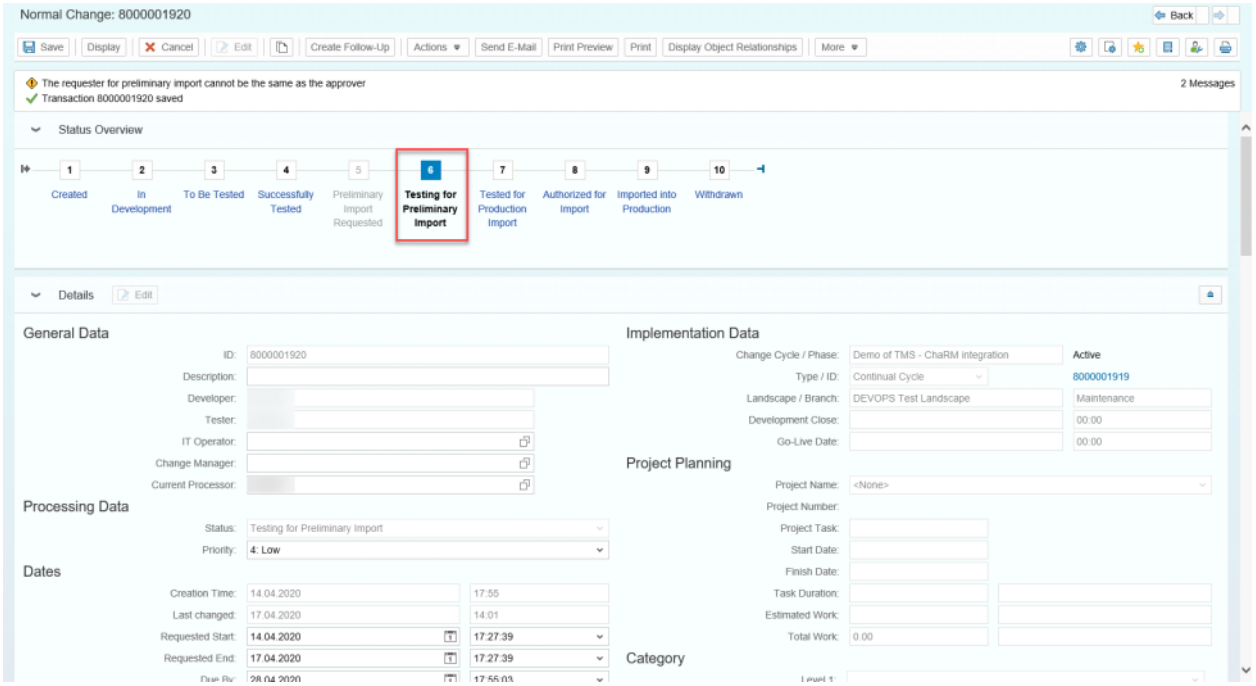
The status changed to ‘Successfully Tested’.



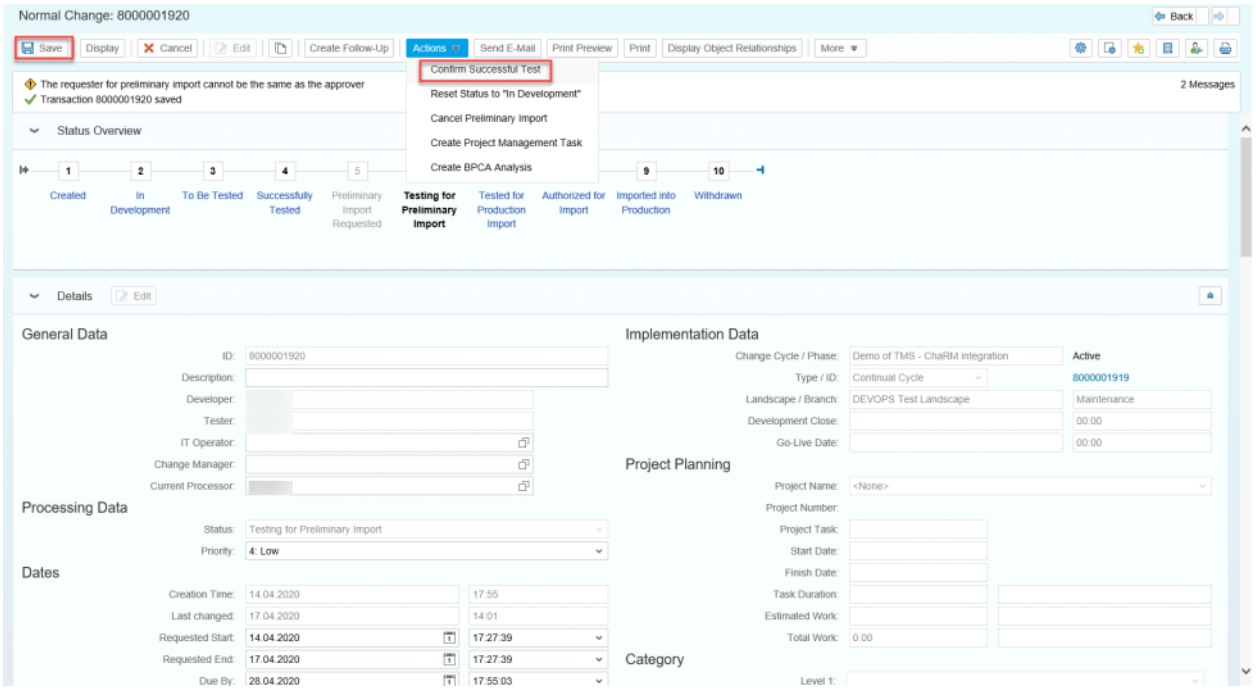
I approved the preliminary transport.



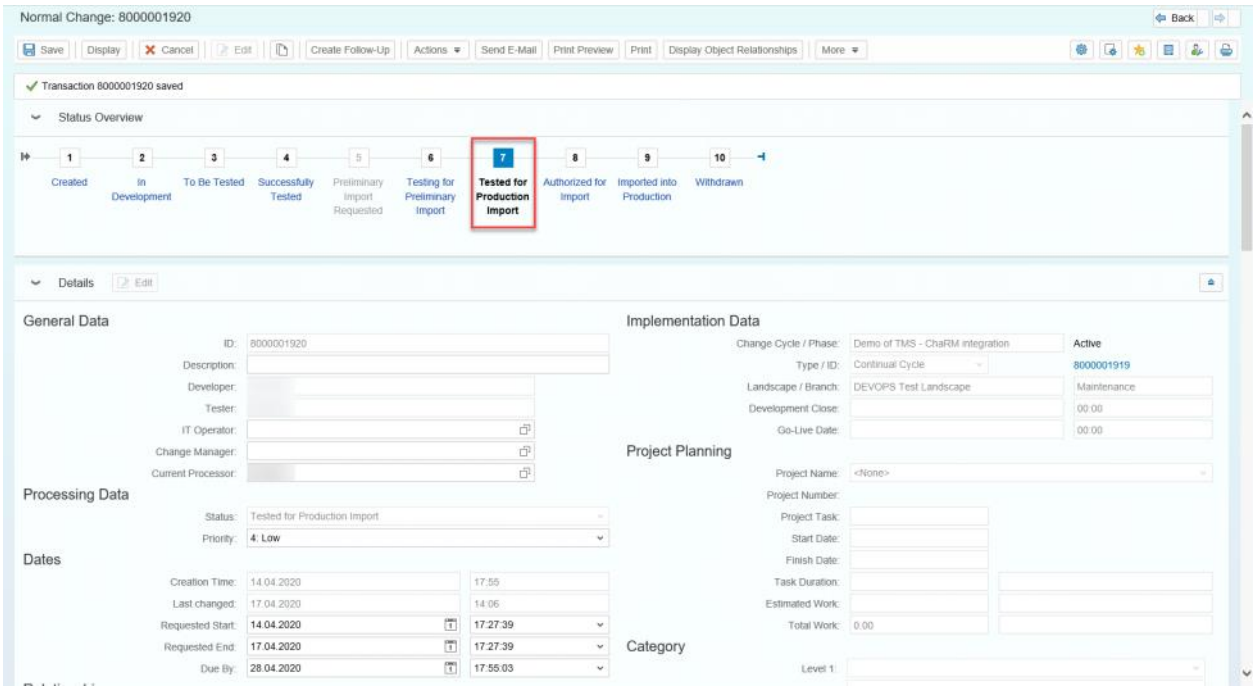
The status changed to ‘Testing for Preliminary Import’.



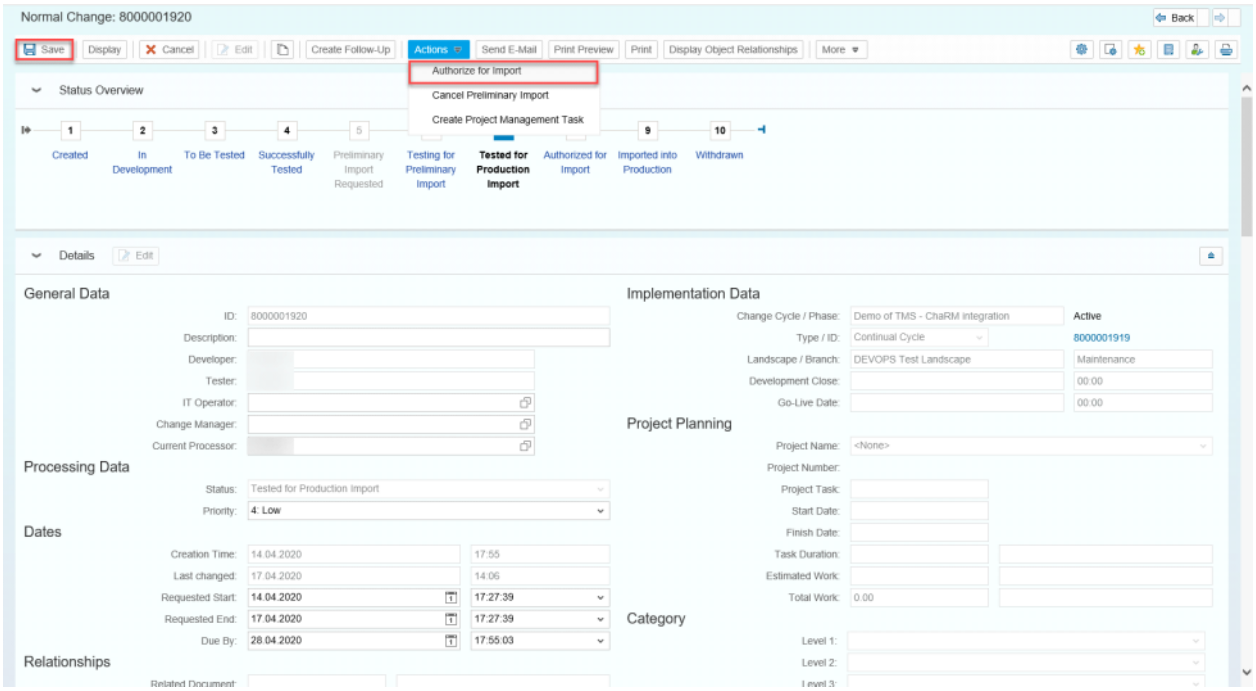
I confirmed the successful test.



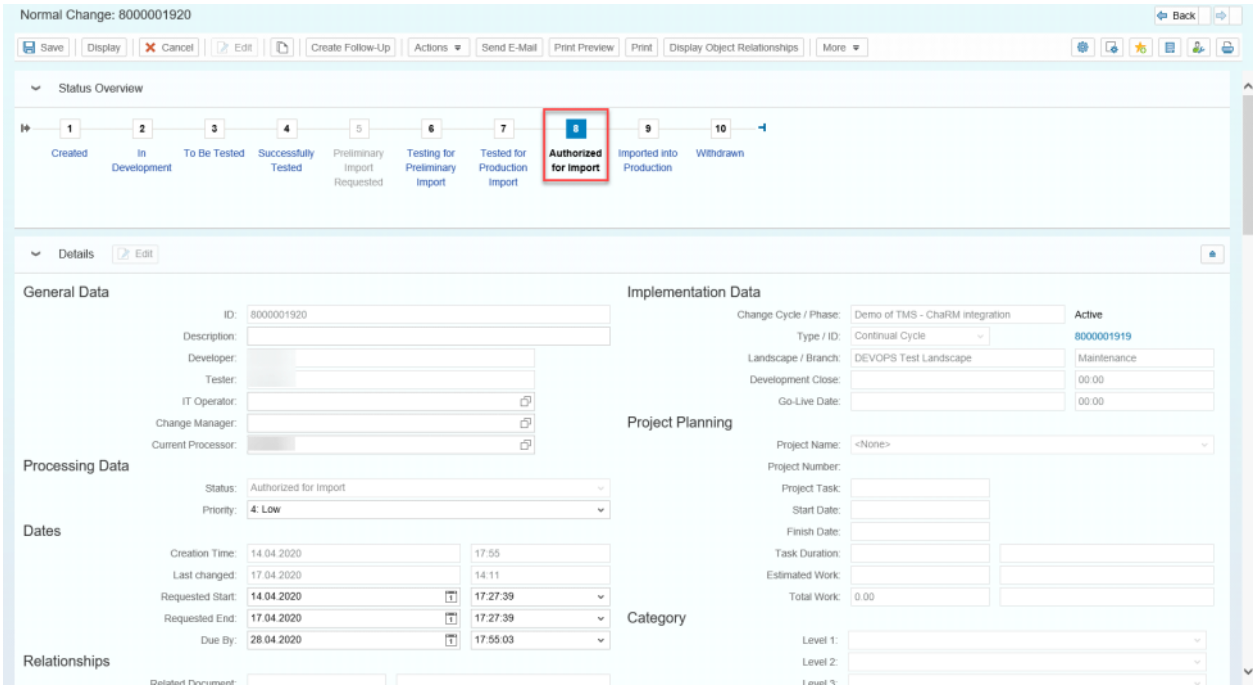
The status changed to ‘Tested for Productive Import’.



I authorized the productive import.

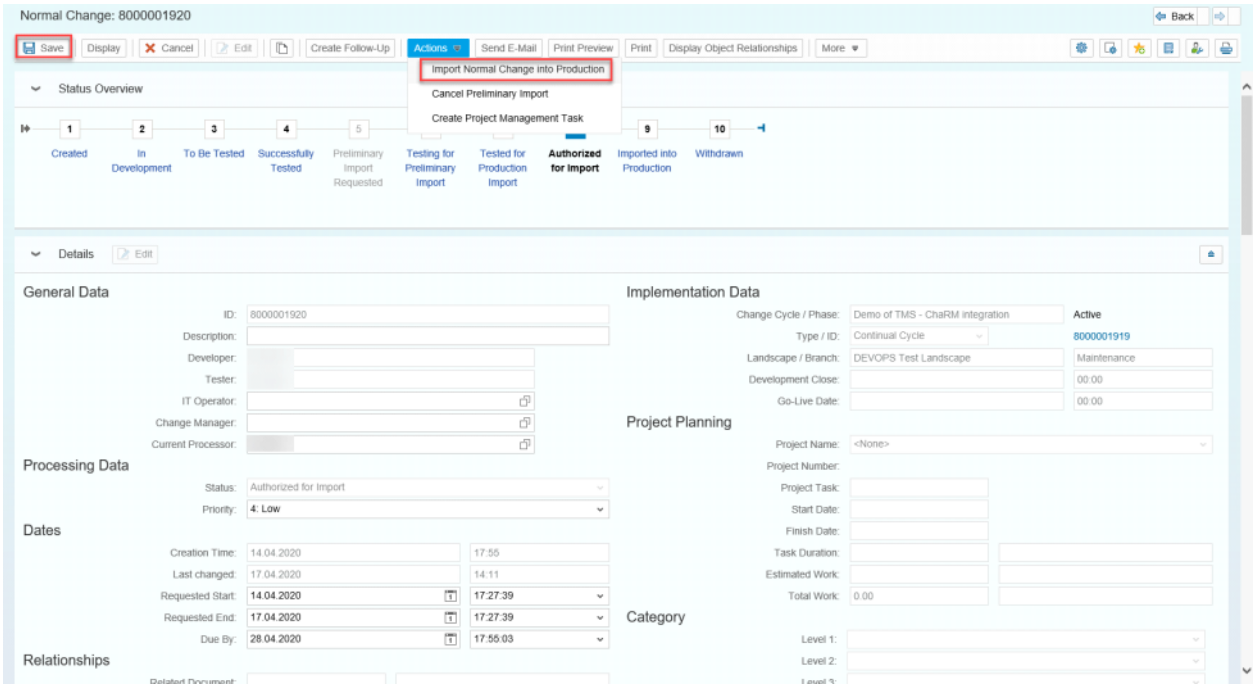


The status changed to ‘Authorized for Import’.

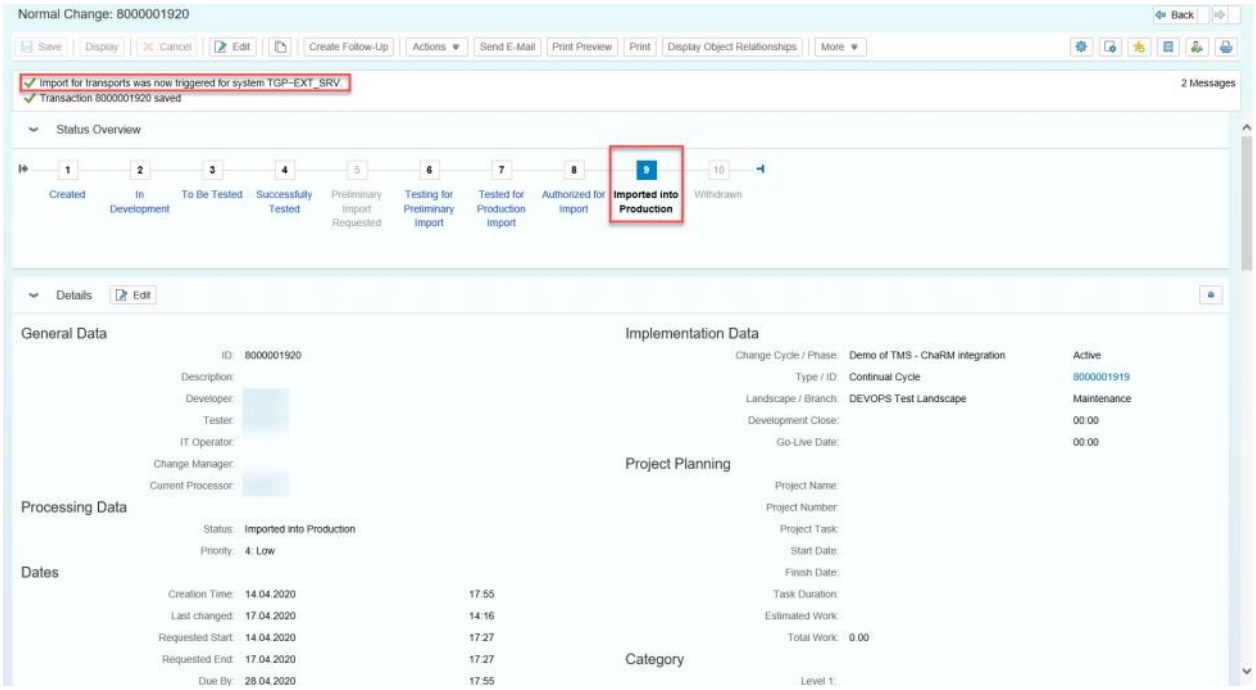


Trigger transport into productive node

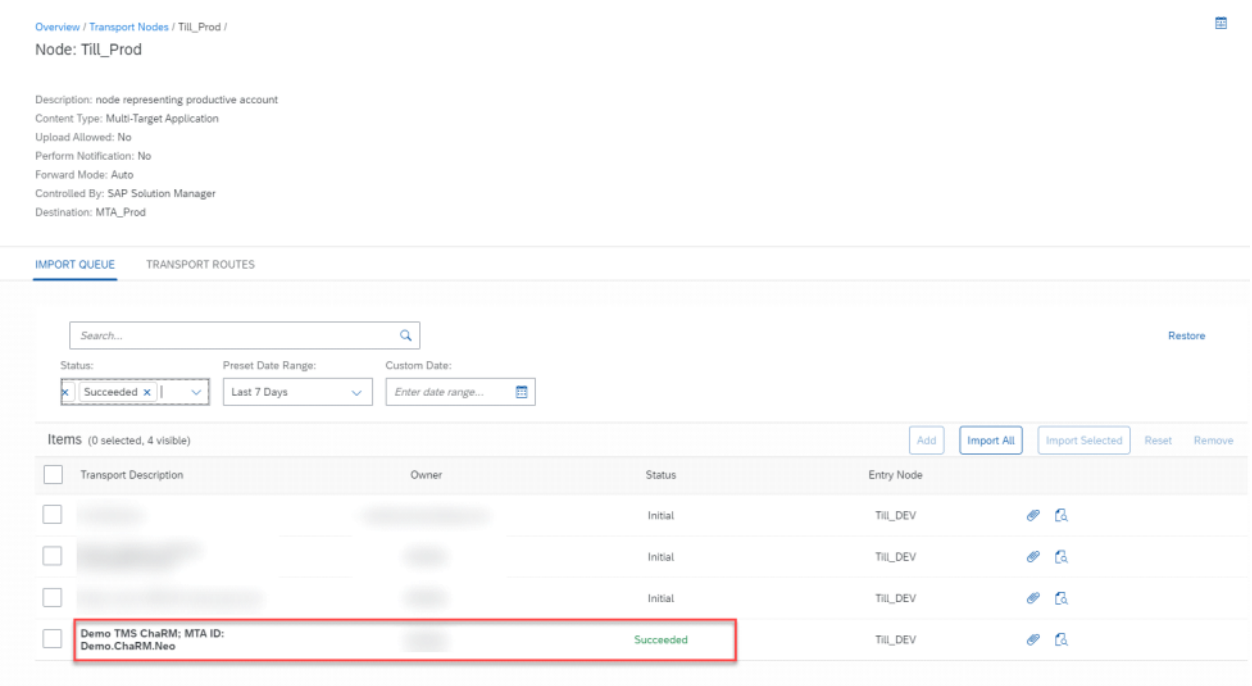
The final step was to set the status of the change document to ‘Import Normal Change into Production’. This triggers the import of the transport request into the productive node in Transport Management.



The status changed to ‘Imported into Production’.



I switched to the import queue of the productive node Till_PROD in SAP Cloud Platform Transport Management. The transport request has been successfully imported into the productive subaccount.



Troubleshooting

There are many potential sources for issues in this rather complex setup. For troubleshooting purposes in the SAP Transport Management setup I would propose the following approach:

- Check the destinations pointing to the target subaccounts. They should return HTTP code 200 (success)
- Set up your landscape without the 'Controlled by SAP Solution Manager' flag
- Manually upload a test MTA to the first node in your landscape using the 'Add' functionality in the import queue
- Import the transport request in all your nodes
- This proves that transporting works in principle. Otherwise analyse the error messages provided in the transport logs
- Enable the 'Controlled by SAP Solution Manager' for the test node and the productive node and continue with tests including SAP Solution Manager

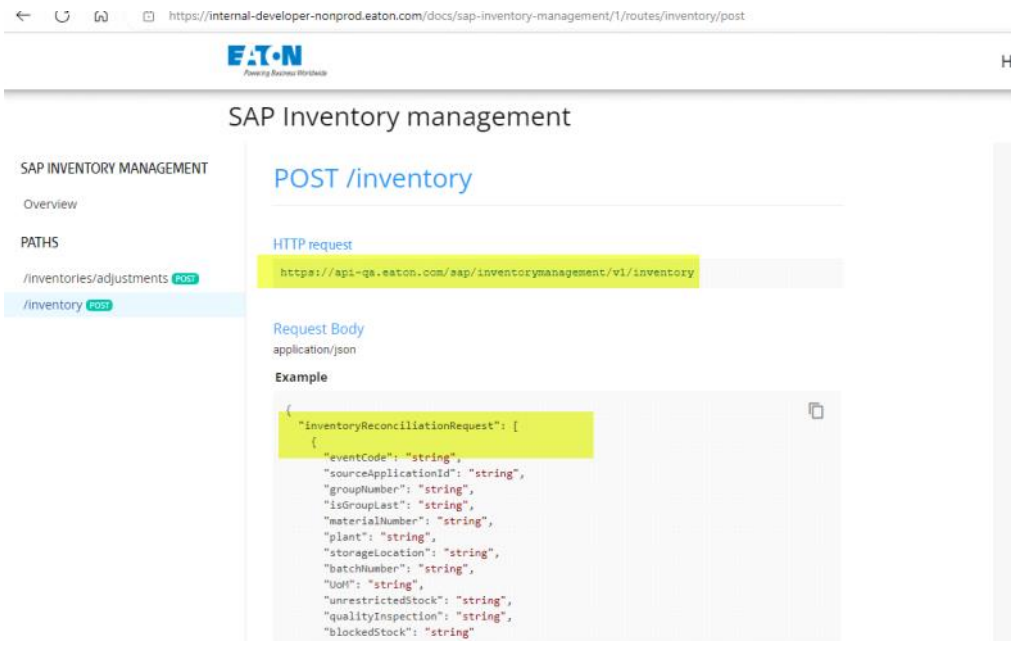
For analysing potential issues with SAP Solution Manager Change Request Management I recommend this very extensive Wiki.

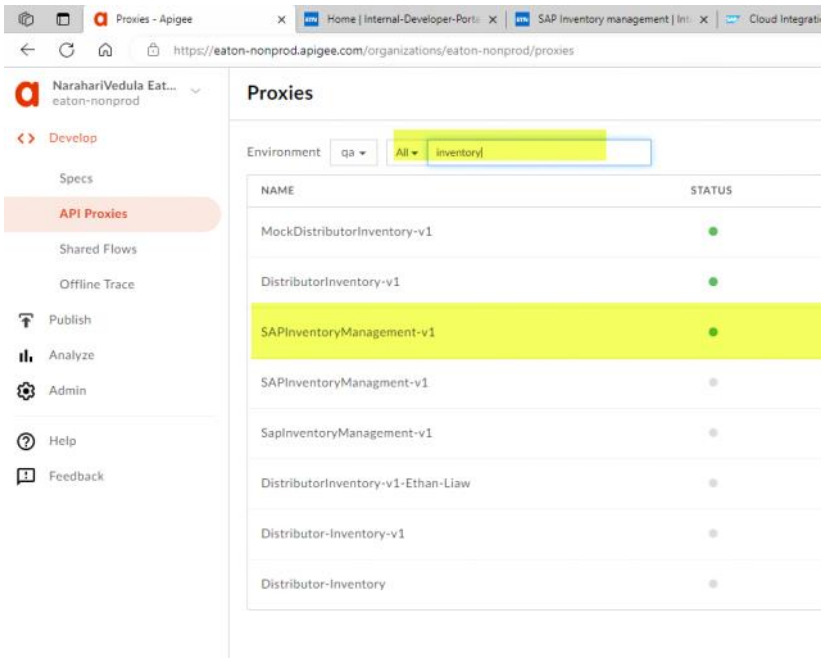
Summary

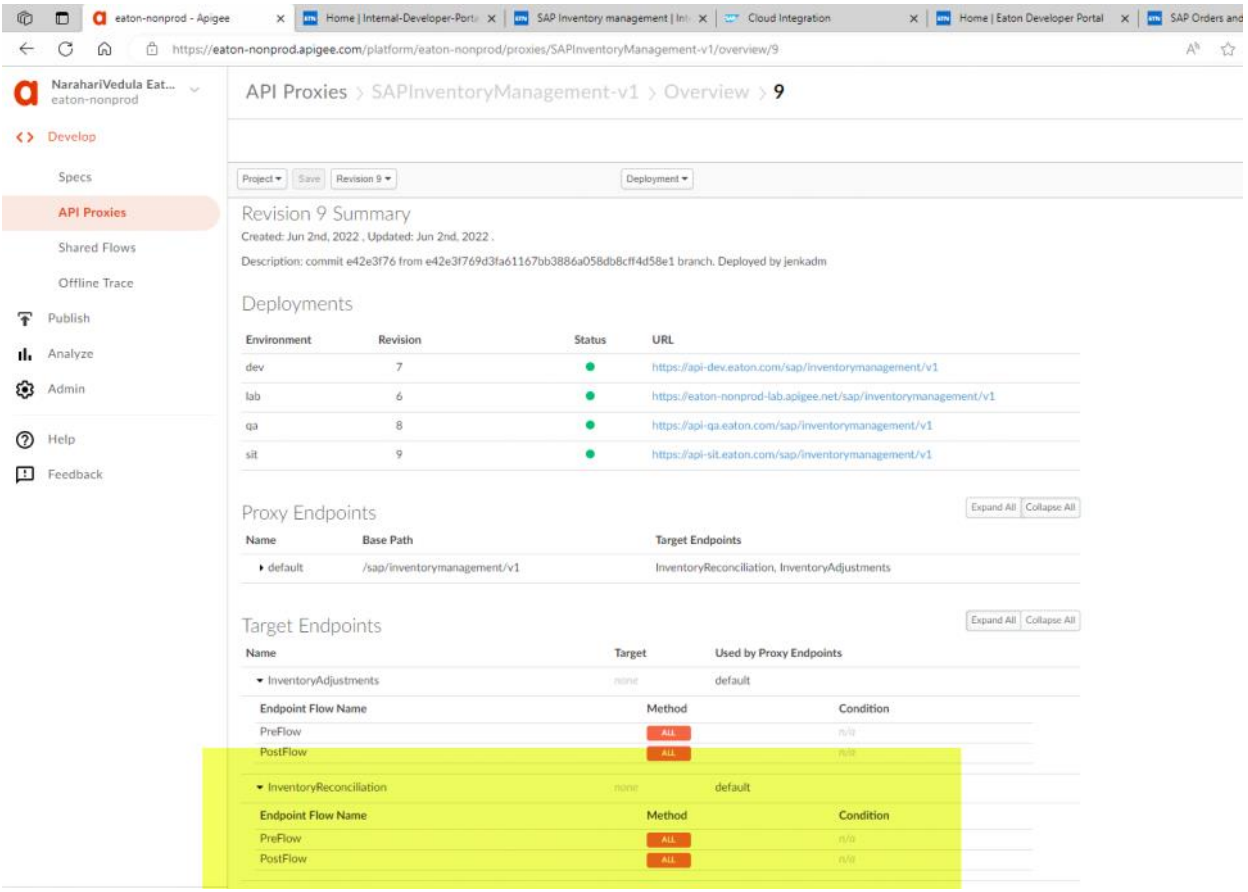
The new integration of SAP Cloud Platform Transport Management into SAP Solution Manager Change Request Management and Quality Gate Management allows you to document all aspects of a change, on premise and in the cloud, in one place. It also synchronizes the transports in the different landscapes. This is a great step forward for managing changes in hybrid landscapes.

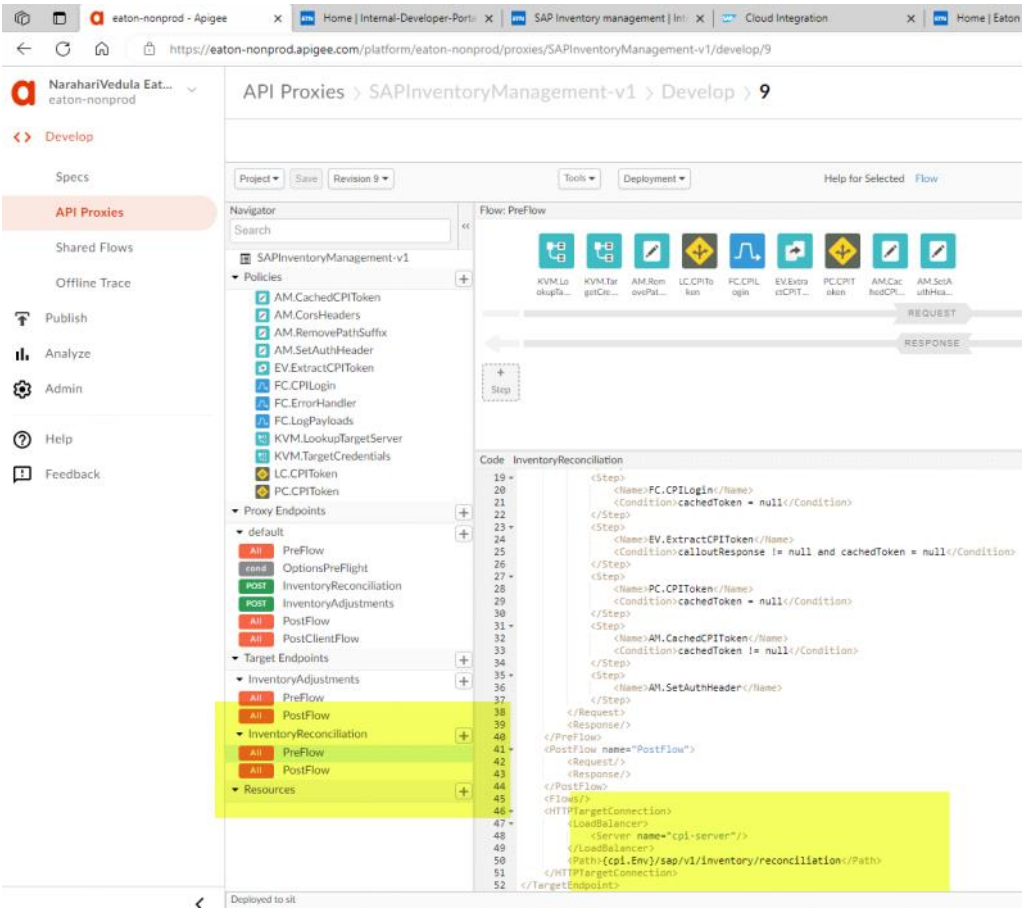
How to trace a API call from APIGEE -> CPI -> SAP

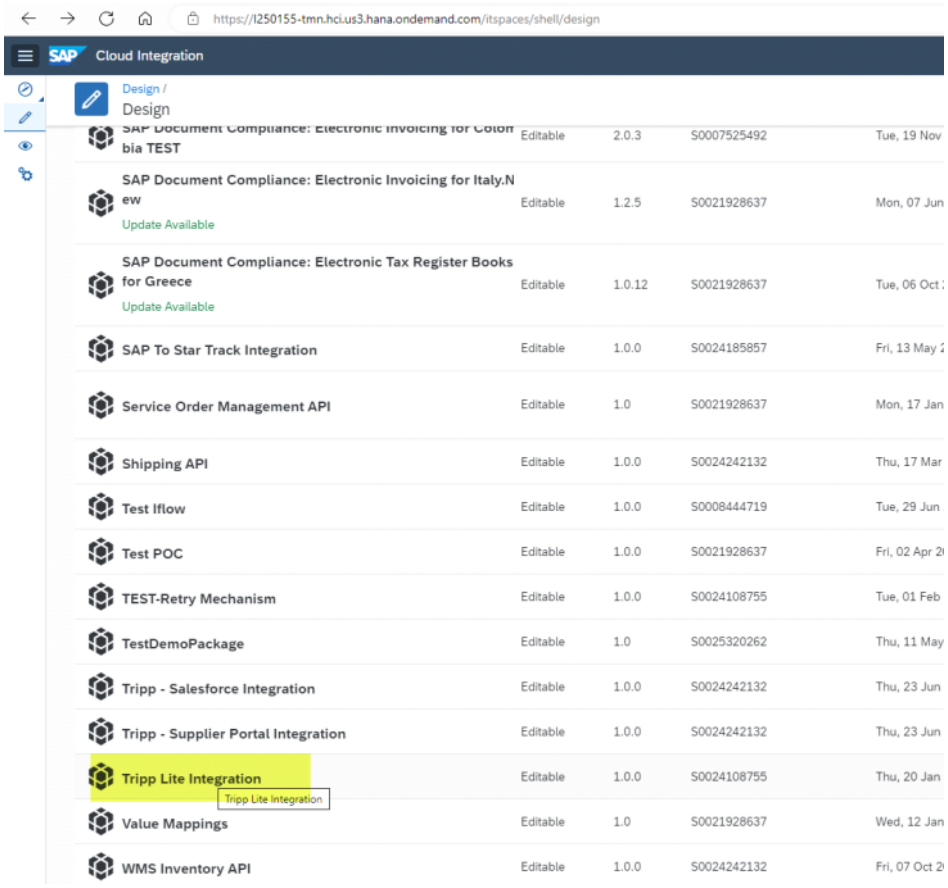
Wednesday, July 5, 2023 6:00 PM



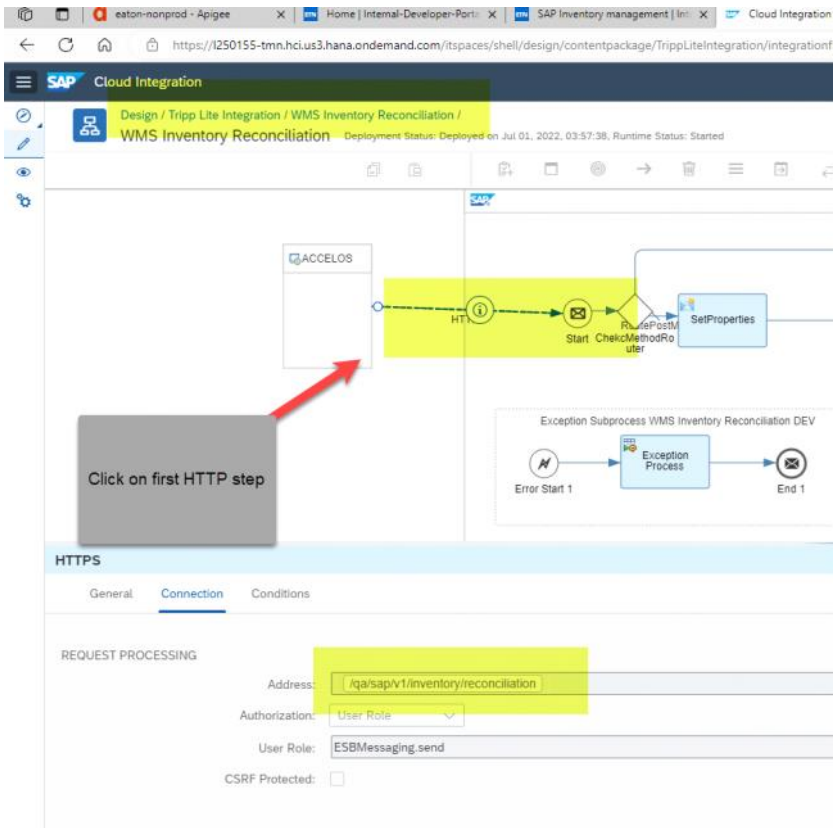



eaton-nonprod - Apigee
https://eaton-nonprod.apigee.com/platform/eaton-nonprod/proxies/SAPInventoryManagement-v1/overview/9
NarahariVedula Eat...
eaton-nonprod
Develop
Specs
API Proxies
Shared Flows
Offline Trace
Publish
Analyze
Admin
Help
Feedback
API Proxies › SAPInventoryManagement-v1 › Overview › 9
Project
Save
Revision 9
Deployment
Revision 9 Summary
Created: Jun 2nd, 2022 , Updated: Jun 2nd, 2022 .
Description: commit e42e3f76 from e42e3f769d3fa61167bb3886a058db8cff4d58e1 branch. Deployed by jenkadm
Deployments
Environment
Revision
Status
URL
dev
7
https://api-dev.eaton.com/sap/inventorymanagement/v1
lab
6
https://eaton-nonprod-lab.apigee.net/sap/inventorymanagement/v1
qa
8
https://api-qa.eaton.com/sap/inventorymanagement/v1
sit
9
https://api-sit.eaton.com/sap/inventorymanagement/v1
Proxy Endpoints
Expand All
Collapse All
Name
Base Path
Target Endpoints
default
/sap/inventorymanagement/v1
InventoryReconciliation, InventoryAdjustments
Target Endpoints
Expand All
Collapse All
Name
Target
Used by Proxy Endpoints
InventoryAdjustments
none
default
Endpoint Flow Name
Method
Condition
PreFlow
ALL
n/a
PostFlow
ALL
n/a
InventoryReconciliation
none
default
Endpoint Flow Name
Method
Condition
PreFlow
ALL
n/a
PostFlow
ALL
n/a

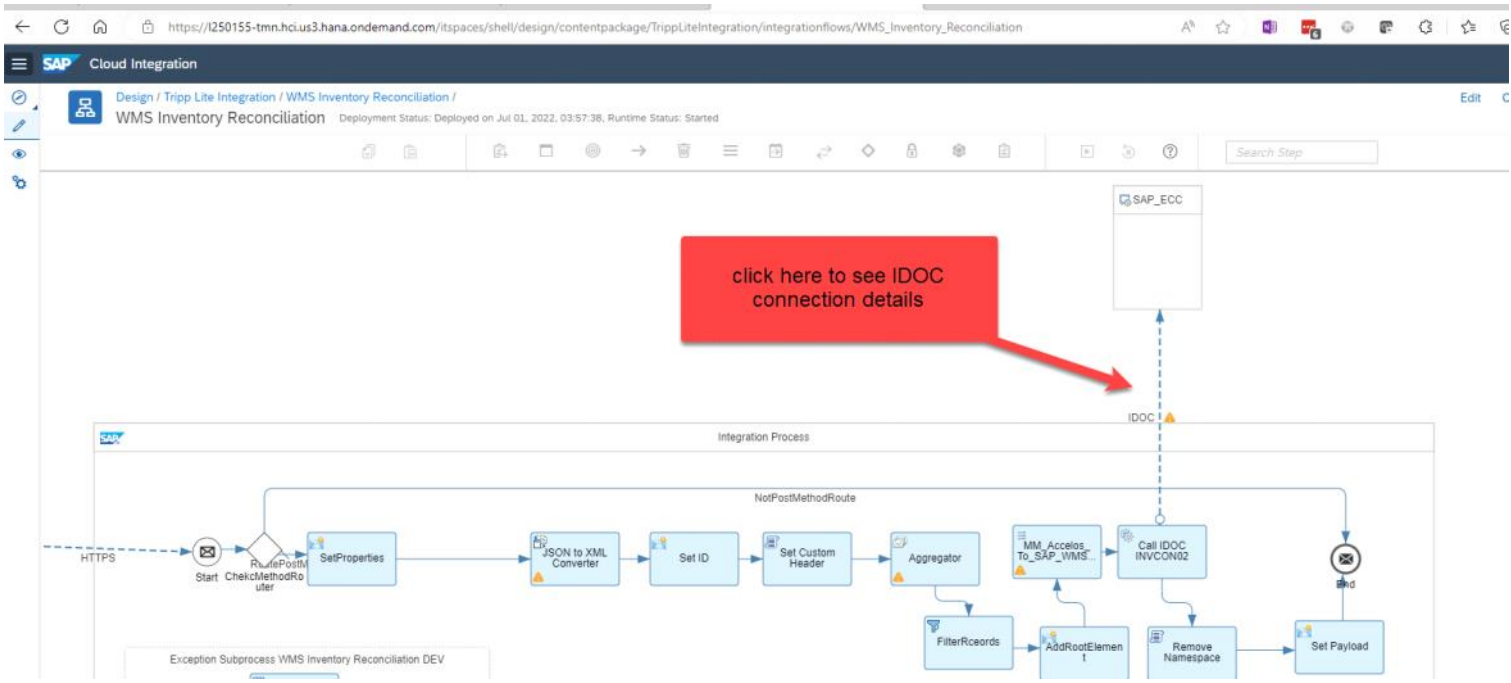

eaton-nonprod - Apigee
https://eaton-nonprod.apigee.com/platform/eaton-nonprod/proxies/SAPInventoryManagement-v1/develop/9
NarahariVedula Eat...
eaton-nonprod
Develop
Specs
API Proxies
Shared Flows
Offline Trace
Publish
Analyze
Admin
Help
Feedback
API Proxies › SAPInventoryManagement-v1 › Develop › 9
Project
Save
Revision 9
Tools
Deployment
Help for Selected Flow
Navigator
Search
SAPInventoryManagement-v1
Policies
AM.CachedCPIToken
AM.CorsHeaders
AM.RemovePathSuffix
AM.SetAuthHeader
EV.ExtractCPIToken
FC.CPILogin
FC.ErrorHandler
FC.LogPayloads
KVM.LookupTargetServer
KVM.TargetCredentials
LC.CPIToken
PC.CPIToken
Proxy Endpoints
default
PreFlow
OptionsPreFlight
InventoryReconciliation
InventoryAdjustments
PostFlow
PostClientFlow
Target Endpoints
InventoryAdjustments
PreFlow
PostFlow
InventoryReconciliation
PreFlow
PostFlow
Resources
Flow: PreFlow
REQUEST
RESPONSE
Step
Code InventoryReconciliation
<Step>
<Name>FC.CPILogin</Name>
<Condition>cachedToken = null</Condition>
</Step>
<Step>
<Name>EV.ExtractCPIToken</Name>
<Condition>calloutResponse != null and cachedToken = null</Condition>
</Step>
<Step>
<Name>PC.CPIToken</Name>
<Condition>cachedToken = null</Condition>
</Step>
<Step>
<Name>AM.CachedCPIToken</Name>
<Condition>cachedToken != null</Condition>
</Step>
<Step>
<Name>AM.SetAuthHeader</Name>
</Step>
</Request>
<Response/>
</PreFlow>
<PostFlow name="PostFlow">
<Request/>
<Response/>
</PostFlow>
<Flows/>
<HTTPTargetConnection>
<LoadBalancer>
<Server name="cpi-server"/>
</LoadBalancer>
<Path>{cpi.Env}/sap/v1/inventory/reconciliation</Path>
</HTTPTargetConnection>
</TargetEndpoint>
Deployed to sit

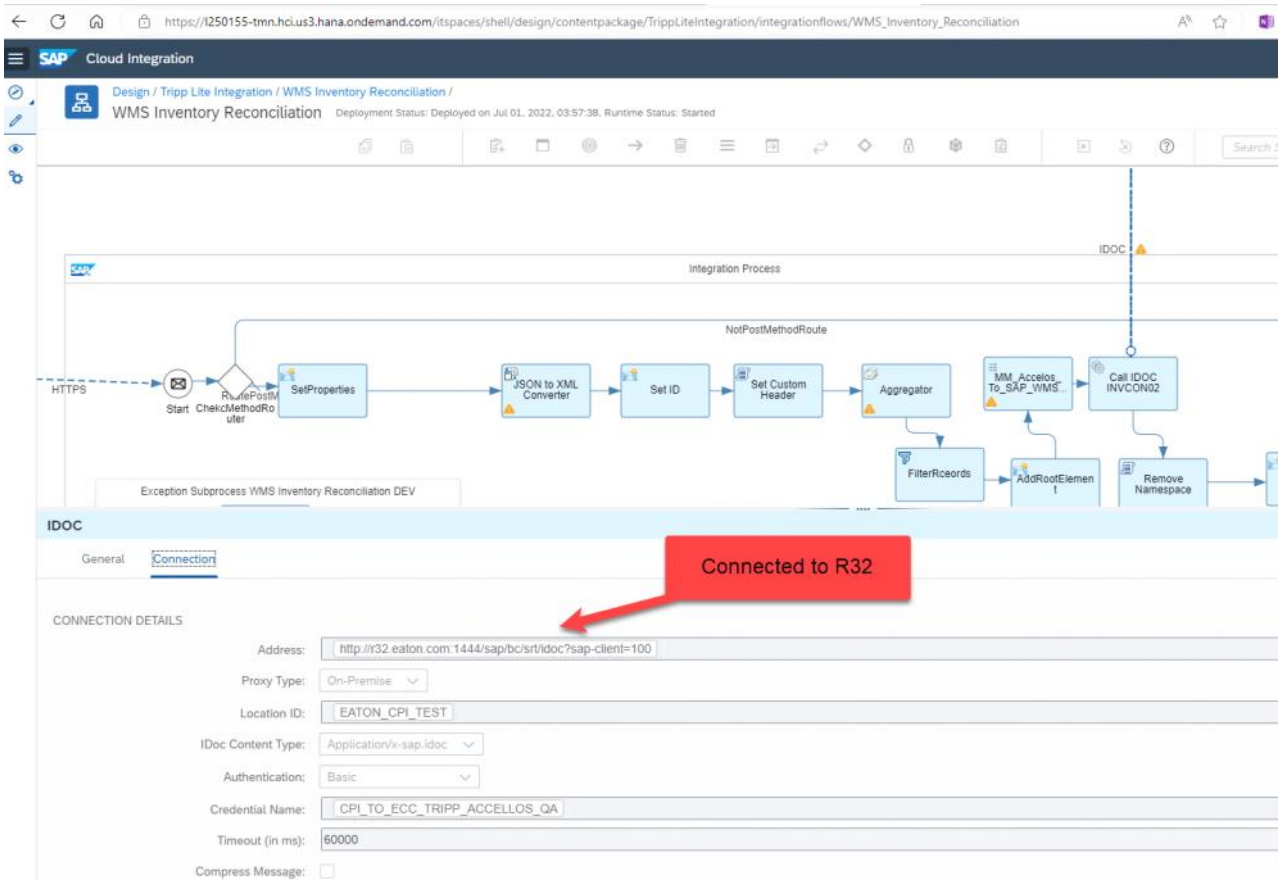


Click on first step to see the incoming request (from Apigee) :-



Click on IDOC to see the outgoing request (to ECC):-


https://l250155-tmn.hci.us3.hana.ondemand.com/itspaces/shell/design/contentpackage/TrippLiteIntegration/integrationflows/WMS_Inventory_Reconciliation
Cloud Integration
Design / Tripp Lite Integration / WMS Inventory Reconciliation /
WMS Inventory Reconciliation
Deployment Status: Deployed on Jul 01, 2022, 03:57:38, Runtime Status: Started
Edit
SAP_ECC
click here to see IDOC connection details
IDOC
Integration Process
NotPostMethodRoute
HTTPS
Start
SetProperties
JSON to XML Converter
Set ID
Set Custom Header
Aggregator
MM_Accelos To_SAP_WMS...
Call IDOC INVCON02
FilterRceords
AddRootElement
Remove Namespace
Set Payload
Exception Subprocess WMS Inventory Reconciliation DEV


https://l250155-tmn.hci.us3.hana.ondemand.com/itspaces/shell/design/contentpackage/TrippLiteIntegration/integrationflows/WMS_Inventory_Reconciliation
Cloud Integration
Design / Tripp Lite Integration / WMS Inventory Reconciliation /
WMS Inventory Reconciliation
Deployment Status: Deployed on Jul 01, 2022, 03:57:38, Runtime Status: Started
IDOC
Integration Process
NotPostMethodRoute
HTTPS
Start
SetProperties
JSON to XML Converter
Set ID
Set Custom Header
Aggregator
MM_Accelos To_SAP_WMS...
Call IDOC INVCON02
FilterRceords
AddRootElement
Remove Namespace
Exception Subprocess WMS Inventory Reconciliation DEV
IDOC
General
Connection
Connected to R32
CONNECTION DETAILS
Address:
http://r32.eaton.com:1444/sap/bc/srt/idoc?sap-client=100
Proxy Type:
On-Premise
Location ID:
EATON_CPI_TEST
IDoc Content Type:
Application/x-sap.idoc
Authentication:
Basic
Credential Name:
CPI_TO_ECC_TRIPP_ACCELLOS_QA
Timeout (in ms):
60000
Compress Message:

PI CPI access

Monday, March 27, 2023 12:39 PM

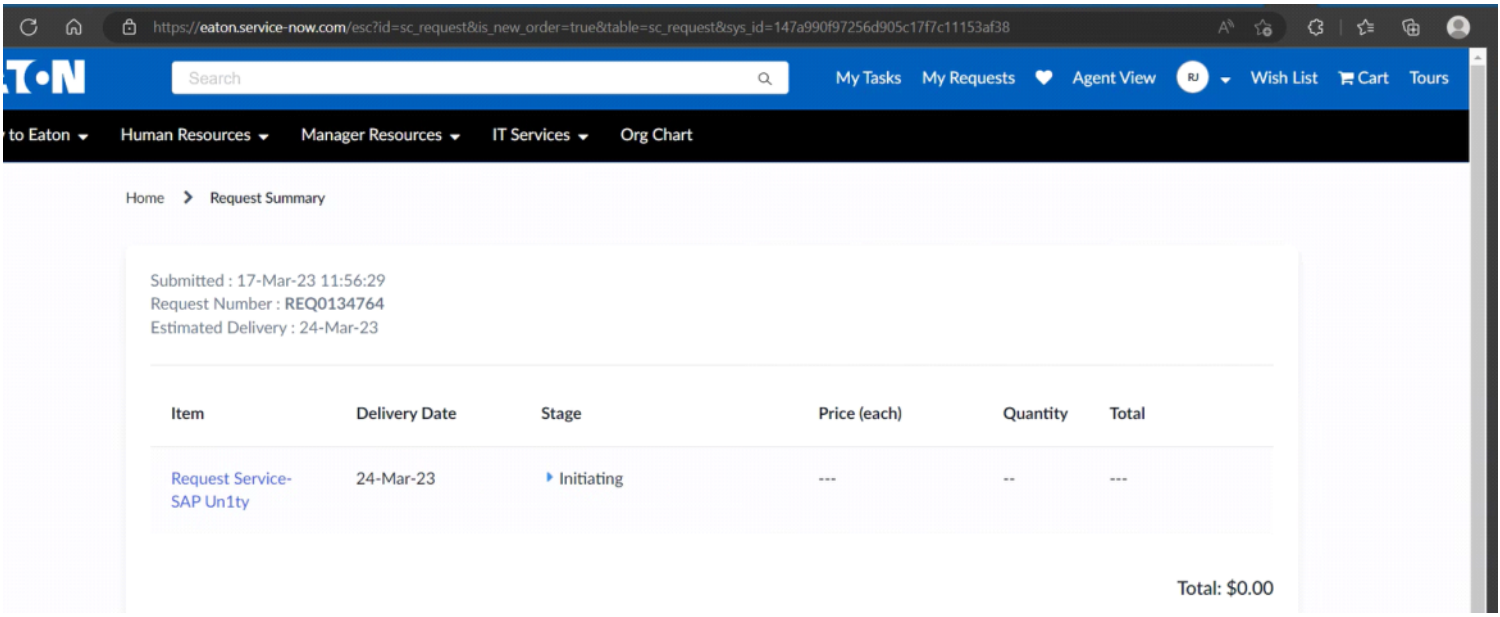
RJ

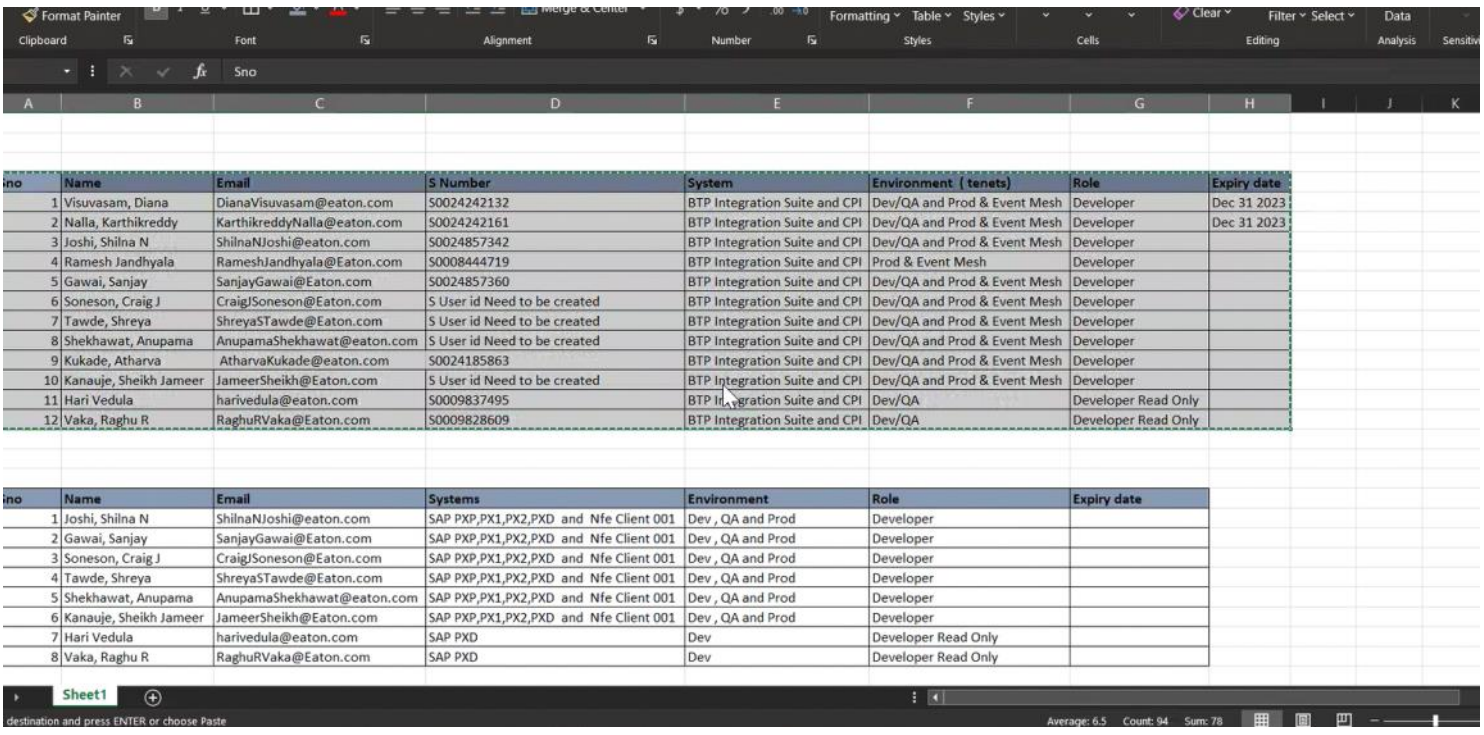
Jandhyala, Ramesh Friday 9:23 AM

I created ticket now.

Edited

FYI Shilna asked to to add you for PI Dev , CPI Dev and BTP Integration Dev read only access.





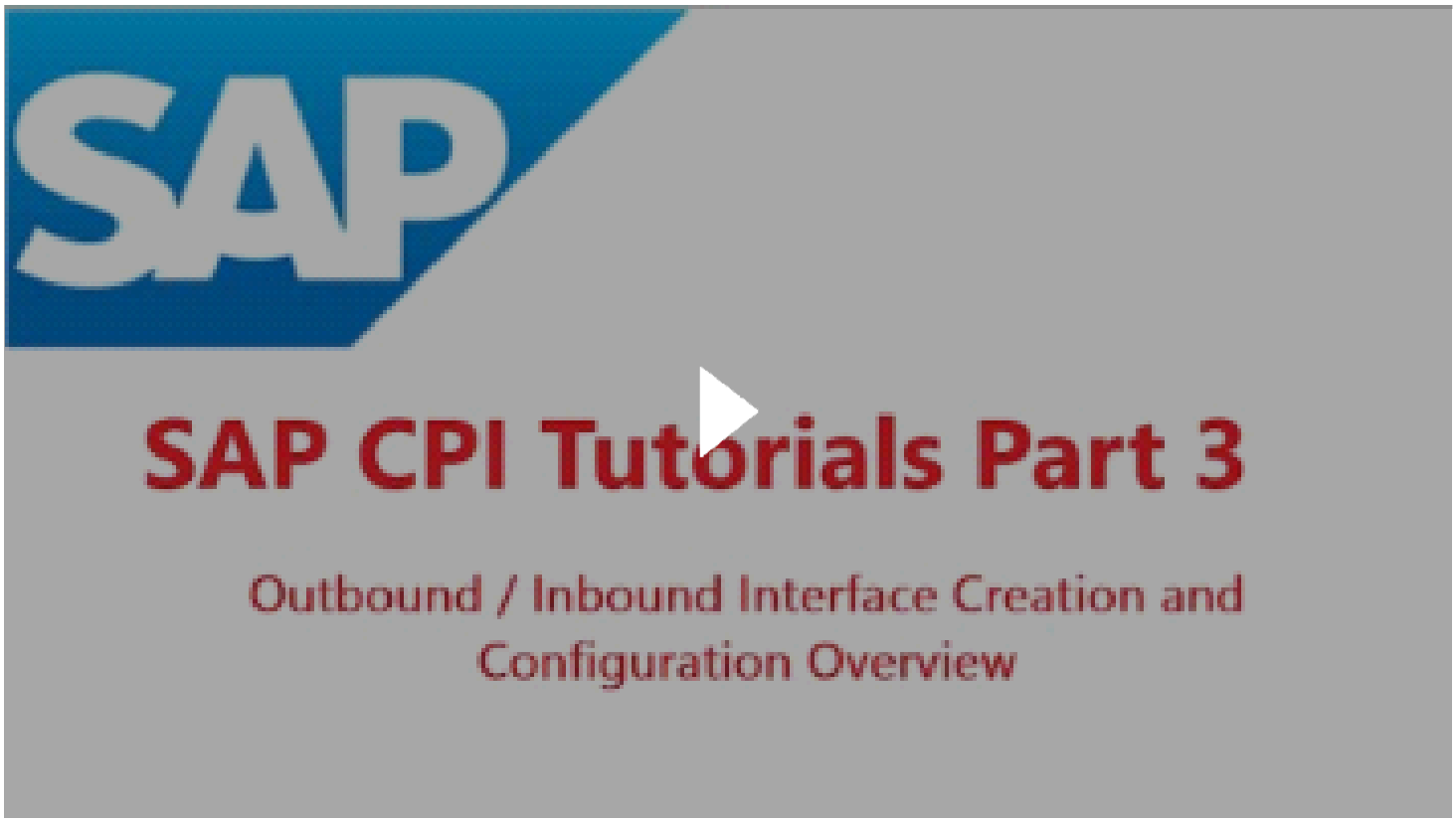
no	Name	Email	S Number	System	Environment (tenets)	Role	Expiry date
1	Visuvasam, Diana	DianaVisuvasam@eaton.com	S0024242132	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	Dec 31 2023
2	Nalla, Karthikreddy	KarthikreddyNalla@eaton.com	S0024242161	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	Dec 31 2023
3	Joshi, Shilna N	ShilnaNJoshi@eaton.com	S0024857342	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
4	Ramesh Jandhyala	RameshJandhyala@Eaton.com	S0008444719	BTP Integration Suite and CPI	Prod & Event Mesh	Developer	
5	Gawai, Sanjay	SanjayGawai@Eaton.com	S0024857360	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
6	Soneson, Craig J	CraigJSoneson@Eaton.com	S User id Need to be created	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
7	Tawde, Shreya	ShreyaSTawde@Eaton.com	S User id Need to be created	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
8	Shekhawat, Anupama	AnupamaShekhawat@eaton.com	S User id Need to be created	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
9	Kukade, Atharva	AtharvaKukade@eaton.com	S0024185863	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
10	Kanauje, Sheikh Jameer	JameerSheikh@Eaton.com	S User id Need to be created	BTP Integration Suite and CPI	Dev/QA and Prod & Event Mesh	Developer	
11	Hari Vedula	harivedula@eaton.com	S0009837495	BTP Integration Suite and CPI	Dev/QA	Developer Read Only	
12	Vaka, Raghu R	RaghuRVaka@Eaton.com	S0009828609	BTP Integration Suite and CPI	Dev/QA	Developer Read Only	

no	Name	Email	Systems	Environment	Role	Expiry date
1	Joshi, Shilna N	ShilnaNJoshi@eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
2	Gawai, Sanjay	SanjayGawai@Eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
3	Soneson, Craig J	CraigJSoneson@Eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
4	Tawde, Shreya	ShreyaSTawde@Eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
5	Shekhawat, Anupama	AnupamaShekhawat@eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
6	Kanauje, Sheikh Jameer	JameerSheikh@Eaton.com	SAP PXP,PX1,PX2,PXD and Nfe Client 001	Dev , QA and Prod	Developer	
7	Hari Vedula	harivedula@eaton.com	SAP PXD	Dev	Developer Read Only	
8	Vaka, Raghu R	RaghuRVaka@Eaton.com	SAP PXD	Dev	Developer Read Only	

CPI Tutorials

Tuesday, March 28, 2023 7:23 AM

SAP CPI Tutorials Part 3 (Outbound / Inbound Interface Creation and Configuration Overview Cont.)
Delta Learning Hub



RE: (Please pick 1 of 2 meetings) 51185 - SAP PI 7.5 Upgrade- New SAP PI Environment configuration

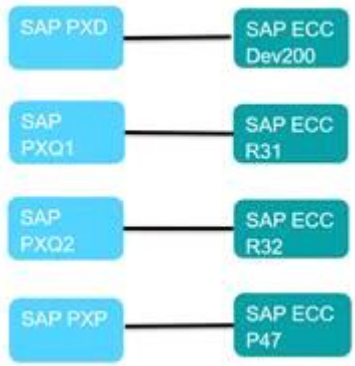
Thursday, March 5, 2020 4:41 PM

Subject	**RE: (Please pick 1 of 2 meetings) 51185 - SAP PI 7.5 Upgrade- New SAP PI Environment configuration**
From	Jandhyala, Ramesh
To	Sours, Brian E; Gay, Alan; sawant, sameer; Brzezicki, Richard M; Gieringer, Michael K; Olliff, John; Lorenz, Martin; Vedula, Hari; Subbusamy, Mohan; O'Neill, Richard; Srivastava, Komal; Kant, Gaurav; Mayreddy, Maddy
Sent	Thursday, March 5, 2020 4:35 PM
Attachments	pi_migration_pi711_...

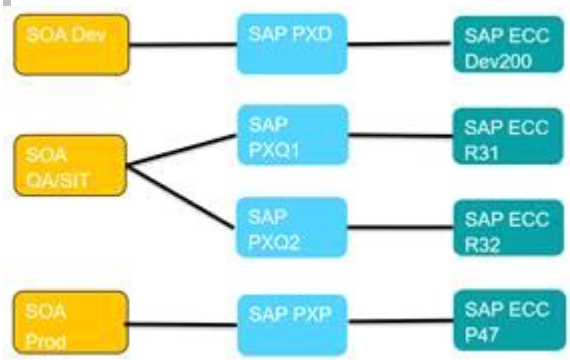
Team

Please see below details and let me know if you are looking for any other information.

High level diagram for SAP and New SAP PI pointers



SOA and PI in landscape



What is changing with New PI in landscape

1) Host names and URLs (mentioned below) for New PI.
2) Now we will have 2 PIs for QA(PX1 and PX2). Previously we used to have only one QA PI.

What are new and Old Server details

New hosts
sapuxpxd.tcc.etn.com:50100
sapuxpx1.tcc.etn.com:50100 (pointing to R31)
sapuxpx2.tcc.etn.com:50100 (pointing to R32)
sapuxpxp.tcc.etn.com:50100

Old hosts
sapuxpid.ci.root:50000
sapuxpiq.ci.root:50000
sapuxpip.ci.root:50100

Where are inventory of Interfaces

Please see attached file. You can filter by application or middleware (we can check for both Sender and Receiver)

Below list teams that have to make changes

SOA
Control M
Flash
Bidman
Redpraire

Changes required Now

All Pointers should be pointing to New PI (above mentioned PI) in Dev .
We are in process of moving all transports to QA and after PI changes moved , all teams mentioned will point to new PI.

On-Going Projects Till May(For Dual Maintenance)

For ongoing projects , we will switch back to old PI and test/Develop until we go live in May.
We will revert back to new PI when testing or development is complete.

Regards
Ramesh Jandhyala
Eaton | SAP Integration, IPA COE
203 Cooper Circle, Peachtree City, GA 30269 **Ph** 770.486.3910 **Mobile** 732 781 6439

-----Original Appointment-----
From: Sours, Brian E <BrianESours@eaton.com>
Sent: Monday, March 2, 2020 12:48 PM
To: Sours, Brian E; Gay, Alan; sawant, sameer; Brzezicki, Richard M; Gieringer, Michael K; Olliff, John; Lorenz, Martin; Vedula, Hari; Subbusamy, Mohan; O'Neill, Richard; Srivastava, Komal; Jandhyala, Ramesh; Kant, Gaurav; Mayreddy, Maddy
Subject: (Please pick 1 of 2 meetings) 51185 - SAP PI 7.5 Upgrade- New SAP PI Environment configuration
When: Thursday, March 5, 2020 7:00 AM-7:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: EC - 8430T Conf Rm - Huddle

Please note, this is meeting 1 of 2, just asking you to attend 1 (Except Ramesh and Gaurav 😊)

Hello,

All of you should be aware at this point that we are upgrading SAP PI to version 7.5. As part of this upgrade we have built new Dev, QA, and Prod environments. For testing, we need various custom apps and other interface platforms configured to point to the new servers. Scheduling time to go over this work.

The interfaces that need changed are filtered on this spreadsheet:
https://eaton.sharepoint.com/:x:/r/sites/PP51185-SAPPI7.11Upgrade/Shared%20Documents/General/PIP%20Inventory%20%26%20other%20Details/PI_Interface_Final%20list.xlsx?d=wf6bee77d38f5423e8e947a0eebe045c8&csf=1&e=1ZulvA

Many of them will be changed via other middle ware (SOA, Tibco, etc.) but some will require changes elsewhere.

Thanks,
Brian

-- Do not delete or change any of the following text. --

Join WebEx meeting

Meeting number (access code): 647 221 482 Meeting password: ZVkmrMmC752

Join from a video system or application
Dial 647221482@eaton.webex.com
You can also dial 173.243.2.68 and enter your meeting number.
From the Eaton internal network, dial *77* and the 9-digit meeting number.
From the Eaton internal network, open below link for Video address list.
http://wcm-prod-ct.etn.com/ecm/groups/intranet/@etn/@voice/documents/content/ct_285723.pdf

Join by phone
Tap to call in from a mobile device (attendees only)
+1-669-234-1708 US Toll
1-844-531-9388 US Toll free
Global call-in numbers | Toll-free calling restrictions

Can't join the meeting?

If you are a host, go here to view host information.

SAP PI interfaces

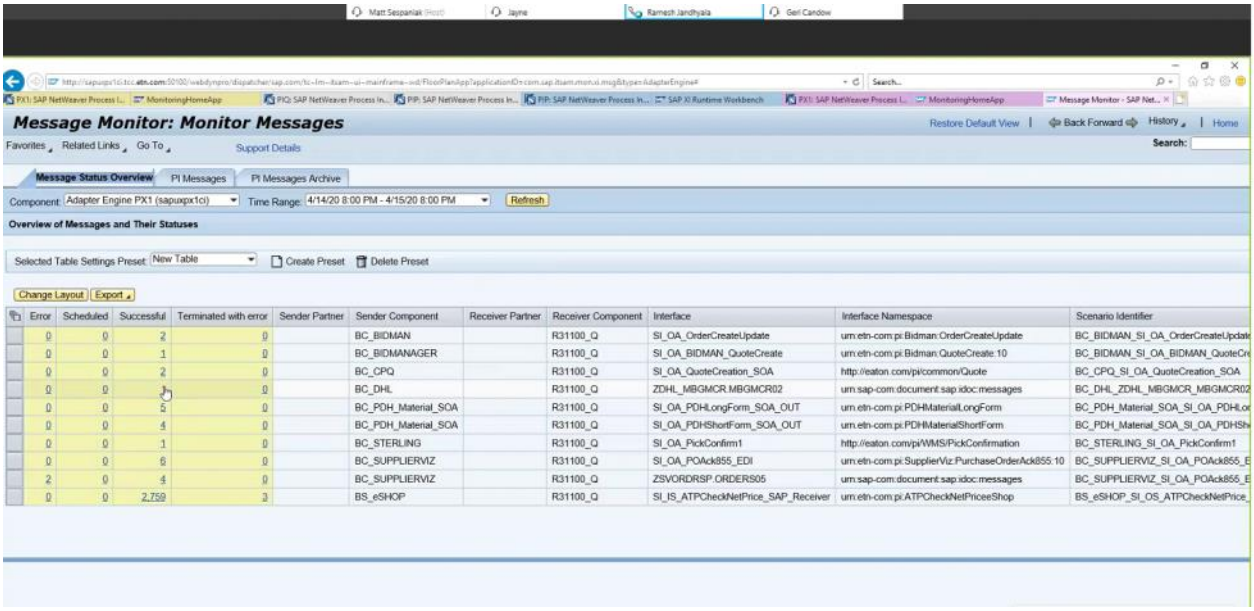
Thursday, March 5, 2020 4:42 PM

PI_Interfac
e_Final list

https://eaton.sharepoint.com/sites/PP51185-SAPPI7.11Upgrade/Shared Documents/General/Issues and Tracking/pi_migration_pi711_prodMarchfinal.xls

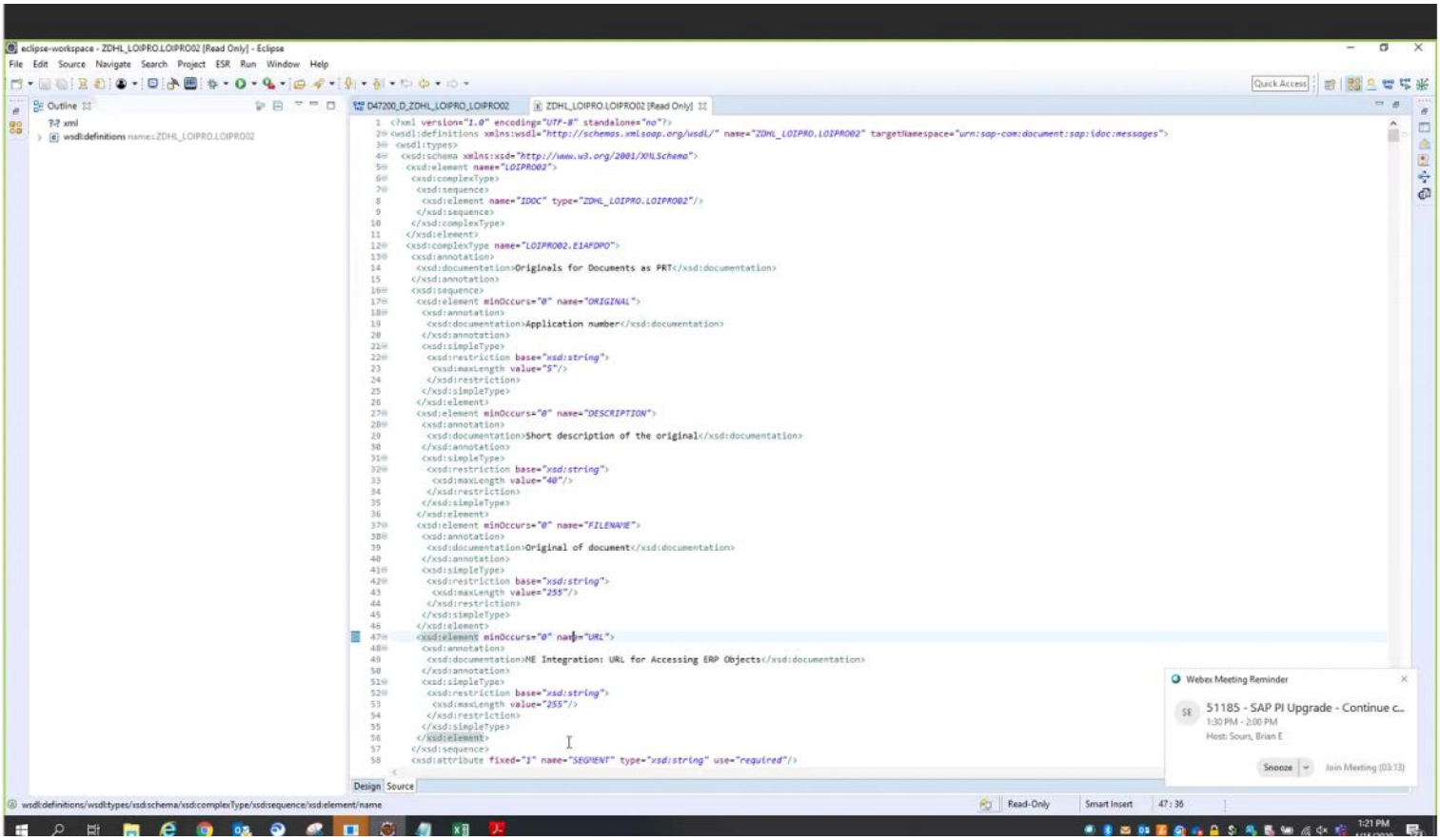
NEW PI monioring

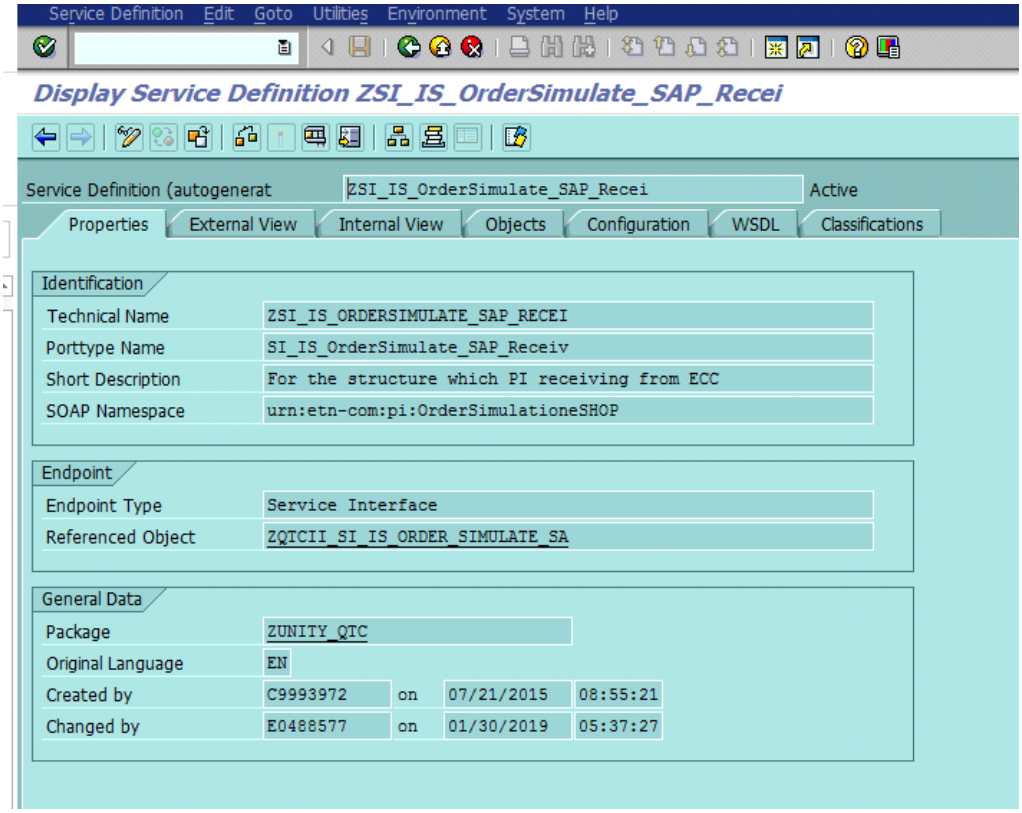
Wednesday, April 15, 2020 12:37 PM

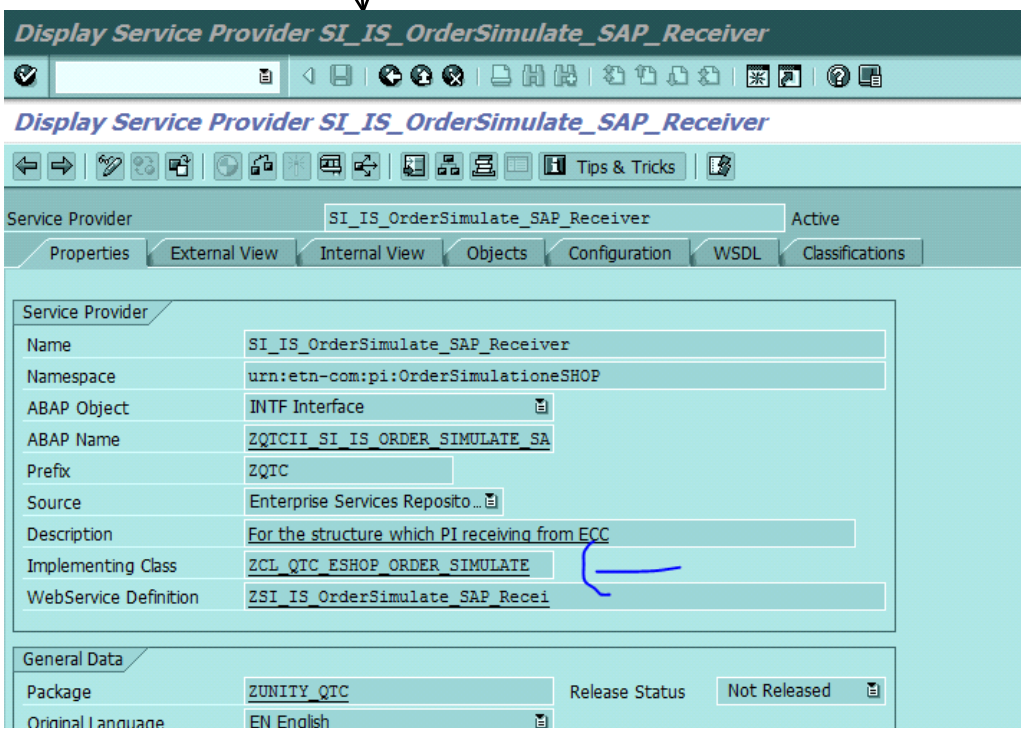


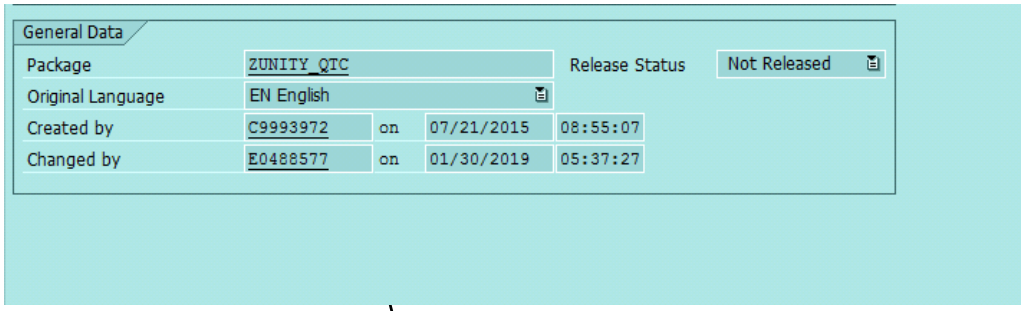
New PI development

Wednesday, April 15, 2020 12:45 PM




Service Definition Edit Goto Utilities Environment System Help
Display Service Definition ZSI_IS_OrderSimulate_SAP_Recei
Service Definition (autogenerat
ZSI_IS_OrderSimulate_SAP_Recei
Active
Properties
External View
Internal View
Objects
Configuration
WSDL
Classifications
Identification
Technical Name
ZSI_IS_ORDERSIMULATE_SAP_RECEI
Porttype Name
SI_IS_OrderSimulate_SAP_Receiv
Short Description
For the structure which PI receiving from ECC
SOAP Namespace
urn:etn-com:pi:OrderSimulationeSHOP
Endpoint
Endpoint Type
Service Interface
Referenced Object
ZQTCII_SI_IS_ORDER_SIMULATE_SA
General Data
Package
ZUNITY_QTC
Original Language
EN
Created by
C9993972
on
07/21/2015
08:55:21
Changed by
E0488577
on
01/30/2019
05:37:27


Display Service Provider SI_IS_OrderSimulate_SAP_Receiver
Display Service Provider SI_IS_OrderSimulate_SAP_Receiver
Tips & Tricks
Service Provider
SI_IS_OrderSimulate_SAP_Receiver
Active
Properties
External View
Internal View
Objects
Configuration
WSDL
Classifications
Service Provider
Name
SI_IS_OrderSimulate_SAP_Receiver
Namespace
urn:etn-com:pi:OrderSimulationeSHOP
ABAP Object
INTF Interface
ABAP Name
ZQTCII_SI_IS_ORDER_SIMULATE_SA
Prefix
ZQTC
Source
Enterprise Services Reposito...
Description
For the structure which PI receiving from ECC
Implementing Class
ZCL_QTC_ESHOP_ORDER_SIMULATE
WebService Definition
ZSI_IS_OrderSimulate_SAP_Recei
General Data
Package
ZUNITY_QTC
Release Status
Not Released
Original Language
EN English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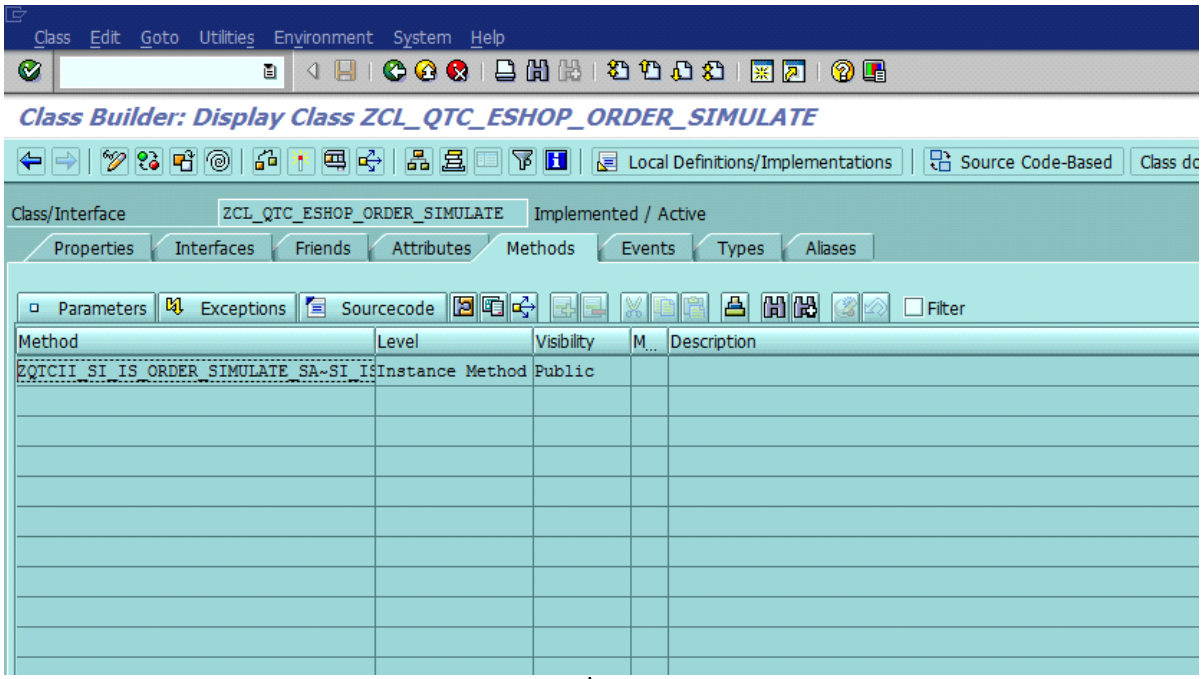
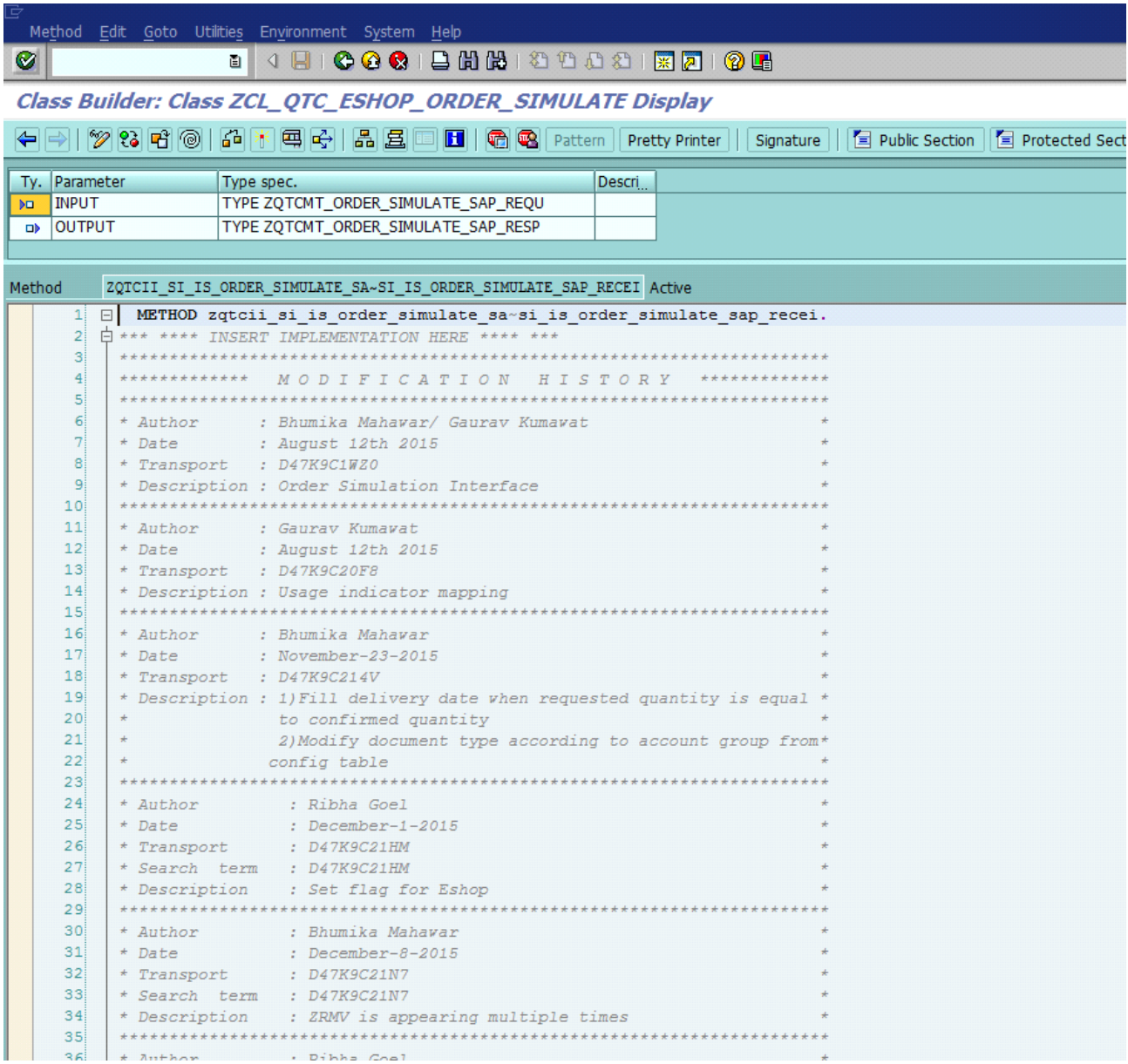
Package
ZUNITY_QTC
Release Status
Not Released
Original Language
EN English
Created by
C9993972
on
07/21/2015
08:55:07
Changed by
E0488577
on
01/30/2019
05:37:27


Class Edit Goto Utilities Environment System Help
Class Builder: Display Class ZCL_QTC_ESHOP_ORDER_SIMULATE
Local Definitions/Implementations
Source Code-Based
Class/Interface
ZCL_QTC_ESHOP_ORDER_SIMULATE
Implemented / Active
Properties
Interfaces
Friends
Attributes
Methods
Events
Types
Aliases
Parameters
Exceptions
Sourcecode
Filter
Method
Level
Visibility
M...
Description
ZQTCII_SI_IS_ORDER_SIMULATE_SA~SI_IS
Instance Method
Public


Method Edit Goto Utilities Environment System Help
Class Builder: Class ZCL_QTC_ESHOP_ORDER_SIMULATE Display
Pattern
Pretty Printer
Signature
Public Section
Protected Sect
Ty. Parameter Type spec. Descri...
INPUT TYPE ZQTCMT_ORDER_SIMULATE_SAP_REQU
OUTPUT TYPE ZQTCMT_ORDER_SIMULATE_SAP_RESP
Method ZQTCII_SI_IS_ORDER_SIMULATE_SA~SI_IS_ORDER_SIMULATE_SAP_RECEI Active
METHOD zqtcii_si_is_order_simulate_sa~si_is_order_simulate_sap_recei.
*** **** INSERT IMPLEMENTATION HERE **** ***
********** M O D I F I C A T I O N H I S T O R Y **********
* Author : Bhumika Mahawar/ Gaurav Kumawat
* Date : August 12th 2015
* Transport : D47K9C1WZ0
* Description : Order Simulation Interface
* Author : Gaurav Kumawat
* Date : August 12th 2015
* Transport : D47K9C20F8
* Description : Usage indicator mapping
* Author : Bhumika Mahawar
* Date : November-23-2015
* Transport : D47K9C214V
* Description : 1)Fill delivery date when requested quantity is equal
* to confirmed quantity
* 2)Modify document type according to account group from
* config table
* Author : Ribha Goel
* Date : December-1-2015
* Transport : D47K9C21HM
* Search term : D47K9C21HM
* Description : Set flag for Eshop
* Author : Bhumika Mahawar
* Date : December-8-2015
* Transport : D47K9C21N7
* Search term : D47K9C21N7
* Description : ZRMV is appearing multiple times

51185 - SAP PI 7.5 Upgrade - UAT and QA Apps ready to test

Monday, February 22, 2021 11:59 PM

Subject	**51185 - SAP PI 7.5 Upgrade - UAT and QA Apps ready to test**
From	Sours, Brian E
To	
Cc	Jandhyala, Ramesh
Sent	Wednesday, March 18, 2020 2:19 PM
Attachments	Defect Template

Hello Everyone,

We have some good news! The applications listed below are ready for testing after 6pm EST today.

Please use R31 for any interface testing. Please reply to this email if you see any issues with and include application name (and interface name if possible – list is below). If you could fill out the attached Defect Template (if not using ALM to log defects), that would help so that we can manually log to ALM for tracking purposes. If you are able to successfully test , please send me a document that lists your test steps and any screenshots/supporting documentation that you can provide for the test (for those not utilizing ALM test scripts).

Thanks! Brian

NOTE(for people that log time to portfolio): This is a capital project, so please accurately book any time that you spend on test prep/testing/meetings to the project (it benefits your group's recovery). For all testing/defect resolution, please utilize the task "Phase 4 - UAT (Testing, Defect Management, Rework, Approval)" on the capital hours tab in Portfolio when you log your time.

Applications:
Flash (Except Order Create response)
Bidman (Except Order Create response)
Direct Connect
GTS
Elgate – Still working on OAG team to repoint to new PI.
DHL
EHSM
AFIP
CLC
SCHENKER
MSR
Sterling

Interface details:

Interface	[redacted]	**Comp Name**
SI_OA_ProductionOrder	[redacted]	BC_DMM
ZSVORDCHG.ORDERS05	[redacted]	BC_SUPPLIERVIZ
ZSVORDERS.ORDERS05	[redacted]	BC_SUPPLIERVIZ
ZRTC_SV_FORECAST.ZSV_FORECAST	[redacted]	BC_SUPPLIERVIZ
SI_OS_InvoiceCreditCard_SAP	[redacted]	BS_eSHOP
ZC360_QUOTES.ORDERS05.ZC360_QUOTES	[redacted]	BC_C360
SI_OA_ProdOrderChar_CLC	[redacted]	BC_CLC
ZDHL_WHSORD.DELVRY03	[redacted]	BC_DHL
ZDHL_ORDERS.ORDERS05	[redacted]	BC_DHL
ZDHL_DESADV.DELVRY03	[redacted]	BC_DHL
ZDHL_MATMAS.MATMAS05	[redacted]	BC_DHL
ZDHL_LOIPRO.LOIPRO02	[redacted]	BC_DHL
SI_OS_ACDC	[redacted]	BC_EHSM
SI_OS_ACDC_ECC	[redacted]	BC_EHSM
ZSCHEN_DESADV.DELVRY03	[redacted]	BC_SCHENKER
ZSCHEN_WHSORD.DELVRY03	[redacted]	BC_SCHENKER
ZSCHEN_MATMAS.MATMAS05	[redacted]	BC_SCHENKER
ZMXINVOIC.INVOIC02.ZINVOIC02	[redacted]	BC_MEXICO_ATEB
SI_OA_ECC_PriceAvailabiltySiteCat	[redacted]	BC_NAM_HOTKEY
ZRP_DESADV.DELVRY03	[redacted]	BC_RedPrairie_ 1057
ZRP_ORDERS.ORDERS05	[redacted]	BC_RedPrairie_ 1057
ZRP_SHPMNT.SHPMNT05	[redacted]	BC_RedPrairie_ 1057
SI_OA_DR861_ECC	[redacted]	BC_SUPPLIERVIZ
SI_OA_MM852_ECC	[redacted]	BC_SUPPLIERVIZ
SI_OA_ATGProductExclusions_SAP	[redacted]	BS_eSHOP
ZORS_CONDA.COND_A02	[redacted]	BC_OSM_SOA
ZCPQ_DEBMAS.DEBMAS07.ZCPQ_DEBMAS07	[redacted]	BC_CPQ
ZCPQ_COND_A.COND_A02	[redacted]	BC_CPQ
ZCPQ_MATMAS.MATMAS05.ZCPQ_MATMAS05	[redacted]	BC_CPQ
ZCPQ_/IRM/AGRMNTS./IRM/AGRMNTS01	[redacted]	BC_CPQ
ZCPQ_CMIR.ZCMIRMAS01	[redacted]	BC_CPQ
BAPI_AR_WS_EXP_CONN_TEST	[redacted]	BC_AFIP
SI_OUT_IDEA_PRODUCT_DATA	[redacted]	IDEA_DMP_P

ZRP_MATMAS.MATMAS05	[redacted]	BC_RedPrairie_1057
ZDOMASN.DELVRY03	[redacted]	BC_VMI_DOMINION
SI_OUT_IDEA_PRODUCT_DATA_R4	[redacted]	IDEA_DMP_P
SI_OA_DMRCreation	[redacted]	BC_WISPER
ZC360_DEBMAS.DEBMAS07	[redacted]	BC_C360
ZKWL_SHPMNT.SHPMNT06.ZSHPMNT06	[redacted]	BC_Kewill_PQ
SI_OA_PSI_DESADV	[redacted]	BC_PSI
SI_OA_PSI_MATMAS	[redacted]	BC_PSI
SI_OA_QANotification_Res_SAP	[redacted]	BC_C360
BAPI_AR_WS_CONN_TEST	[redacted]	BC_AFIP
BAPI_AR_WS_EXP_FEXAUTHORIZE	[redacted]	BC_AFIP
BAPI_AR_WS_EXP_REJ_RESP_2758	[redacted]	BC_AFIP
BAPI_AR_WS_REJ_RESP_2485	[redacted]	BC_AFIP
BAPI_AR_WS_2485	[redacted]	BC_AFIP
ZSELA_WHSORD.DELVRY03	[redacted]	BC_SELA
ZSELA_MATMAS.MATMAS05	[redacted]	BC_SELA
ZSELA_DEBMAS.DEBMAS07.ZSELA_DEBMAS07	[redacted]	BC_SELA
ZSELA_DESADV.DELVRY03	[redacted]	BC_SELA
ZORDSTATUS.ORDERS05.ZORDSTATUS	[redacted]	BC_FLASH
ZST_DEBMAS.DEBMAS07	[redacted]	BC_STERLING
ZSVORDCHG.ORDERS05.ZRTC_SVORDERS05	[redacted]	BC_SUPPLIERVIZ
ZSVORDERS.ORDERS05.ZRTC_SVORDERS05	[redacted]	BC_SUPPLIERVIZ
ZSVORDSCH.ORDERS05.ZRTC_SVORDERS05	[redacted]	BC_SUPPLIERVIZ
ZESHOP_CMIR.ZESHOP_CMIR	[redacted]	BS_eSHOP
ZESHOP_CONDA2.COND_A02	[redacted]	BS_eSHOP
ZESHOP_MATMAS.MATMAS05.ZESHOP_MATMAS05	[redacted]	BS_eSHOP
ZESHOP_DEBMAS.DEBMAS07.ZESHOP_DEBMAS07	[redacted]	BS_eSHOP
SI_OA_OrderAckeShop	[redacted]	BS_eSHOP
ZMSR_EIM_SHPMNT.ZMSR_EIM_SHPMNT	[redacted]	BC_MSR
ZORS_DEBMAS.DEBMAS07	[redacted]	BC_OSM_SOA
SI_OS_RegenrateAuthReqID_SAP	[redacted]	BS_eSHOP
SI_OS_ReverseAuthReqID_SAP	[redacted]	BS_eSHOP
INVOIC.INVOIC02	[redacted]	BC_OTTO_FISCHER
SI_OUT_FICO_GL_HYPERION	[redacted]	DOL_PTS_P
ZDOMRSP.ORDERS05	[redacted]	BC_VMI_DOMINION
ZDOMOR.ORDERS05	[redacted]	BC_VMI_DOMINION

ZST_WMATMAS.MATMAS05	[redacted]	BC_STERLING
ZST_CREMAS.CREMAS05	[redacted]	BC_STERLING
ZST_ORDERS.ORDERS05	[redacted]	BC_STERLING
ZST_ORDDELVRY.DELVRY05	[redacted]	BC_STERLING
ZST_MATMAS.MATMAS05	[redacted]	BC_STERLING
ZST_DELVRY.DELVRY05	[redacted]	BC_STERLING
ZMSR_EIM_CREMAS.ZMSR_EIM_VENDOR	[redacted]	BC_MSR
ZMSR_EIM_MATMAS.MATMAS05	[redacted]	BC_MSR
ZMSR_EIM_DEBMAS.ZMSR_EIM_CONSIGNEE	[redacted]	BC_MSR
ZTMSDESADV.DELVRY07.ZTMC_DELVRY07		BC_TMS
ZTMSDESADV.DELVRY07.ZTMC_DELVRY07		BC_TMS
SI_OS_ETNBRG_SOSYNC_RESPONSE	[redacted]	BC_ORACLE_ECP
SI_OS_ETNBRG_SOUNLOCK_S2O	[redacted]	BC_ORACLE_ECP
ZQTC_ETNBRG_SOUNLOCK_S2O	[redacted]	BC_ORACLE_ECP
SI_OA_PSI_WHSORD	[redacted]	BC_PSI
ZST_INB_DELVRY.DELVRY05.ZDELVRY05	[redacted]	BC_STERLING
IORDER.IORDER01.ZIORDER01_WKCTR	[redacted]	BC_C360
ZESHOP_ORDRSP.ORDERS05	[redacted]	BS_eSHOP
SI_OA_ECC_Quote	[redacted]	BC_CPQ
ZCPQ_CREMAS.CREMAS06.ZCPQ_CREMAS06	[redacted]	BC_CPQ
ZCEVA_MATMAS.MATMAS05.ZE1MARA_CLAS	[redacted]	BC_CEVA
ZCEVA_DESADV.DELVRY03	[redacted]	BC_CEVA
ZCEVA_WHSORD.DELVRY03	[redacted]	BC_CEVA
ZBID_MATMAS.MATMAS05.ZBID_MATMAS05	[redacted]	BC_BIDMAN
ZBID_COND_A.COND_A02	[redacted]	BC_BIDMAN
SI_OA_OrderAckStatus_Failure	[redacted]	BC_BIDMAN
COD_STOCK_REPLICATE.COD_STOCK_REPLICATE01	[redacted]	LR1_051
COD_PRODUCT_CATEGORY_SAVE.COD_PRODUCT_CATEGORY_SAVE01	[redacted]	LR1_051
ADRMAS.ADRMAS03	[redacted]	LR1_051
ZC4S_ADRMAS.ADRMAS03	[redacted]	LR1_051
COD_CONTRACT_CREATEFROM_DAT.COD_CONTRACT_CREATEFROM_DAT01	[redacted]	LR1_051
COD_CONFIRM_CREATEFROMDAT.COD_CONFIRM_CREATEFROMDAT01	[redacted]	LR1_051
ConnectivityCheckConsumer	[redacted]	LR1_051
COD_EQUIPMENT_SAVE.COD_EQUIPMENT_SAVE01	[redacted]	LR1_051
MATMAS_CFS.MATMAS05	[redacted]	LR1_051
DEBMAS_CFS.DEBMAS06	[redacted]	LR1_051
ZBID_DEBMAS.DEBMAS07.ZBID_DEBMAS07	[redacted]	BC_BIDMAN
ZCPQ_/IRM/AGRMNTS./IRM/AGRMNTS01.ZCPQ_IRM_AGRMNTS01	[redacted]	BC_CPQ

ZDHL_MATMAS_DE.MATMAS05.ZE1MARA_CLAS	[redacted]	BC_DHL
ZDHL_WHSORD.DELVRY03.ZQTC_DHL_WHSORD	[redacted]	BC_DHL
ZDHL_MATMAS.MATMAS05.ZE1MARA_CLAS	[redacted]	BC_DHL
ZBIDMAN_ORDRSP.ORDERS05.ZORDRS05	[redacted]	BC_BIDMAN

			Sender	
Comp Name		**Adapter**	**Comm Chan**	**Interface**
BC_SUPPLIER VIZ	TIBCO	File/FileCSV	CC_SND_FILE_POFncAck_SupplierViz	SI_OA_POFncAck997_EDI
BC_DHL	Control M	File/File	CC_SND_File_DeliveryConfirmation_DHL	ZDHL_WHSCON.DELVRY03
BC_DHL	Control M	File/File	CC_SND_File_ProductionOrderConfirmation_DHL	ZDHL_CONF21.CONF21
BC_DHL	Control M	File/File	CC_SND_File_StockTransfer_DHL	ZDHL_WMMBXY_CHS.WMMBID02
BC_DHL	Control M	File/File	CC_SND_File_GoodsIssue_DHL	ZDHL_WMMBXY_GIWO.WMMBID02
BC_DHL	Control M	File/File	CC_SND_File_PurchaseOrderReceipt_DHL	ZDHL_WMMBXY_POGR.WMMBID02
BC_DHL	Control M	File/File	CC_SND_File_StockAdjustment_DHL	ZDHL_WMMBXY_ADJ.WMMBID02
BC_SCHENKER	Control M	File/File	CC_SND_File_GoodsMovement_SCHENKER	ZSCHEN_MBGMCR.MBGMCR02
BC_SCHENKER	Control M	File/File	CC_SND_File_WarehouseVerification_SCHENKER	ZSCHEN_WHSCON.DELVRY03
BC_SELA	Control M	File/FileCSV	CC_SND_File_PickConfirm_SELA	SI_OA_PickConfirm
BC_WISPER	Control M	FTP/FileCSV	CC_SND_FILE_PPAPInspectionFlag_WISPER	SI_OA_PPAPInspectionRecord
BC_EHSM	Control M	File/FileCSV	CC_SEN_FILE_EHSM_VendorMaster	SI_OA_ERPVendor
BC_EHSM	Control M			SI_OA_VENNONAFT
BC_EHSM	Control M	File/File	CC_SEN_FILE_EHSM_VendorMaster_UNZIP	SI_OA_VENZIP
BC_KeWill	Control M	SOAP/SOAP	CC_SEN_UpdateShipment_KeWill	SI_OA_UpdateShipment_Kewill
BC_EHSM	Control M	File/File	CC_SEN_FILE_EHSM_BOM_UNZIP	SI_OA_BOMZIP
BC_EHSM	Control M			SI_OA_BOMNONAFT
BC_EHSM	Control	File/FileCS	CC_SEN_FILE_EHSM_BOM	SI_OA_ERPBOM

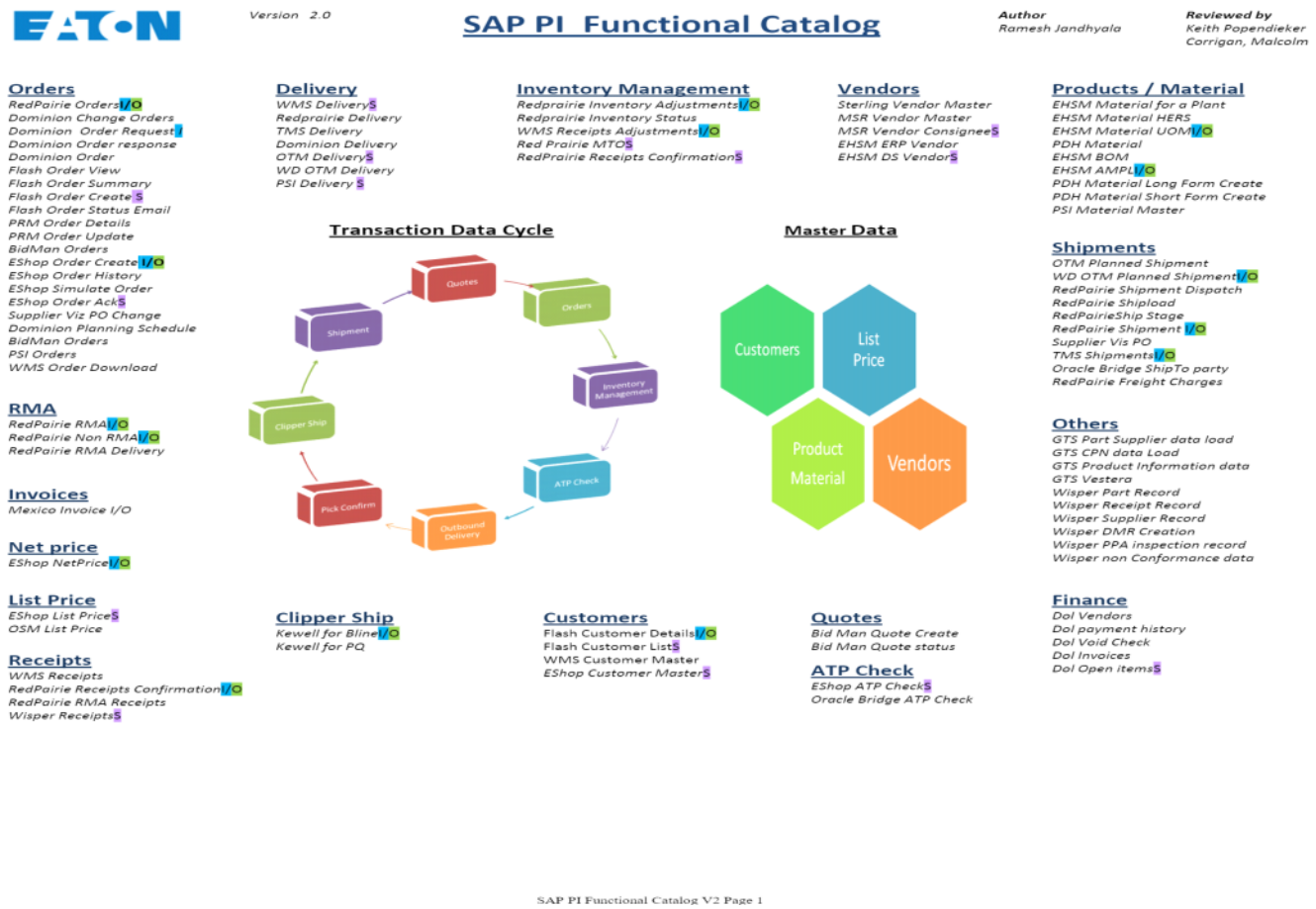
	M	V		
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_CustomerList	SI_OS_CustomerList
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_MaterialList	SI_OS_MaterialList
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_DSCProductSearch	SI_OS_DSCProductSearch
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_MaterialDetail	SI_OS_MaterialDetail
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_GetIdocAndOrder	SI_OS_GetIdocOrder
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_SalesOrderView	SI_OS_SalesOrderView
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_InventoryStatus	SI_OS_InventoryStatusInfo
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_CustomerDetail	SI_OS_CustomerDetail
BC_FLASH	Developer	SOAP/SOAP	CC_SEN_SOAP_Flash_OrderSummary	SI_OS_OrderSummary
BC_DMM	Control M	FTP/File	CC_SEN_FILE_ProductionOrderConfirmation	SI_OA_ProductionOrderConfirmation_File
BC_TMS	Control M	File/File	CC_SEN_FILE_PlannedShipment_TMC	SI_OA_TmsTmc_PlannedShipment
BC_EHSM	Control M	File/FileCSV	CC_SEN_FILE_EHSM_MaterialMaster	SI_OA_ERPMaterial
BC_EHSM	Control M	File/File	CC_SEN_FILE_EHSM_MaterialMaster_UNZIP	SI_OA_MATZIP
BC_EHSM	Control M			SI_OA_MATNONAFT
BC_SELA	Control M	File/FileCSV	CC_SND_File_GoodsReceipt_SELA	SI_OA_GoodsReceipt_SELA
BC_EHSM	Control M	File/FileCSV	CC_SEN_FILE_EHSM_AMPL	SI_OA_ERPAMPL
BC_EHSM	Control M			SI_OA_AMPLNONAFT
BC_EHSM	Control M	File/File	CC_SEN_FILE_EHSM_AMPL_UNZIP	SI_OA_AMPLZIP
BC_SELA	Control M	File/FileCSV	CC_SND_File_Inventory_SELA	SI_OA_Inventory_SELA
BC_Elgate	Developer	SOAP/SOAP	CC_SEN_SOAP_Elgate_Price	SI_OS_PriceElgate_Elgate_Sender
BC_CEVA	Control M	File/File	CC_SND_File_StockReport_CEVA	ZCEVA_INVCON.INVCON02
BC_CEVA	Control M	File/File	CC_SND_File_MovementsConfirmation_CEVA	ZCEVA_MBGMCR.MBGMCR02

BC_CEVA	Control M	File/File	CC_SND_File_PickPackConfirmation_CEVA	ZCEVA_WHSCON.DELVRY03
BC_Elgate	Developer	SOAP/SOAP	CC_SEN_SOAP_Elgate_Availability	SI_OS_AvailabilityElgate_Elgate_Sender
BC_Elgate	Developer	SOAP/SOAP	CC_SEN_SOAP_Elgate_StdAvailability	SI_OS_StdAvailabilityElgate_Elgate_Sender
BC_DHL	Control M	File/File	CC_SND_File_StockMovements_DHL	ZDHL_MBGMCR.MBGMCR02
BC_DHL	Control M	File/File	CC_SND_File_Shipments_DHL	ZDHL_SHPMNT.SHPMNT05
BC_DHL	Control M	File/File	CC_SND_File_InventoryReconciliation_DHL	ZDHL_INVCON.INVCON02

SAP PI Functional Catalog 2.0.pdf

Friday, March 10, 2023 11:08 AM

Clipped from: https://teams.etn.com/corp/EnterpriseApplicationIntergration/SAPPI/SAPPIKnowledgebase/Standards%20and%20Processes/SAP%20PI%20Functional%20Catalog/SAP%20PI%20Functional%20Catalog%202.0.pdf#search=record



Version 2.0

SAP PI Functional Catalog

Author
Ramesh Jandhyala

Reviewed by
Keith Popendieker
Corrigan, Malcolm

Orders
RedPairie Orders I/O
Dominion Change Orders
Dominion Order Request I
Dominion Order response
Dominion Order
Flash Order View
Flash Order Summary
Flash Order Create S
Flash Order Status Email
PRM Order Details
PRM Order Update
BidMan Orders
EShop Order Create I/O
EShop Order History
EShop Simulate Order
EShop Order Ack S
Supplier Viz PO Change
Dominion Planning Schedule
BidMan Orders
PSI Orders
WMS Order Download

RMA
RedPairie RMA I/O
RedPairie Non RMA I/O
RedPairie RMA Delivery

Invoices
Mexico Invoice I/O

Net price
EShop NetPrice I/O

List Price
EShop List Price S
OSM List Price

Receipts
WMS Receipts
RedPairie Receipts Confirmation I/O
RedPairie RMA Receipts
Wisper Receipts S

Delivery
WMS Delivery S
Redprairie Delivery
TMS Delivery
Dominion Delivery
OTM Delivery S
WD OTM Delivery
PSI Delivery S

Inventory Management
Redprairie Inventory Adjustments I/O
Redprairie Inventory Status
WMS Receipts Adjustments I/O
Red Prairie MTO S
RedPrairie Receipts Confirmation S

Vendors
Sterling Vendor Master
MSR Vendor Master
MSR Vendor Consignee S
EHSM ERP Vendor
EHSM DS Vendor S

Products / Material
EHSM Material for a Plant
EHSM Material HERS
EHSM Material UOM I/O
PDH Material
EHSM BOM
EHSM AMPL I/O
PDH Material Long Form Create
PDH Material Short Form Create
PSI Material Master

Shipments
OTM Planned Shipment
WD OTM Planned Shipment I/O
RedPairie Shipment Dispatch
RedPairie Shipload
RedPairieShip Stage
RedPairie Shipment I/O
Supplier Vis PO
TMS Shipments I/O
Oracle Bridge ShipTo party
RedPairie Freight Charges

Others
GTS Part Supplier data load
GTS CPN data Load
GTS Product Information data
GTS Vestera
Wisper Part Record
Wisper Receipt Record
Wisper Supplier Record
Wisper DMR Creation
Wisper PPA inspection record
Wisper non Conformance data

Finance
Dol Vendors
Dol payment history
Dol Void Check
Dol Invoices
Dol Open items S

Transaction Data Cycle

Master Data

Clipper Ship
Kewell for Bline I/O
Kewell for PQ

Customers
Flash Customer Details I/O
Flash Customer List S
WMS Customer Master
EShop Customer Master S

Quotes
Bid Man Quote Create
Bid Man Quote status

ATP Check
EShop ATP Check S
Oracle Bridge ATP Check

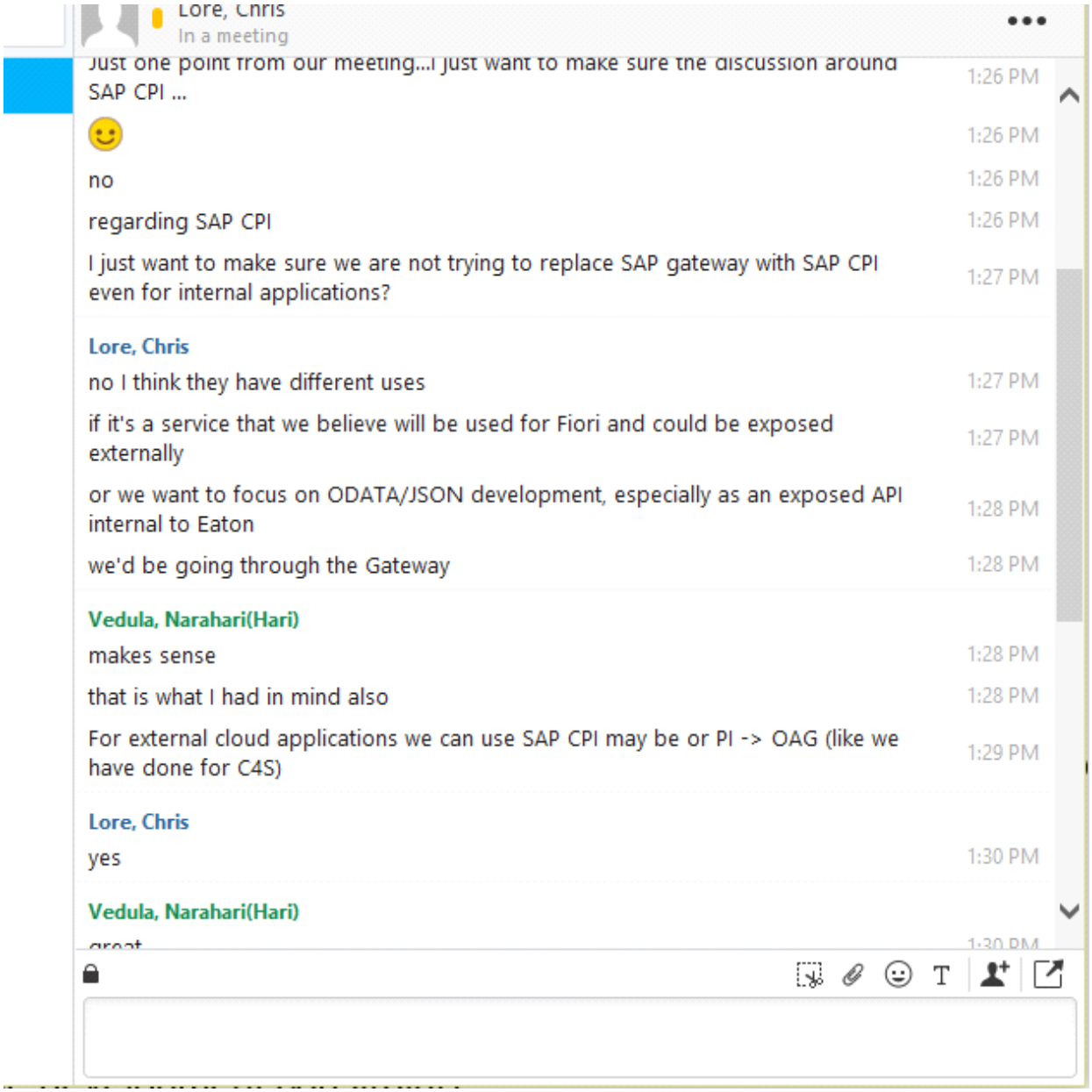
SAP PI Functional Catalog V2 Page 1

SAP PI vs Sap gateway

Tuesday, December 3, 2019 3:28 PM

http://www.beginners-sap.com/sap-gateway-vs-sap-pi/

http://www.beginners-sap.com/wp-content/uploads/2017/06/SAP-Gateway_vs_SAP-PI.pdf



Wednesday, December 4, 2019

Vedula, Narahari(Hari)

Hi Chris 1:24 PM

Lore, Chris

Hi Hari 1:25 PM

Already spotted something wrong huh? 1:26 PM

 1:26 PM

Vedula, Narahari(Hari)

Just one point from our meeting...I just want to make sure the discussion around SAP CPI ... 1:26 PM

 1:26 PM

no 1:26 PM

regarding SAP CPI 1:26 PM

I just want to make sure we are not trying to replace SAP gateway with SAP CPI even for internal applications? 1:27 PM

Lore, Chris

no I think they have different uses 1:27 PM

if it's a service that we believe will be used for Fiori and could be exposed externally 1:27 PM

or we want to focus on ODATA/JSON development, especially as an exposed API internal to Eaton 1:28 PM

we'd be going through the Gateway 1:28 PM

Vedula, Narahari(Hari)

makes sense 1:28 PM

that is what I had in mind also 1:28 PM

For external cloud applications we can use SAP CPI may be or PI -> OAG (like we have done for C4S) 1:29 PM

Lore, Chris

yes 1:30 PM

Vedula, Narahari(Hari)

great 1:30 PM

I was not sure why Ramesh was so worried about SAP CPI

SAP PI Vs SAP Gateway - Beginner's SAP

Sunday, June 21, 2020 5:59 PM

Beginners-SAP

SAP PI Vs SAP Gateway

A common question people usually ask when starting out implementing or learning SAP OData and SAP Gateway is, what is the difference between SAP PI and SAP Gateway – (SAP NetWeaver Gateway is now rebranded as SAP Gateway.. so I will continue to call it SAP Gateway)?

If you haven't yet started to read about the Gateway and OData, then you should start now and if you don't know what is SAP PI, then its fine fair to say its an SAP product used to integrate SAP and non-SAP systems.

SAP PI stands for Process Integration and has been in the industry for a long time. I am sure you must have heard of ALE and IDOCs which is used to transfer data between systems. PI (originally started out as XI) is a much bigger product than ALE. It is an SAP Technology Framework to solve Integration challenges specifically for data transfer between Applications(A2A) and Systems(B2B).

Since SAP Gateway is also related to transferring SAP Data to external consumers hence on initial thought it could be assumed that PI should be able to cater to all that the Gateway does and more. Hence one might wonder, is investing in an additional Gateway really necessary or can PI do the job. Since companies may have already invested in it so really do we need the Gateway?

I will try to answer this question in 2 ways: A simpler example and then some more details further down.

Scenario:

Imagine you a have headache and you walk up to your local pharmacist or chemist and ask them to recommend a headache pill. The Pharmacist suggests you take an over the counter Aspirin. You agree and tell the Pharmacist that you would want to buy one. The Pharmacists checks their inventory and finds that the stock on Asprin is running low. So she goes inside the warehouse to place a bulk order for a particular brand of Aspirin.

The order however is not dispatched right away. The pharmacy's software system bundles up all the days orders and dispatches this order to the drug distributor which is responsible for distribution of the drug from the Pharmaceutical company that develops and markets the drug.

The above scenario is a very very simplified version of a very complex system. But lets understand the business scenario here.

In the above example there are two types of transactions that happen.

1. An end user transaction where in the customer purchased an Asprin over the counter from the Pharmacist.
2. A system transaction where in the system placed a bulk order to the Distributors system, the Pharma company's product sales and Distribution network.

If we have to make a broad statement here and keeping all the complexities away for a moment, then for the first transaction case we would use an SAP Gateway, while for the second type of transaction we would use a SAP PI kind of Framework.

Another common requirement could be that you have some flat files in one system and you want to move those files from one system to another system programmatically on a daily basis after applying some programming logic to validate the file content without any manual intervention. In such a case also PI would be a better choice than Gateway.

Lets see why would that be the case. We will then be able to appreciate each technology as it exists.

The answer to this is based on the scenarios that the company is trying to solve.

User Requirements:

In the current era, SAP users can be typical classified into 2 types.

1. Power users : Users who are well versed with using SAP GUI, Portal etc. These are primarily users like administrators for example, purchase administrator, payroll administrator, system administrators.
2. End users : These are "occasional user" who regularly but typically on need basis, use the SAP environment. This group often has difficulty using SAP applications, as they are used differently to what they are accustomed to with other business and consumer applications. Additionally, they want mobile access so as to carry out ad hoc work regardless of the location or time.

When we talk about End users, since they are users who have difficulty using SAP applications, and

expect consumer grade, app like features in their business applications, hence making these user interfaces easy to use is necessary. Plus with the rapid technology changes happening, it is necessary to have the capability to be able to quickly deploy the changes and adapt to newer innovations. For this reason SAP has introduced a completely new concept called as sap FIORI and SAP Gateway is one of its core components which is responsible to feed data for its Apps.

The Gateway is built in such a way as to enable the development of REST based OData services in SAP which can expose underlying SAP data thus keeping the application developer free to develop frontends that can consume the data as per the user requirements without burdening the developer from knowing the details of the underlying data structure(known as metadata). This can happen only because OData is based off of the HTTP protocol which is a REST implementation and since the internet works on HTTP hence all applications that run on the internet invariably understand HTTP.

However when we talk about System to System, Application to Application (A2A) and Business to Business(B2B) type of communication, then we cannot be certain that all business applications will ahere to HTTP. Many of the older (legacy) systems within the company cannot be easily upgraded. Also many of the company's partners like suppliers, vendors, customers etc use system which are non-SAP or spread across multiple domains and technologies. Hence building an integration channel between them based purely on HTTP is difficult.

SAP Process Integration (SAP PI) is a functionally comprehensive SOA middleware platform aimed at A2A (*Application-2-Application*) and B2B (*Business-2-Business*) system integration scenarios.

PI scenarios are often executed independently without the direct involvement of a 'user' whereas Gateway Scenarios mostly are synchronous and require direct involvement of the user.

PI implementation processes are often complex, containing several aspects and several people, applications and environments. It usually takes months (of designing, constructing, testing and validating) to get a new or modified scenario up and running.

Architecture of SAP PI:

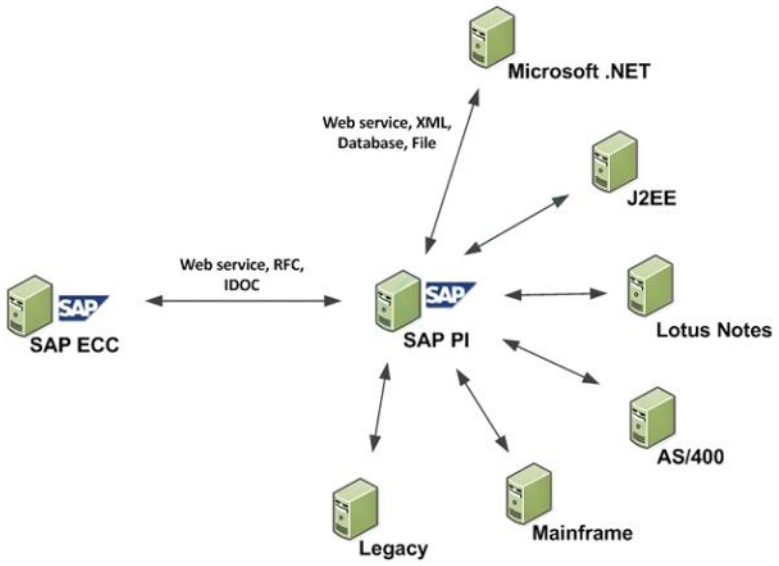
SAP software has many core modules which cater to various necessary business functions of any organization, for example, Accounting, Finance, Sales and Distribution, HR, MM etc. However there are some modules which are additional support modules. As stand alone they are of no significance but with them they the software usability and functionality becomes very powerful. SAP Enterprise Portal and SAP PI are two such modules.

SAP PI is built as an SOA (Service oriented architecture) in that meaning the applications that need the SAP PI are not bothered with the internal running of the PI.

A common example of an SOA application could be a payment gateway that comes into picture when you purchase a product online. Your credit card payment is validated and the payment is processed by a third party service company and after the payment goes through, the program control returns back to the original website with a success or failure response. The caller website is not bothered about what happened, all it wants to know is whether the transaction was complete or not.

PI is also an ESB (Enterprise Service Bus) model which means you can integrate different applications by setting up a communication channel between them to enable application to talk through the bus. This decouples systems from each other, allowing them to communicate without dependency on or knowledge of other systems on the bus.

SAP to Legacy Applications Integrations:



There are many adapters available in the PI system which helps to integrate SAP and non-SAP systems.

- Usually in a typical large scale SAP implementation there may be some legacy applications which cannot be migrated to SAP because of their complexity or SAP just doesn't support them. In such cases its a usual practice to leverage SAP PI to build an interface to transfer data between the 2 systems.
- Also within an SAP system itself its typical to have a CRM, SRM, FI systems to be running on different SAP instances. In such a case a PI system acts as a central box which keeps all these systems in synch.
- There are non-SAP third party systems and partners such as Banks and vendors who's systems have to be integrated with the client's SAP system. Every system may be different and working on its own unique protocol. Because PI has a number of adapters inbuilt hence mapping out the transfer process between heterogeneous systems is possible.
- Another important point to keep in mind is communication between systems is usually synchronous. Particularly in the case of a gateway, a request is sent from a calling application and the application waits for a response before proceeding to the next step. However sometimes you may need the data transfer to be asynchronous. In such cases a PI system allows us to create asynchoronous mode of data transfer.
- A Gateway provides OData feed to the calling application by using its own native BAPI and RFCs so when it comes to non-SAP system data using Gateway really doesn't make sense (atleast for now).

There are many points to mention when explaining the difference between Gateway and PI but frankly SAP Gateway cannot be compared to SAP PI, because it only supports synchronous connectivity to a SAP environment. SAP chose this deliberately so that Gateway could be optimally positioned for all developments concerning SAP Mobile, SAPUI5 Modern Apps, etc. SAP Gateway is considered an absolute must in the SAP landscape of the average SAP organization when looking at the SAP roadmap.

Developing in SAP Gateway needs developer to know SAP BAPI, SAP OOABAP and SAP RFC's however the application developer who is tasked with developing the consumption screens and modules need not know about the SAP Data structure However developing integration scenarios for SAP PI needs extensive knowledge of SAP architecture and the business process.

So Frankly speaking if you want to build an application is dependent on heavy user interaction then SAP Gateway is necessary, however your chief concern is System Integration between 2 or more systems requiring minimal human intervention then you should think about SAP-PI.

Hence next time you are asked this question whats the difference between SAP PI and SAP Gateway, you know better to advice them what to use when.

Thanks for reading this extensive blog. I have tried to keep the blog to the point without going into much details about the internal workings of either the Gateway or PI.

Click to Download the complete pdf Comparison Chart

There are many blogs that address this topic. Following are some blogs if you want to read more.

For more information and samples on PI Check the following links

- https://blogs.sap.com/2013/05/21/sap-pi-for-beginners/
- https://en.wikipedia.org/wiki/SAP_NetWeaver_Process_Integration

5 Comments

Praveena Naidu
June 22, 2017 at 4:35 pm
Amazed to read the blog. This has been most bothering question to me for longtime.Thank you so much for the detailed explanation with apt scenarios catering to different levels of SAP aspirants.
Reply

Suresh Kolisetty
June 27, 2017 at 11:38 am
Really brilliant way of explaining the difference between PI and Gateway. Thanks Linkin.
Reply

Sudipta Chakraborty
November 9, 2017 at 12:00 pm
Great…. Thank you very much for the explanation with simple example, it has been really a typical question asked to me for a long time.
Reply

Debashish Das
April 13, 2018 at 9:45 am
Great Article. Nice explanation.
Reply

Mahi
April 14, 2018 at 2:29 pm
Well!! I got answer for my question 😳
Reply

Leave a Reply

Your email address will not be published. Required fields are marked *
Comment
Name *
Email *
Save my name, email, and website in this browser for the next time I comment.

Download the guide:

How to Troubleshoot SAP Workflows

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Hello, my name is Linkin Pereira. I am an SAP Consultant and like many of my colleagues I am passionate about SAP. I share my passion for the technical and functional aspects of SAP through this blog. Check out the Posts and leave your comments on whatever areas you liked. Your suggestions are always welcome!! Have Fun.

SAP-Gateway_vs_SAP-PI

Sunday, June 21, 2020 6:01 PM

SAP-Gateway_vs_SAP-PI

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Beginners-SAP

SAP GATEWAY

VERSUS

SAP-PI

COMPARING THE 2 SAP DATA PROVISIONING BACKEND PRODUCTS

The focus of SAP Gateway is to enable easy access and consumption of SAP data in the client or device of the customer's choose.

It is designed for user-facing applications that are stateless, and require selected data sets of the entire business object definition.

Through simple to use standard market protocols such as REST and OData/ATOM, it provides extremely simple access to SAP applications for developers without prior SAP knowledge.

In that sense, SAP NetWeaver Gateway builds on the openness of SAP Enterprise Services for the types of solutions described above.

Quick Application Development which need minimal SAP knowledge application developers.

SAP NetWeaver Process Integration (SAP NetWeaver PI) is a comprehensive SOA middleware platform focused on A2A and B2B integration.

It provides SAP customers a SOA foundation to manage their SOA landscape and SOA development and deployment lifecycle

It supports multiple integration scenarios to SAP-2-SAP and SAP-2-Non-SAP enviornments through the use of supported adapters.

Not optimal for Quick Application Development, it requires long development and delivery cycles, involving multiple stakeholders

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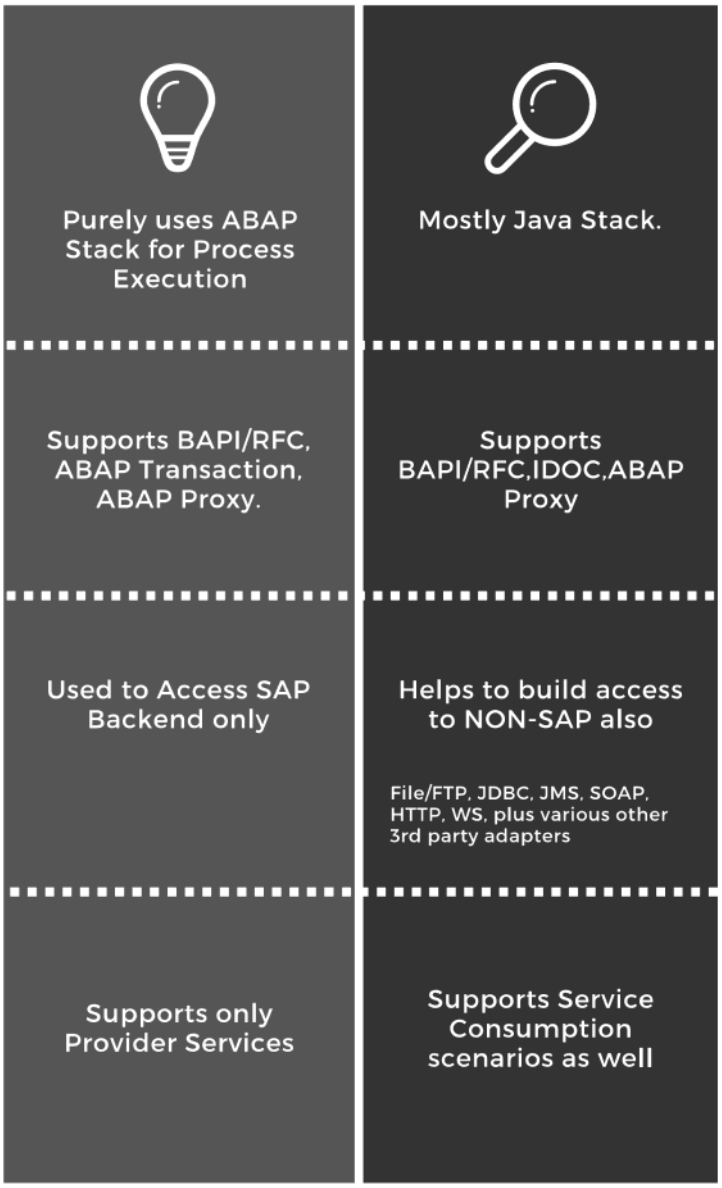
SAP GATEWAY VERSUS SAP-PI

COMPARING THE 2 SAP DATA PROVISIONING BACKEND PRODUCTS



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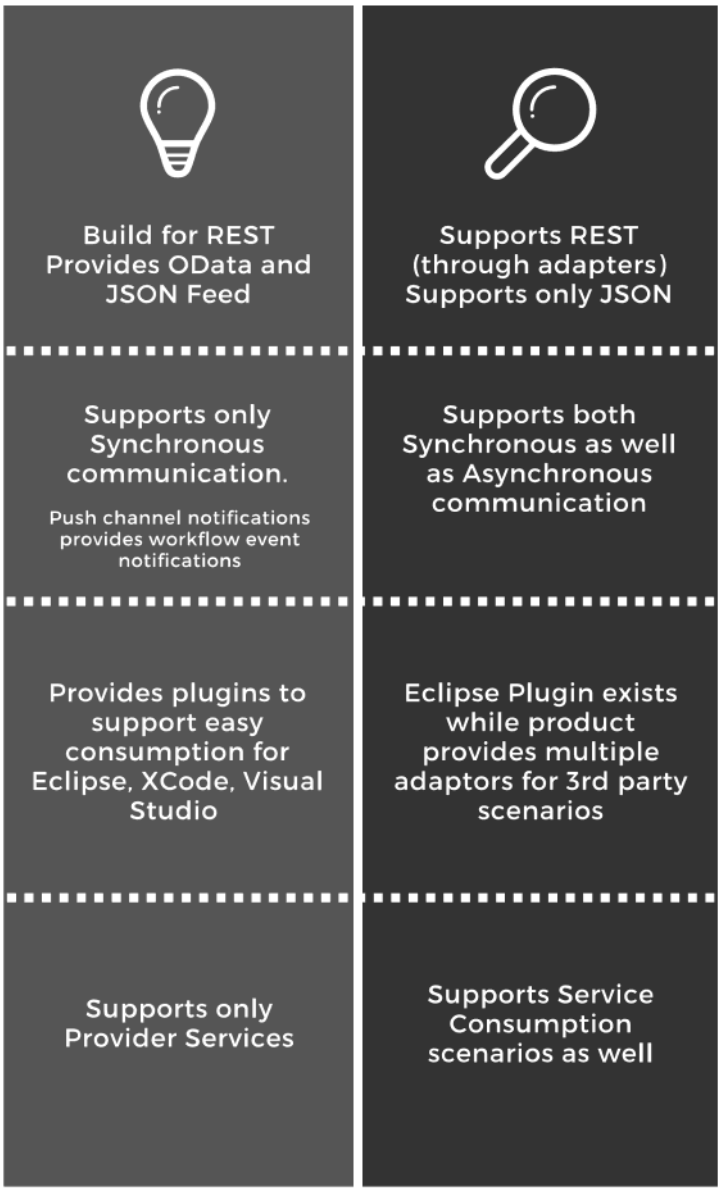
SAP GATEWAY

VERSUS

SAP-PI

COMPARING THE 2 SAP DATA PROVISIONING BACKEND PRODUCTS



Flat file approach interface

Thursday, January 2, 2020 3:53 PM

https://blogs.sap.com/2017/12/14/posting-fi-documents-using-flat-file-interface-sap-fi-co/

Integration Council – Initial Decision Matrix Meeting

Thursday, January 2, 2020 4:23 PM

Subject	***Integration Council – Initial Decision Matrix Meeting***
Date and Time	12/4/2019 1:00 PM EDT
Location	WebEx
Attendees	Ramesh Jandhyala, Hari Vedula, Chris Lore
Overview	Agenda: • Define goal of decision matrix – 10 minutes • Determine initial decision matrix criteria – 15 minutes • Questions/assign actions – 5 minutes

Notes	**Define Goals**
	• What is our expectation for this decision matrix?
	  ○ Guidelines for which type of interface to use when?
	  ▪ Focus will initially be on which interfaces to use when and middleware to be added
	  ○ Guidelines for which middleware to use when?
	  ▪ Will need input from the IPA team
	  ▪ Will be worked on after the initial interface decision matrix is completed
	Initial Decision Matrix Criteria
	• Matrix Format
	  ○ Re-use the use case presentation as the starting format – Ramesh to get the documentation so the team can review
	• Interface Types
	  ○ IDOC - Chris
	  ○ EDI - Chris
	  ○ SOAP - Ramesh
	  ○ Web Proxy - Ramesh
	  ○ ODATA/JSON - Hari
	  ○ cXML (Ariba) - Chris
	  ○ Flat File - Hari
	  ○ sFTP - Hari
	  ○ RFC - Hari
	• Middleware – to be completed after interface decision criteria/high level guides captured below
	  ○ PI
	  ▪ Used for all SAP connections and also if exclusive for SAP
	  ○ Sterling Integrator
	  ▪ EDI only
	  ○ SAP Cloud Platform Integration
	  ▪ Unlimited messages in production
	  ▪ What's the development constraint?
	  ▪ API specific development that will be exposed externally?
	  ▪ Connections to other SAP cloud applications?
	  ▪ OOB Ariba/SAP Cloud Applications Communications
	  ▪ Data should not be ROHS, FAR, DFAR, GDPR compliant; careful with sensitive data; check regulatory requirements for other projects when dealing with custom development
	  ○ SOA
	  ▪ If multiple ERPs and needs a reusable component
	  ○ Ariba Network
	  ▪ Communication through the CIF (add-on in SAP) or with Ariba
	  ▪ OOB Ariba Communications

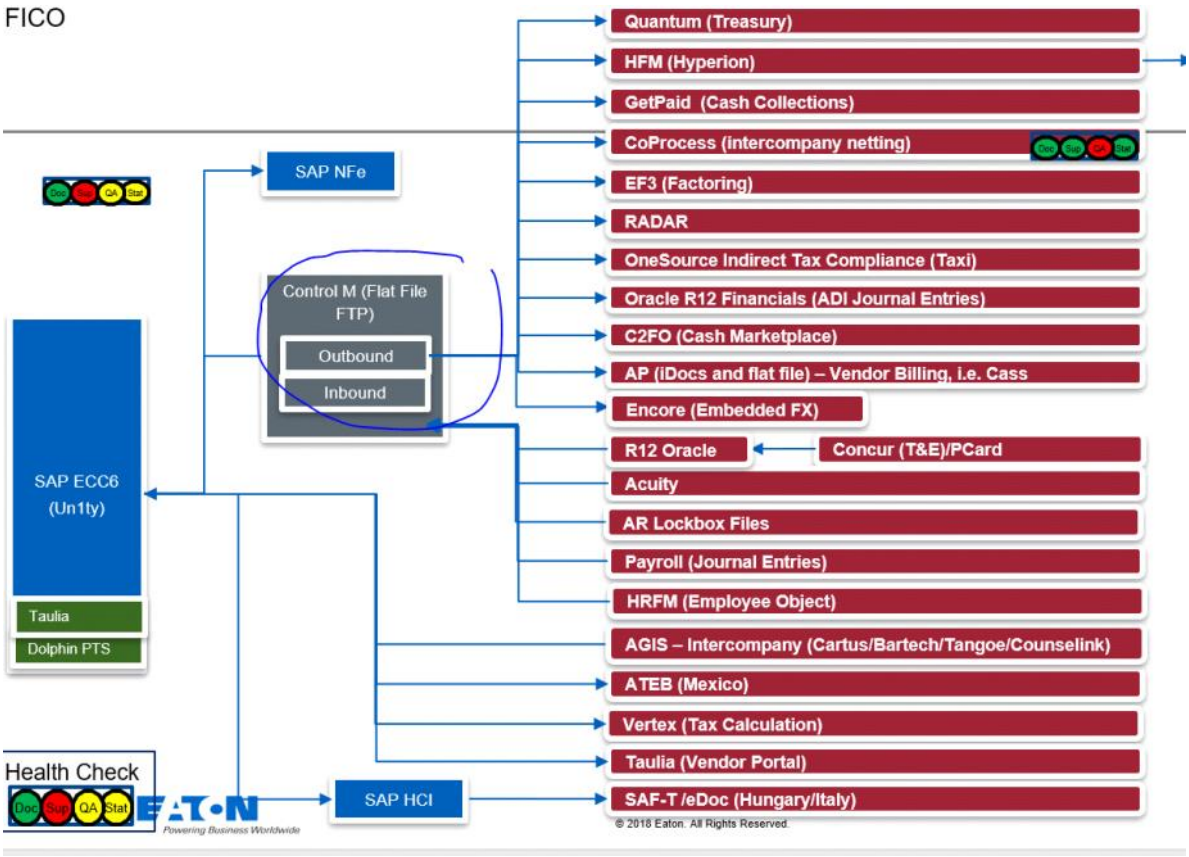
	○ SAP Netweaver Gateway ▪ Custom development ○ Licensing impacts ● Data to capture ○ Message counts (worst case & average), timings ○ Message size/width ○ Concurrent connection requirements ○ Real time vs asynchronous ○ Trusted vs not trusted connection and user type

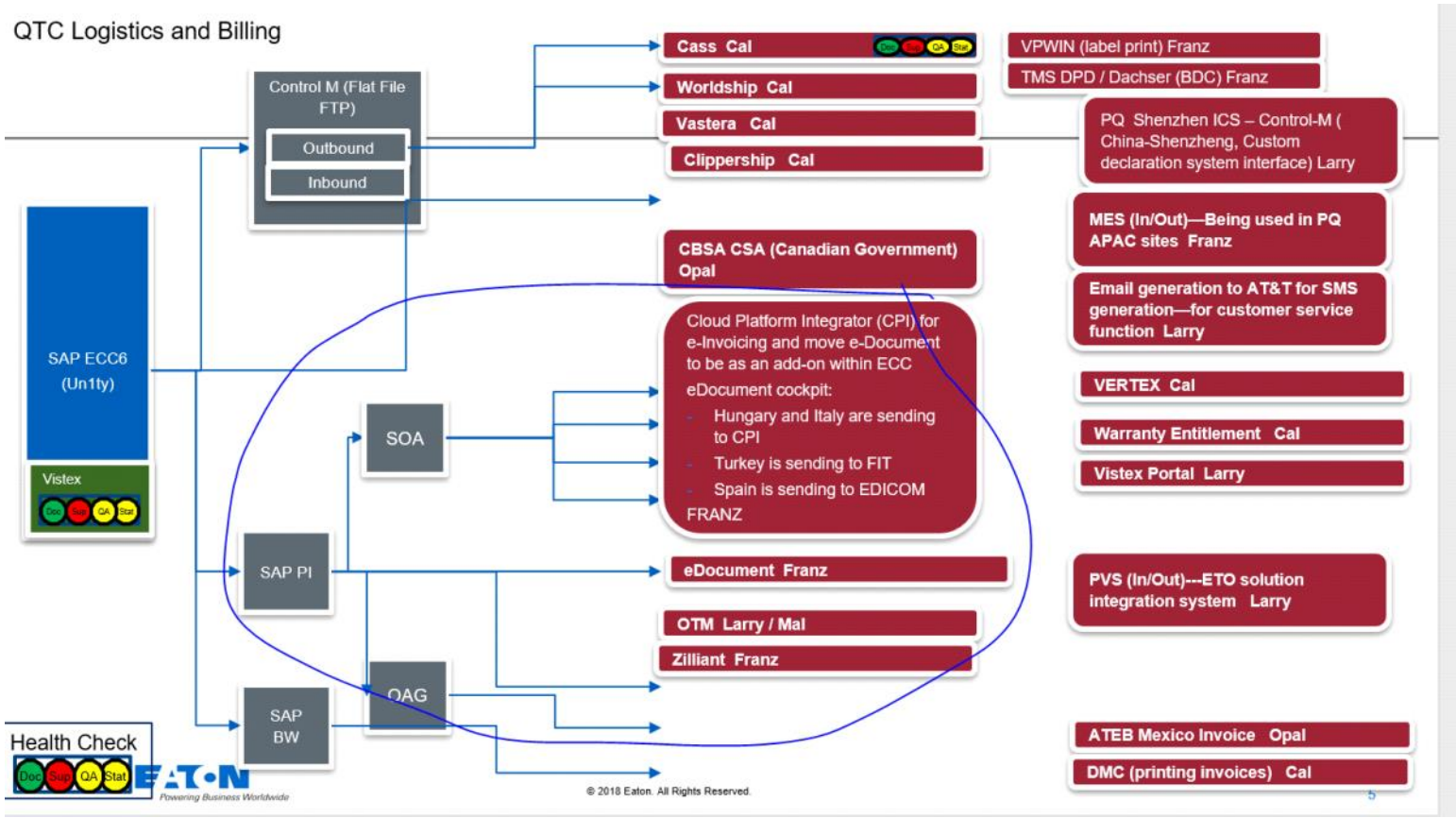
Action	Assigned To	ECD	Status
Provide team with current IPA decision documents	Ramesh Jandhyala	12/5/2019	In Progress
Decision Matrix Format	Team	12/9/2019	Not started
IDOC Decision Matrix Criteria	Chris Lore	1/10/2019	Not started
EDI Decision Matrix Criteria	Chris Lore	1/10/2019	Not started
SOA/SOAP Decision Matrix Criteria	Ramesh Jandhyala	1/10/2019	Not started
webProxy Decision Matrix Criteria	Ramesh Jandhyala	1/10/2019	Not started
ODATA/JSON Decision Matrix Criteria	Hari Vedula	1/10/2019	Not started
cXML (Ariba) Decision Matrix Criteria	Chris Lore	1/10/2019	Not started
Flat File Decision Matrix Criteria	Hari Vedula	1/10/2019	Not started
sFTP Decision Matrix Criteria	Hari Vedula	1/10/2019	Not started
RFC Decision Matrix Criteria	Hari Vedula	1/10/2019	Not started

Unity Integrations

Thursday, January 2, 2020 4:24 PM

http://teams.etn.com/es/SAPUn1tyCOESite/SAPSolutionDesign/Overview/Unity%20Integration%20Diagram.pptx




QTC Logistics and Billing
Control M (Flat File FTP)
Outbound
Inbound
SAP ECC6 (Un1ty)
Vistex
SOA
SAP PI
SAP BW
OAG
Cass Cal
Worldship Cal
Vastera Cal
Clippership Cal
CBSA CSA (Canadian Government) Opal
Cloud Platform Integrator (CPI) for e-Invoicing and move e-Document to be as an add-on within ECC
eDocument cockpit:
Hungary and Italy are sending to CPI
Turkey is sending to FIT
Spain is sending to EDICOM
FRANZ
eDocument Franz
OTM Larry / Mal
Zilliant Franz
VPWIN (label print) Franz
TMS DPD / Dachser (BDC) Franz
PQ Shenzhen ICS – Control-M (China-Shenzheng, Custom declaration system interface) Larry
MES (In/Out)—Being used in PQ APAC sites Franz
Email generation to AT&T for SMS generation—for customer service function Larry
VERTEX Cal
Warranty Entitlement Cal
Vistex Portal Larry
PVS (In/Out)---ETO solution integration system Larry
ATEB Mexico Invoice Opal
DMC (printing invoices) Cal
Health Check
Doc Sup QA Stat
EATON
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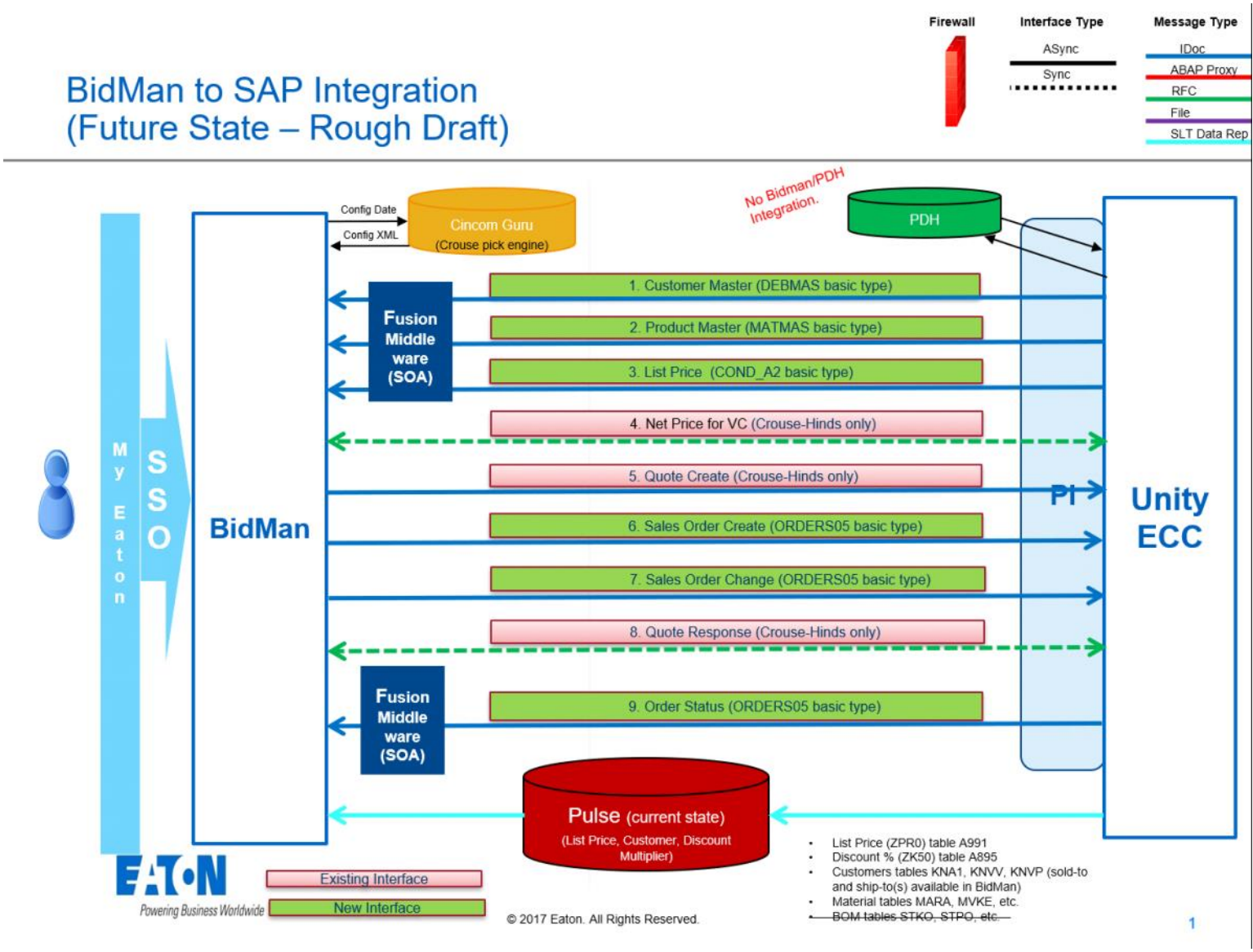
5

Bidman interface

Tuesday, January 28, 2020 10:42 AM

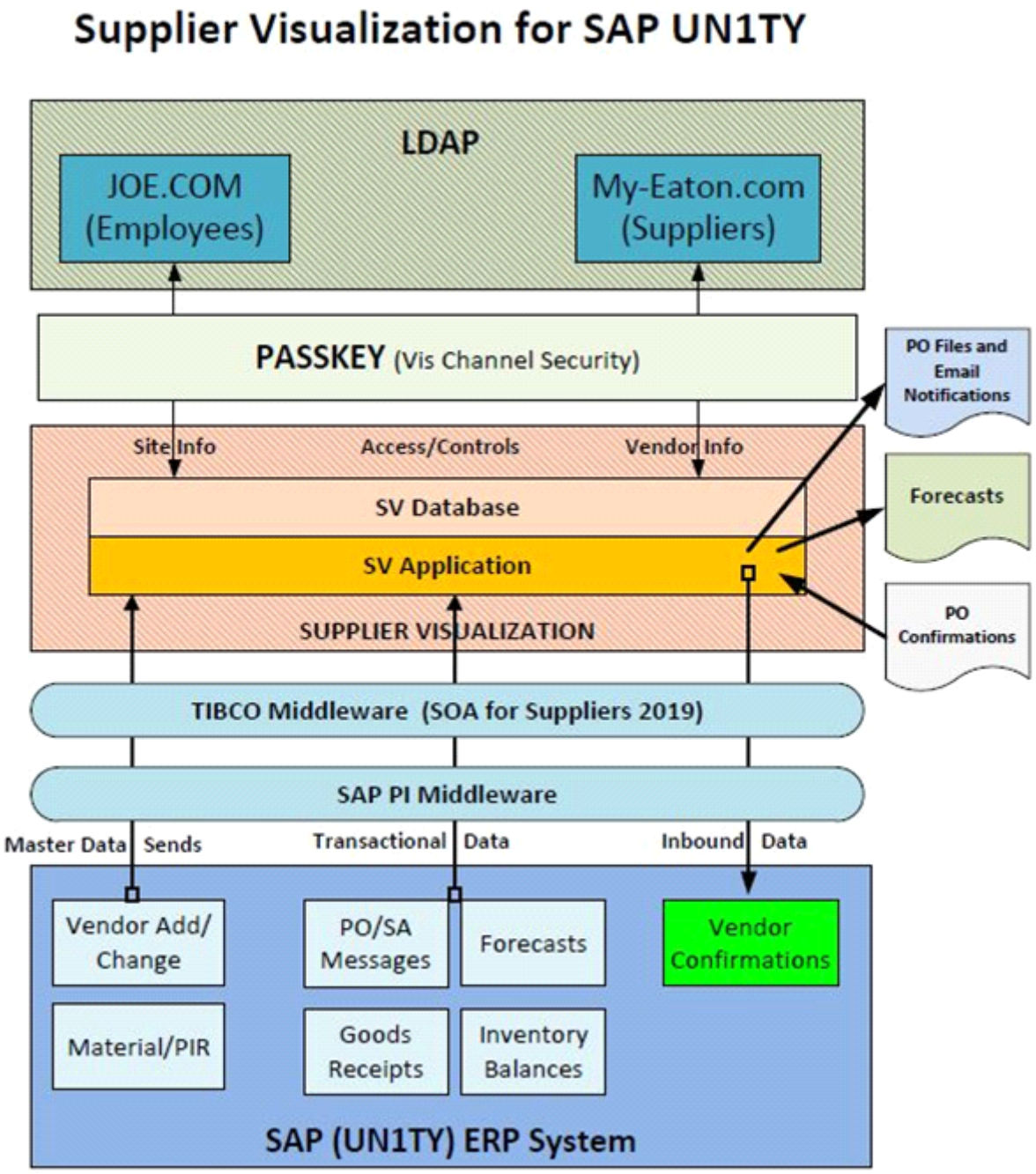
Bidman is a product configuration and pricing tool used by Eaton's Electrical Sector sales teams and distributors. It provides pricing and quoting functionality for detailed and complex jobs that use multiple Eaton products.

Current state (March 2019), Bidman is integrated with SAP for the Crouse-hinds division. Three interfaces were developed to support quote creation (listed below), and Bidman uses Pulse ODS to upload customer master, material master, vendor master, pricing and listings/exclusions.



Suplier Viz

Tuesday, January 28, 2020 12:06 PM



SAP PI course

Thursday, January 23, 2020 2:42 PM

https://figaf.com/courses/sap-pi-course/	SAP PI
https://www.cpicourse.com/sap-cpi-course	SAP CPI

Tuesday, January 28, 2020 9:42 AM

20191204 Integratio...

- IDOC - Chris
- EDI - Chris
- SOAP - Ramesh
- Web Proxy - Ramesh
- ODATA/JSON - Hari
- cXML (Ariba) - Chris
- Flat File - Hari
- sFTP - Hari
- RFC - Hari

IDOC	Chris	Real time Asynchronous (or scheduled batch)
EDI	Chris	
SOAP	Ramesh	
Web Proxy	Ramesh	
ODATA / JSON	Hari	
cSML (Ariba)	Chris	
Flat File	Hari	Control M
sFTP	Hari	
RFC/BAPI	Hari	Synchronous real time Expose RFC as Web Service in SAP PI/PO – SOAP to RFC Synchronous Interface

http://teams.etn.com/team/ebsit/Services_Team/Dev_Team/SAP%20Integration/Interface%20Inventory/Integration%20DataCollection%20Template_EatonElectricalInterfaces.xls	Integration DataCollection Template_EatonElectricalInterfaces

Expose RFC as Web Service in SAP PI/PO – SOAP to RFC Synchronous Interface

Tuesday, January 28, 2020 2:27 PM

https://sapintegrationhub.com/pi-po/rfc/expose-rfc-as-web-service/

Expose RFC as Web Service in SAP PI/PO – SOAP to RFC Synchronous Interface

By Isuru Fernando RFC, Service Registry, SOAP 15 Comments

In this article we will look at how to expose a RFC as a Web service in SAP PI/PO. Using SOAP to RFC synchronous interface we would be exposed a RFC as a web service.

Most commonly researched topics under third-party system integration with SAP is how to use RFCs and web services to expose SAP APIs. There are lot of confusion under exposing web services due to different third-party platforms, authentication, connection issues and different PI versions etc.

There are several ways third party applications you can access RFCs.

- **Directly access RFC using SAP credentials.**

  I have previously written a article on how to access a RFC using .NET front-end.

- **Exposing RFC as a web service using transaction SE37.**

  This can be done using SE37>Utilities>Create web service option.

- **Exposing RFC as a web-service using SAP Process Integration (PI/PO).**

In this article I will provide detail on how to expose a RFC as a web service using SAP PI/PO environment. This would be a SOAP to RFC synchronous interface.

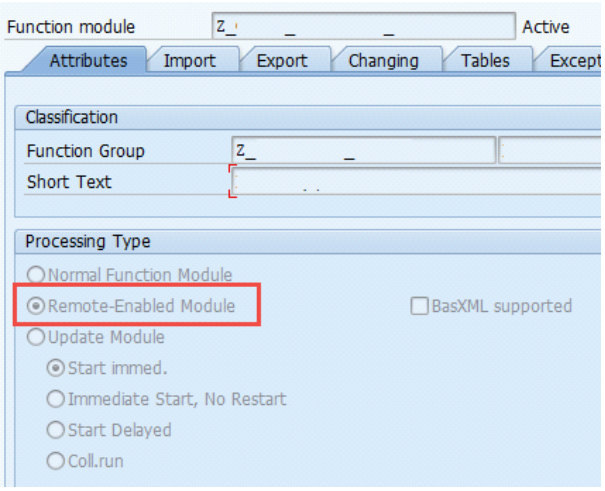
One advantage of using SAP PI in this purpose is you would have comprehensive monitoring capabilities than other two methods. SAP PI has provided detail message monitoring, message logging and error handling capabilities which can be leveraged for any scenario. if you you use other methods such as directly exposing a RFC you will have to write your own message monitoring, alert and logging.

One disadvantage I see in using SAP PI is there would be more development effort due to PI development.

This example is a SOAP to RFC synchronous scenario. Third party send the SOAP call can PI converts the input and call the RFC then the RFC return data would be converted and send synchronously to third party using SOAP protocol.

Configuration Steps How to Expose RFC as a Web Service using PI/PO.

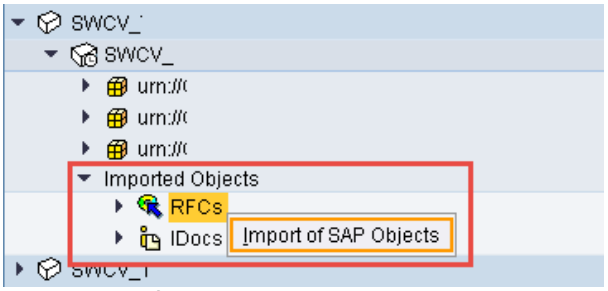
1. Make sure your function module or the API is “Remote enabled”. – SE37



Remote Enable Function Module in SE37

2. Import RFC to SAP PI.

Right click on RFC under imported objects under software component and provide application server/system number/user credential. Then find the RFC from the list.

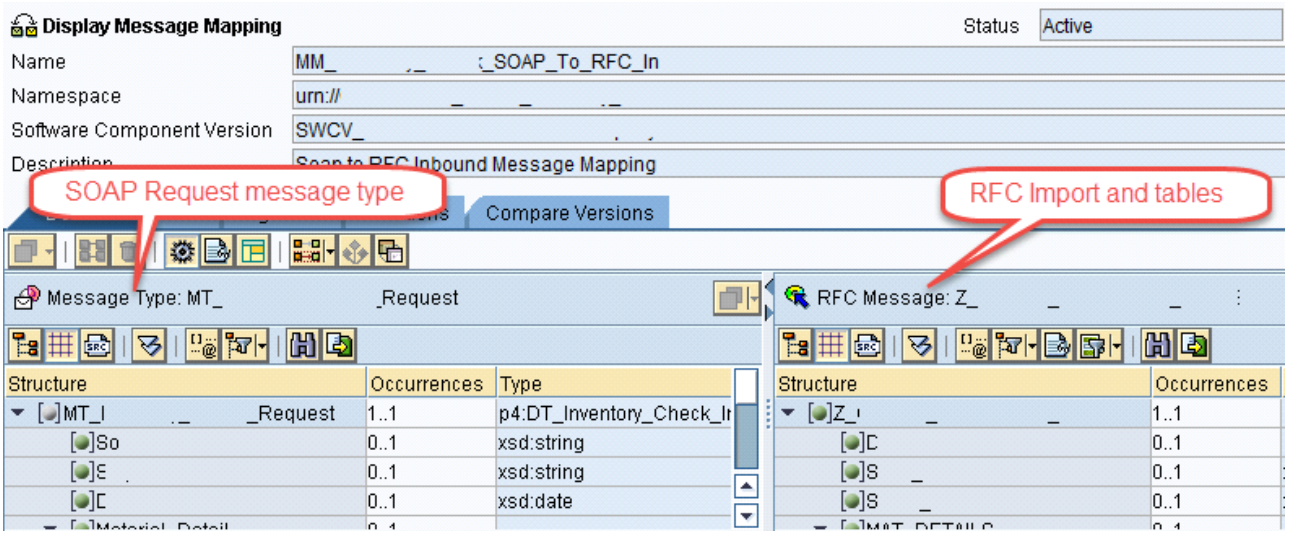


Import RFC in ESR

3. Create input, output data types and message types which correspond to SOAP input and output data formats.

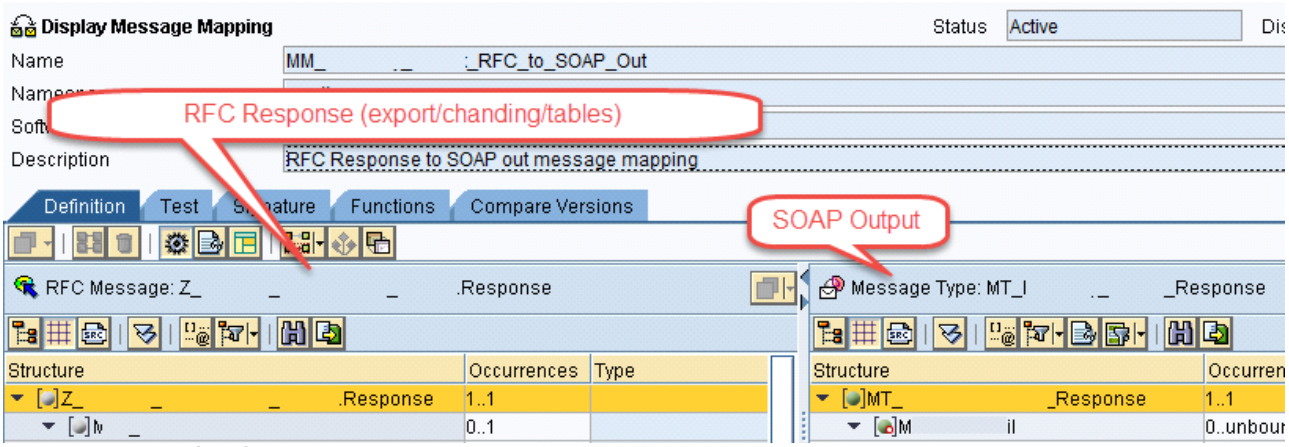
SOAP request data/message type.
SOAP response data/message type.

4. Create message mapping for SOAP request to RFC input.



Message Mapping for SOAP Request to RFC

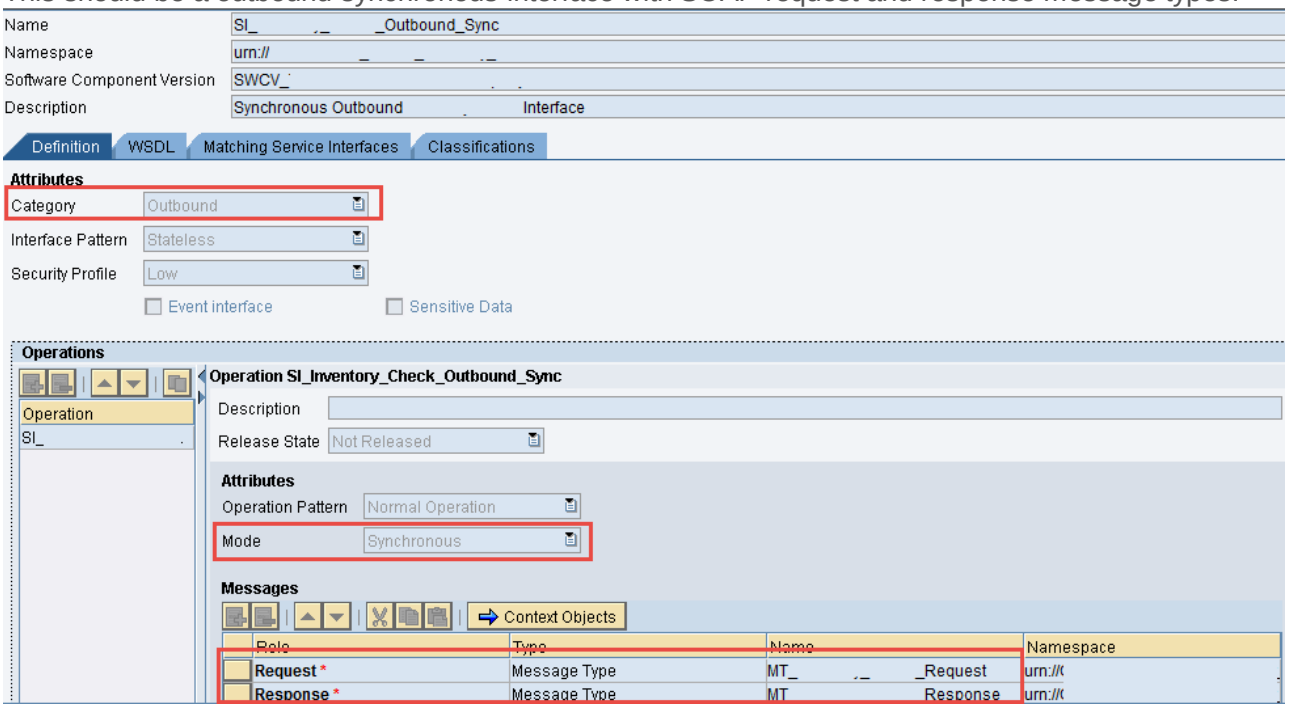
5. Create message mapping for RFC output to SOAP response.



Message Mapping for RFC Response to SOAP

6. Create outbound service interface.

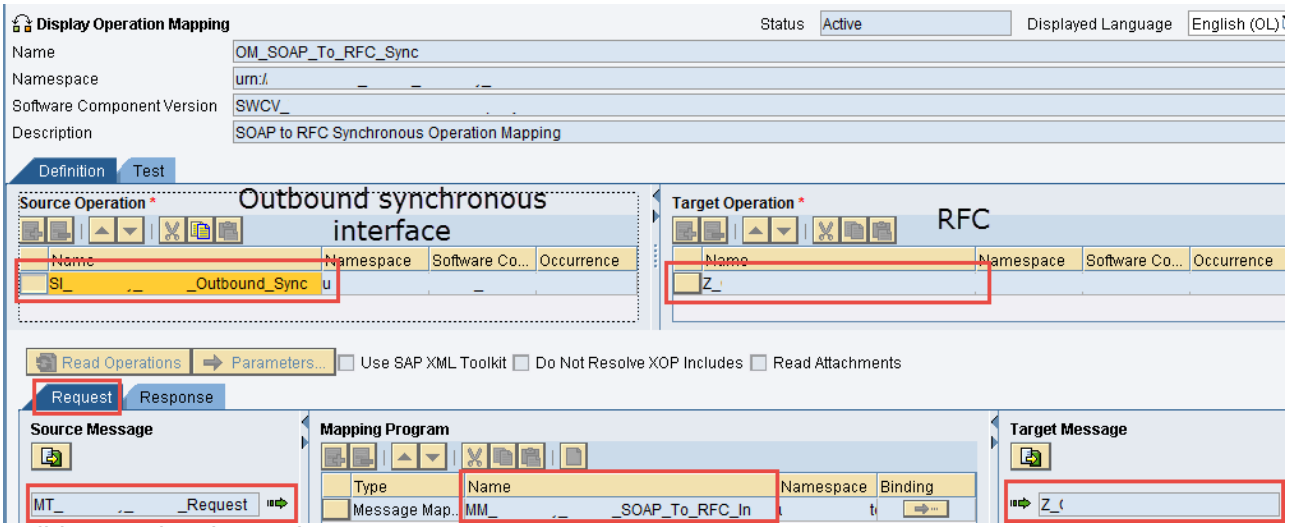
This should be a outbound synchronous interface with SOAP request and response message types.



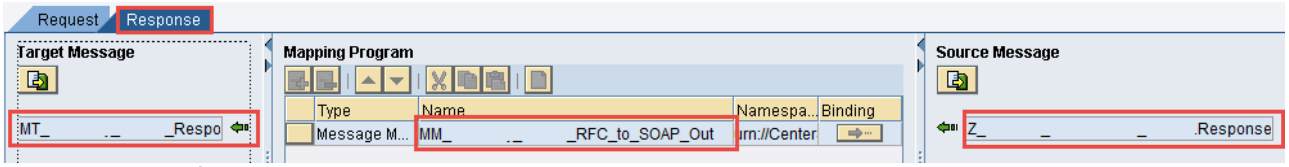
Build Outbound Synchronous Interface

7. Create operation mapping.

Configure Operation Mapping for request and response.

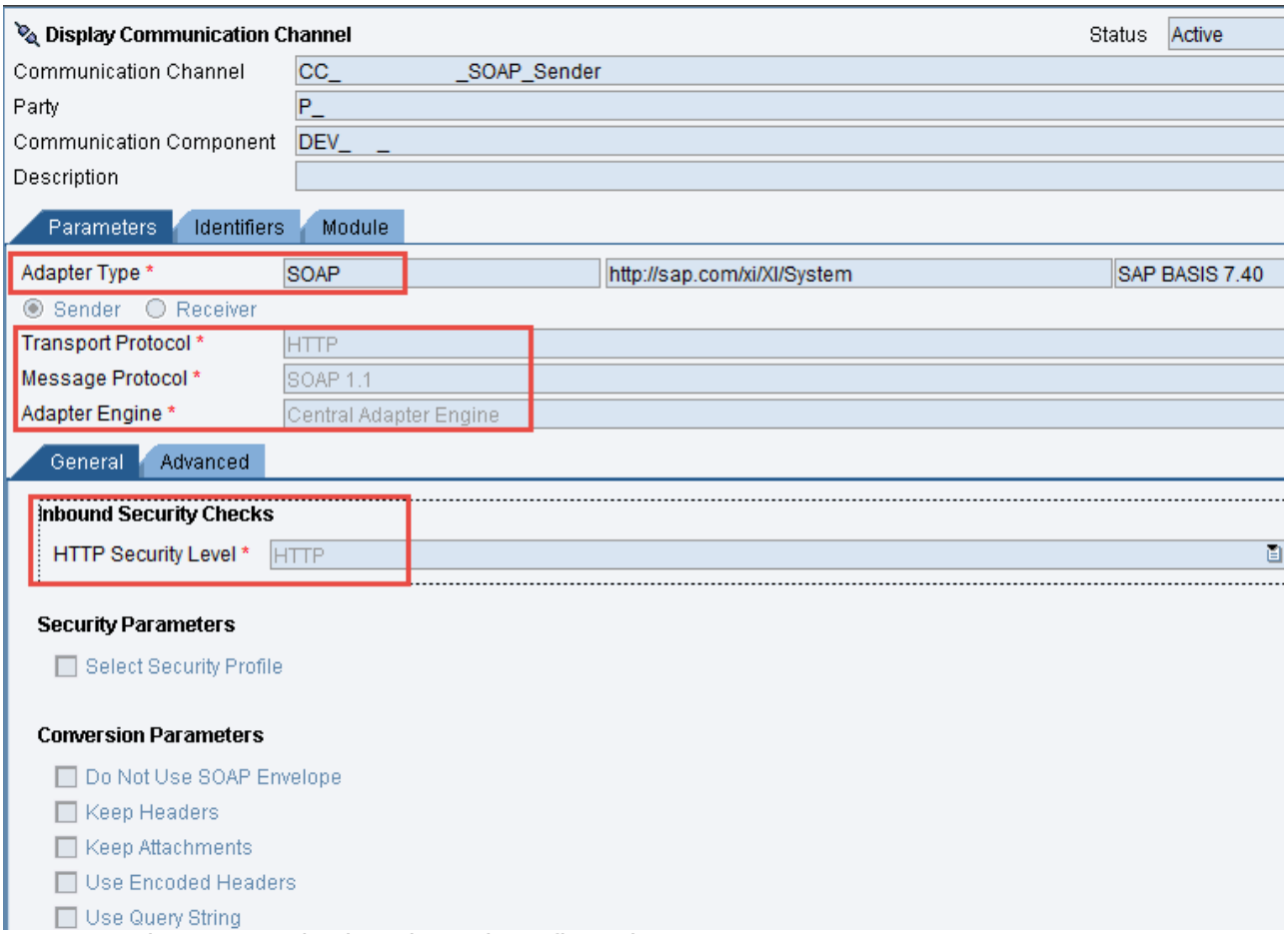


Build Operational Mapping



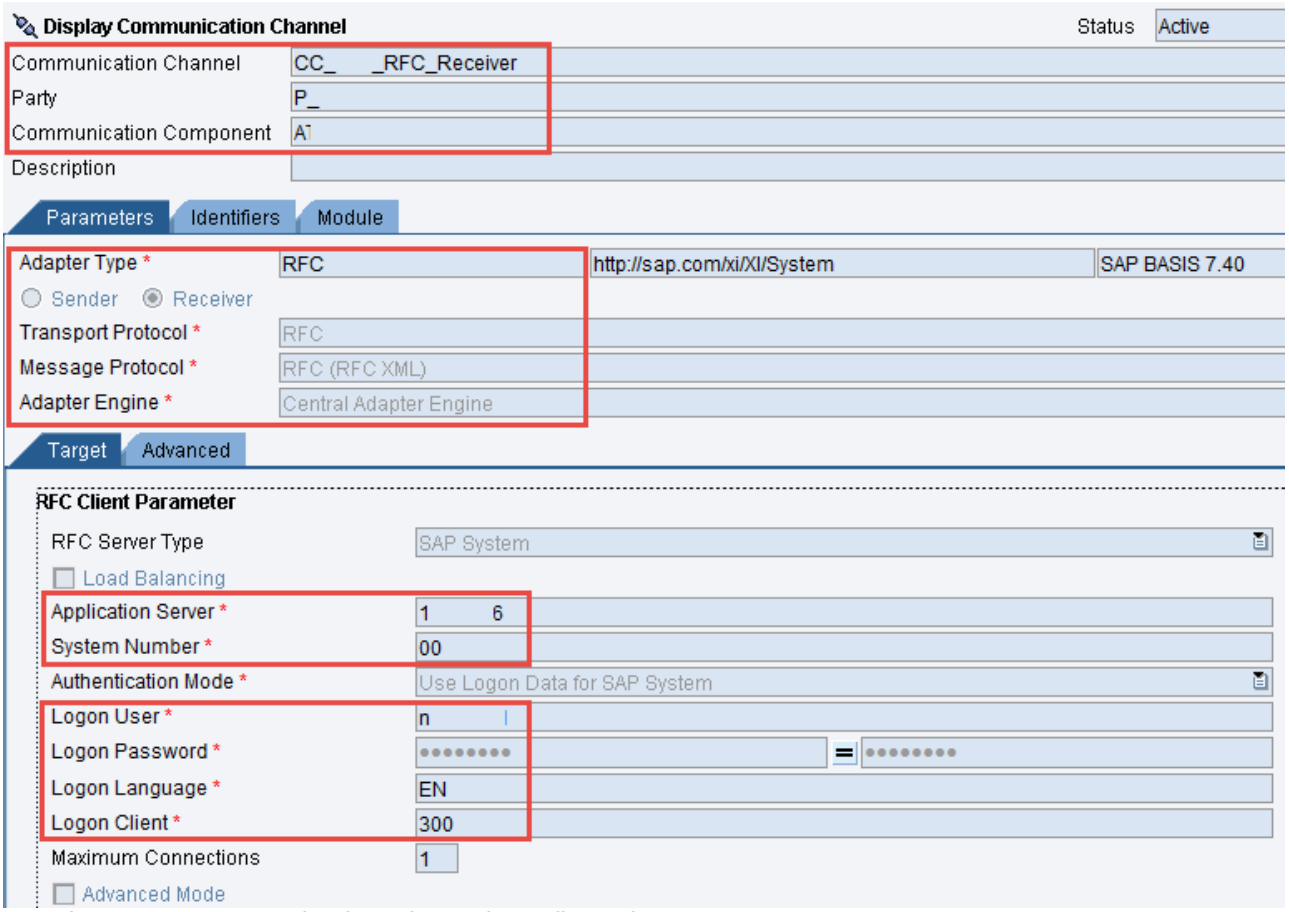
response mapping

8. Create sender SOAP communication channel.



SOAP Sender Communication Channel Configuration

9. Create RFC receiver communication channel.



Receiver RFC Communication Channel Configuration

10. Create integration scenario.

11. Publish the interface under service registry.

if you have any questions on any of the steps discussed how to expose a RFC as a web service, please leave a comment.

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Tags:.NET, API, Communication Channel, Message Mapping, PI/PO, RFC, Service Interface, Service Registry, SOA, SOAP, Synchronous, Web Service, WSDL

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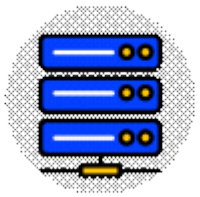
Proxy Outbound Interface Example SAP to PI File Receiver

Proxy Communication Error SLD_NO_OWN_BS



How to Publish Services in SAP PI/PO Service Registry

About Author

Isuru Fernando

Hi, I am Isuru Fernando, Senior SAP Integration Consultant with 10 years of SAP full-cycle implementation and support project experience. From the early days, I had a passion for coding, software development, and everything tech-related. I started my carrier as an ABAP developer and soon found my love for system integration when I learned SAP XI 3.0 in 2008. Playing a variety of roles from an offshore technical consultant (ABAP, PI/PO, BW, BOBJ) at the beginning of my career to a technical lead managing a team of consultants in different countries, I have gained immense experience in SAP project implementation life cycle. Having the opportunity to work on SAP implementation projects in USA, EU, and Asia, I learned valuable ins and outs of global business processors in Sales and Distribution (SD), Material Management, Retail, Customer Relationship Management (CRM), and Finance and Controlling (FICO). Through this blog, I want to share my expertise in SAP technical areas such as SAP ABAP, PI/PO, AIF, and Basis. I also want to provide a platform for others with similar ambitions who would like to share their SAP technical expertise with the world!

15 Comments

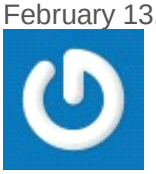
Unknown
Hi Isuru Fernando,
I'm new with SAP PI, can you create step-by-step for '10. Create integration scenario.'
thanks
December 1, 2016 Reply

best popup ad network
Hello blogger, i have to say you have high quality content
here. Keep up good work !
January 18, 2018 Reply

how to get more instagram followers
Hi I really enjoyed reading this article
January 18, 2018 Reply

Johny Jackson
Aw, this was a really good post. Taking the time and actual effort to create a
really good article… but what can I say… I procrastinate a whole lot and don't seem
to get nearly anything done.
January 20, 2018 Reply

gang świeżaków kolorowanki
Awesome content my friend, keep updating your blog
February 13, 2018 Reply



Bhargav
Hi Isuru Fernando,
Can multiple systems call this Web service to use the result?!.
I have a scenario where i need to send some data from SAP ECC to E-comm sites(multiple) via Web service. All the sites will call the same Web service to get the data. Can we use this approach for that case?.
In the above steps i can see there is a Receiver communication channel, but in my scenario i have multiple receivers who are gonna use the same web service. Thanks in advance for your suggestion.
July 18, 2018 Reply

Isuru Fernando
Hi Bhargav,
Of cause there are several ways you can handle this in SAP PI/PO. Either create separate ICOs for each consumer or use a common business component for all receivers. Make sure locking of data when multiple consumers access the same data is handled in ECC side.

Cheers!
Isuru
August 5, 2018 Reply


Priyanka
Hi ,
I have a requirement where When a PO is created , I need to send PO data to SAP PO.For this I have created a RFC Function module in ECC. Besides the steps you have mentioned (which have to be done in SAP PO side) , what other steps I need to do in ECC and how can I call the web service/ proxy from my code in ECC to send data to SAP PO , when the Purchase order is created.
Kindly provide some help .
February 12, 2019 Reply


Isuru Fernando
Hi Priyanka,
How are you planning to send PO data to PI? using iDocs or Proxy? If its a proxy have you created a custom proxy?
Cheers!
Isuru
February 14, 2019 Reply


Vinay Kumar
Hi Isuru Fernando,
I’m new to SAP PI so I’m facing while performing IDOC to FIle scenario.I got struck when configuring logical name setting using BD54 tcode.Can you help me out to defining logical name .
May 1, 2019 Reply


Isuru Fernando
Hi Vinay,
Check my post on iDoc configuration scenario where I have more detail on how to create logical systems using transaction bd54.
Hope it would be helpful!
Cheers!
Isuru
May 3, 2019 Reply


Vaishali Rani
Hi Isuru,
I have synchronous scenario SOAP-RFC.
This is part of PI7.3 to PI 7. 5upgrade. Its working fine in 7.but ng in 7.5.

MP: exception caught with cause com.sap.engine.interfaces.messaging.api.exception.MessagingException: com.sap.aii.adapter.rfc.afcommunication.RfcAFWException: error while processing message to remote system:com.sap.aii.adapter.rfc.core.client.RfcClientException: could not get a client from JCO.Pool: com.sap.mw.jco.JCO$Exception: (101) RFC_ERROR_PROGRAM: Parameter message server host (jco.client.mshost) is missing.
Any help would be really appreciated.
Thanks,
Vaishali
September 24, 2019 Reply

Vaishali
Hi Isuru,
I have a synchronous scenario, SOAP-RFC. It is part of PI 7.3 to PO 7.5 upgrade. This scenario is working fine in PI but failing in PO. Error: MP: exception caught with cause com.sap.engine.interfaces.messaging.api.exception.MessagingException: com.sap.aii.adapter.rfc.afcommunication.RfcAFWException: error while processing message to remote system:com.sap.aii.adapter.rfc.core.client.RfcClientException: could not get a client from JCO.Pool: com.sap.mw.jco.JCO$Exception: (101) RFC_ERROR_PROGRAM: Parameter message server host (jco.client.mshost) is missing.
Could you please help me in solving the same.
Regards,
Vaishali
September 24, 2019 Reply

Isuru Fernando
Hi Vaishali,
Did you check with BASIS team if the RFC connectivity is working?
Cheers!
Isuru
September 26, 2019 Reply

Vaishali
Hi Isuru,
Yes thee is a RFC lookup channel and that is working fine.
September 26, 2019 Reply

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Tag Cloud

ABAP ALE/iDoc ASMA B2B Base64 DDIC Eclipse EDI Error ESR Example File Adapter FTP Function Module Guide How To HTTP iDoc iDoc_AAE iFlow Java Mapping Message Mapping NWA NWDS Overview PI/PO Proxy RBDMIDOC RFC SAP PO 7.5 SE11 SE37 SE38 Service Interface SLD sm59 SOAP sproxy SQ01 Step by Step Troubleshoot Variable Substitution we02 we20 XML

Explore by Category

- ABAP
- ALE/iDoc
- ALV
- Application Log
- base64
- BDC
- DDIC
- Function Module
- LSMW
- Proxy
- SAP Query
- Search Help
- Smartforms
- Spool
- Table Maintenance
- Transformation
- BASIS
- Batch Jobs
- How To
- PI/PO
- Alerts
- ASMA
- B2B
- Context Objects
- Data Type Enhancements
- Fault Messages
- File Adapter
- iDoc
- iDoc_AAE
- iFlow
- Java Mapping
- Mapping
- Node Functions
- NWDS
- Proxy
- Receiver Determination
- RFC
- Service Registry
- sFTP Adapter
- SLD
- SOAP
- UDF

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johnsmith@example.comJohnSmithSubmitForm is being submitted, please wait a bit.
Yes, I agree with the privacy policy.

x
x

- helps planning release cycles
- native SAP integration

- Product governance with non-SAP team?
- Career growth for SAP PI developers (cross train on other SAP technologies)
- SAP PI team works primarily with SAP functional team

IDOC fields SAP team will know
everybody speak the same language KUNNR

proxies SAP - everyone understand what it is
change in proxy field (adding a field)

SAP PI change is always linked to SAP ABAP

We can build a better integration solution

changes deployment cycle matches SAP

proxy
idoc
rfc

new version pi

ALL SAP systems under 1 roof

Oneside is always ABAP/SAP

Onwership of the server

Support packs / upgrades ABAP system….you have test PI interfaces also

PI is SAP tool easy integration with SAP

Foot print grows
Cloud more SAP CPI (future cloud apps)

Operational ease - talk to each other well
Inherentely gel together well - understand each other well

Tuesday, February 11, 2020 8:20 PM

1. More interactions with SAP teams, than SOA team:-
    - For SAP PI/ CPI interfaces, one side is always an SAP system (ECC / GTS / GRC / NFE, etc.).
    - 90% of the interaction is with SAP teams (ABAP team / functional teams / Security team). Very high compared to the SOA team.
    - For SAP ONLY integrations, SAP PI 7.5 can now be used without SOA.
    - Native SAP integration by SAP CPI for cloud-based applications (like SAP Ariba / SAP SuccessFactors), without SOA.
2. Having ownership of ALL SAP systems under 1 roof:-
    - helps better manage the release cycles with SAP Change Management processes as most of the SAP PI transports are linked with ABAP transports.
    - As SAP footprint grows, enables better product governance to take full advantage of all the capabilities in SAP PI / CPI for easy integration with SAP systems
    - Most of the SAP PI changes are linked with changes on the SAP ABAP side. Having them in one team will help better resource assignments for projects, operational ease (everyone speaks the same SAP language) and reduced effort.
    - Support packs and upgrades cycles match with other SAP products.
    - Helps coordinate testing of SAP PI/CPI interfaces better every time any SAP source system (ECC/GTD etc.) is upgraded.
    - Career options for SAP PI developers within SAP technologies (cross-train on other SAP technologies like Portal / Fiori / ABAP / BW)

SAP Cloud Platform Integration for Data Services (CPI-DS)

Friday, March 13, 2020 2:20 PM

https://visualbi.com/blogs/sap/sap-cloud-for-analytics/overview-sap-cloud-platform-integration-data-services-cpi-ds/

https://wiki.scn.sap.com/wiki/display/TechOps/SAP+Cloud+Platform+Integration+for+data+services

How do we connect SAP PI and SAP Netweaver Gateway - SAP Q&A

Wednesday, June 3, 2020 12:58 PM

0

Former Member

How do we connect SAP PI and SAP Netweaver Gateway

Posted on Dec 14, 2016 at 06:16 PM | 1.2k Views

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Dear Experts,

I have seen many blogs and information on two SAP products ,SAP PI and SAP Netweaver Gateway and there has been a very good document by William on when to choose SAP Netweaver Gateway and SAP PI as both are integrating tools.

I would like to know whether it is a good practice to have something like SAP(ECC)-SAP Netweaver Gateway-SAP PI-thirdparty systems.We need to have this scenario as all data to be interfaced needs to go through SAP NW Gateway.

Because of the error handling capabilities which SAP PI offers we would like to know whether it is technically possible to connect from NW Gateway to SAP PI.With newer versions of SAP PO we have that capability where we have java gateway incorporated with SAP PO and Rest adapters which make that possible to connect to SAP Gateway.

Could experts please throw more light on the connection between sap pi (version 7.1) and sap netweaver gateway if we want to have integration scope SAP ECC-SAPGW(Hub)-SAP PI-Thirdparty and how do we achieve it .

Thanks for all the help and suggestions.

Shaik

SAP NetWeaver Process Integration, adapters | SAP Gateway

Add comment

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- Cancel

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Related questions

CSV files to be picked by SAP PI from ARIBA using ITK

By Santhoshi M, Feb 21, 2017

Need help on how to pick CSV from ARIBA using SAP PI as middleware

By Santhoshi M, Feb 22, 2017

1 Answer

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|

- Newest

|

- Oldest

- Best Answer

Vinita Kasliwal
Posted on Dec 14, 2016 at 10:25 PM
0
Hi Shaik
I dont understand why would you want to connect Pi and gateway ?
They are 2 different software solutions . PI is used for integration and gateway is used for displaying data on a user interface. I also went through the williams link you have mentioned and it says as below and sums it all.
"Does SAP NetWeaver Gateway Replace any Existing SAP Software?In a word—No. SAP NetWeaver Gateway is not designed to be a channel for transactional applications, nor is it designed to replace existing middleware like SAP NetWeaver PI. In addition, applications built on SAP NetWeaver Gateway are not designed to target integration scenarios. user-facing applications "
In my current client landscape we have both the systems installed where gateway offers a better front end capability for CRM and Hybris system and PI is used for system integration between CRM and 3rd Party and also between CRM and ECC systems
Using just the PO system can help in activating OData as mentioned below but many of the capabilities of gateway do not work
"Customers who are already using SAP Process Orchestration as a middleware solution can now activate the OData generation of ABAP-based SAP Systems directly inside PI. This has the advantages that no SAP Gateway hub system is required any more (which saves cost for hardware and operations) and also strengthens central governance."
refer this link as well which helps you exposing gateway services from PO
https://blogs.sap.com/2014/11/26/exposing-gateway-services-from-process-orchestration/
https://archive.sap.com/discussions/thread/3640754
Refer similar questions asked in the past
https://archive.sap.com/discussions/thread/3663376
https://archive.sap.com/discussions/thread/2029214
http://www.sap.com/documents/2015/08/26a5f3e6-557c-0010-82c7-eda71af511fa.html#
Let me know if this helps
regards
Vinita

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Inserted from <https://answers.sap.com/questions/83197/how-do-we-connect-sap-pi-and-sap-netweaver-gateway.html>

Chris ODATA integration recommendation

Monday, July 20, 2020 3:40 PM

Integration

Integration and interoperability will be key to competitive advantage in the manufacturing industry[2,4]

- ERP evolving from local processing to fully integrated across the value chain to allow for agile data driven collaboration with customers and suppliers[1]
- We need to convert from traditional point-to-point interface development to loosely coupled SOA API style integrations and possibly microservices (e.g. IoT)
  - SAP has heavily invested in the use of ODATA for API and microservices development going forward

Recommendation – Switch to ODATA development through Gateway

- ODATA services can be used by Fiori applications, SAP PI (SAP NW PI 711 >=SP12), or other integration engines that consume RESTful services
- ODATA is strategically aligned with future SAP and cloud vendor products
- Service Gateway Builder provides a central location for all registered services

This allows us to more closely align to the IPA team's future strategy around API development/management and sets our group up to deliver integration at the speed of business.

1

Integration

Integration and interoperability will be key to competitive advantage in the manufacturing industry[2,4]

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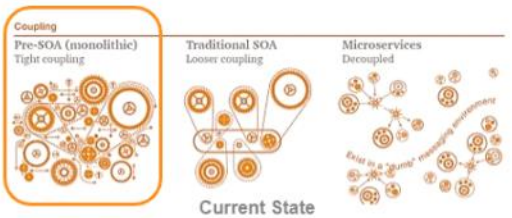
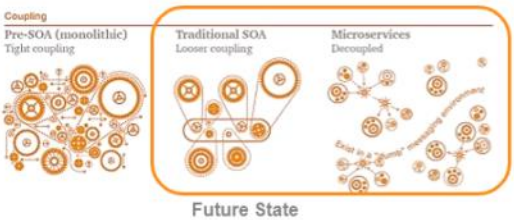


Current State

- Enterprise IT is fragmenting and moving to the cloud[3]
  - Boundaries between application, OS, and information are blurring; can provide great opportunities or be disastrous[3]
- SOA can provide more mature and comprehensive architecture for cloud computing[3]
- Requires changes to development methodologies and testing strategies



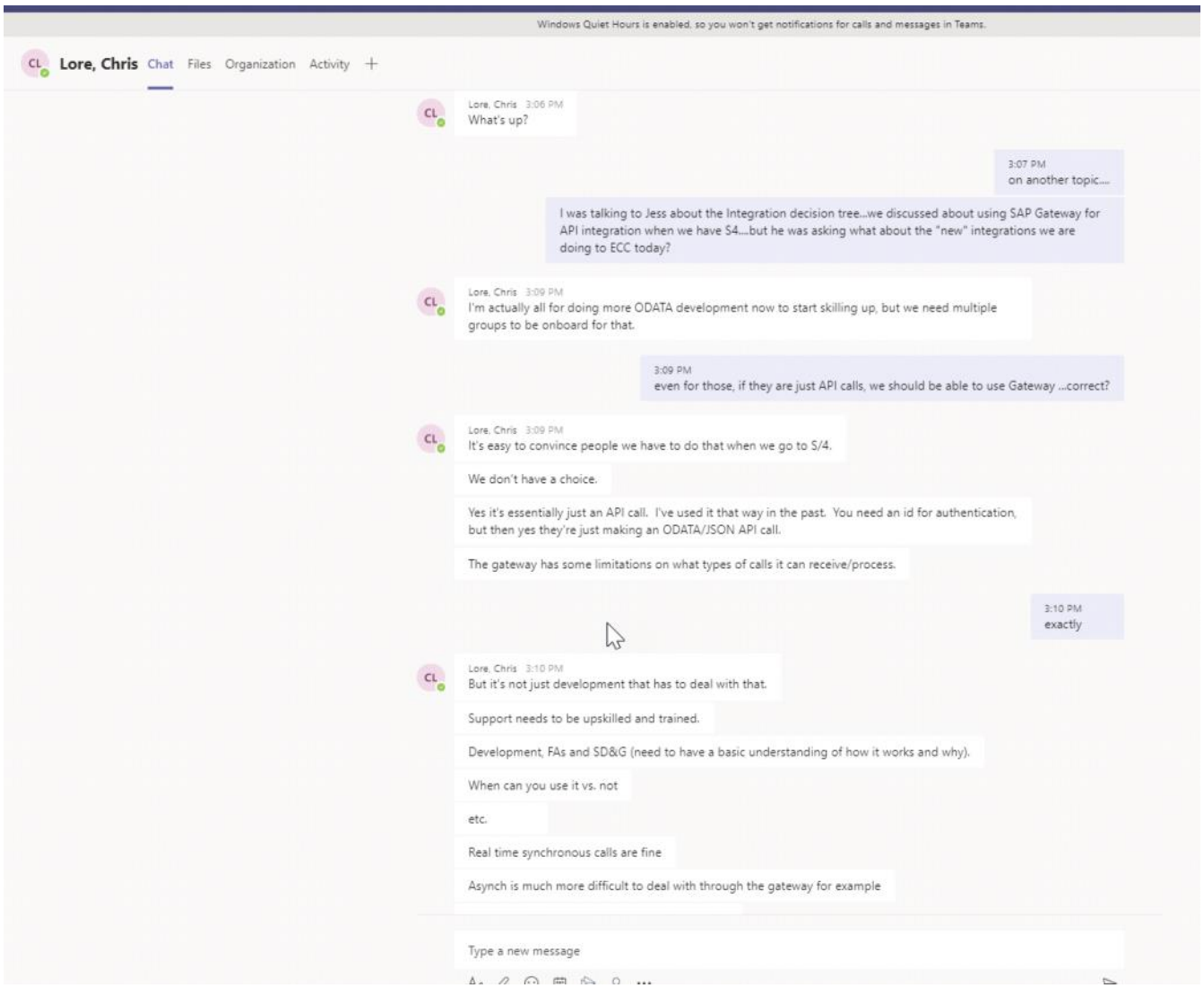
Future State

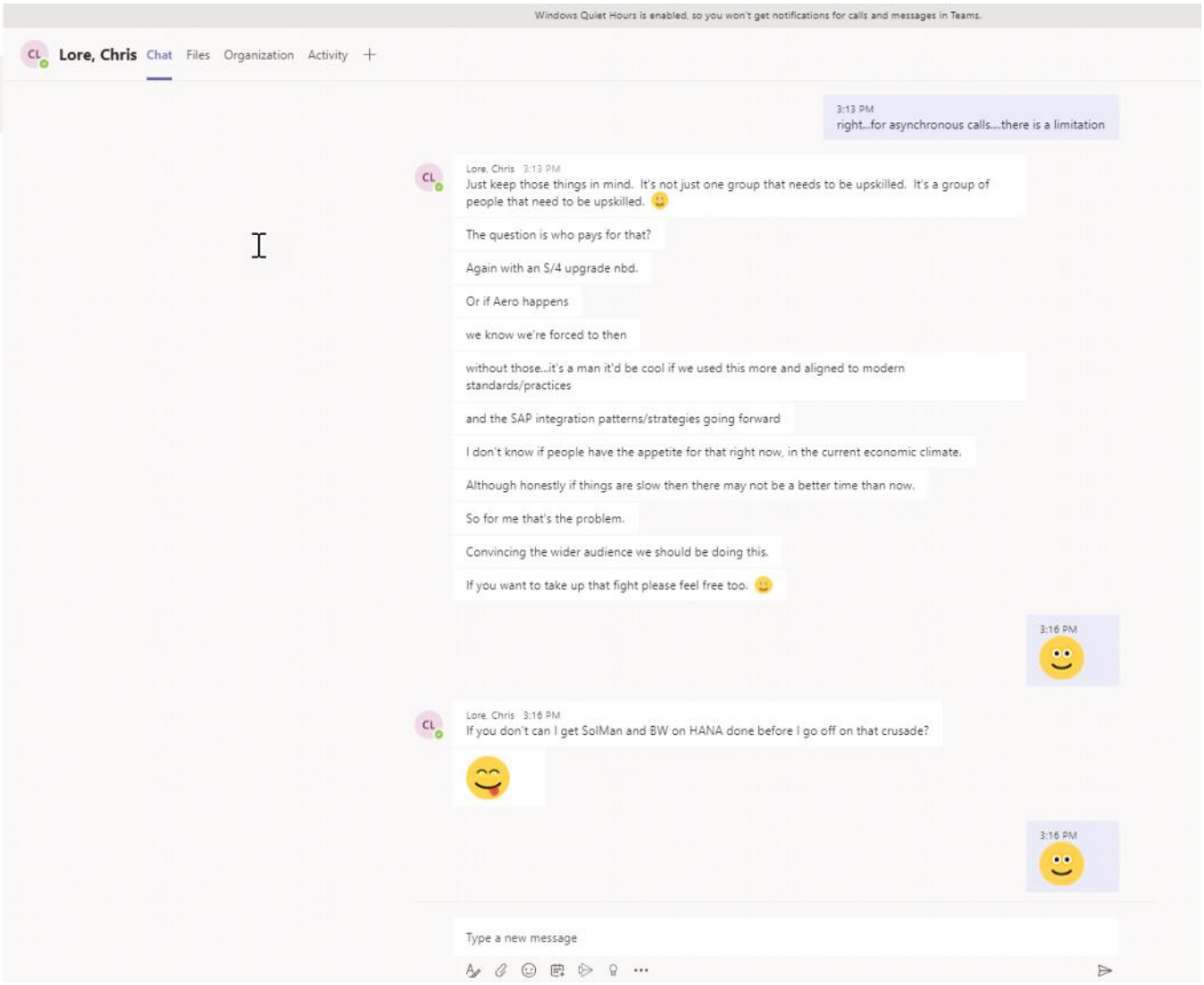
This allows us to more closely align to the IPA team's future strategy around API development/management and sets our group up to deliver integration at the speed of business.

2

Chris chat Odata

Monday, July 20, 2020 3:49 PM




Windows Quiet Hours is enabled, so you won't get notifications for calls and messages in Teams.
Lore, Chris
Chat
Files
Organization
Activity
3:13 PM
right...for asynchronous calls....there is a limitation
Lore, Chris 3:13 PM
Just keep those things in mind. It's not just one group that needs to be upskilled. It's a group of people that need to be upskilled.
The question is who pays for that?
Again with an S/4 upgrade nbd.
Or if Aero happens
we know we're forced to then
without those...it's a man it'd be cool if we used this more and aligned to modern standards/practices
and the SAP integration patterns/strategies going forward
I don't know if people have the appetite for that right now, in the current economic climate.
Although honestly if things are slow then there may not be a better time than now.
So for me that's the problem.
Convincing the wider audience we should be doing this.
If you want to take up that fight please feel free too.
3:16 PM
Lore, Chris 3:16 PM
If you don't can I get SolMan and BW on HANA done before I go off on that crusade?
3:16 PM
Type a new message

SAP Gateway or Process Integration – which is the Right Tool for the Job?

Wednesday, August 26, 2020 12:37 PM

https://archive.sap.com/kmuuid2/10ce5cd7-7c55-2f10-aea0-b775b478258c/Gateway%20or%20Process%20Integration%20%E2%80%93%20which%20is%20the%20Right%20Tool%20for%20the%20Job_.pdf

Gateway or Process Integration – which is the Right Tool for the Job?

Applies to:

SAP NetWeaver Process Orchestration 7.3x, SAP NetWeaver Process Integration 7.1x, PI 7.3x, SAP NetWeaver Gateway 2.0
For more information, visit the SAP Integration & Certification Center homepage.

Summary

Both SAP NetWeaver Gateway and SAP NetWeaver Process Integration can provision RESTful services to SAP backend applications. What does this mean? Should a company consider one or both? How does a company determine which is the most suitable? How does a company evaluate the products?

In order to answer these questions, we should at least understand what each product does, and the differences and purposes of each product.

This article has been written to provide some of that information to help a company in making the business decision during the evaluation process.

Author: William Li

Company: SAP Labs LLC

Created on: March 12, 2012

Author Bio

William Li is a member of the SAP NetWeaver Orchestration and Integration Team in SAP NetWeaver Solution Management. He has been with SAP since 1998 - originally as a SAP America consultant, as a developer at SAPLabs and then as a SAP NetWearver RIG member focused on Process Integration. He joined SAP NetWeaver Solution Management in April of 2010.

Table of Contents

Abstract

The objective of this document is to outline the different solutions provided by SAP that provision SAP backend applications as services for easy consumption by client applications or for integrating between SAP and non-SAP systems, focusing on the strengths of each solution and the recommendations for their usage.

A summarization of the findings is available at the end of the document.

SAP Solutions

Through SAP's history, SAP has provided numerous methods for accessing SAP backend data by external consumer applications. With applications increasingly moving toward a web- or mobile-based environment, this paper will focus specifically on product solutions that enable easy consumption of SAP backend data by web and mobile applications. This paper will discuss the intended use cases so that SAP customers can determine which product will suit their environment best.

This section of the document concentrates on outlining the existing solutions and what use cases they support.

Currently, there are two main products that can provision SAP backend applications for consumption by web- or mobile-based application, SAP NetWeaver Gateway and SAP NetWeaver Process Integration.

SAP NetWeaver Gateway

SAP NetWeaver Gateway is a technology that provides a simple way to connect devices and applications to SAP software based on market standards (REST and OData). The framework enables development of people-centric solutions by exposing SAP business software data to new experiences such as social and collaboration environments, mobile and tablet devices and rich internet applications. It simplifies connectivity to SAP applications by allowing any programming language or model to be used without the need for SAP knowledge by leveraging REST services and OData/ATOM protocols.

In order to make the OData consumption process even easier, SAP delivers several versions of the Gateway Consumption Tool. This tool can be used in popular integrated development environments (IDE) including Eclipse, Visual Studio 2010 or XCode to generate OData proxy objects and provide other productivity help for software developers. In addition to further ease development, the Gateway Consumption Tool can generate a basic application that wraps the generated proxy object.

The SAP NetWeaver Gateway interface has been designed to conform completely to the six architectural constraints that define a RESTful software system (for details, reference http://en.wikipedia.org/wiki/Representational_state_transfer#Constraints). This makes the business data content of your SAP systems accessible as RESTful resources through a uniform, stateless interface to any software system that can communicate using HTTP(S) and the OData protocol.

A key capability of SAP NetWeaver Gateway is the REST enablement of SAP business data and functionality, thereby making it easy for non-SAP applications to consume. These could be:

- Any external business application. E.G. Microsoft Office applications via a .Net (or even VBA) interface
- Desktop machines using Web-based applications running PHP, Java, Ruby or any other popular web-development language.
- Native applications on mobile devices e.g., iPad/iPhone, Android device, or Blackberry.
- Embedded devices such as manufacturing robots or route planning software in Satellite Navigation systems.
- Any other business scenario involving a programmable device that can speak HTTP(S).

In providing this capability, it hides the complexities that exist within your system landscape by making use of:

Protocol Adaptation

OData becomes the only communication protocol needed for you to supply or consume SAP Business Data to or from your SAP systems.

Service Adaptation

Different types and versions of SAP systems now appear as a single, integrated repository of business information.

Does SAP NetWeaver Gateway Replace any Existing SAP Software? In a word—No. SAP NetWeaver Gateway is not designed to be a channel for transactional applications, nor is it designed to replace existing middleware like SAP NetWeaver PI. In addition, applications built on SAP NetWeaver Gateway are not designed to target integration scenarios.

Instead, SAP NetWeaver Gateway provides for mass consumption of SAP business data and functionality in your existing SAP Business Suite systems. The target audience for SAP NetWeaver Gateway applications is a group known as Occasional Platform Users (OPU). These are people who need ad hoc access to SAP data and functionality in an easy-to-consume manner. They may be employees in a company or consumers of its products.

To enable you to define and provide exactly the right OData services for mobile and web applications without coding, the SAP NetWeaver Gateway ABAP-Add-On provides Designtime Tools, which can generate OData services from existing business objects inside the SAP system (such as RFCs, BAPIs or ABAP Dynpro screens). Alternatively you may develop more advanced services using the ***OData Channel*** *programming model*. This is a set of ABAP classes and interfaces that can be used to develop specific OData Services within your backend SAP system. For server-notification of change events to the client, Gateway provides a server-API using the Push Channel to update the client, e.g. Gateway can send an asynchronous event message to the client application of shipping information when an order is fulfilled.

For more information about SAP NetWeaver Gateway please see: http://www.sdn.sap.com/irj/sdn/gateway

Process Integration capabilities of SAP NetWeaver Process Orchestration

Integration across heterogeneous IT landscapes is critical for all companies. The trend to heterogeneity is further driven by mergers and acquisitions as well as software-as-a-service or on-demand offerings. Process Integration is SAP's Enterprise Service Bus (ESB) solution for all kinds of integration needs including SAP and non-SAP systems either through message exchange or via web service calls. Whether application-to-application (A2A) or business-to-business (B2B) integration is needed, Process Integration helps customers connect systems in a secure, standards-based, reliable, and scalable way. Process Integration especially provides best-in-class connectivity to SAP systems and delivers SOA foundation capabilities to SAP customers. Using Process Integration, customers can leverage enterprise services delivered by SAP and also benefit from existing investments in third-party and legacy applications by integrating and service-enabling these applications.

Process Integration provides a set of technical and partner adapters for application and B2B integration. The following is a sample set of adapters provided by SAP and partners: File/FTP, JMS, JDBC, SOAP, HTTP, RFC, IDoc, AS2, CICS, IMS, PeopleSoft, Oracle Applications, etc. For a full set of adapters, please examine the following links:

Partner Adapters:
http://www.sap.com/partners/directories/ProductSearchResults.epx?context=21B87D61C0F646A22B2A6DB254A010CA8C9C141B7529F02972463D54EC8217D707ADFB1B61328B27A6200891D1824987C4A2286C415FA5583A680E633FB258D6F702338D4AE86843C5ADEB30E7160581899BB4603C9793EC%7c6F12B862C581661DDC24764F9C7927F5419DC328C62BA22B835E8506997D10B55A354B13B4227E92D6D369658167CE044A394E1123E665900CBD8ACCA30E1EC9D7F14ED7E2299D541D7BFBB8130BD4A3802CB838F8F43980E803085B912820024E1B92198E403D6183CDAC5A5C969468

SAP Technical Adapters:
http://help.sap.com/saphelp_nw73ehp1/helpdata/en/48/ce24473a8e5430e10000000a42189b/frameset.htm

SAP NetWeaver PI includes:

- Enterprise Service Repository (ES Repository) to build, model, and manage (Web-) services, e.g. publish to the Service Registry.
- High-volume enterprise services bus that supports distributed integration
- Principal propagation for trusted communication helping ensure compliance
- Application-to-application (A2A) and business-to-business (B2B) integration capabilities

- Predefined integration scenarios to jump-start integration projects

Process Integration provides access to an extensive set of mapping and transformation programs such as XSLT and Java mappings. Process Integration also has its own easy-to-use graphical mapping/transformation tool with extensive function support for flexibility and extensibility. One of Process Integration's strengths is the ease of integration to SAP backend systems. Process Integration provides a multitude of connectivity options using adapters for access to BAPIs, RFC-enabled function modules, and IDocs or by using ABAP/Java proxies, which can be automatically generated based on the service information available in the ESR. With configurations, those accesses can be exposed as HTTP or SOAP web services.

Process Integration is intended as an enterprise integration broker. It enables multiple consumption and integration patterns, whether they be system-to-system interaction, business to business interaction, or simple consumption of backend systems via various interaction channels. This is accomplished via Process Integration's strength in integrating backend systems, regardless of if they are SAP, non-SAP, or external customer and business partners.

The interactions between the consumer and provider applications can either be synchronous or asynchronous. With asynchronous communication, Process Integration guarantees delivery of the information where the consumer applications will not need to resend the information in case of system or network failures.

For consumer application development, SAP NetWeaver Developer Studio (SAP NWDS) provides a plug-in to access Process Integration's ES Repository and is able to generate proxies from the service interfaces that have been designed and stored in the repository. In addition, without requiring ES Repository, any SOAP web services can be used by the NWDS plug-in to generate the proxies needed to ease and jump-start the consumer application development.

Finally, Process Integration supports the orchestration of message exchanges and service calls via a BPMN-based process engine. (For more information on BPMN, please reference http://en.wikipedia.org/wiki/BPMN.) It allows the stateful handling of integration-centric processes, based on standard integration patterns to support more sophisticated integration scenarios such as collecting and aggregating messages or bringing messages in the right order.

Comparative Summary

This section is intended to provide a summarized perspective on the topics discussed in this document.

	SAP NetWeaver Gateway	SAP NetWeaver Process Orchestration
Platform	ABAP	ABAP+Java or Java only
Access to SAP ERP		
BAPI/RFC	Y	Y
ABAP Transaction	Y	N
IDoc	N	Y
ABAP Proxy	Y	Y
Access to non-SAP	N	Y [1]
Providing Services	Y	Y

Consuming Services	N[5]	Y
REST	Y	Y [2]
OData	Y	N[2]
JSON	Y[6]	Y[2]
SOAP	N	Y
Synchronous Service	Y	Y
Asynchronous Service	N [3]	Y
Eclipse Plug-In	Y [4]	Y
Visual Studio 2010 Plug-In	Y [4]	N
XCode Plug-In	Y [4]	N
Stateful orchestration of message exchanges and service calls	N	Y

[1] Access to non-SAP via adapters: File/FTP, JDBC, JMS, SOAP, HTTP, WS, plus various other 3rd party adapters.

[2] Using NetWeaver certified PI REST adapter, which can be licensed from Advantco. The REST adapter supports JSON. OData support will be available in the future. MuleSoft is also planning on providing a REST adapter for PI in the near future.

[3] Only for notification in workflow or business events by using the Push Channel, which provides an asynchronous event message to be sent to the client from Gateway.

[4] The plug-ins can provide application specifically targeted for mobile devices, e.g. Blackberry and iPhone. This eases the developer's tasks significantly.

[5] Technically possible, but there is no use-case.

[6] Will be available in SP4 May 2012.

Product Decision Factors

Gateway is recommended for user-centric applications. Use Gateway when there is a need for synchronous access to business objects of an SAP Business Suite system (like BAPI/RFCs or transactions) via light-weight REST services. Access using mobile devices is especially easier due to the available developer tool plug-ins which can target those specific devices.

Use Process Integration when general purpose integration is needed, involving disparate systems and applications requiring asynchronous and synchronous services involving SAP and non-SAP applications and systems. Process Integration is especially useful for service enabling of SAP and non-SAP applications in establishing standards based on SOA. Finally if you need stateful handling of message and/or service call orchestrations, SAP NetWeaver Process Orchestration is the right choice.

For new customers without either SAP NetWeaver Gateway or SAP NetWeaver Process Orchestration, customers should evaluate their selections based on the following considerations:

1. Application development: Gateway can provide simple, flat interfaces by using a simple mapping tool and "wizard-like" add-on in ABAP to generate the services. Gateway also provides plug-ins in Eclipse and Visual Studio to jumpstart the client application development. In addition, Gateway can also access ABAP transactions (i.e. screen-scraping) as services, which Process Integration does not support. Development in Process Integration of the same interface requires a higher learning curve due to the number of components, e.g. ESR, ID, SLD. Since Process Integration requires Java knowledge and Gateway is based on ABAP, those customers without Java expertise will be able to benefit from Gateway quicker without additional training.
2. Systems support: When developing REST services, Gateway uses the ABAP server, which is already supported in the customer's environment. Supporting Gateway should fit into the existing SAP support infrastructure easily with minimum interruption. Since Process Integration requires Java server, and if such expertise is not present with the customer, additional training will be required.
3. Requirement to access non-SAP applications: Process Integration provides access to both SAP and non-SAP applications and systems, whereas Gateway provides access to only SAP applications. By using the SOAP or REST adapters in Process Integration, both SAP and non-SAP applications can be consumed by client applications.
4. Requirement for A2A or B2B integrations: Gateway does not support A2A or B2B integrations, where consumption and provisioning of both synchronous and asynchronous services are required. Process Integration provides both synchronous and asynchronous interfaces to client applications. Asynchronous interfaces are primarily used in A2A and B2B integrations. Process Integration can consume and provision services, whereas Gateway can only provision services. .
5. Requirement for stateful message/service call handling: SAP NetWeaver Process Orchestration supports the stateful coordination of message exchanges and/or service calls via a standards-based BPMN-engine. A dedicated graphical modeler as part of the SAP NetWeaver Developer Studio allows the efficient development of sophisticated integration scenarios. SAP NetWeaver Gateway doesn't provide a comparable feature.

In a brief context, Gateway provides REST services based on HTTP/OData to SAP backend applications for simple consumption by light weight applications and devices. Process Integration provides A2A and B2B integrations between applications and systems using adapters.

During the evaluation, the customer should consider whether there is or will be a need for capabilities provided by an enterprise service bus (e.g. A2A, B2B integration) such as SAP NetWeaver Process Orchestration. If not, then SAP NetWeaver Gateway is likely the preferred solution. If so, then a more detailed evaluation should be conducted to determine whether the REST or SOAP adapter in Process Integration can meet the requirement to access SAP backend applications.

FAQ

Q: Who is the target audience for SAP NetWeaver Gateway?

A: SAP customers who want to provide user access to SAP backend applications using mobile devices or web applications using REST web services. The applications are synchronous and involving user-interaction.

Q: Who is the target audience for SAP NetWeaver Process Orchestration?

A: SAP and non-SAP customers who want to provide integrations of services/message exchanges between SAP and non-SAP systems, applications, and partners.

Q: If I have Process Integration, do I need SAP NetWeaver Gateway?

A: It depends, since both Gateway and Process Orchestration can provide REST services to SAP backend application. However, Gateway has to be considered if the SAP backend application is transaction-base, where screen-scraping must be used. With the availability of REST adapter(s) from SAP's partner(s), a detailed evaluation of requirements and business case for each should be performed.

Q: If I have SAP NetWeaver Gateway, do I need SAP NetWeaver Process Orchestration?

A: Yes, if there is a need for heterogeneous integrations between SAP and non-SAP systems involving A2A and B2B, for both synchronous and asynchronous scenarios.

Related Content

For more information, visit the SAP Integration & Certification Center homepage.

Copyright

[EXTERNAL] Sap gateway vs pi

Wednesday, August 26, 2020 1:13 PM

Subject	**[EXTERNAL] Sap gateway vs pi**
From	Hari Vedula
To	Vedula, Hari
Sent	Wednesday, August 26, 2020 6:58 AM

https://www.mindsetconsulting.com/when-to-use-sap-netweaver-gateway-vs-pi-2/

RE: SAP Integration Council

Thursday, August 27, 2020 10:17 AM

Subject	**RE: SAP Integration Council**
From	Lore, Chris
To	Vedula, Hari
Sent	Thursday, August 27, 2020 8:49 AM
Attachments	 IGC - Enterpris...

Here you go.

Chris Lore
SAP Enterprise Architect, SAP Solution Design and Governance – PROCOE
Eaton Corporation
mobile: +1 678-216-6164
chrislore@eaton.com
www.eaton.com

From: Vedula, Hari <NarahariVedula@Eaton.com>
Sent: Thursday, August 27, 2020 9:39 AM
To: Lore, Chris <ChrisLore@Eaton.com>
Subject: RE: SAP Integration Council

Chirs,

I cannot access the link. Could you download it and send it to me?

Hari Vedula
Sr Specialist – SAP Web Development, APPS CoE
Eaton
Mobile: +1 630 864 9921
harivedula@eaton.com
www.eaton.com

From: Lore, Chris <ChrisLore@Eaton.com>
Sent: Tuesday, August 25, 2020 4:10 PM
To: Vedula, Hari <NarahariVedula@Eaton.com>
Subject: FW: SAP Integration Council

Chris Lore
SAP Enterprise Architect, SAP Solution Design and Governance – PROCOE
Eaton Corporation

mobile: +1 678-216-6164
chrislore@eaton.com
www.eaton.com

From: Corrigan, Malcolm <MalcolmCorrigan@Eaton.com>
Sent: Tuesday, August 25, 2020 4:32 PM
To: Lore, Chris <ChrisLore@Eaton.com>
Subject: Fwd: SAP Integration Council

Get Outlook for iOS

From: Mayreddy, Maddy <MaddyMayreddy@Eaton.com>
Sent: Tuesday, August 25, 2020 4:14:22 PM
To: Corrigan, Malcolm <MalcolmCorrigan@Eaton.com>
Subject: RE: SAP Integration Council

Mal,

Here is the link to the presentation that has the integration technologies and patterns details:
https://eaton.sharepoint.com/sites/Team_IntegrationGovernanceCouncil/_layouts/15/Doc.aspx?sourcedoc=%7B3A17F272-C970-448A-8FD2-F1F5932B37A3%7D&file=IGC%20-%20Enterprise%20Integration%20Technology%20and%20Patterns.pptx&action=edit&mobileredirect=true&CT=1598386298556&OR=ItemsView

Slide#4 is where you will see questions to determine the right integration technology.

Please let me know if this helps.

Thanks,
Maddy

From: Corrigan, Malcolm <MalcolmCorrigan@Eaton.com>
Sent: Tuesday, August 25, 2020 1:28 PM
To: Mayreddy, Maddy <MaddyMayreddy@Eaton.com>
Subject: RE: SAP Integration Council

Excellent! looking forward to seeing it.

Regards
Malcolm Corrigan

Director, SAP Solution Design and Governance – PROCOE, Eaton

From: Mayreddy, Maddy <MaddyMayreddy@Eaton.com>
Sent: Tuesday, August 25, 2020 1:08 PM
To: Corrigan, Malcolm <MalcolmCorrigan@Eaton.com>
Subject: RE: SAP Integration Council

Hi Mal,

I hope all is well at your end.

I realized there is one item on me in this list below. More than questionnaire it's a decision matrix.
I will share the slide relating to the topic today.

Thanks,
Maddy

-----Original Appointment-----
From: Corrigan, Malcolm <MalcolmCorrigan@Eaton.com>
Sent: Friday, April 24, 2020 12:19 PM
To: Corrigan, Malcolm; Svoboda, Jess R; Lore, Chris; Sanchez, Eduardo; Vedula, Hari; Torres Lara, Jesus; Jandhyala, Ramesh
Cc: Mayreddy, Maddy
Subject: SAP Integration Council
When: Tuesday, August 25, 2020 4:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Agenda

- Review SAP projects with integration to review potential data volumes
- Review project with integration design
- Roadmap future integration best practices

Team Site/Meeting Notes
https://teams.microsoft.com/l/channel/19%3a88d46899b70e4c16aeec2b7b9e76b0b0%40thread.skype/General?groupId=b5122c2c-19f3-483d-8b27-090d71cac83b&tenantId=d6525c95-b906-431a-b926-e9b51ba43cc4

Join Microsoft Teams Meeting

+1 216-273-0465 United States, Cleveland (Toll)
Conference ID: 429 062 938#
Local numbers | Reset PIN | Learn more about Teams | Meeting options

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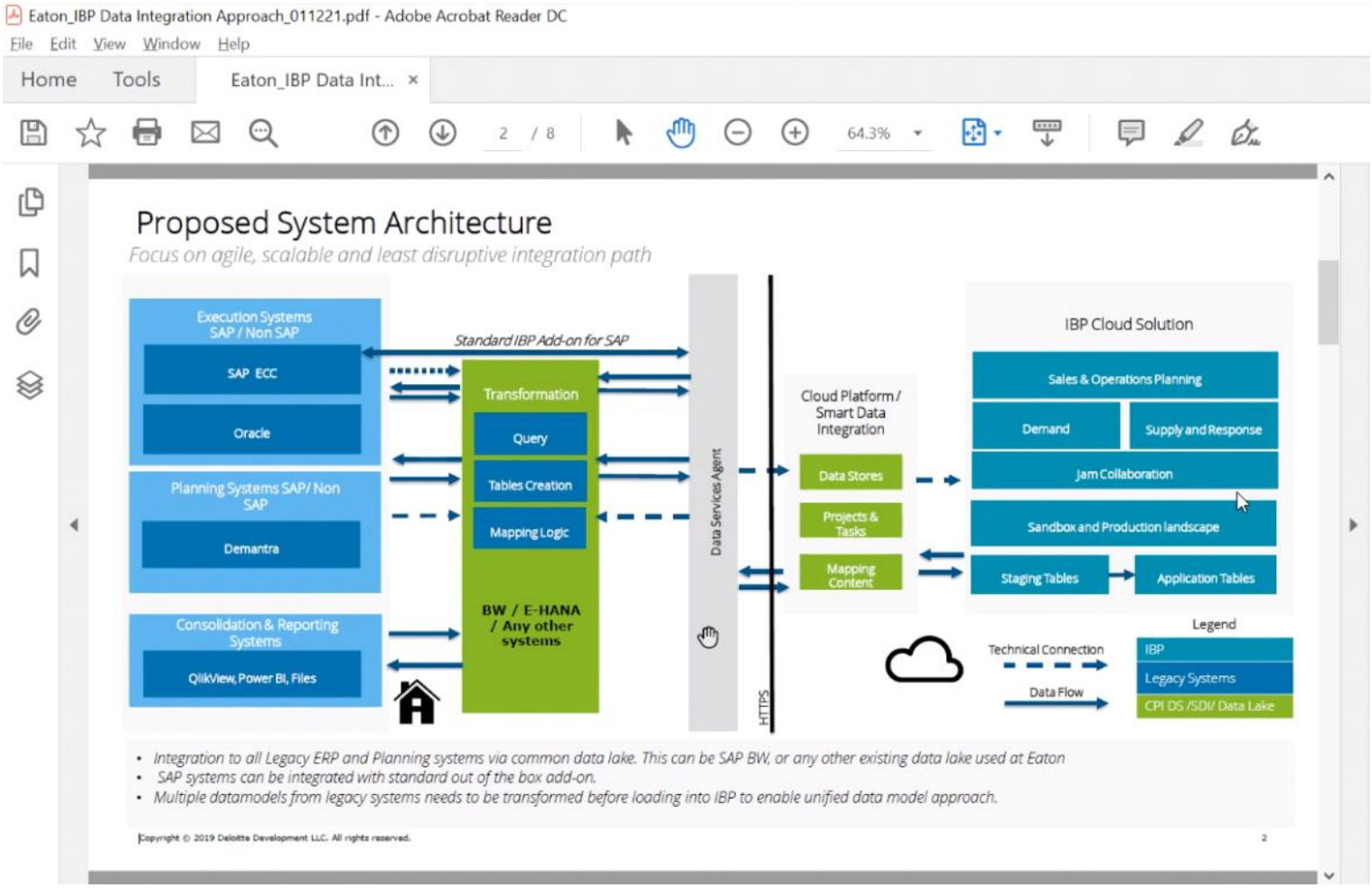
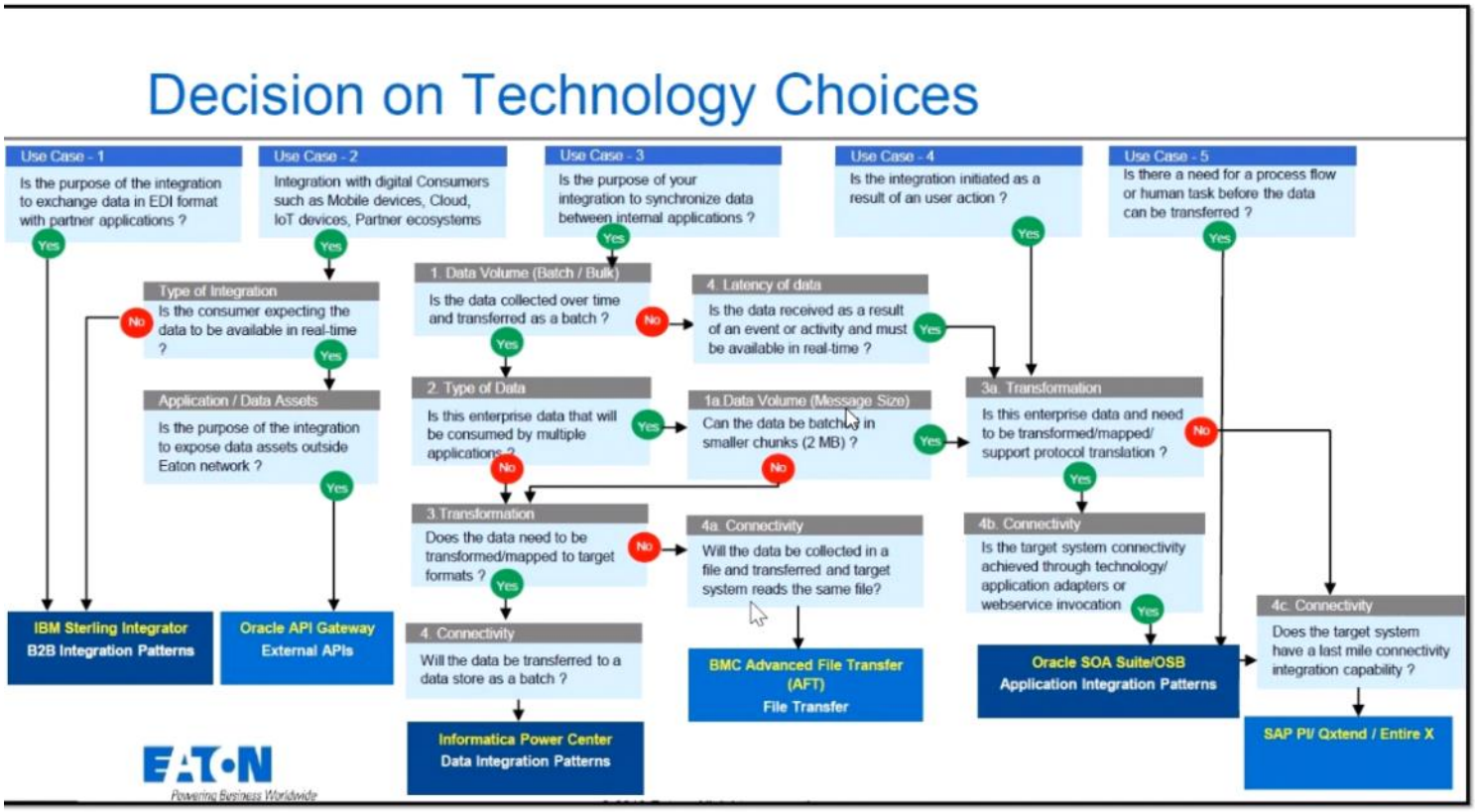
SAP CPI-DS

Wednesday, January 13, 2021 5:19 PM




Decision on Technology Choices
Use Case - 1
Is the purpose of the integration to exchange data in EDI format with partner applications ?
Yes
IBM Sterling Integrator
B2B Integration Patterns
Use Case - 2
Integration with digital Consumers such as Mobile devices, Cloud, IoT devices, Partner ecosystems
Yes
Type of Integration
Is the consumer expecting the data to be available in real-time ?
No
Yes
Application / Data Assets
Is the purpose of the integration to expose data assets outside Eaton network ?
Yes
Oracle API Gateway
External APIs
Use Case - 3
Is the purpose of your integration to synchronize data between internal applications ?
Yes
1. Data Volume (Batch / Bulk)
Is the data collected over time and transferred as a batch ?
Yes
2. Type of Data
Is this enterprise data that will be consumed by multiple applications ?
Yes
No
3.Transformation
Does the data need to be transformed/mapped to target formats ?
No
Yes
4. Connectivity
Will the data be transferred to a data store as a batch ?
Informatica Power Center
Data Integration Patterns
No
4. Latency of data
Is the data received as a result of an event or activity and must be available in real-time ?
Yes
1a.Data Volume (Message Size)
Can the data be batched in smaller chunks (2 MB) ?
Yes
No
4a. Connectivity
Will the data be collected in a file and transferred and target system reads the same file?
BMC Advanced File Transfer (AFT)
File Transfer
Use Case - 4
Is the integration initiated as a result of an user action ?
Yes
3a. Transformation
Is this enterprise data and need to be transformed/mapped/ support protocol translation ?
No
Yes
4b. Connectivity
Is the target system connectivity achieved through technology/ application adapters or webservice invocation
Yes
Oracle SOA Suite/OSB
Application Integration Patterns
Use Case - 5
Is there a need for a process flow or human task before the data can be transferred ?
Yes
4c. Connectivity
Does the target system have a last mile connectivity integration capability ?
SAP PI/ Qxtend / Entire X
EATON
Powering Business Worldwide

When to use SAP Netweaver Gateway vs. PI | Mindset Consulting

Friday, February 12, 2021 7:21 AM

Clipped from: https://www.mindsetconsulting.com/when-to-use-sap-netweaver-gateway-vs-pi-2/

What does integration mean to your SAP implementation? Integration seems like it should be a very simple problem to solve with SAP. Connect two systems ...

What does integration mean to your SAP implementation?

Integration seems like it should be a very simple problem to solve with SAP. Connect two systems together, either directly or through SAP PI. But what about mobile users or consumers of SAP data that need light-weight integration? I will explain how people often overstate the reasonable use cases of SAP PI. Finally I will show how SAP Netweaver Gateway may now be a legitimate answer to use cases where PI isn't a good fit.

From SAP's web site, this is how SAP PI is introduced:

Over three thousand organizations are using the SAP NetWeaver Process Integration (SAP NetWeaver PI) offering as their enterprise-class, service-oriented architecture (SOA) middleware to perform application-to-application (A2A) and business-to-business (B2B) integration, and to accelerate composite application development.

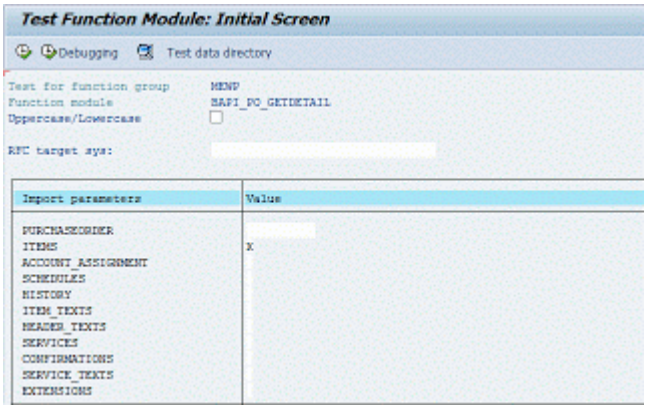
http://www.sap.com/platform/netweaver/components/pi/index.epx

If you read that carefully, the scenario described above is not very broad. What about mobile-to-SAP? What about Microsoft SharePoint connections to SAP?

PI is best used with asynchronous communication which is described in the Best-Built Application Guide: http://www.sdn.sap.com/irj/sdn/bestbuiltapps?rid=/library/uuid/d0619693-ce8f-2c10-07b5-fc222ad36370.

One of the most interesting new products of SAP is Netweaver Gateway, and in particular the 2.0 release.
http://www.sap.com/platform/netweaver/components/gateway/index.epx

Gateway allows you to expose your SAP systems with REST HTTP service calls instead of cryptic BAPIs, or even highly complex SOAP services (that are better suited for PI). REST is a really simple and fast web service interface that is extremely easy to integrate. If you aren't familiar with BAPI's, they can be very powerful and critically useful. If you are an ABAP programmer they may even be easy to use. However, to a 3rd party, or anyone integrating with SAP, these are downright cryptic:



SAP Netweaver Gateway is an ABAP Add-On for Netweaver 702. It generates these simple REST services (create, read, update, delete, and query) based on the back-end business objects. Once these services are exposed, you can easily consume them from consumers like mobile-devices.

There are a few challenges I would like to note. This is a relatively new product, and very few of these business objects come out of the box. A good knowledge of the business objects and ABAP is really important to create these. Also the basis and technical setup is not arbitrary. Those points aside, I was able to create a RESTful set of services based on Invoices in ERP in just a few hours. As this product matures, and more objects come out of the box, it will be exciting to see the innovative ways that SAP data can be used throughout the enterprise.

What Are B2B and A2A Integration? | US Daily Review

Friday, February 12, 2021 8:18 AM

Clipped from: https://usdailyreview.com/what-are-b2b-and-a2a-integration/

Business-to-Business and Application-to-Application Integration are not new concepts. Many enterprises from all around the world have been using them extensively, lately. If you wonder what is B2B integration, you should know that such projects have been up and running since the late '60s. Simply put, B2B integration involves the integration, automation and optimisation of several key business processes that go beyond the physical premises of a company or organization. Application-to-Application Integration is based on the emergence of certain technological advancements and developments, more specifically software products like software as a service (SaaS) and cloud computing. While the two are very similar, they are fundamentally different in certain areas. But for more information on each type of integration, keep reading below.

B2B Integration – What Is It?

B2B integration is a process that allows businesses to electronically exchange information, data and important documents in the context of interlinked systems. The exchange of data and information can take place between businesses, their suppliers, various key-institutions with which they should remain in contact, governmental bodies, customers and other internal systems.

All the data used in B2B integration comes from a source application. There are multiple types of source applications out there, from enterprise resource planning (ERP) applications, accounting packages or even state-of-the-art CRM systems.

In case the source application is an ERP application, the data is typically mapped, identified or translated to a standard that is specific to a certain

industry (the one in which the enterprise using it activates) and contains virtually any sort of information that is held in the ERP application, from purchase orders, sales data, invoices and sales forecasts, without being limited to this.

When inquired, the files containing different types of information are sent to the recipient as a message or a standard protocol. These usually come protected by different security protocols and have an increased performance and reliability. These are the same for the industry as a whole, but they are also dictated by a trading partner of each company.

B2B integration has become over the years a standard across all industries, mainly because B2B integration makes it easier for companies to keep in touch and manage their business relationships and communities, exchange information in a facile manner and trade in a safe and secure way. Plus, the entire process is automated and removes the necessity to manually process the documents usually necessary in business processes.

In this context, companies can process order information faster and more accurately, in real time. Considering the fact that nowadays, thanks to B2B integration, businesses are able to process order information faster and better, they become more responsive to their customer's needs and requirements. In the end, this allows businesses to increase sales, customer retention rates and improve their customer relations capabilities.

Based on the same principle, companies in various industries can gain a better insight on their suppliers' shipment status, they become able to automate all warehousing and distribution needs and demands and beautifully optimise stock and inventory. Ultimately, B2B integration is only due to increase companies' working capabilities and lowering operational costs.

A2A Integration – What Is It?

Application-to-Application Integration software or simply put, application integration software is a product that allows customers to rapidly complete integrations that are specific to various applications and that don't involve any sort of coding. The process involves, however, some configuration.

Most frequently than not, reliable vendors will offer a wide array of pre-configured templates that make the entire process significantly easier. In this context, businesses have the opportunity to complete various projects of a high importance for their activity in a matter of days. Otherwise, these tasks associated with various projects would take months to complete. There are some key features you should consider when searching for a reliable A2A integration tool or software.

- ***Data interfaces*. Reliable A2A integration systems allow an easy connection between various types of users and IT staff. User-ready templates and interfaces allow businesses to create**

simple connections between apps of different kinds. Naturally, these connections are based on pre-configured connectors put at user's command by the IT staff. Simply put, these templates allow a simple and fast connection between applications, mainly with the web's help. What makes these data interfaces so great? Simply the fact that they allow self-service integration for businesses, decreasing the way in which they are dependant on their IT departments.

- ***Web Services and APIs***. User-ready A2A integration templates are also great because they offer comprehensive support for Web Services. This makes utilization easier and more approachable by all users.
- ***Data Mapping Features***. Templates that come ready for use allow usually come with a graphical tool that makes it easier for the user to configure data transformation, mapping, validation and cleaning. This boost any businesses' capability to complete otherwise complex processes without writing a single line of code. These types of systems allow users to apply transformation rules regardless of the formats of both targets and sources. State-of-the-art templates for A2A Integration feature a library of pre-created functions that can be reused in the future. Plus, the whole process can be easily verified on-the-go, to assure the necessary accuracy levels.
- ***Process Design Features***. When users need to create process flows, they can easily approach this tool and take advantage of the process design tool.

A2A integration tools come with numerous benefits and advantages for a wide range of businesses, but mainly their IT departments as these decrease the volume of work and effort put into integration and configuration.

- They boost the IT efficiency of a business because they increase a business' self-service capabilities. Besides, they allow the IT staff to offer business users higher self-care capabilities when it comes to integration and configuration. This way, IT teams and departments have all the necessary time to focus on the strategic side of their tasks.
- A2A integration tools and templates boost productivity. Because the entire process is automated, this reduces the manual steps and necessary time when it comes to processing data and information.
- This reduces errors that may occur in the process, thus leads to lower operational costs.
- The products developed by using A2A integration will reach the market faster. In this case, connections can be created in a matter of hours rather than weeks and integration projects will be achieved faster and more accurately.
- Being a product that doesn't require any coding, the process of creating new connections is immensely simplified.
- Developing new products becomes incredibly rapid and efficient as these systems allow unmatched flexibility. They can be used as needed and, on-premise or even in the cloud.
- These templates, if created by reliable developers, come with pre-built connectors (SaaS, CRM and ERP, database capabilities, messaging

systems and customer support features).

- Management and monitoring capabilities are also simplified in the case of web-based management systems. These systems include alerts and notifications, error alerts and connectivity concern warnings. Besides, they allow real-time monitoring capabilities.
- Similar systems are easy to maintain up and running, as opposed to traditional developer tools.

B2B and A2A integration tools and systems continue to be a valuable asset of businesses across all industries. Offering businesses improved operational capabilities, these tools and systems are due to increase their profitability, reliability and customer retention rates.

Emailing: Apigee SaaS - Target State Architecture.pdf

Friday, February 12, 2021 8:18 AM

Subject	**Emailing: Apigee SaaS - Target State Architecture.pdf**
From	Roy, Graham
To	Vedula, Hari
Sent	Friday, February 12, 2021 8:18 AM
Attachments	 Apigee SaaS - Tar...

Your message is ready to be sent with the following file or link attachments:

Apigee SaaS - Target State Architecture.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Nov 17th 2020

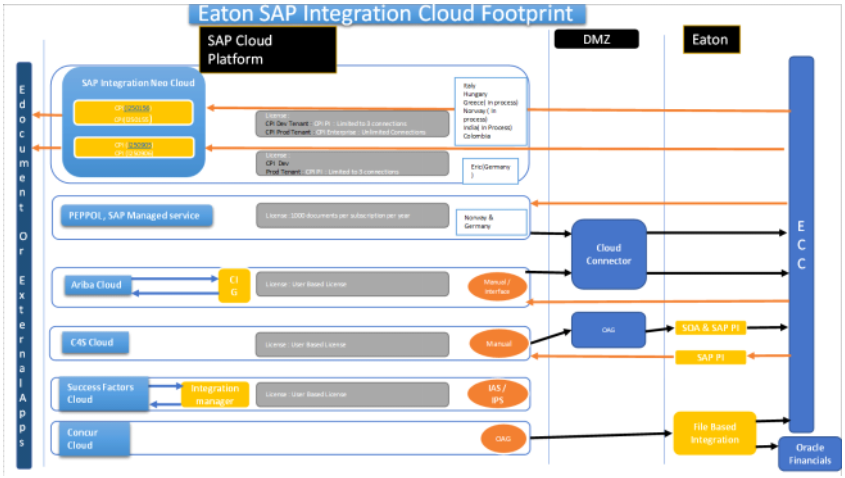
Tuesday, October 22, 2019 4:02 PM

Attendees

- [x] Mal
- [x] Chris Lore
- [x] Eduardo
- [x] Jess
- [ ] Jesus
- [x] Hari
- [ ] Ramesh
- [ ] Maddy

Agenda

- Purpose of SAP Integration Council
  - Review SAP projects with integration to review potential data volumes, size, concurrent users
  - Review projects and problem tickets with integration design
    - Review the SAP project roadmap - Chris
    - Review problem areas
  - Roadmap future integration best practices and integration retirement
    - Decision tree, standards and matrix for integration design (PI vs CPI, RFC vs Odata, etc.)
      - ☐ Chris to resend to the team to ensure everyone has a copy to review
      - ☐ Hari and Ramesh have changes to apply; Ramesh has reviewed with the integration team
    - Changes to projects to review
      - ☐ Capture all projects and list high level integration patterns
      - ☐ Break the list up into projects to review and which ones we need to focus
        - Project Focus should be on new integrations or major changes/rewrites
        - Break out new integration types/patterns and technologies that are used to possibly be presented to the IGC

Action	Assignees	Status
Create decision tree, standards and matrix for integration design . Reviewing and standardizing with IGC on templates as IGC has a decision tree already - reviewed during meeting. 2 updates "PI as solution for Idoc batch not bulk" and "Remove Direct SQL" https://teams.microsoft.com/l/file/2DEC8801-AB86-4F0C-A2EC-D8C23C0D625E?tenantId=d6525c95-b906-431a-b926-e9b51ba43cc4&fileType=pdf&objectUrl=https%3A%2F%2Featon.sharepoint.com%2Fsites%2FSAPIntegrationCouncil%2FShared%20Documents%2FGeneral%2FSAP%20Integration%20Decision%20TreeV5.pdf&baseUrl=https%3A%2F%2Featon.sharepoint.com%2Fsites%2FSAPIntegrationCouncil&serviceName=teams&threadId=19:88d46899b70e4c16aeec2b7b9e76b0b0@thread.skype&groupId=b5122c2c-19f3-483d-8b27-090d71cac83b 	**Chris** / Ramesh / Martin / Hari	Pending Integration review (Maddy and Ramesh)

		
Integration catalog to be built in solution manager. ADQS SAP support team is documenting integrations…need to ensure that we are aligned with them and whatever they created fits with our standards/templates and can be used with solman. SolMan - SMD now live. interfaces will begin being collected there; some already included Ariba, CPQ, Order Center, Raleigh PQ, etc.	Chris / Martin / Ramesh / Hari	Chris to kick off in 2020.
Hana POC • SAP - Integration to Hana DB. Demo order history / shipping status • Realtime data replication from ECC QAS to HANA • Data queries exposed for oData / webservice connection • Connect SAP Gateway or SAP PI to HANA for oData / webservice • DB performance – query response times of ECC vs HANA 52263 - SAP HANA Poc...		
Phase 2 Project Questionnaire Purpose is to understand the system impact, licensing impact and validate the integration design • Overall integration diagram (BPMN template, Chris to provide) ○ number of data points ○ Realtime vs batch ○ Types of integration (IDoc, RFC, proxy, etc.) ○ Proposed middlewares ○ System End points ○ Error handling • Data volumes per data point (need to align with solution manager) ○ Average payload size ○ number of calls ○ peak times ○ If realtime, max concurrent connections • User information ○ Who are the potential users calling SAP? (indirect liability)	All	Maddy to provide existing questionnaires used by the integration teams. Hari/Chris/Ramesh - Need to continue development of questionnaire, can use some of the integration pattern information provided by Maddy as a starting point; break out in a lower level of detail for projects due 10/1/2020
Integration Project Review • 51991 - Ariba - Self Guided Buying. ○ Cloud connector (in DMZ) and in prod ○ CIG…now in production. No issues		

○ Production connectivity establishednew expected pilot site go-live early Oct for BLine • 50986 - CPQ bulk data integration ○ needs to be reworked to use alternative to SOA/PI, potential to use ETL tool (SAP data services) ○ Potential to review for current and future mass data integrations (order center, bidman, etc.). To be built into the decision tree ○ Realtime services from D47 to DS POC is working. Now can perform the data services development. 7 interfaces that we could migrate, probably only move 3 (material and 2 pricing). Load testing? ○ Confirmed three interfaces; First two specs completed; DS team to begin development mid October due to bandwidth constraints would like go-live in Nov. or prior to Jan 2021 due to organization rollouts • 52356 - eInvoicing Norway - same golive date as Ariba ○ Added by Eduardo because the project requires the cloud connector (which is now available in development as part of project 51991) ○ PEPPOL now active in dev and prd. ○ Cloud connector for PRD should be complete this week with high availability (2 cloud connectors, so there is a failover). • 51946 - TPH Supplier Master - FUTURE • 50314 - Italy Oracle to Unity LES - FUTURE (order center, CPQ, oracle services) ○ Will need to include discussions on the broader ORA2SAP program • 50667 - Global Service Management - FUTURE • 52489 - Modify Shipping Interface in Un1ty SAP to Star Track new software - FUTURE • 52018 - Streamline/Automate the Supplier Add Process - 1 interface for supplier search • 52035 - BidMan. • 51892 - eInvoicing Germany - B2G - PP2020 • 52364 - Direct Connect Advantage ○ Someone was looking at the option of integrating with ECC or real-time ODS; way Vista pulls data for DC is real-time ODS; they've decided to use SAP and not real-time ODS; COCOE says short-term this is OK long term want this data going to HANA and coming from HANA side car; already putting in the back of their minds this is short term but if you scale this up it'll cause issues ○ Mike Lula(sp?) has a HANA PoC, asked for this scenario of replicating this order data into his HANA PoC, which is being led by the BICOE, real life scenario that we have requirements for and want to do in the long term; going to be a sandbox which is being built as of today; ongoing conversations with BICOE on what it would take to install additional applications in that environment, eventual integration into IS/DS • 52662 - Change of 3PL for Israel Distribution Center • 52509 - Direct Connect Onboarding and Pricing Syndication Discovery - Direct connect and other API management.		
Projects to be aware of that include integrations • 48909 - ANZ Oracle to SAP ○ Reusing existing Raleigh integrations with some modifications ○ EDI will be used, Mohit Jain working on these • 50992 - Talent Management System Implementation - SuccessFactors. ○ Only integration highlighted to date is for HRMS using SuccessFactors "integration center" which is for flat file integration.		

Monday, February 1, 2021 5:03 PM

Attendees

- [x] Mal
- [x] Chris Lore
- [x] Eduardo
- [x] Jess
- [x] Jesus
- [x] Hari
- [x] Ramesh

Agenda

- Purpose of SAP Integration Council
  - Review SAP projects with integration to review potential data volumes, size, concurrent users
  - Review projects and problem tickets with integration design
    - Review the SAP project roadmap - Chris
    - Review problem areas
  - Roadmap future integration best practices and integration retirement
    - Decision tree, standards and matrix for integration design (PI vs CPI, RFC vs Odata, etc.)
    - Changes to projects to review
      - Capture all projects and list high level integration patterns
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        - Project Focus should be on new integrations or major changes/rewrites
        - Break out new integration types/patterns and technologies that are used to possibly be presented to the IGC

Project	Integration Pattern	Status

Action	Assignee	Status

Thursday, February 4, 2021 9:19 AM

- Project Review (review integration approach)

Agenda

Friday, February 12, 2021 7:19 AM

1) Get list of projects
2) Review existing integrations?

Topics for 7/21

Tuesday, July 20, 2021 9:18 AM

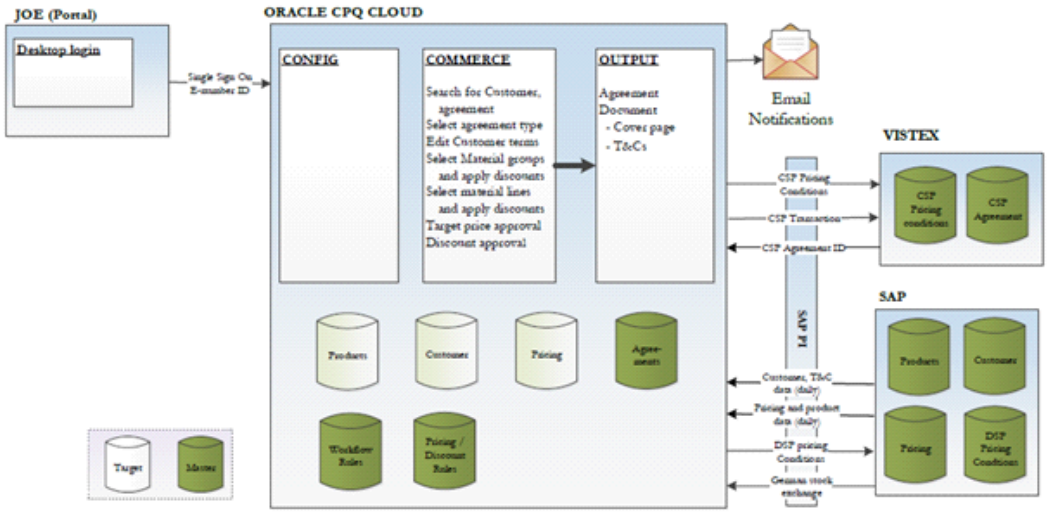
1) Interface Template sent by Chirs Lore
2) Cloudera integration update
3) SalesForce integration for TrippLite
4) APIGEE training

CPQ

Friday, March 6, 2020 10:10 AM

Product Configuration, Pricing, & Quoting (CPQ) Bulk data load

Term	Definition
CPQ	Oracle's CPQ (Configure – Price – Quote) tool that is used for configuration, pricing and generating an output proposal. For Eaton Germany, CPQ will be used for pricing of transactions within the tool that will then send pricing conditions to either Vistex or SAP and converted into an agreement for the Customer.



Interface requirements

1 – INBOUND to CPQ from SAP- Customers

2 – INBOUND to CPQ from SAP- Agents

3 – OUTBOUND from CPQ to SAP – Customer Agreements & Price Guidelines

4 – OUTBOUND from PDH to SAP – Finished Goods to SAP (In scope of PDH implementation)

5 – OUTBOUND from SAP to Price Calculation Engine – Customer Price & Guidelines

6 – OUTBOUND from My Eaton to CPQ – User Authentication

7 – OUTBOUND from PDH to CPQ – Product Catalog and Attributes

8 – OUTBOUND from PDH to CPQ – Pricing Product Hierarchy

9 – INBOUND from Pricing Service to CPQ – Real Time Price Call

10 – OUTBOUND from CPQ to Output Formats – Production of .pdf and Electronic Catalog

11 – INBOUND from SAP to CPQ – Sales History

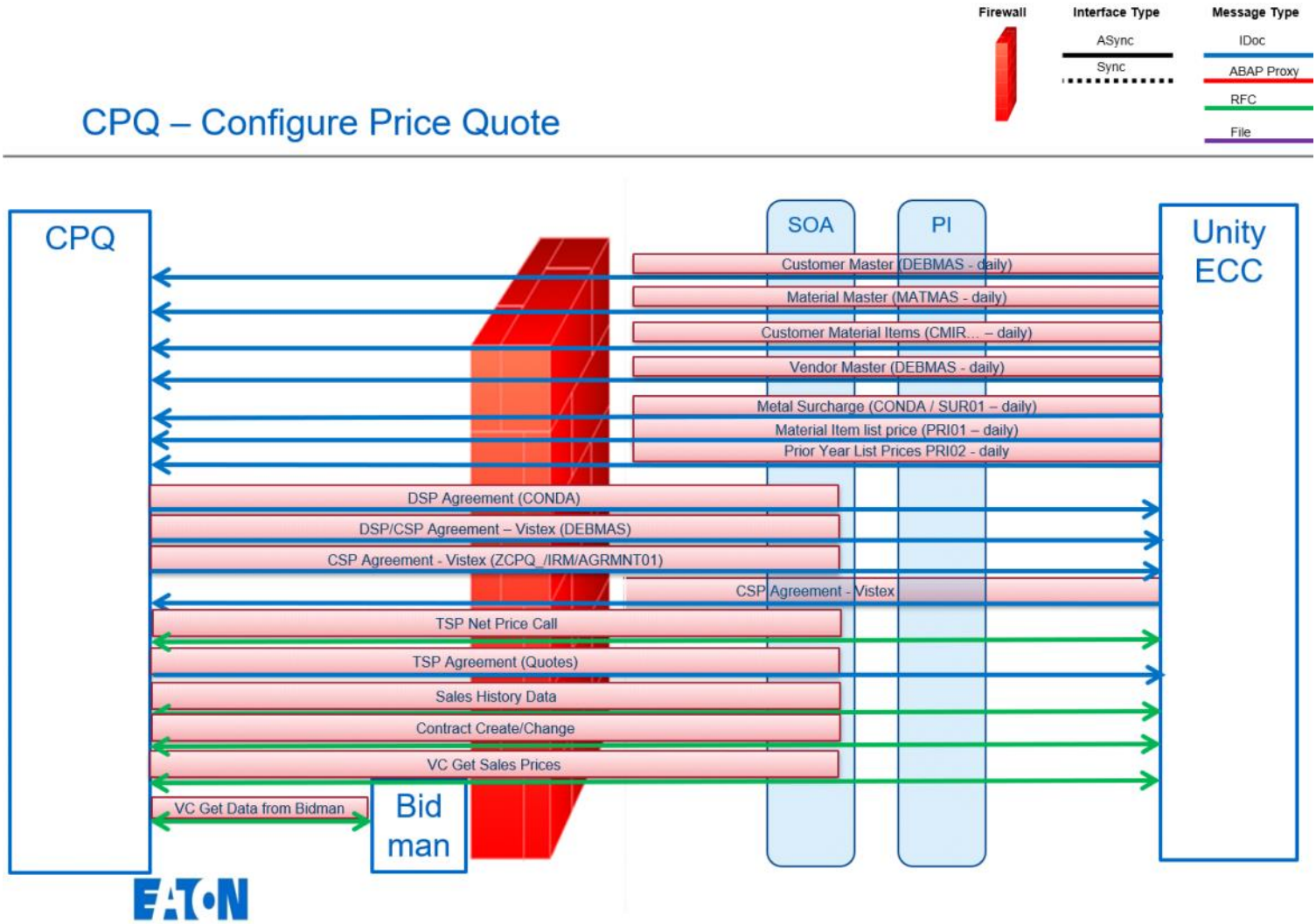
12 – OUTBOUND to VConfig and Return Punchout to CPQ – Punchout to VConfig and Return

13 – INBOUND from CPQ to SAP – Contract Create

14 – INBOUND from CPQ to SAP – Contract Change

From <https://eaton-my.sharepoint.com/personal/naraharivedula_eaton_com/Documents/6_SAP%20solution%20Design%20and%20Governance/Application%20Solution%20Design/PROCoE%20SAP%20QTC%20Solution%20Design%20CPQ.docx>

CPQ – Configure Price Quote



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SAP BODS Tutorial for Beginners: What is, Architecture

Details

Last Updated: 20 February 2020

Before we learn SAP BODS, let's understand

What is ETL?

ETL stands for Extract-Transform-Load, and it is a process of how data is loaded from the target system to the data warehouse. Data is extracted from a databa se and transformed to match according to the data warehouse schema. After that, it is loaded back to the data warehouse database in the form of dimension and fact tables.

What is SAP BODS?

SAP BODS is an ETL tool by SAP which can extract data from disparate systems, transform them into meaningful information and load them in various kinds of systems.

Full form of SAP BODS is **B**usiness **O**bjects **D**ata **S**ervices. It is designed to deliver an enterprise-class solution for data integration, data quality, data processing, data profiling, and text data.

In this beginner's tutorial, you will learn,

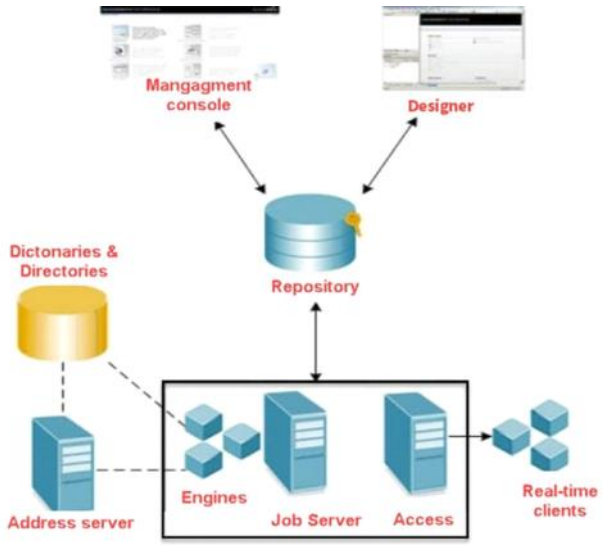
History of SAP BODS

Here, are famous landmarks in the history of SAP BODS:

- In 2002, BusinessObjects rebranded the two software products of Acta as BusinessObjects Data Quality tool and BusinessObjects Data Integration tool.
- Business Objects acquired by SAP in 2007 and both of these products were renamed as SAP BODQ and SAP BODI.
- In 2008, SAP merged both of these products in a single tool and renamed it as SAP BusinessObjects Data Services (BODS)

SAP BODS Architecture

Here, are some basic components of SAP BODS architecture:



SAP BODS Architecture Diagram

Repository:

A repository is a set of a table which holds user-created and predefined system object, source, target metadata, and transformation rules. It allows you to set up repositories on an open client/server platform. This helps you for sharing metadata with other enterprise tools. Each local r epository is connected with one or more job server which runs the job you have created.

Management Console

SAP BOD Data Services Management Console is the web-based application with the following features.

- Impact and Linear Analysis
- Administration
- Auto Documentation
- Operational Dashboard
- Data Validation
- Data Quality Data Reports.

Job server:

The Job Server component helps you to starts the data movement engine. It allows you to integrate data from multiple sources. It helps you to perform complex data transformations and manages transactions and extractions from ERP systems and other sources.

The Data integration Job server tool allows you to move in data in either batch or real-time mode. It delivers high data throughput and scalability. Moreover, while designing a job, you can also run it from the Designer which tells the Job Server to run the job. The Job Server also allows you to get the job from its associated bods repository.

Data Services Designer

The Data services Designer tool offers an easy-to-use graphical user interface that helps you define transformations, data mappings, and control logic.

This component helps you to build applications containing data and workflows. This component also allows you to manage metada ta stored in a repository.

Engines:
After SAP BusinessObjects Data Services job are executed, the Job Server starts the engine to perform data extraction, transf ormation, and movement. The engine uses parallel processing and in-memory data transformation to offer high data connectivity, quality, and scalability.

Access server:
Access server offers real time request-reply message that collects message request routes them to a real-time service and delivers a message reply in a specific duration. The Acess Server queries message and sends them to the next available real-time service across numerous computing resources.

Address Server:
The next component is the Address Server. It offers address validation and corrections. The Address Server must be started be fore processing data flows which contain the Global address Cleanse or Global Suggestion list transform with the EMEA engine enabled.

Important terms in SAP BODS
Datastore
A Datastore offers a connection to a data source like a database. It is a linking interface between the actual backend databa se and Data services. Data store also allows data services to import the description of the data source such as metadata.

CMC (Central Management Console)
CMC is a web-based administration tool for BOD. It is a helpful tool to perform some essential functions like repository registration, use r management, etc.

Data Integrator Web Administrator
Data Integrator web administrator is also known as DI web admin. It helps you to maintain repositories in Data services. This SAP BOD services included in DI web admin are Meta Repository, Central Repository, job services, and web services.

SAP Data Services Advantages
Here are a few pros of SAP BODS

- SAP Business Objects offers better profiling because of too many acquisitions of other companies.
- The learning curve of this ETL tool is quick, and it is easy to use.
- Offers an easy to UI interface to perform data manipulation tasks.
- The objects and functions of BODS allow you to perform manipulations and transformation of data very efficiently.
- There are system-provided objects and functions which you can easily drag and dropped.
- SAP BODS allows you to implement various data transformations using Data Integrator language
- SAP BODS helps you to perform complex data transformations for building customized functions.
- Data Integrator Designer allows you to store real time and batch jobs and new projects in the repository.

Disadvantages of SAP BODS
Here, are few draws backs of using SAP BODS.

- It is an expensive tool, so the initial purchase cost is very high.
- Business Objects many need a number of servers and extensive hardware.
- Business Objects is a developer platform which means organizations that want to use Business Objects will require the support of a highly skilled development team.

Summary
- SAP BODS is an ETL tool by SAP which can extract data from disparate systems, transform them into meaningful information and load them in various kinds of systems.
- Full form of SAO BODS is **B**usiness **O**bjects **D**ata **S**ervices.
- Repository, Management Console, Designer, Job Server, Access Server, are important components of SAP BODS Architecture
- SAP Business Objects offers better profiling because of too many acquisitions of other companies.
- BODS is an expensive tool, so the initial purchase cost is very high

SAP Business Blueprint: BBP Document & Template
What is Business Blueprint in SAP? The SAP Blueprint is a detailed description of a company's...

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SAP-HANA

SAP HANA Calculation View Tutorial
What is Calculation View? SAP HANA Calculation view is a powerful information view. SAP HANA...

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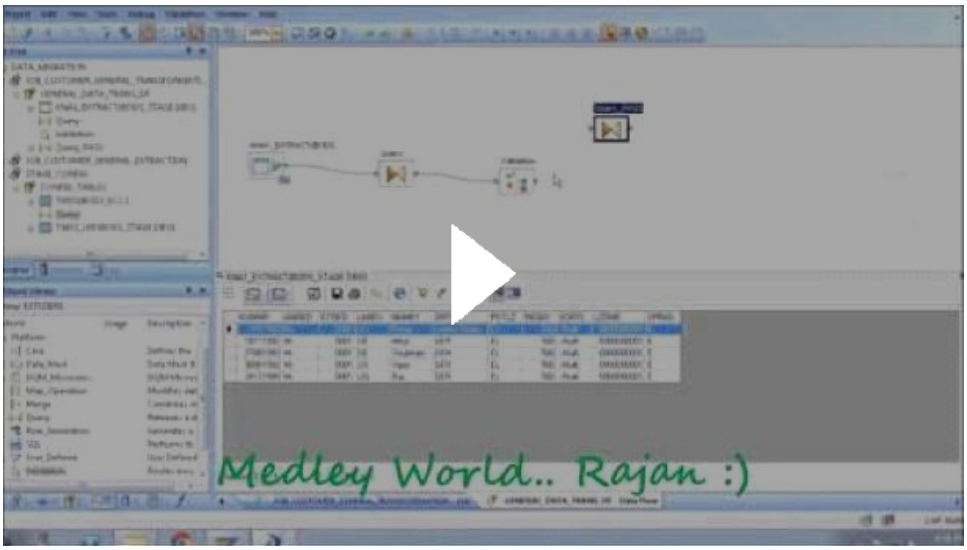
Friday, March 13, 2020 4:44 PM

https://www.tutorialspoint.com/sap_bods/sap_bods_etl_flow_ds_designer.htm

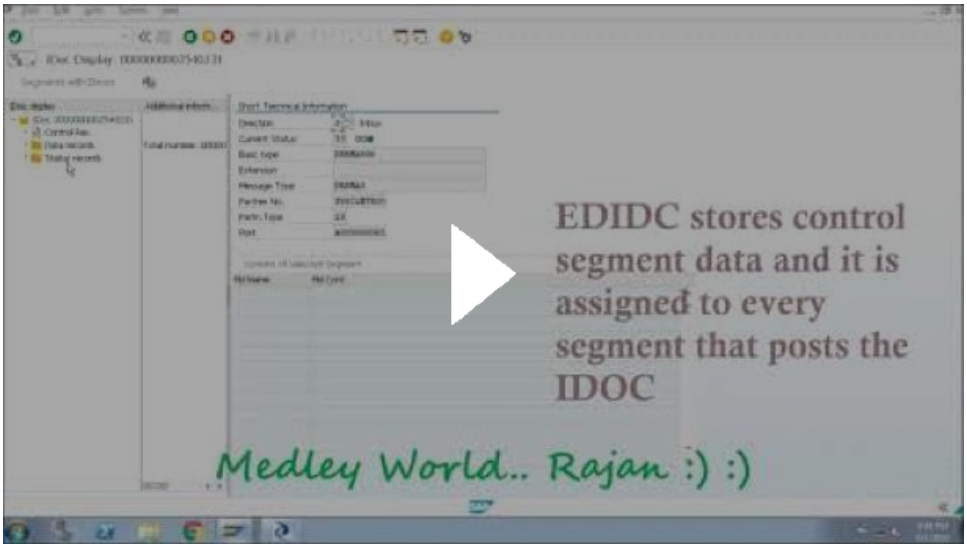
https://sapbodsinfo.blogspot.com/2016/02/bods-designer-moduleobjectives.html

Wednesday, April 1, 2020 6:14 PM

SAP BODS | Data Migration | IDOCs | Customer Master-1
Medley World



SAP BODS | Data Migration | IDOCs | Customer Master-2
Medley World



PI to SAP BTP migration

Monday, April 10, 2023 4:10 PM

Vinay Mittal's Post

Vinay Mittal
Sr. Manager -Projects-Integration
1d Edited

We recently did a very successful and fast SAP PO to SAP Integration Suite (BTP) migration. There very numerous learnings during the migration and just to list out... a couple of those were 1) That you really cant migrate your update_insert jdbc scenarios from SAP PO to Delete and Insert in SAP CI (batch) or even to update_insert that kills the performance. You have to rely on Stored Procedures. 2) For SELECT / UPDATE operations SAP CI jdbc adapter doesn't behave in the same manner as SAP PO JDBC adapter. You do SELECT and UPDATE in different calls to the DB server and you run the risk of updating the flag for more entries than you selected again you should rely on stored procs. 3) Another interesting find was that SOAP RM adapter has a limit of 50k records both inbound and outbound which can be increased on request by SAP. therefore you should either limit your reports/ programs in SAP to select / push less than the number of records you have set for your tenant OR increase SAP CI Tenants record limit from 50K records per SOAP message to a really large number lets say 300k records but then run the risk of crossing the threshold of 100 mb message size which most of have (configurable) for outbound webservice / proxy message size sent via http out of S4. 4) You can convert your RFC/proxy scenarios to soamanager webservices (consumer proxies / service definitions) leaving IDOC scenarios as is. 5) For NFS scenarios you can either convert them to outbound async Webservices / XML or you can replace that NFS with a SFTP server. During a typical SAP PO to Integration suite migration the build activity only takes up-to 20- 30 % of the effort the testing takes 30-40% of the total effort while the connection set up, collaboration with different teams and Quality control takes up the remaining. We had many other learnings but perhaps it would need a blog to summarize that. What were the most interesting learnings you had during such migrations? If you also have a SAP PO Integration bus on which you are heavily relying for your Integration scenarios, then this is the right time to make your move to SAP Integration Suite before it becomes too late. Please get in touch with us at Cognizant if you have plans to do the same.

From <https://www.linkedin.com/posts/vinay-mittal_sap-sapintegrationsuite-cognizant-activity-7050756661912731648-Wsq_?utm_source=share&utm_medium=member_ios>

https://www.linkedin.com/posts/vinay-mittal_sap-sapintegrationsuite-cognizant-activity-7050756661912731648-Wsq_?utm_source=share&utm_medium=member_ios

SAP API Management Technical Presentation

Thursday, October 6, 2022 7:35 AM

https://help.sap.com/doc/980f5f55402145b1ad140359a7257229/CLOUD/en-US/Unit%202%20-%20Overview%20of%20SAP%20API%20Management%20and%20its%20Components.pdf

Unit 2 - Overview of SAP API Management and its Compo...

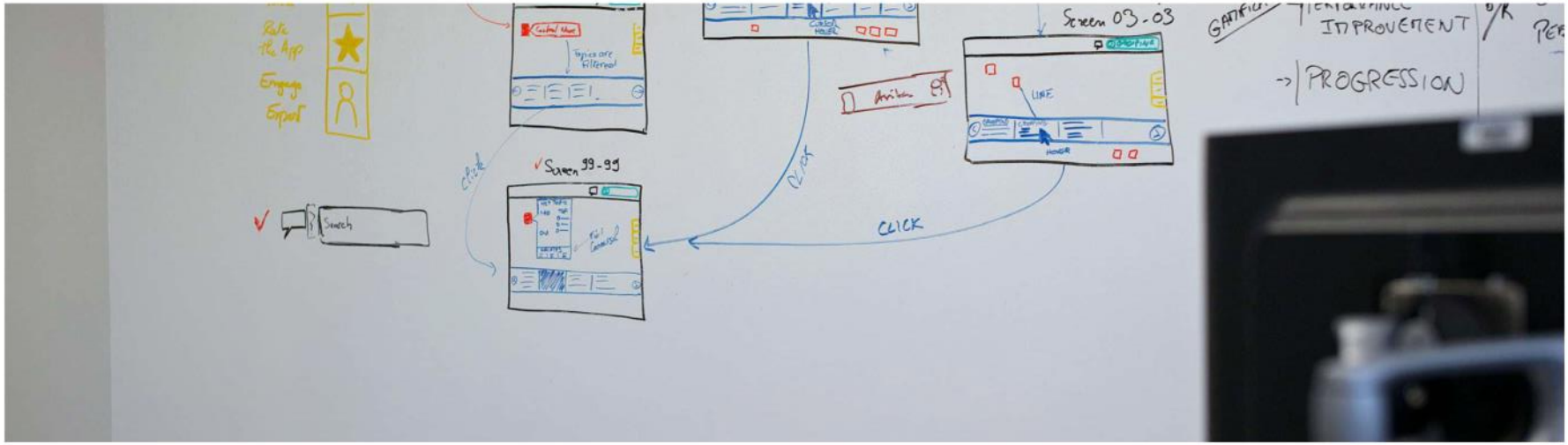
SAP API Management Technical Presentation

Sven Huberti, Senior Solution Specialist

SAP Run Simple

Agenda

Overview



SAP Cloud Platform
API Management

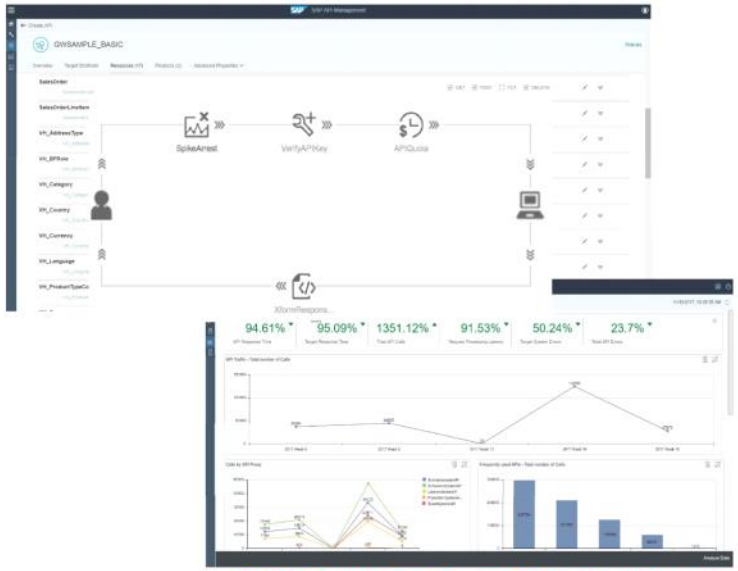
SAP Cloud Platform API management provides simple, scalable and secure access to digital assets through application programming interfaces (APIs) and enables developer communities to consume these.

Key capabilities

- Unified standards-based API access of REST/OData or SOAP services
- Enterprise Grade Security for the APIs against attacks like DoS, CSRF, XSS etc. and robust traffic management
- Real-time insights & analytics on the APIs traffic, usage, error reporting and monitoring
- Developer services to enable developers to try, subscribe, use and manage API consumption

Benefits

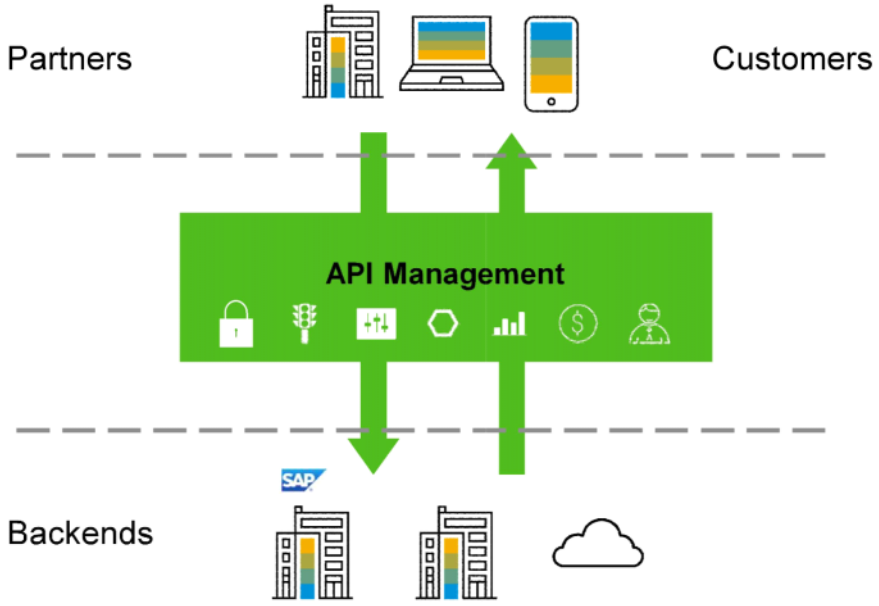
- Platform for engaging with and enabling employees and developers - internal and external



Read more: SAP Cloud Platform API management

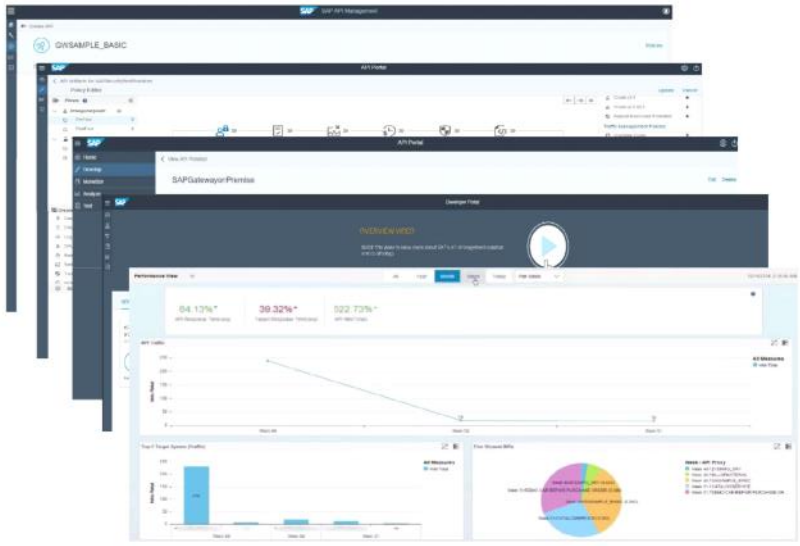
SAP API Management
Typical use cases

1. Enterprise-wide governance and security for REST APIs
2. Omni-channel experience for customers and employees
3. Low-touch Open Integrations with partners, suppliers and marketplaces



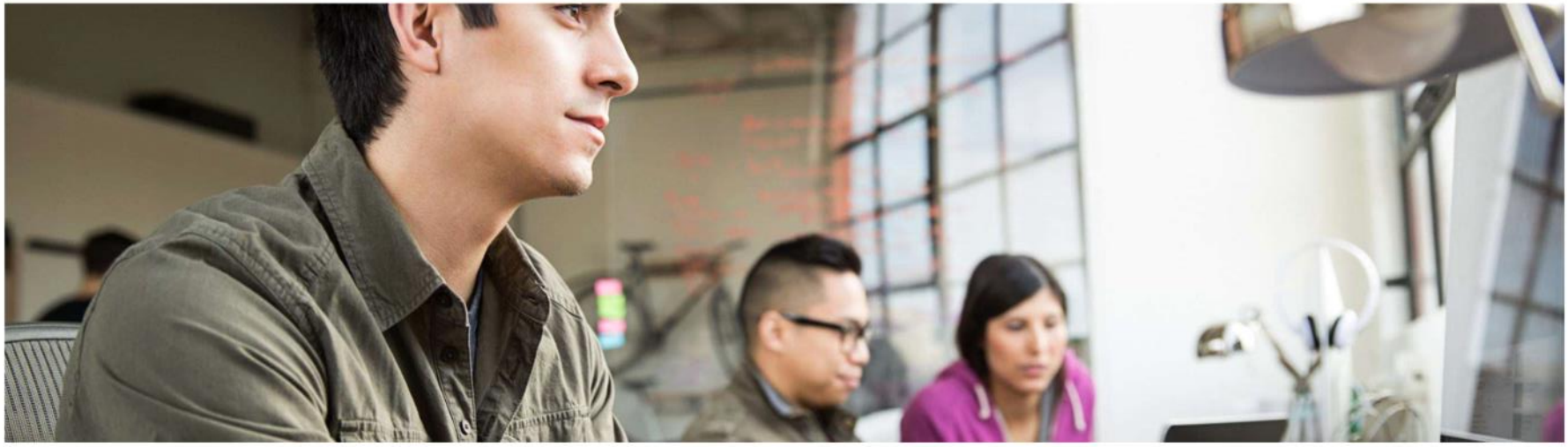
Highlights

- **Best of breed engine** with **streamlined admin and developer experience** in SAP Cloud Platform
- **Increased productivity** with to OData
- **Agnostic** REST/OData or SOAP services management
- **Enterprise Grade Security** for the APIs against attacks like DoS, CSRF, XSS etc. and robust traffic management
- **Secure connection to on-premise systems** with **Cloud connector**
- **Integration with SAP Cloud Platform services** such as **SAP API Business Hub**, mobile service, WebIDE, Leonardo IoT etc.
- Platform for engaging with, and enabling employees and developers – **internal and external**
- **Real-time** insights & analytics on the APIs traffic, usage, error reporting and monitoring

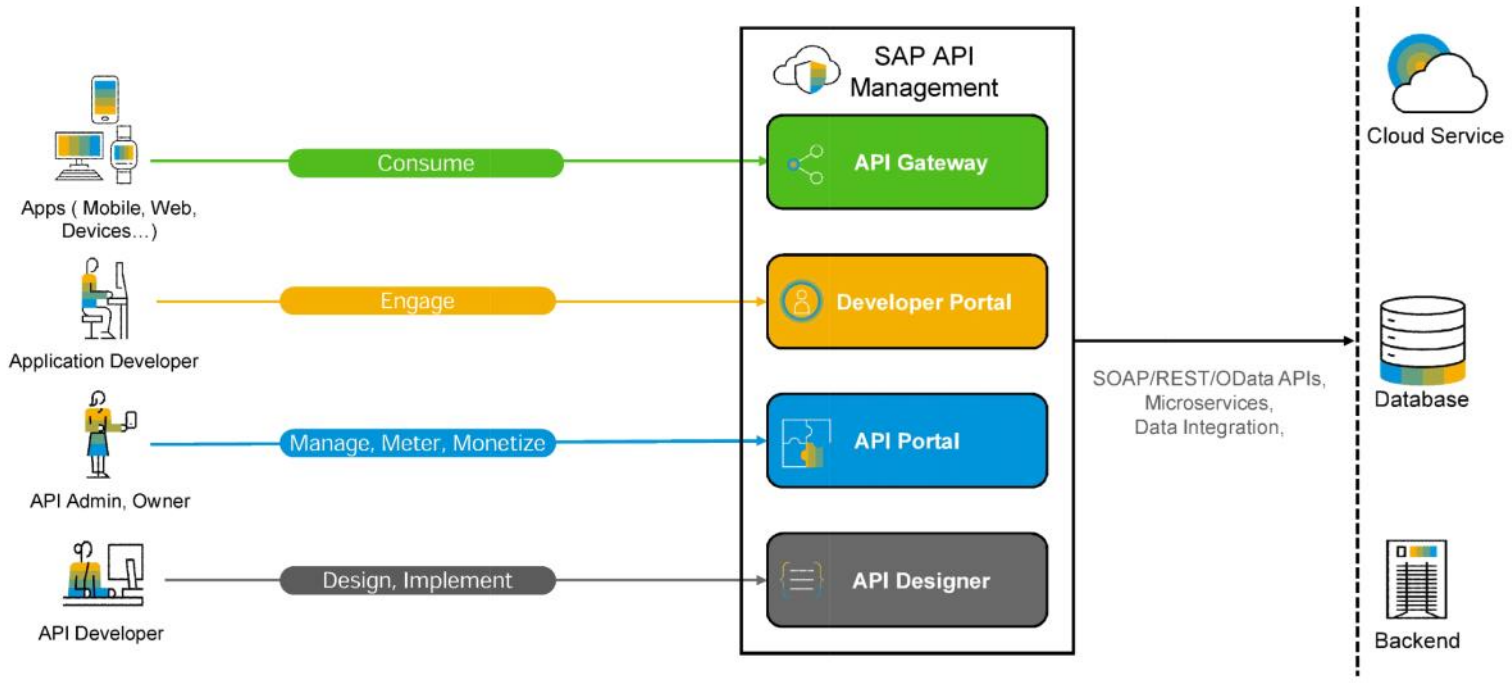


Read more: SAP Cloud Platform, API management

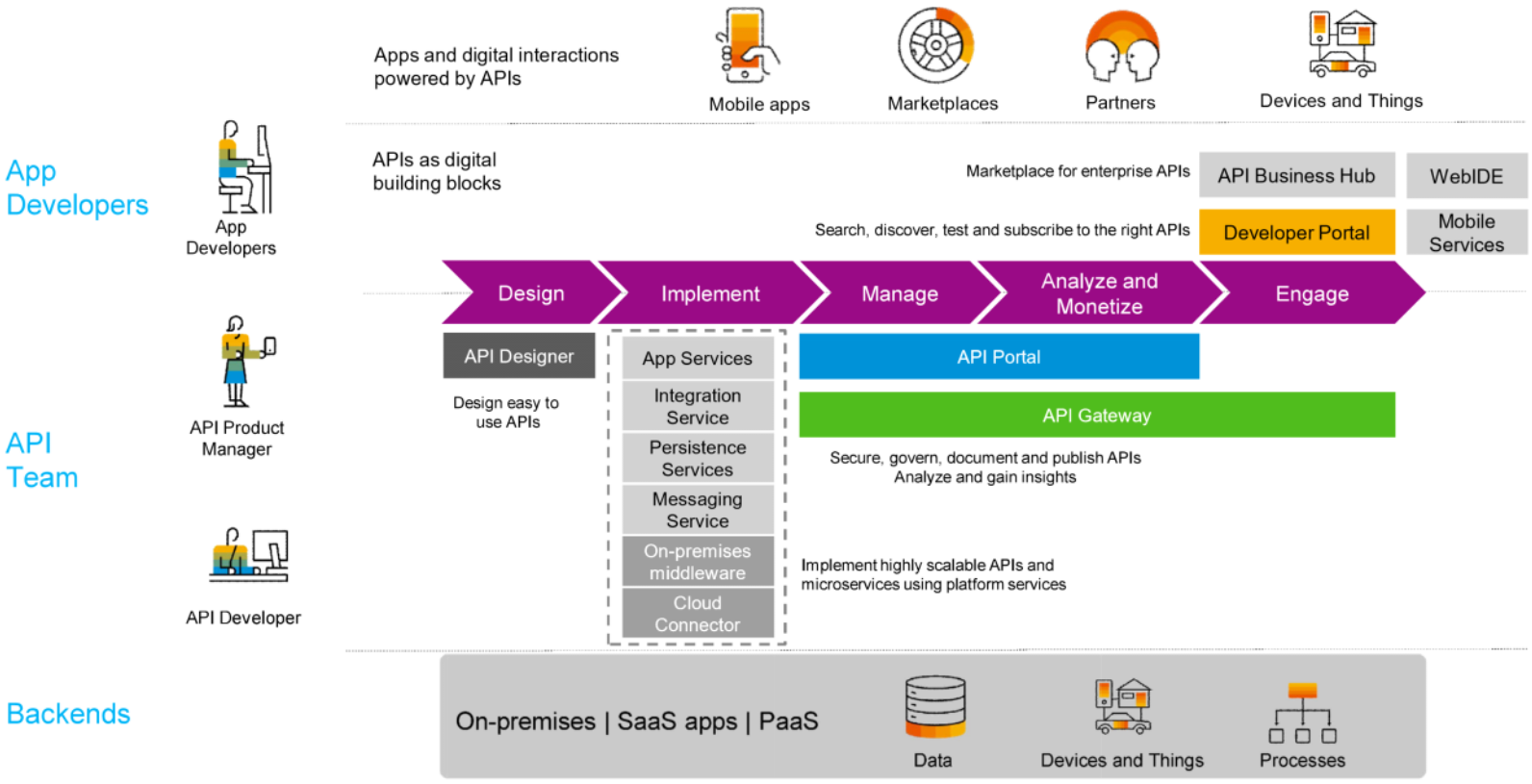
Personas and interactions



Personas and interactions



Full lifecycle API Management with SAP

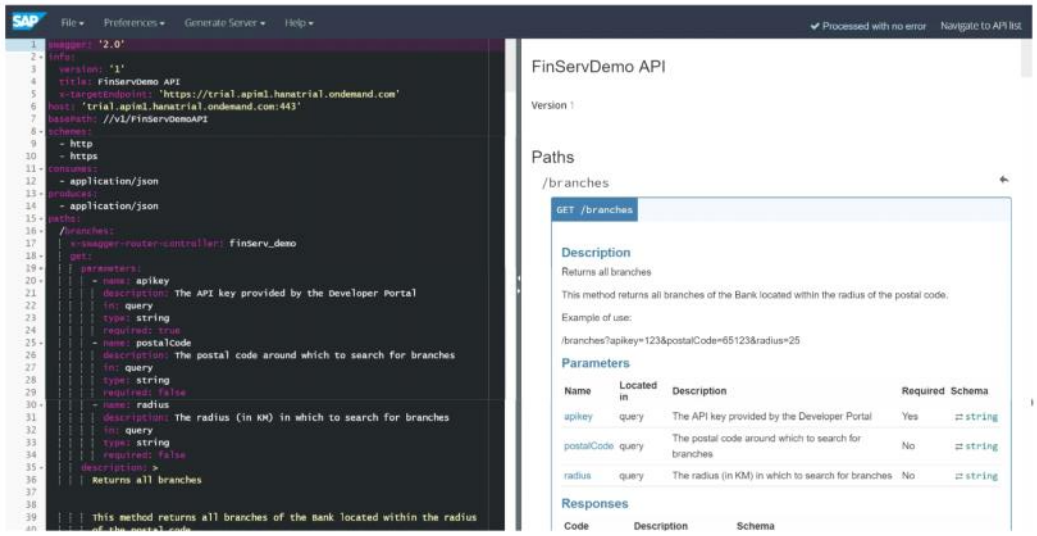


Features and functions

API Portal: API Designer

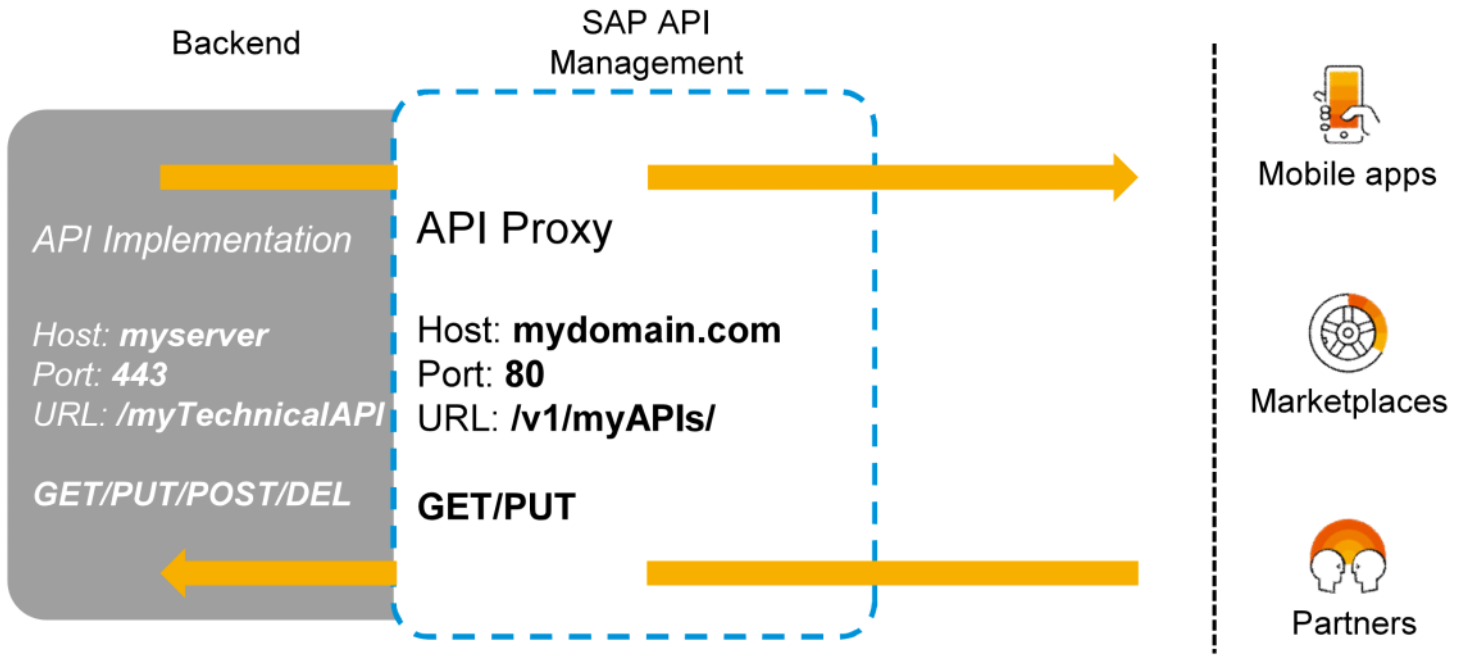
{ } Design-first approach

- **OpenAPI** support
- **Import** your APIs from:
  - RAML
  - Odata
- **Generate** Server Stubs
  - NodeJS
  - JAX-RS
  - Spring
- **Generate** API in API Management



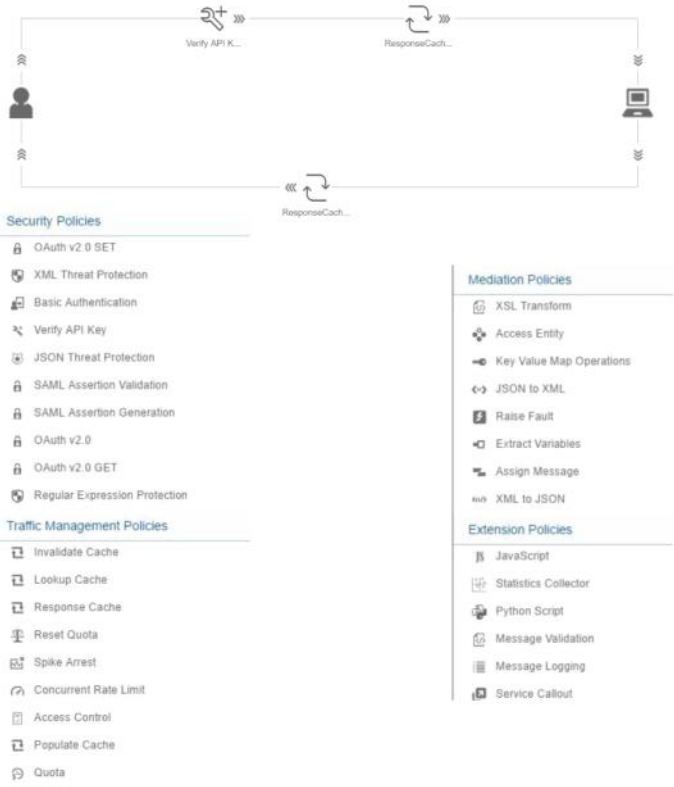
API Portal: Proxies

Hide internal information and add specific behavior



API Portal: configure the runtime of the API

Security



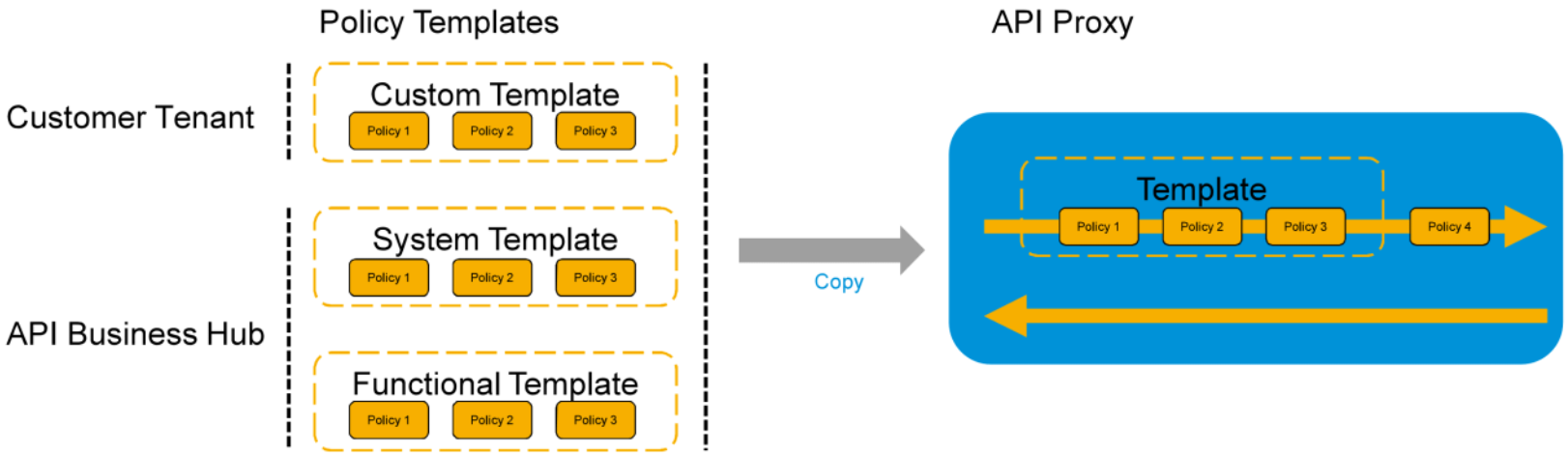
API mediation

Traffic Management

Coding

API Portal: re-use configurations through templates

Package and reuse existing policy sets

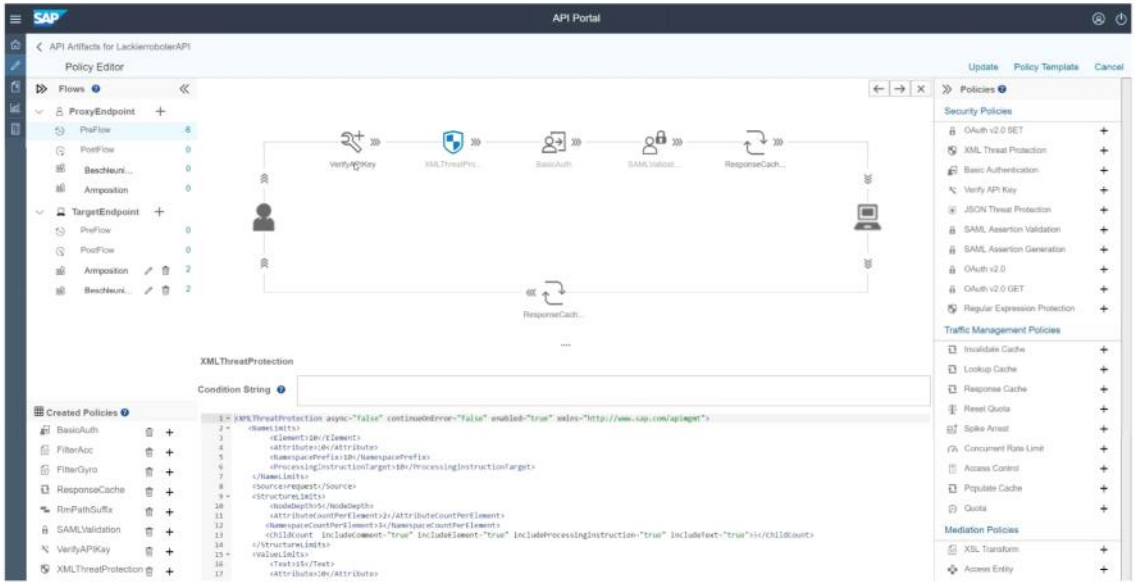


API Portal: Security on all levels

Threat protection

Authentication and authorization

Role-based access control



API Portal – Developer Portal: publish APIs

Developer self-registration

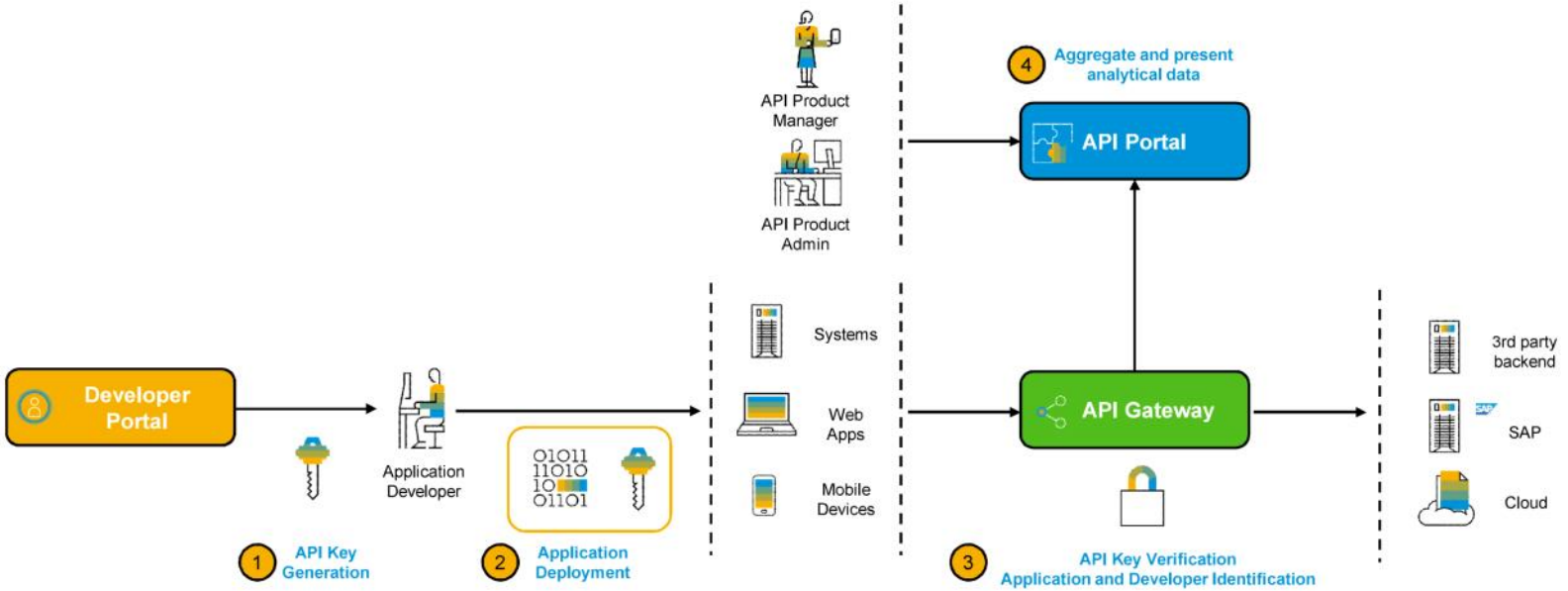
Documentation and testing

API Subscription

Developer Portal

API Portal – Developer Portal: integrated API key

Track developer and application API usage through the API Key

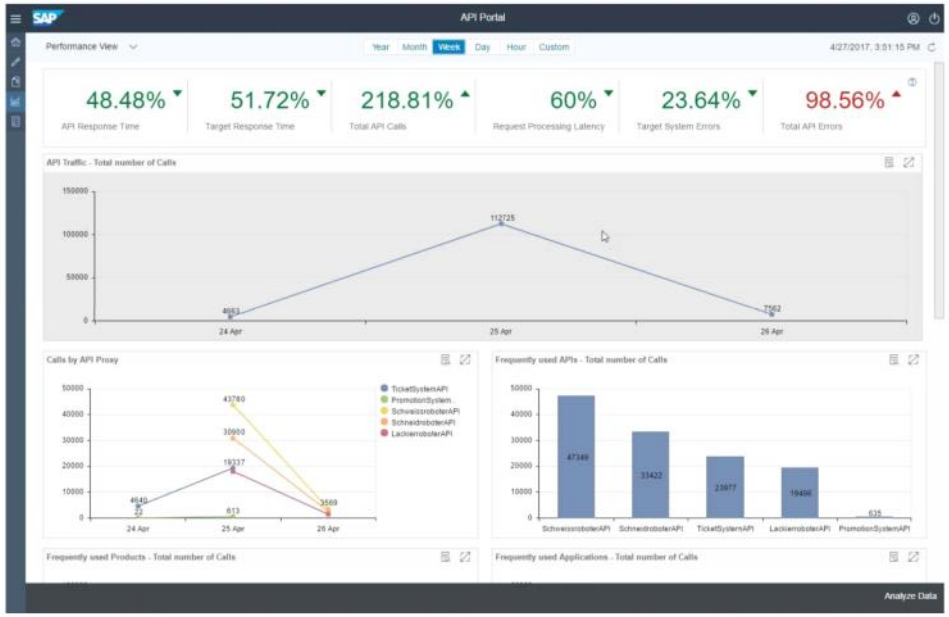


API Portal: Analytics

Technical Analysis

API Program Analysis

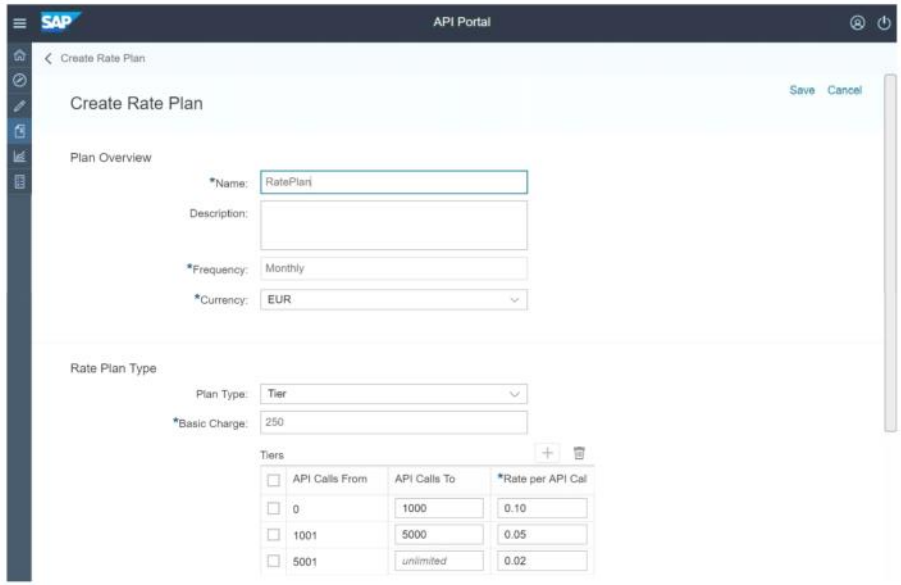
Custom Dashboards



API Management: Monetize

Create flexible rate plans

Provide billing to API users



Additional features

1. **Custom Templates**
   Re-use enterprise-wide API patterns: **centralize governance.**

2. **Pre-defined Policy Templates**
   Typical operations such as data filtering, CORS, SQL Threat Protection, URL Masking, error handling, quota, … are available out-of-the-box from SAP: **speed-up configuration.**

3. **Interpretation of OData metadata**
   OData metadata interpreted in SAP API Management (Resources, Documentation, …): **speed-up documentation and reduce errors.**

4. **SAP API Management APIs**
   Access artifacts and analytical information of SAP API Management through APIs: **automate operations and integration into monitoring tools.**

A platform approach: integration into SCP

1. **SAP Gateway Hub support**
   Through the „Discovery“ feature: automatic creation of APIs including documentation and resources for SAP backend integration: **reduce implementation time and errors.**

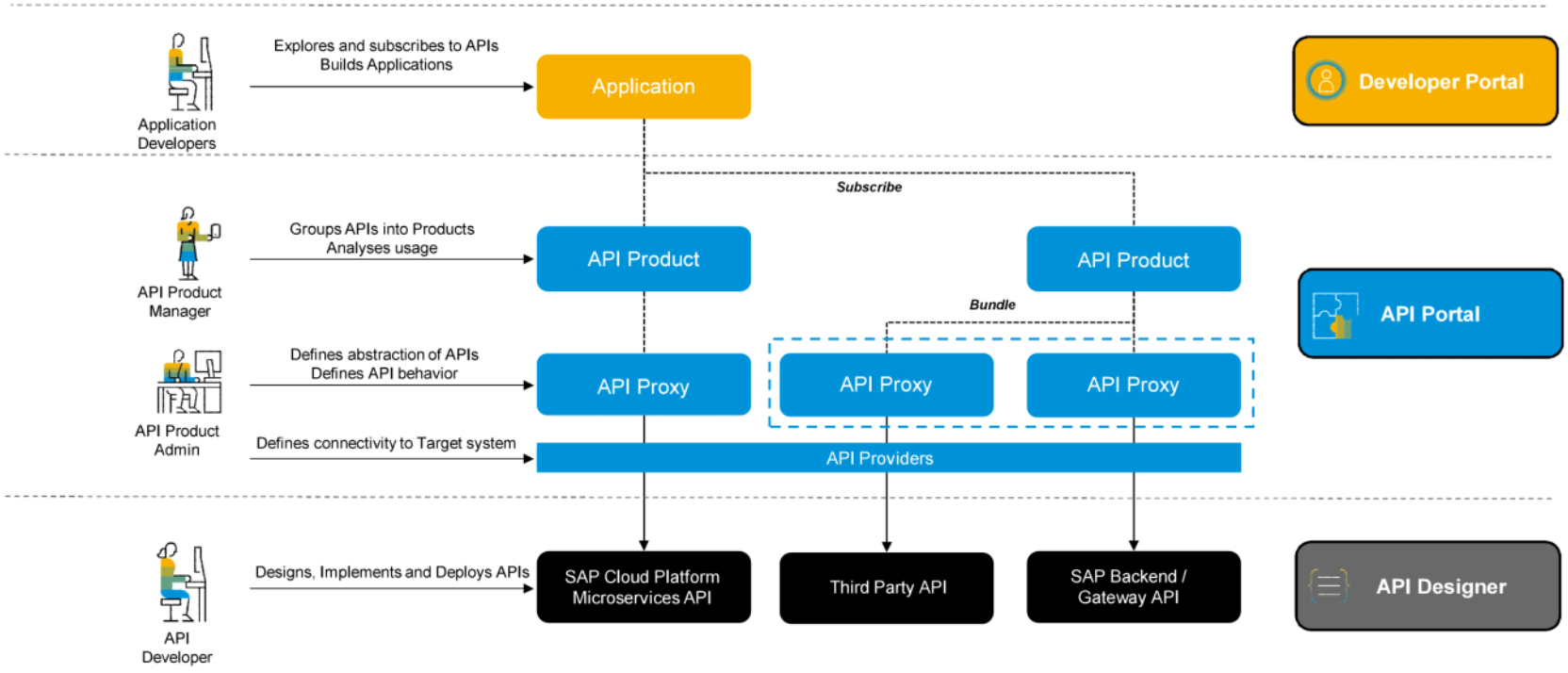
2. **OpenAPI (fka. Swagger) support**
   All SAP APIs are available in the API Business Hub as OpenAPI artifacts and API proxies can be created from OpenAPI defintion files: **re-use your assets to speed up your API project.**

3. **CloudFoundry support**
   Automatic binding of Cloud Foundry applications to API management, generation of stubs from the API Designer to be deployed directly in CF: **centrally manage your APIs from any platform**

4. **WebIDE support**
   Discovery and usage of APIs from the Developer Portal in WebIDE: **simplify your Developer‘s work.**

Components

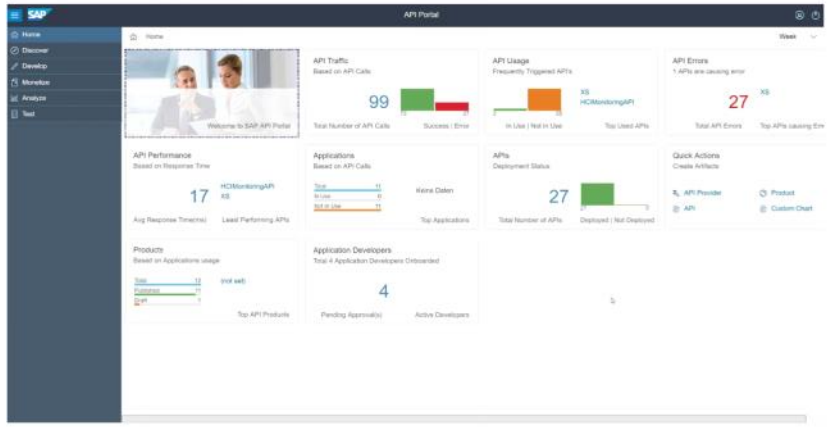
API Management: Personas and Components



SAP API Management Platform – API Portal

SAP API Management Portal is the main entry-point for the API Builder / API Owner. From here the API Owner can:

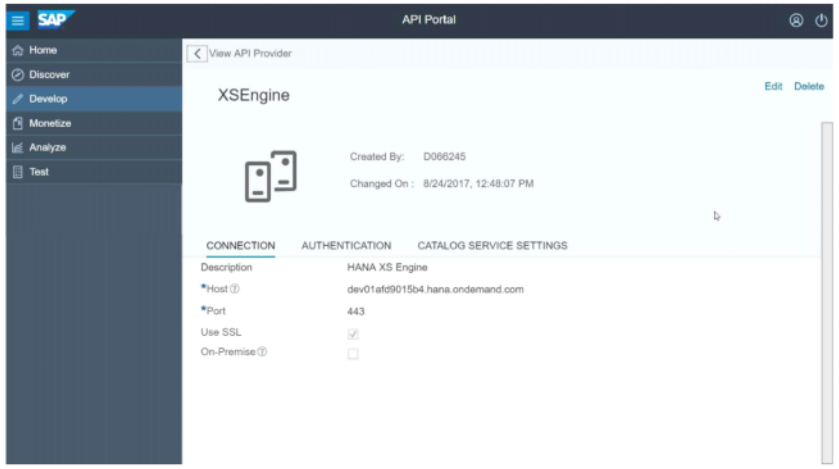
- Create and manage **API Providers**
- Create and manage **API Proxies**
- Create and manage **Products**
- **Analyze** the usage of APIs
- Create and manage **rate plans**



SAP API Management Platform – API Portal – API Provider

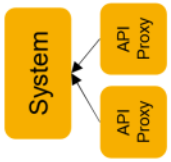
- Logical representation of a backend
- Not mandatory
- Simplifies management (eg. transport)
- Simplifies discovery

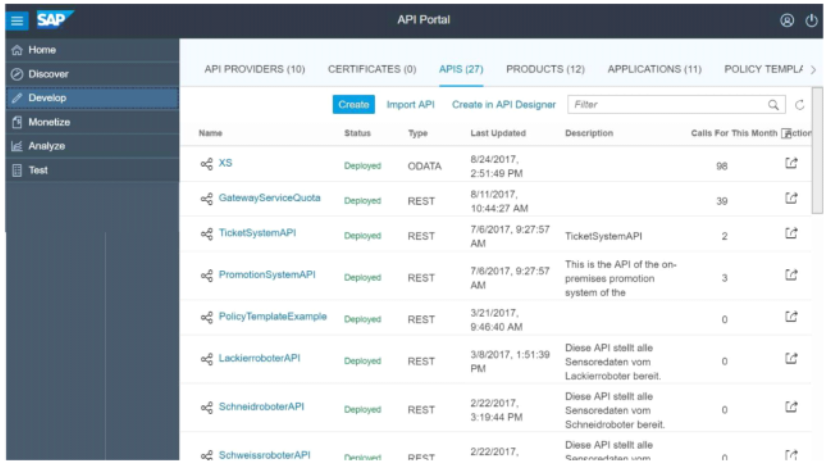
System



SAP API Management Platform – API Portal – API Proxies

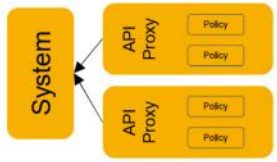
- **Facade** of an existing REST API or SOAP service
- API Proxy allows for:
  - Hiding internal implementation information
  - Versioning
  - Security, Traffic Management, Transformation
  - Documentation
  - Usage analytics
  - Technical analytics

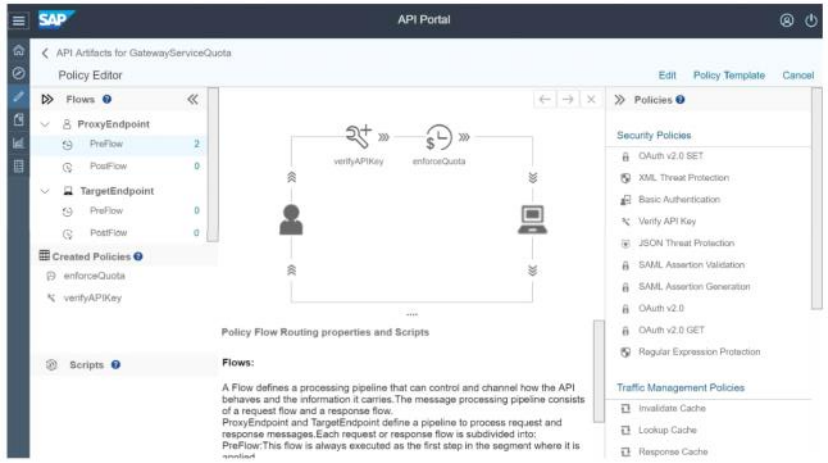




SAP API Management Platform – API Portal – API Proxies - Policies

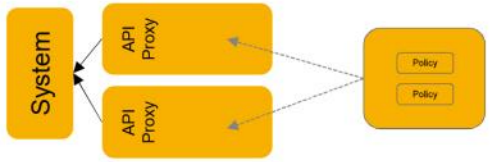
- Pre-defined, configurable behavior
- Used in the **Policy Editor**, and positioned on the **request** or **response**
- Preconfigured for:
  - Security
  - Traffic Management
  - Message transformation
  - Caching
- Coding can be added through Java Script

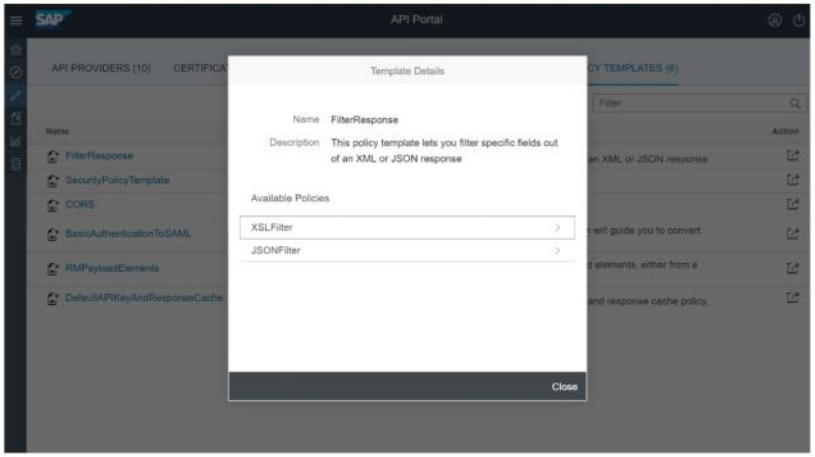




SAP API Management Platform – API Portal – Policy Templates

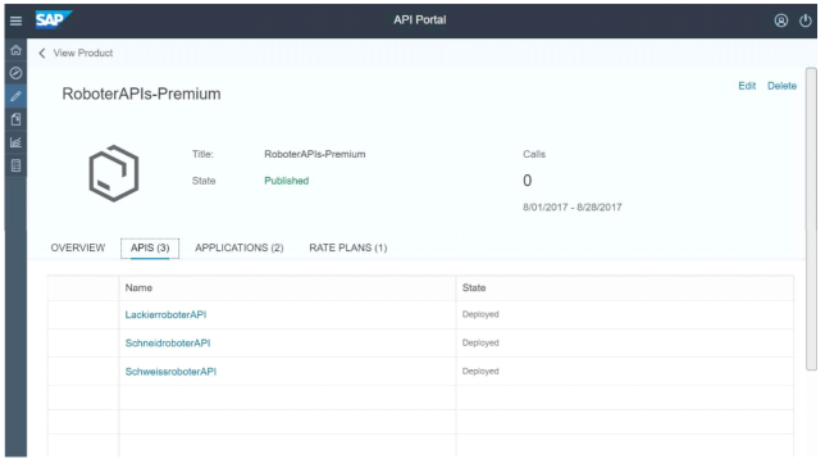
- Bundle of policies that can be re-used
- Can be created and managed individually
- Can be re-used from the SAP API Business Hub





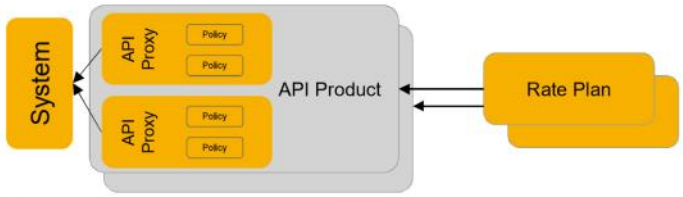
SAP API Management Platform – API Portal – Product

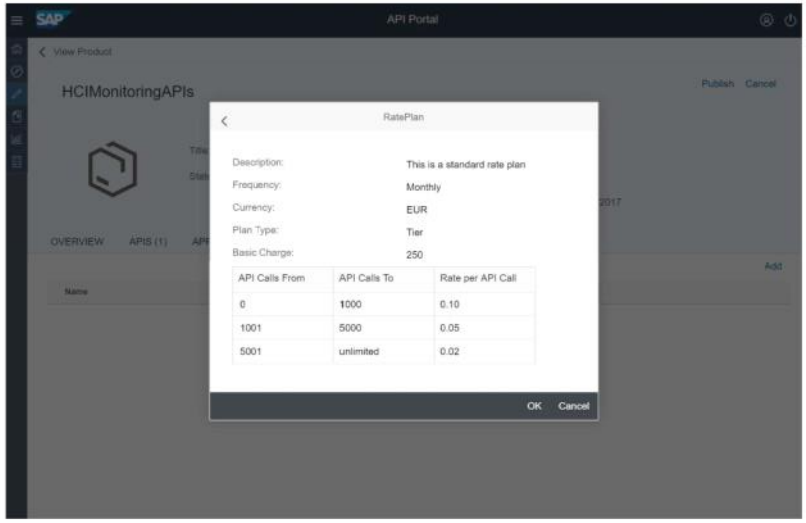
- Logical bundle of APIs
- Can be configured with Quota:
  - Premium Product with ilimited use
  - Standard Product with 1000 API Calls/Month
- Developers subscribe to API Products in the Developer Portal



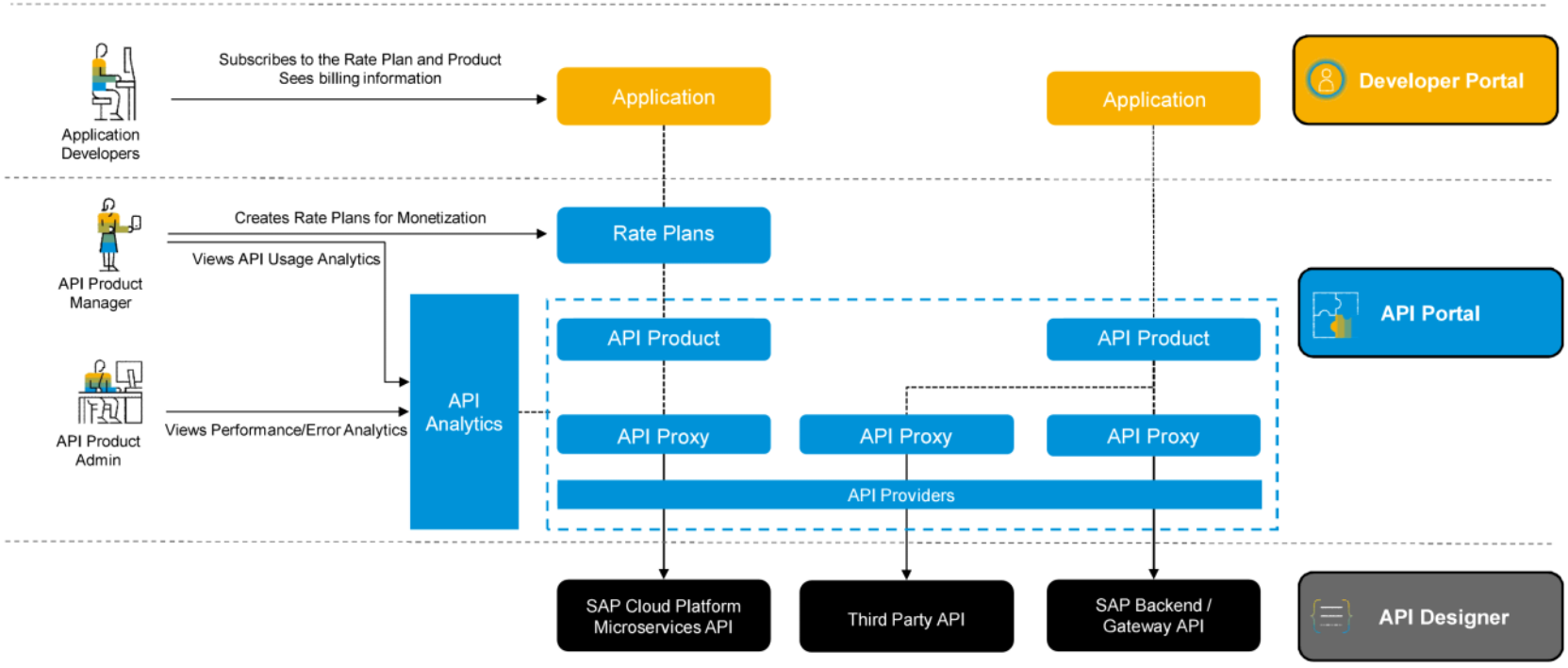
SAP API Management Platform – API Portal – Rate Plan

- Defines charging of API usage
  - Basic: Basic charge + X€ per API Call
  - Tiered: Basic charge + X€ per Y API Calls
- Is attached to one ore more API products
- API Admin and Developers can see their bills



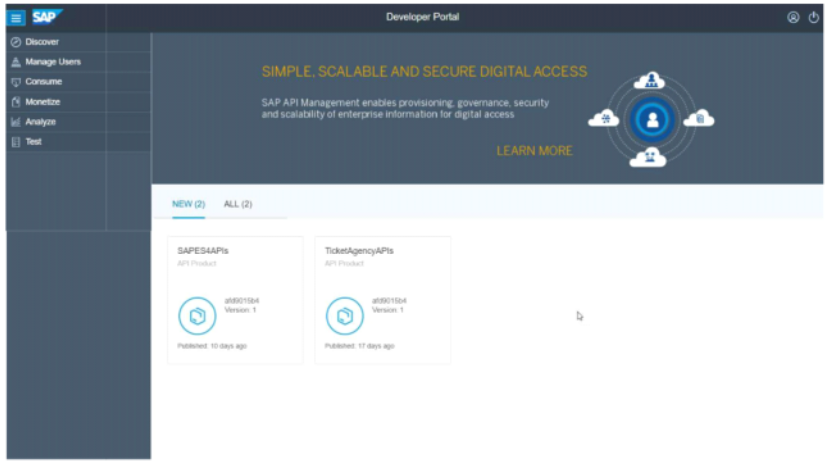


API Portal: Monetize



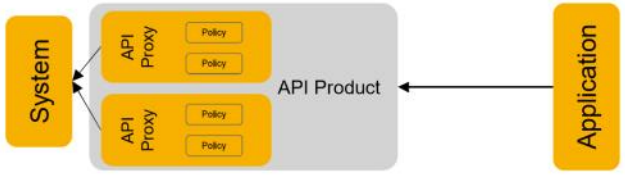
SAP API Management Platform – Developer Portal

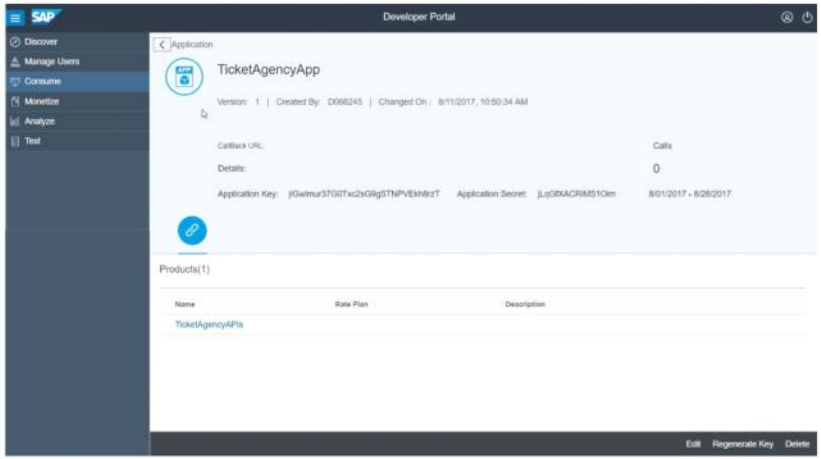
- main entry-point for the application developer
- Developers self-register and can:
  - Discover available products and the API Proxies which are included,
  - Test APIs online,
  - **Subscribe** to an **API product** by creating an **Application** (a represenation of the „real“ application which he will develop),
  - Manage his API keys.



SAP API Management Platform – Developer Portal – Application

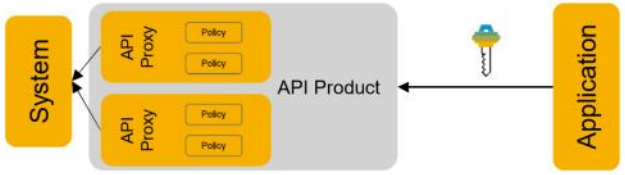
- **Applications** represent an **API consumer**
- Applications can be Apps, Web applications, …: it is not relevant.
- Upon subscription, an API key is created

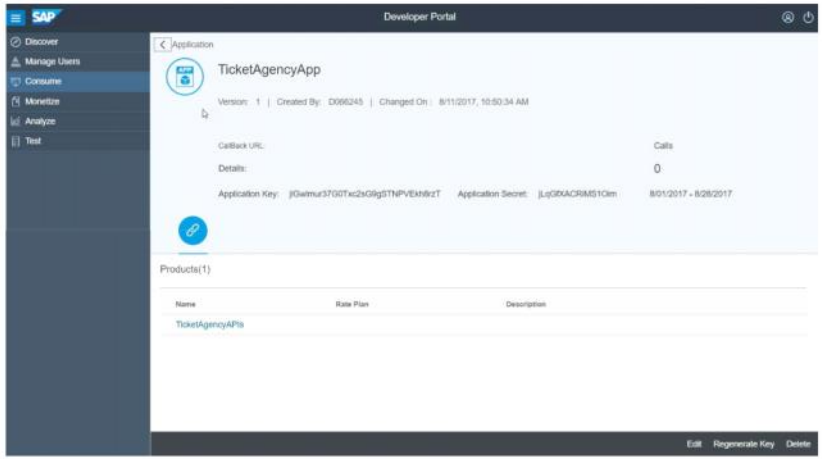




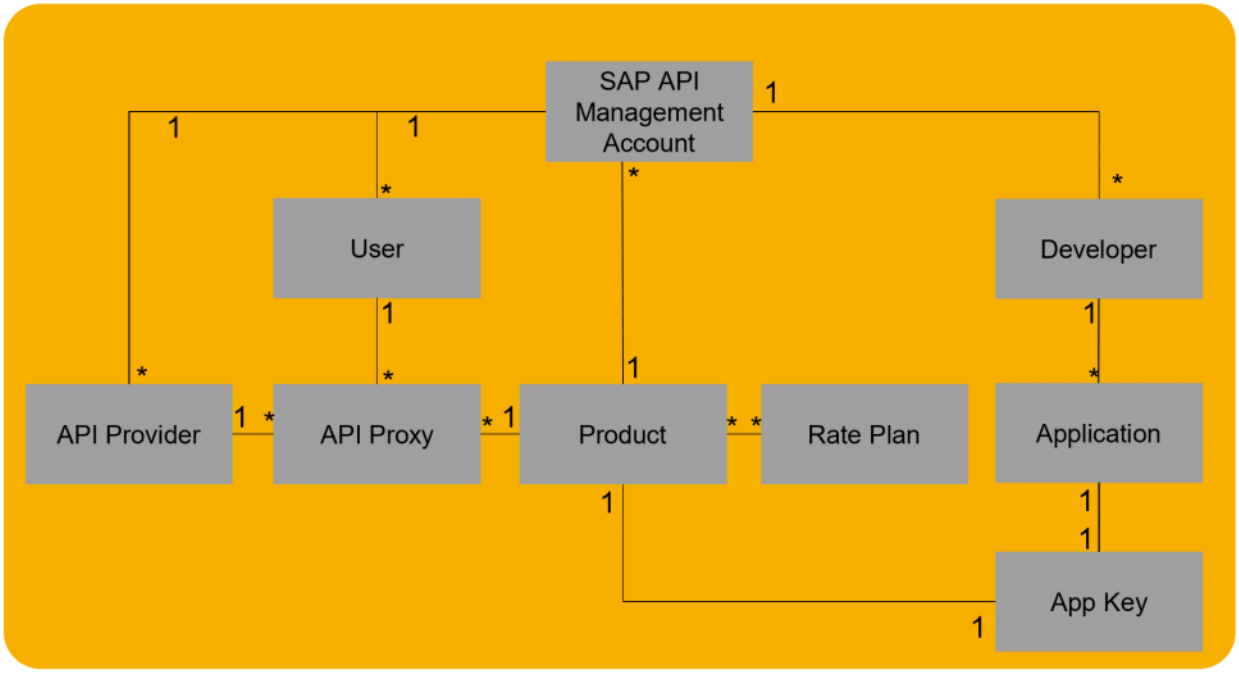
SAP API Management Platform – Developer Portal – App Key

- Each Application is tied to a Developer through an **API Key**: the API key identifies the Application, and is used primarily for analytics
- It is a **best-practice** to use API keys
- API keys are managed by the Application Developers
- API Key is not a security feature!



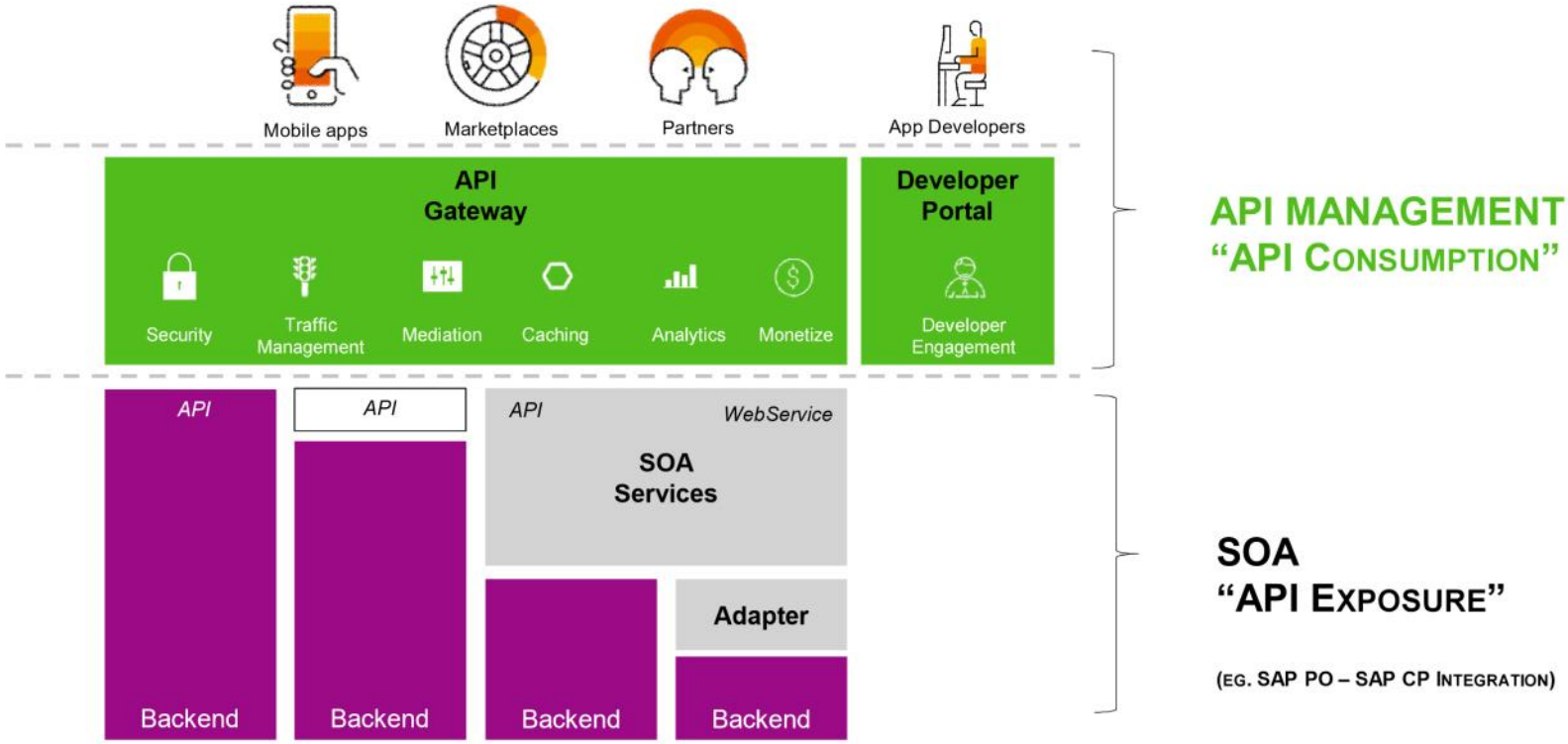


Concepts of API Platform for SAP API Management

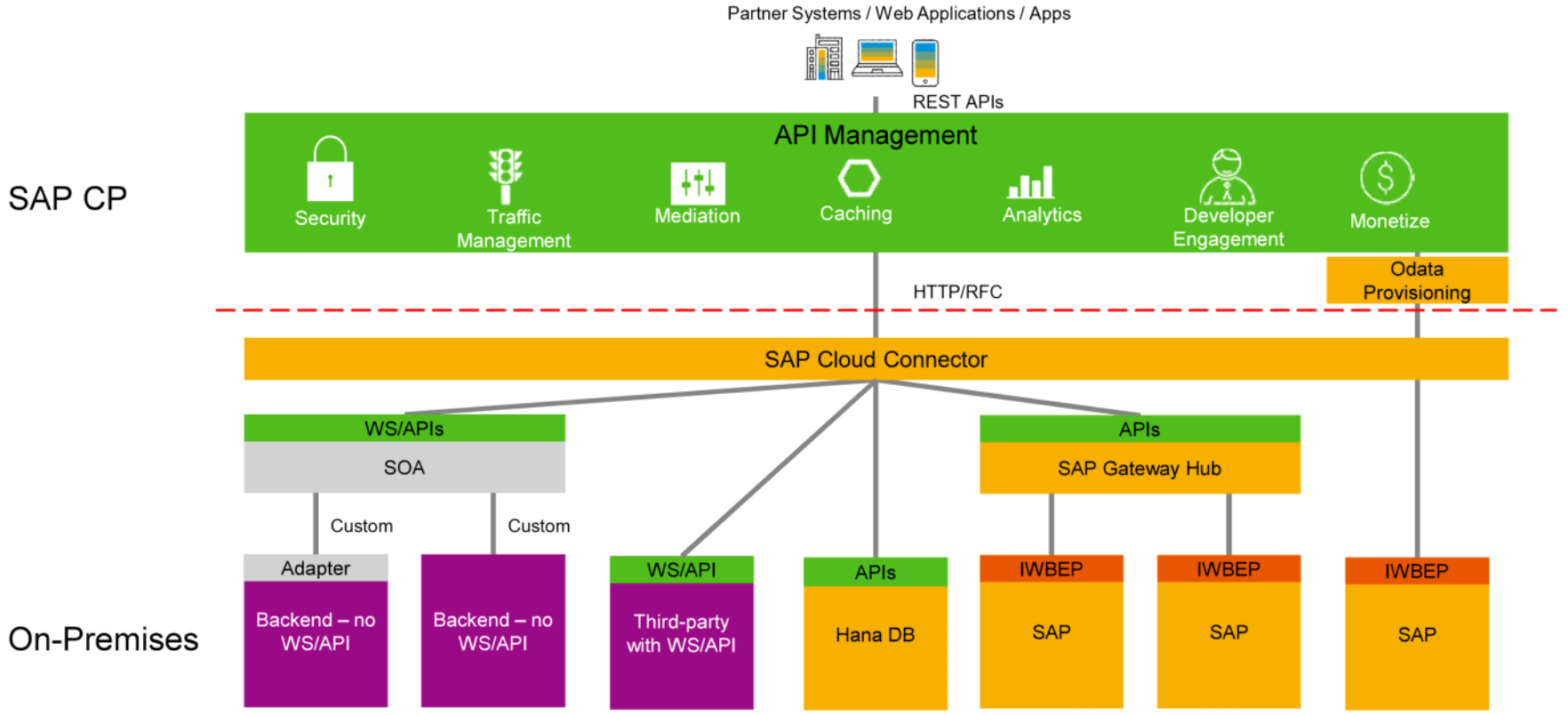


Architecture

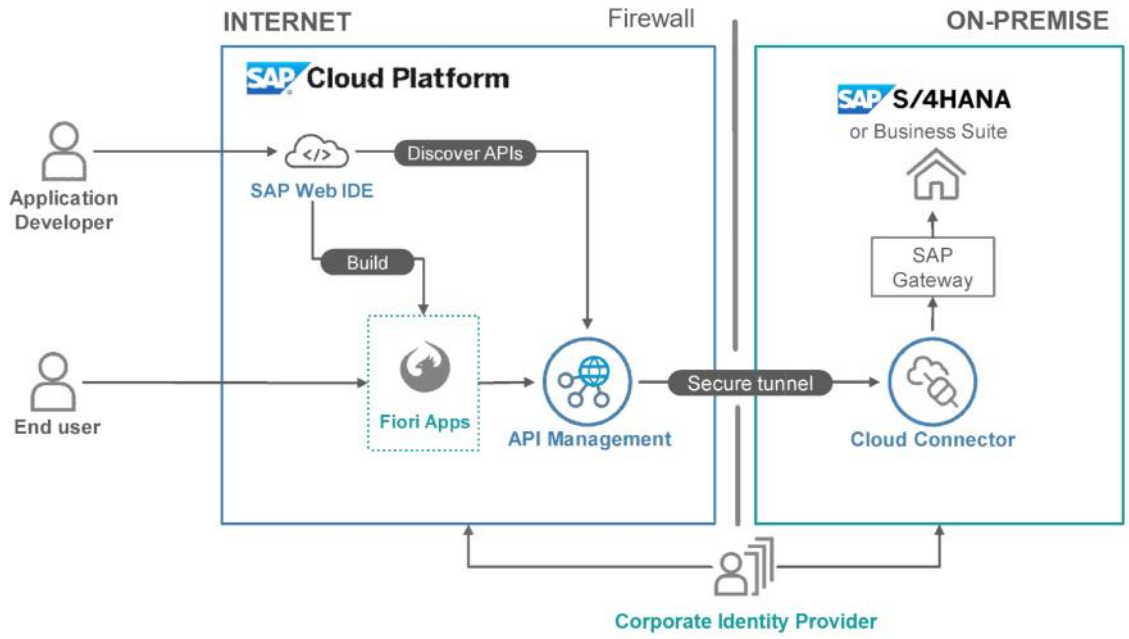
SAP API Management – High-Level Architecture



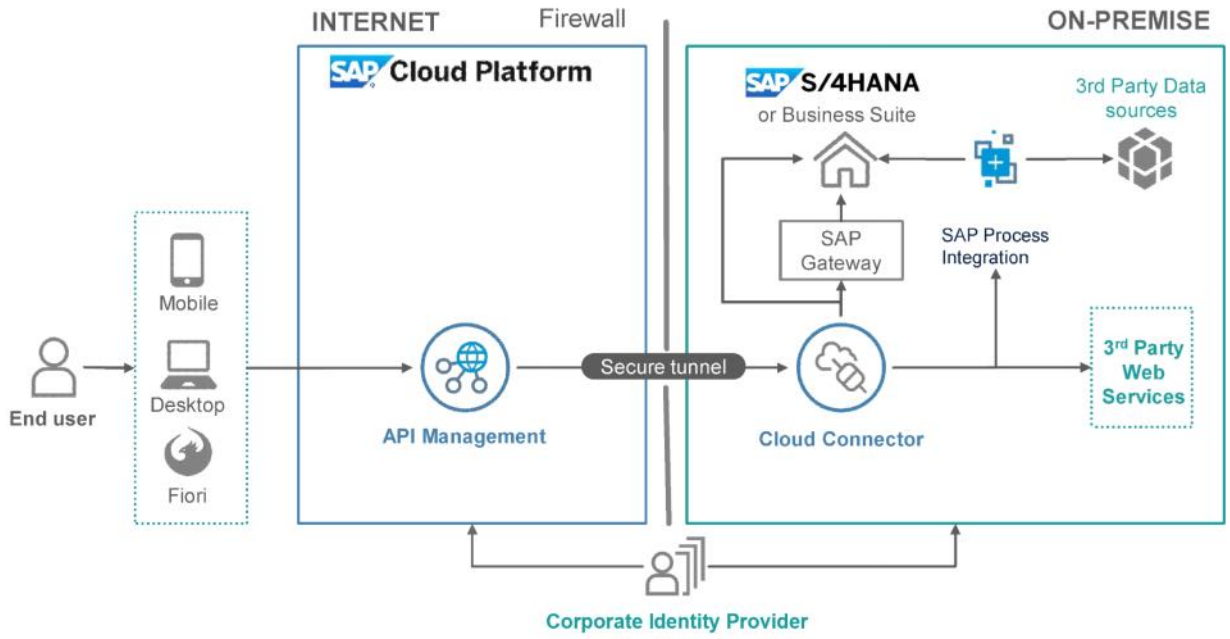
High-Level Architecture in an SAP Ecosystem



Fiori apps with SAP API Management and Gateway – Web IDE Integrations



SAP API Management and On Premise connectivity



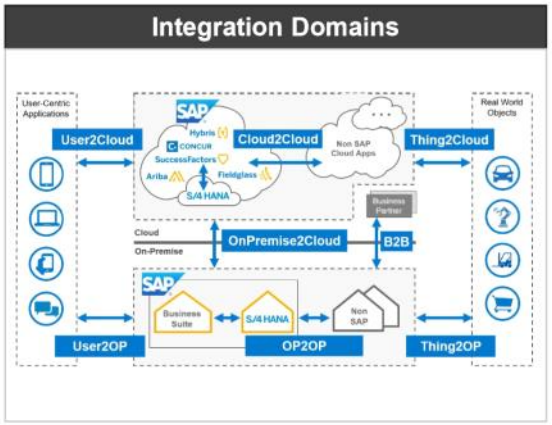
Additional information

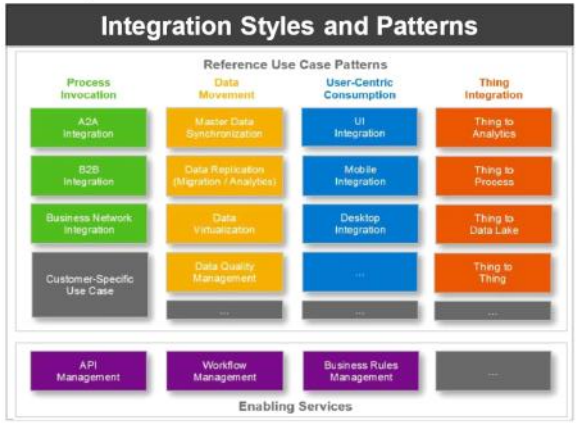
One Platform for Process Integration and API Management

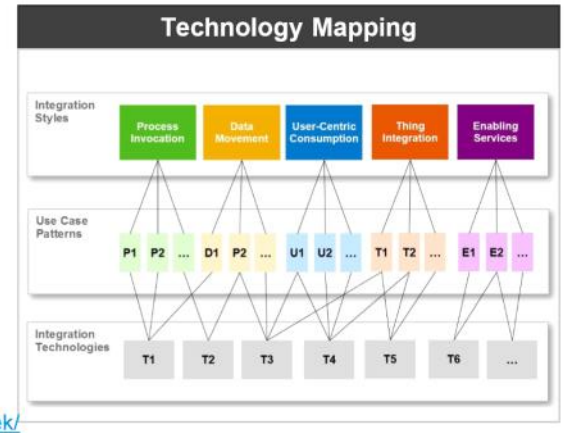
Both covered in SAP Cloud Platform Integration

Functions	Process Integration	API Management
Data Mapping	Complex data mapping	**Limited**
Process Orchestration	Exhaustive features, support for EAI patterns, persistence	**Request-Reply pattern, Mash-Up capabilities**
Adapters and Connectors	Exhaustive list	**SOAP and APIs over HTTP**
Scalability	Good	**Built from ground up for high throughput and low latency**
Authentication	SAML, Certificates	**SAML, OAuth**
Security	WS-Security, Encryption, Decryption, Signature	**JSON and XML threat-protection, RegEx threat protection**
Message formats	Exhaustive list	**No specific message type, focus on XML and JSON**
Developer Portal	No	**Self-service Portal with API catalog capabilities**
Traffic Management	No	**Exhaustive features**

Integration? Integration Solution Advisor - Methodology



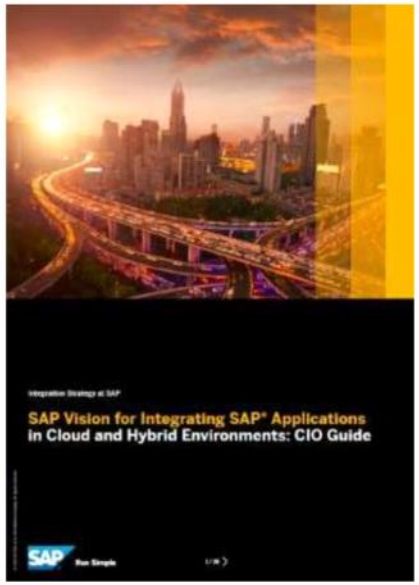




https://blogs.sap.com/2016/03/04/int203-integration-solution-advisor-methodology-isa-m-sap-teched-lecture-of-the-week/

CIO Guide

SAP's Vision for Integrating SAP Applications in Cloud & Hybrid Environments



Published at SAPPHIRE (May 2017)

- Outlines SAP's long-term integration strategy
- Focus on scenarios in the cloud and in hybrid environments
- Technology Recommendations
  - Process Integration
  - Data Integration
- Outlook & future strategy including application design and integration technology

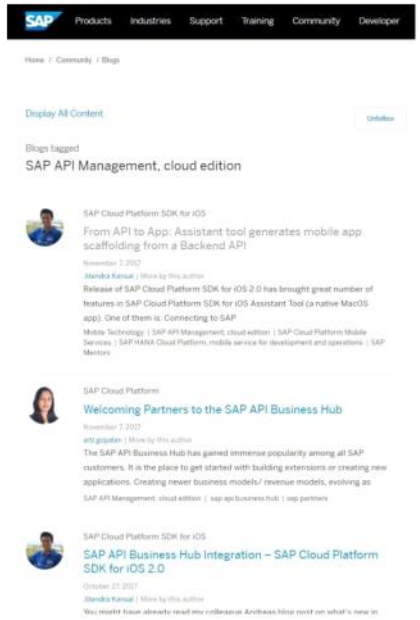
More information…

Try it out on SAP Cloud Platform Trial!
https://blogs.sap.com/2016/02/10/how-to-use-sap-api-management-on-hcp-trial/

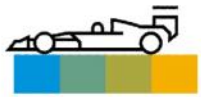
Enterprise Architecture Explorer:
https://eaexplorer.hana.ondemand.com/_item.html?id=11470#!/overview

Sap.com:
https://www.sap.com/germany/product/technology-platform/api-management.html

Blogs:
https://blogs.sap.com/tags/67838200100800006828/



Jump Start Service Package for SAP API Management



FAST
3 days hands-on, onsite training workshop to kick-off

RELEVANT
Get a comprensive overview over API Management

PRACTICIAL
Actively work on customer use cases and APIs hands-on

Service Category	Description	Amount	Price per Day	SUM
G3	Design Service, Education Service	6	1.625,40 EUR	9.752,40 EUR

Thank you!

Sven Huberti
Sven.Huberti@sap.com

Helpful links

Thursday, October 6, 2022 7:38 AM

https://www.sap.com/products/technology-platform/integration-suite/pricing.html#cpea	Pricing CPEA funds
https://blogs.sap.com/2017/08/18/sap-api-management-faq/	FAQs
https://help.sap.com/doc/980f5f55402145b1ad140359a7257229/CLOUD/en-US/Unit%202%20-%20Overview%20of%20SAP%20API%20Management%20and%20its%20Components.pdf	API management technical components

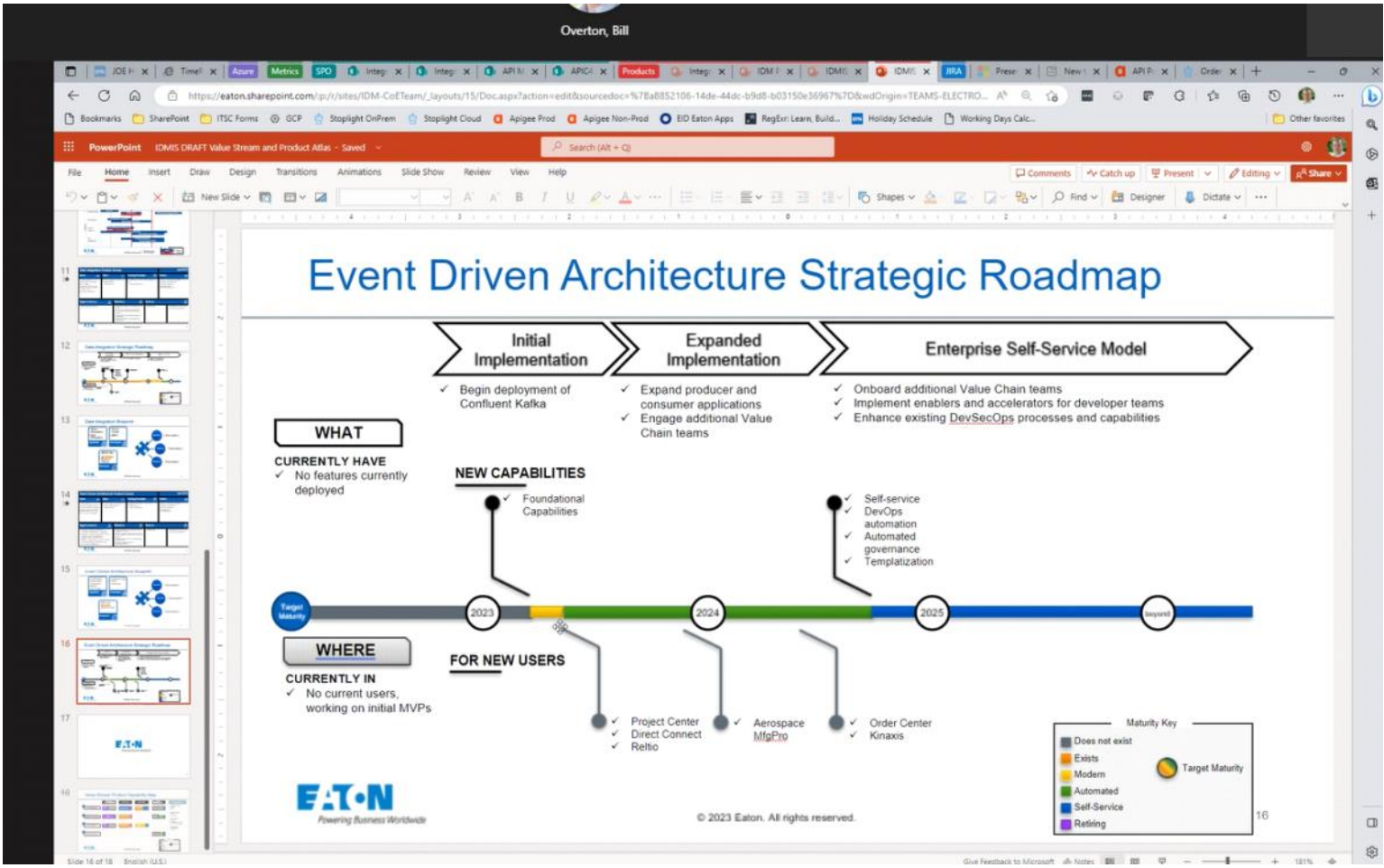
SAP Cloud Migration

Friday, February 17, 2023 12:18 PM

https://www.sap.com/products/technology-platform/integration-suite/migration.html

Event Driven Architecture St

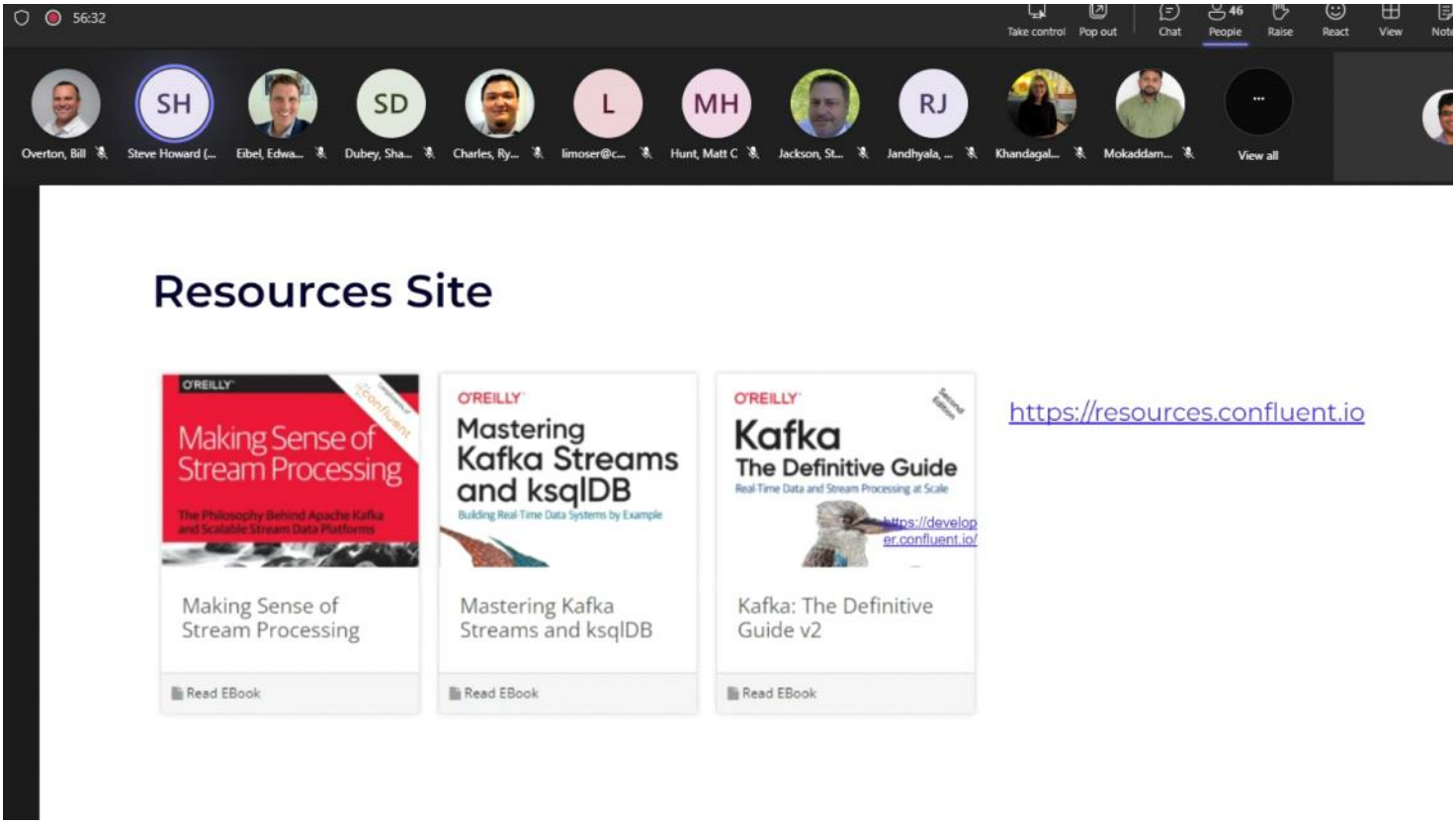
Thursday, March 23, 2023 10:17 AM



Useful links

Wednesday, August 30, 2023 8:48 AM

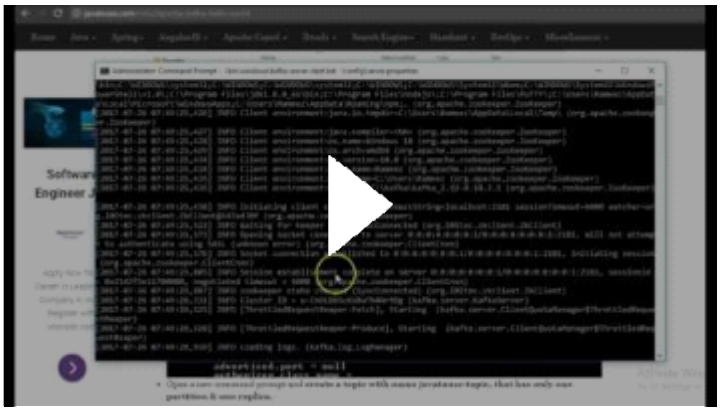
https://www.confluent.io/hub/	
https://developer.confluent.io/home/	
https://resources.confluent.io/	



Kafka - Java simple example

Wednesday, August 30, 2023 10:54 AM

[Starting Apache Kafka on Windows - Hello World Example]



https://www.javainuse.com/misc/apache-kafka-hello-world

Getting Started with Apache Kafka - Hello World Example | JavaInUse

Wednesday, August 30, 2023 10:55 AM

Clipped from: https://www.javainuse.com/misc/apache-kafka-hello-world

Getting Starting with Apache Kafka

In this post we will download and start an Apache Kafka instance. Apache Kafka is an open-source stream processing platform developed by the Apache Software Foundation written in Scala and Java. The project aims to provide a unified, high-throughput, low-latency platform for handling real-time data feeds.

The Advantages of using Apache Kafka are as follows-

- **High Throughput-**
  The design of Kafka enables the platform to process messages at very fast speed. The processing rates in Kafka can exceed beyond 100k/seconds. The data is processed in a partitioned and ordered fashion.
- **Scalability-**
  The scalability can be achieved in Kafka at various levels. Multiple producers can write to the same topic. Topics can be partitioned. Consumers can be grouped to consume individual partitions.
- **Fault Tolerance-**
  Kafka is a distributed architecture which means there are several nodes running together to serve the cluster. Topics inside Kafka are replicated. Users can choose the number of replicas for each topic to be safe in case of a node failure. Node failure in cluster wonâ™t impact. Integration with Zookeeper provides producers and consumers accurate information about the cluster. Internally each

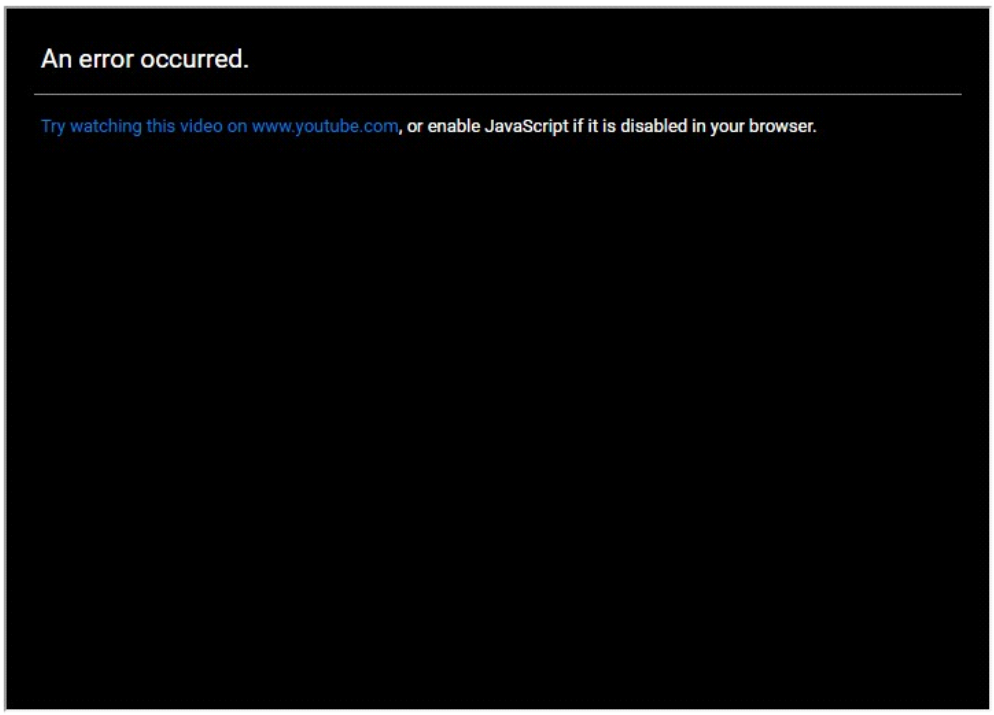
impact. Integration with Zookeeper provides producers and consumers accurate information about the cluster. Internally each topic has its own leader which takes care of the writes. Failure of node ensures new leader election.

- **Durability-**

  Kafka offers data durability as well. The message written in Kafka can be persisted. The persistence can be configured. This ensures re-processing, if required, can be performed.

Video

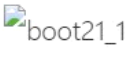
This tutorial is explained in the below Youtube Video.



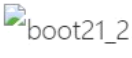
Lets Begin-

Got to the Apache Kafka downloads page and download the https://kafka.apache.org/download the **Scala 2.12 kafka_2.12-**

Got to the Apache Kafka downloads page and download the https://kafka.apache.org/download the **Scala 2.12 kafka_2.12-0.10.2.1.tgz**



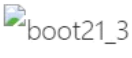
Next unzip it to a particular location-



We will now start Apache Kafka-

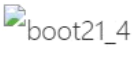
- This Kafka installation comes with an inbuilt zookeeper. Zookeeper is mainly used to track status of nodes present in Kafka cluster and also to keep track of Kafka topics, messages, etc.
  Open a command prompt and **start the Zookeeper-**

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\zookeeper-serve
```



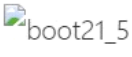
- Open a new command prompt and **start the Apache Kafka-**

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\kafka-server-st
```



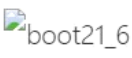
- Open a new command prompt and **create a topic with name javainuse-topic, that has only one partition & one replica.**

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\kafka-topics.ba
```



- Next Open a new command prompt and **create a producer to send message to the above created javainuse-topic and send a message - Hello World Javainuse to it-**

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\kafka-console-p
Hello World Javainuse
```



- Finally Open a new command prompt and **start the consumer which listens to the topic javainuse-topic we just created above**. We will get the message we had sent using the producer

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\kafka-console-c
```

```
C:\kafka_2.12-0.10.2.1>.\bin\windows\kafka-console-c
```

See Also

Spring Boot + Apache Kafka Example
Spring Boot Tutorial-Spring Data JPA
Spring Boot + Simple Security Configuration
Pagination using Spring Boot Simple Example
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- Understand Drools Stateful vs Stateless Knowledge Session
- JBoss Drools- Understanding Drools Decision Table using Simple Example

See Also

- Spring Batch Interview Questions
- Spring AOP Interview Questions
- Angular 2 Interview Questions
- Apache Camel Interview Questions
- JBoss Fuse Interview Questions
- Drools Interview Questions
- Java 8 Interview Questions
- Spring Cloud Interview Questions

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- Mule ESB frequently asked interview questions
- Apache Kafka Interview Questions
- Tosca Testing Tool Interview Questions
- Top Maven Build Tool Interview Questions
- Top Gradle Build Tool Interview Questions
- Top Cosmos DB Interview Questions
- Miscellaneous Topics

Kafka Tech Talk - Integration with Kafka Connect

Wednesday, August 30, 2023 11:12 AM

Meeting Date: 8/30/2023 8:00 AM
Location: Microsoft Teams Meeting
Link to Outlook Item: *click here*
Invitation Message
Participants

Notes

Decoupling: When to use a broker like SAP Event Mesh – integration://excellence – The blog of Whitepaper InterfaceDesign

Clipped from: https://www.integration-excellence.com/decoupling-when-to-use-a-broker-like-sap-event-mesh/

We often hear "we need a messaging broker to be able to decouple applications". Moving away from Point-To-Point-Integration is really great to remove the dependencies between systems. But what does decoupling (or loose coupling) mean and which dimensions does it bring?

Here´s an overview (for more check out this video from AWS re:invent by Gregor Hohpe):

Decoupling	Runtime (async messaging)	Data Format (XML, JSON, ...)	Data Structure (Address)
Broker (e.g. SAP Event Mesh)	X		
API-M (e.g. SAP API Management)		(X)	(X)
ESB (e.g. SAP Cloud Integration)	X	X	X

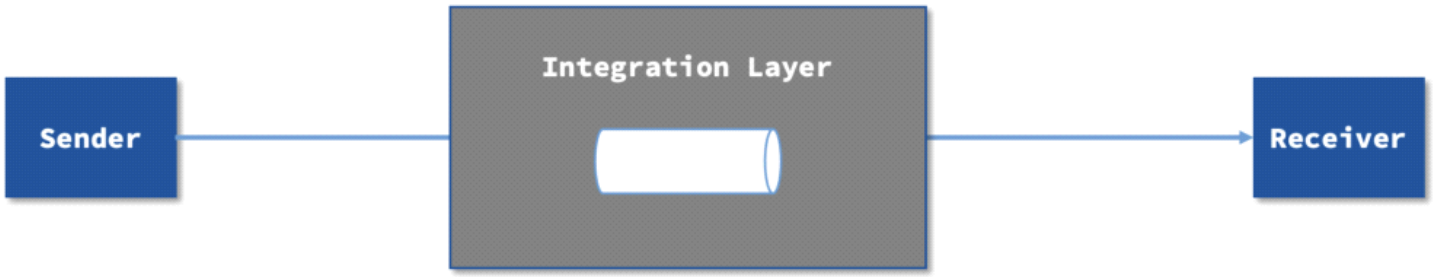
Decoupling dimensions

Among all different types of dependencies we look at the most important ones:

- **Runtime** dependencies can be solved with asynchronous messaging, where the sender (system) can submit a message to the middleware and this is independent from the availability of the receiver.
- **Data Format** dependencies, where both systems have to speak the same technical language (XML/JSON/CSV/…). The decoupling takes place via converters. In API-M this can be solved with policies.
- **Data Structure** dependencies look at structural, technical and semantic differences of the fields and elements, which can include
    - the structure and arrangement of field names in a message (e.g. ZipCode vs. ZIP),
    - the data type behind a field (e.g. string/int, null/empty),
    - the semantic content of a field, e.g. the country code (DE vs. GER) The decoupling done with mappings like XSLT (for XML) or scripting/programming or via graphical mapping tools. In API-M it can be also done via policies, but we would not recommend that way.

Going further in this article, let´s even combine Data Format and Data Structure into Message Format (for simplification). SAP calls this "aligned APIs", when sender and receiver speak the same language and where no mediation is required through a middleware (which is performing transformations, message mappings and even protocol switch).

A broker is **decoupling runtime dependencies** through this pattern:

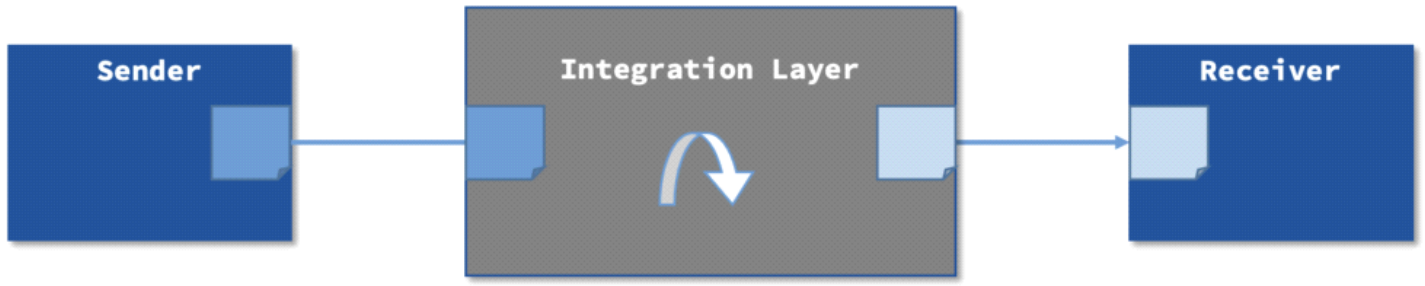


Runtime Decoupling

There are many brokers available in the market, from our experience we see mainly those below, who serve this main purpose, but have different implementation approaches of course. They typically handle (only) protocols like AMQP, MQTT or plain HTTP. Messages are being exchanged through topics and/or queues and sometimes work with Webhooks (to push messages to consumers).

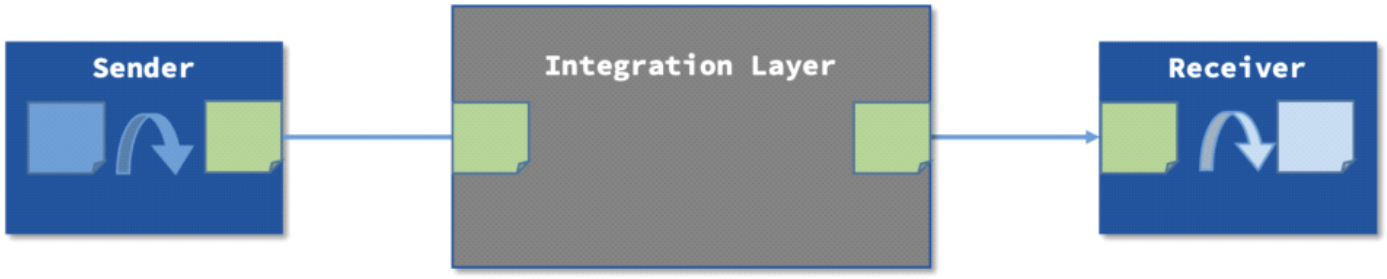
- Rabbit MQ
- Kafka (Confluent)
- Solace
- SAP Event Mesh, SAP Advanced Event Mesh (technology: Solace)
- Microsoft Service Bus
- AWS SQS

An ESB is **decoupling Message Format dependencies** through this pattern:



Message Format decoupling

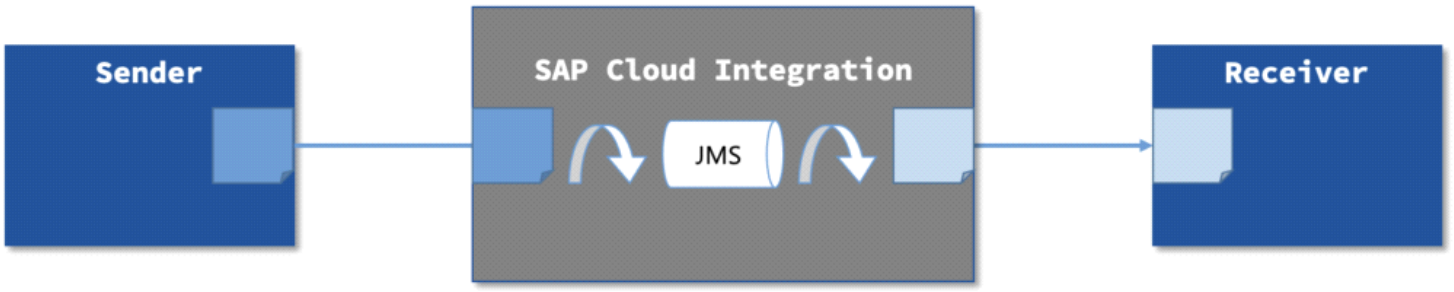
The main focus is to transform messages from one format to another. One can argue, this is creating a lot of "mediated point-to-point" integrations (which is true), but what is the alternative? Mediation here brings transparency and a clear approach to map the 2 different message formats. Solving this with a canonical data model, where all applications speak the same language is a nice theory, but the reality is hard: Each application has to map to this canonical data model with its own programming technique (which is rarely better)… In the end, connecting the dots (aligned message formats) through API Management or decoupled through a broker brings a mediated point-to-point landscape as well (at least from a connectivity point of view)!



Message Mapping in the applications

Actually **SAP Cloud Integration**, as an ESB, can decouple in all areas.

- There are standard transformers and converters to support Data Format Decoupling (JSON <-> XML <-> CSV), Zip/Unzip, Decode/Encode and Data Structure Decoupling (XSLT Mappings, Groovy/JavaScript Mappings, (graphical) Message Mappings in a low-code fashion.
- What many people forget: SAP Cloud Integration can also decouple the runtime through queuing mechanisms like JMS or Data Store. For more information on queuing check out this article. The JMS-Queuing feature is technically based on SAP Event Mesh, which is a white-label product of Solace!



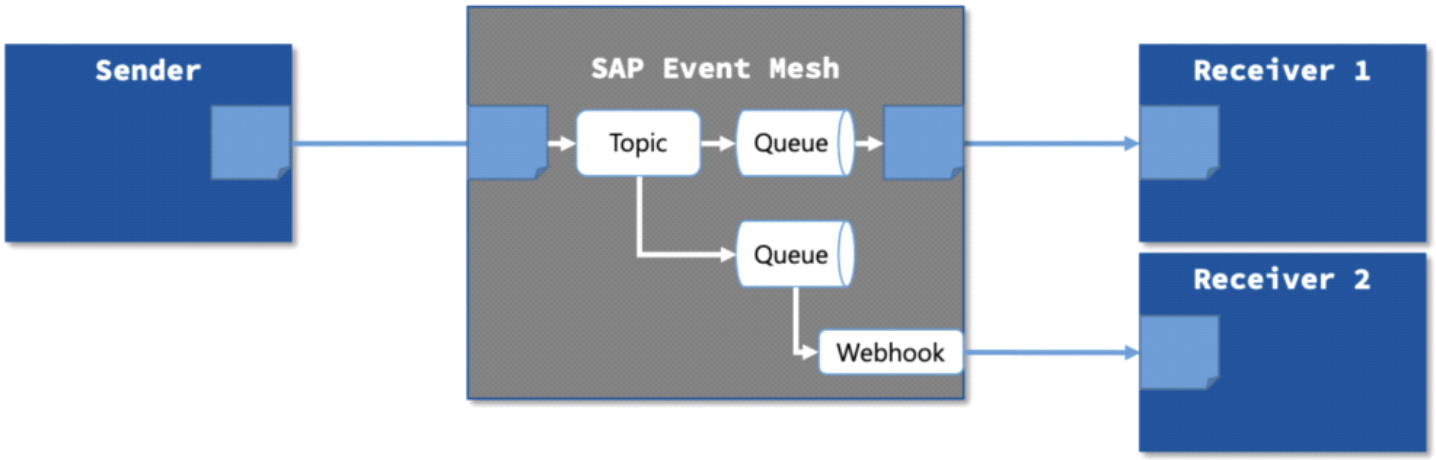
Runtime and Message Format Decoupling with SAP Cloud Integration

Do I still need a Broker?

SAP Event Mesh can connect directly with event consumers or producers through AMQP, MQTT, JMS or HTTP, such as SAP S/4HANA, where a lot of events are available meanwhile (see SAP API Business Hub), so there is a natural fit. But choosing a broker in all asynchronous messaging depends on the use case.

PubSub

The typical integration pattern is PubSub (Publish & Subscribe). You can easily configure a connection between different event producers and event consumers through topics and queues (or Webhooks where needed). This makes sense, if you dispatch the same event (message) to different receivers. However, please keep in mind, that you can send messages to multiple receivers as well by configuring this in a low-code environment.



PubSub with SAP Event Mesh

Replay

Another aspect is a replay capability which is available with brokers like Kafka, Solace or SAP Advanced Event Mesh. You can go back e.g. 2 days and replay all messages that were processed through a particular topic or queue (typically for one receiver only).

Additional Aspects

Brokers for Event-Driven Architectures serve the purpose of handling large volumes (but with a limited message size) in a scalable, low-latency way to decouple and ensure reliable messaging.

All of this can be achieved with SAP Cloud Integration, but with a higher price tag. SAP Cloud Integration is depending on the amount of messages (and volume: 1 message = 256 KB, so 1 MB = 4 messages), whereas SAP

Event Mesh is licensed by bandwith in GB. The calculation (and comparison) can be done in the SAP discovery center.

When do you need a broker then of you have an ESB already?

- If your event producer/consumer speaks natively with a broker (e.g. via AMQP/MQTT)
- If you need a distribution model to multiple receivers and you want to implement a PubSub pattern
- If you need replay capabilities
- If you need to ensure FIFO (First-In-First-Out)/EOIO (Exactly-Once-In-Order) which is not (yet) available in SAP Cloud Integration
- For high-volume messaging (large volumes with high throughput, e.g. in IoT-scenarios or custom-developed mobile apps to process small messages from sensors or real-time analytics and eventing)

Conclusion

You can achieve all aspects of decoupling with an ESB/iPaaS like **SAP Cloud Integration**. You might consider brokers like **SAP Event Mesh** for transparency reasons using PubSub when integrating multiple receivers or when you have the need for replay capabilites (SAP Advanced Event Mesh, Solace, Kafka). You can also use it, when you have event producers like SAP S/4HANA who can connect to your broker via AMQP/MQTT natively.

Please consider there are scenarios, where both components make sense (e.g. SAP Cloud Integration together with SAP Event Mesh (via AMQP-Adapter) or Kafka (via Kafka-Adapter)) and you can use the best of the 2 components together.

Event-driven architecture – now available for SAP ECC users | SAP Blogs

Friday, April 21, 2023 6:35 PM

Clipped from: https://blogs.sap.com/2020/07/01/event-driven-architecture-now-available-for-sap-ecc-users/

Overview

Wikipedia defines an event as a "significant change in state". If for example a Material Master is being updated, other processes in other systems need to be informed. This whole journey of generating the event, channeling and processing is called Event-driven architecture (EDA).

According to industry analysts, customers and user group feedback, event-driven architecture is already an important topic and will most likely become even more central in the future. As an example I still remember the last DSAG annual meeting in Mannheim (sitting in the keynote together with 1000nds of people…), listening to the great Keynote from Steffen Pietsch (in German only, from 0:32:00 on).

Event-driven architecture with SAP

In the last couple of years, SAP has put a lot of effort into providing holistic support for EDA, just to mention a few highlights:

One missing – but important – stakeholder was the group of the SAP ECC customers. To let this group also participate on event-driven architecture we just released the ABAP Add-On **SAP NetWeaver, add-on for event enablement**. This Add-On works as an SDK, customers will be able to enable objects with just a few clicks, generating their own content (events). Of course the events generated in an SAP ECC System will follow the same standard (https://cloudevents.io/) as events coming from an S/4HANA System.

What is the benefit, especially for SAP ECC customers?

Event-driven architecture in general is offering a lot of advantages like decoupling or the avoiding of polling. With this new Add-On, SAP ECC customers particularly, will be able to leverage SAP Cloud Platform as an extension platform even more – as now the event-centric pattern is also supported in addition to REST / OData via SAP Gateway. In combination with SAP S/4HANA this will open up some great new opportunities:

- In order to serialize activities during the SAP S/4HANA Migration, it is now easier to port existing event-driven extensions from SAP ECC to SAP Cloud Platform. A guide on the general topic of side-by-side extensions is available here
- This will bring back your SAP ECC System closer to the standard – and

this will then reduce complexity during the migration to SAP S/4HANA
- As SAP S/4HANA already supports events, the switch to SAP S/4HANA will be easy – if you already designed the cloud extension with the SAP S/4HANA Events and OData services accordingly.

Several missions are available showing in more detail on how to extend an S/4HANA System based on event-driven architecture (e.g https://discovery-center.cloud.sap/#/missiondetail/3156/3192). We are currently working on the same scenario – only using an SAP ECC system instead of an S/4HANA system.

Summary

The Add-On **SAP NetWeaver, add-on for event enablement** (ASANWEE) is available for NetWeaver 7.31 and higher (Documentation) and is based on an ABAP Add-On from the partner company ASAPIO (https://www.asapio.com/en/index.html), but adapted for the usage with the SAP Cloud Platform.

2020 – Dec 22nd – Update:

2021 – June 1st – Update

SAP Event Mesh - Learning Series

Tuesday, April 25, 2023 12:00 PM

[SAP Event Mesh]
SAP Developers

https://developers.sap.com/tutorials/cp-enterprisemessaging-learn-messaging-concepts.html

Learn about SAP Event Mesh | Tutorials for SAP Developers

Tuesday, April 25, 2023 12:02 PM

Clipped from: https://developers.sap.com/tutorials/cp-enterprisemessaging-learn-messaging-concepts.html

Learn about SAP Event Mesh

Beginner 10 min. SAP Event Mesh, Beginner, Tutorial, Java, SAP Business Technology Platform, Node.js

Learn about SAP Event Mesh, central concepts, and the benefits of decoupled communication and capabilities supported.

You will learn

- What the SAP Event Mesh service is
- What you can do with SAP Event Mesh
- Messaging protocols and libraries
- Basic messaging concepts

PRADEEP PANDA March 4, 2022 Created by November 12, 2019 Contributors

Prerequisites

- Start Developing on SAP Business Technology Platform

Open all Close all

STEP 1

What is the SAP Event Mesh service?

SAP Event Mesh is a fully-managed service to connect applications, services, and systems so they can interact with each other through messages and events.

It replaces traditional point-to-point communication by introducing a central message broker. While point-to-point communication is fine for sharing data between a limited number of senders and receivers, scalability can quickly become an issue. SAP Event Mesh solves this issue and ensures messages can be exchanged reliably between senders and multiple receivers at large scale.

In addition, through the introduction of a message broker, you decouple communication between applications, services, and

Mesh solves this issue and ensures messages can be exchanged reliably between senders and multiple receivers at large scale.

In addition, through the introduction of a message broker, you decouple communication between applications, services, and systems so that messages can be sent asynchronously (non-blocking). Asynchronous communication improves performance and scalability since senders are not slowed down or blocked while they wait for individual receivers to be online to receive direct messages.

Since SAP Event Mesh is responsible for message delivery, senders do not need to know which applications, services or systems will receive what data.

- Sending applications are not slowed down by waiting for a non-critical response from receivers that might be offline and unable to receive and respond to a message as it is published.
- Receiving applications can subscribe to messages of business importance and ensure to receive all relevant updates and can consume these messages at their own pace.

What communication options does SAP Business Technology Platform offer to connect applications, services and systems?

- [ ] Messages
- [ ] RFC Calls
- [ ] Events
- [ ] API Calls

Log in to complete tutorial

Check answer

STEP 2

Use cases

STEP 3

Protocols and libraries

STEP 4

Messaging concepts

1. Step 1: What is the SAP Event Mesh service?
2. Step 2: Use cases
3. Step 3: Protocols and libraries
4. Step 4: Messaging concepts

Back to Top

Turn your ERP into a Team Player: Introducing SAP Integration Suite, advanced event mesh | SAP Blogs

Friday, April 28, 2023 4:38 PM

Clipped from: https://blogs.sap.com/2022/10/28/turn-your-erp-into-a-team-player-introducing-sap-integration-suite-advanced-event-mesh/

How team sports explain Event-Driven Architecture

Have you experienced these moments when you hear a single sentence – and this sentence sums up things better than anything you could have come up with? That moment in respect to event-driven architecture took place on Tuesday for me.

I had been presenting to an American Fortune 500 customer on SAP Integration Suite, advanced event mesh and I had come up with this new slide wrapping up the advantages of event-driven architecture, comparing an EDA to team sports.

This comparison is in the end quite obvious since soccer players for example act loosely coupled while always knowing what is going on around them (situational awareness is the buzzword here) and ideally notifying each other in real time about their plans and actions.

In order to win, players need to act as a team. And in order to act as a team, they need situational awareness. You can replace soccer with your favourite team sport here – ice hockey, basketball, football, rugby. You pick. It's the same story. It is about situational awareness and teamwork. Talent wins games, teamwork wins championships.

Now transfer this to your SAP landscape – wouldn't it be great if your SAP S/4HANA system could inform your SAP Business Technology Platform and your SAP ECC system in real time of changes that are important? Of significant changes? Or even beyond your SAP landscape, if your SAP S/4HANA system would inform your Microsoft Teams of significant changes in real time.

My customer did this transfer in almost real time and worded it close to

perfect: **I want my ERP to be a team player!**

I simply love this sentence. It sums things up so well.

Let's make the next step: what do you need for that? In order to turn your ERP into a team player, you need an event-enabled backend, suitable event consumers and you need the appropriate infrastructure to transport and distribute your events: an event broker or event mesh.

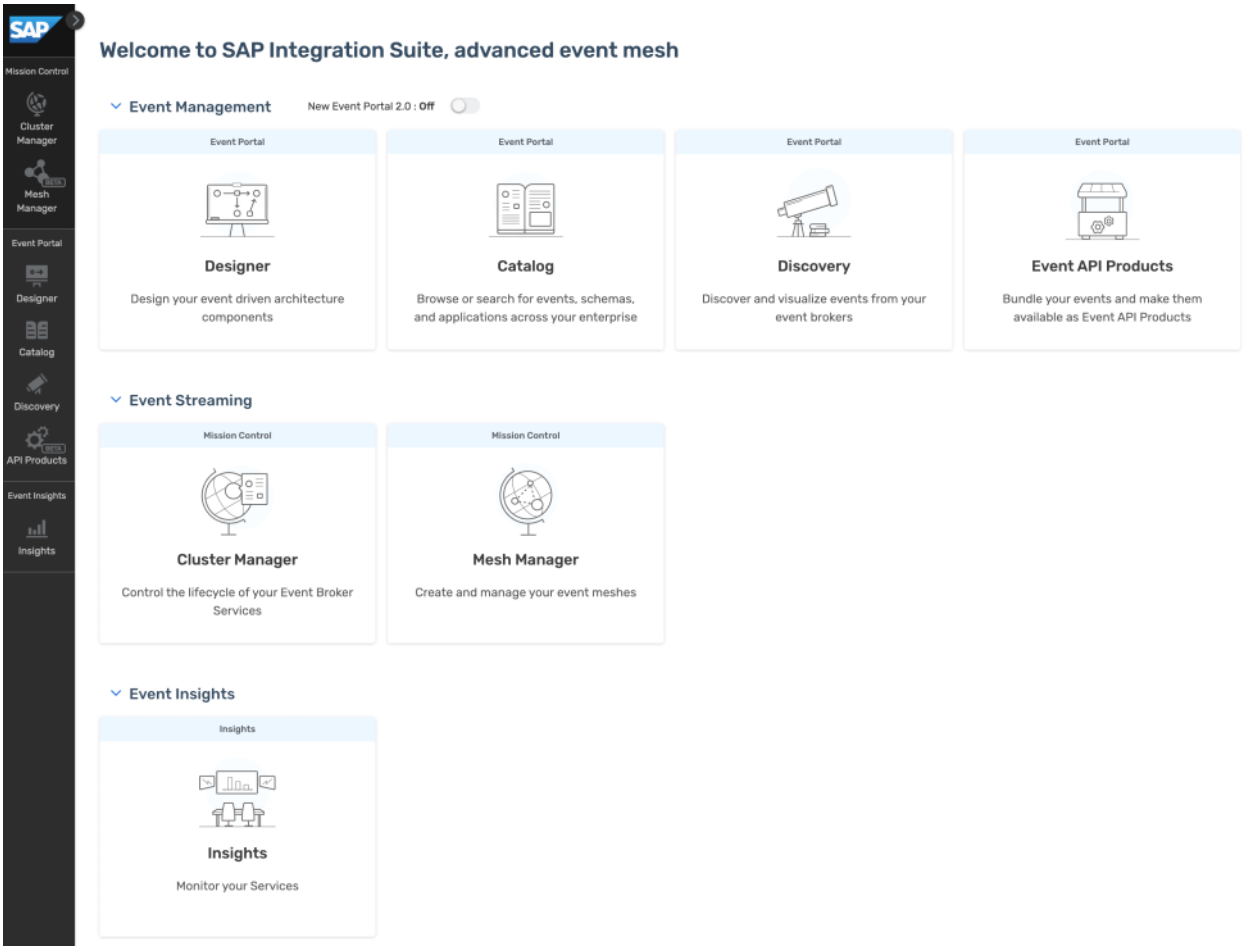
So far SAP Event Mesh has been SAP's single offering in this space. Lately, beginning of August 2022 to be exact, we have added SAP Integration Suite, advanced event mesh to our portfolio. Advanced Event Mesh complements SAP Event Mesh for more demanding scenarios and offers a highly sophisticated feature set perfectly suited for the SAP Event-Driven Ecosystem and beyond.

SAP Integration Suite, advanced event mesh

SAP Integration Suite, advanced event mesh is a fully managed event streaming and management service that enables enterprise-wide and enterprise-grade event-driven architecture.

What is Advanced Event Mesh?

- Advanced Event Mesh is a distributed mesh of event brokers that can be deployed across environments, both in the cloud and on-premise
- It offers a full purpose set of eventing services covering all relevant use cases
- AEM supports event streaming, event management and event monitoring
- Brokers fully scale as required and come in T-shirt sizes to perfectly fit different needs

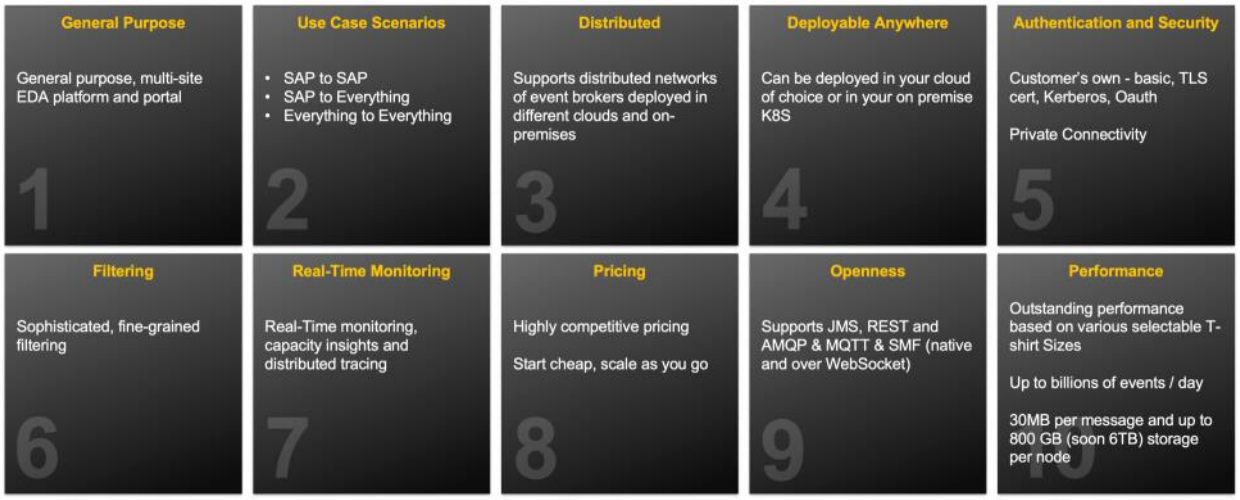


Advanced Event Mesh Cockpit

What features and benefits does AEM offer?

- AEM offers enterprise-grade performance, reliability, security and governance.
- It scales to very large use cases – and very means very very very in this case. On the other hand, you can start small, if needed, as well.
- SAP Integration Suite, advanced event mesh offers deployment options across different hyperscalers and in private cloud environments. All it takes is a Kubernetes environment.
- AEM can be configured to form a distributed mesh of event brokers. Events can flow across the mesh to be consumed where desired.
- It includes a sophisticated toolset to address tasks like cluster management, mesh management and monitoring/tracing.
- SAP Integration Suite integrates with SAP backends via different options

SAP Integration Suite, advanced event mesh in ten short statements



SAP Integration Suite, advanced event mesh

1. is a general purpose, multi-site EDA platform and portal
2. allows for SAP to SAP, SAP to Everything and Everything to Everything scenarios
3. supports distributed networks of event brokers deployed in different clouds and on-premises
4. can be deployed in your cloud of choice or in your on premises K8S
5. provides sophisticated authentication and security features like Kerberos, OAuth or TLS
6. offers fine-grained filtering options
7. allows for real-time monitoring, capacity insights and distributed tracing
8. provides support for all relevant protocols like JMS, REST, AMQP and MQTT, plus SMF.
9. allows to start small and upgrade to bigger T-shirt sizes when your business grows
10. provides an outstanding performance up to billions of events per day

Think Event Network!

You can think of Advanced Event Mesh as an event network. It is ideal for real-time high availability use cases: event distribution, event-driven integration, event-driven extensions of business applications, microservices and real time applications.

Advanced Event Mesh is a highly valuable addition to SAP's event-driven ecosystem and will allow you to target globally distributed, high load event-driven use cases complementing SAP Event Mesh for more demanding

scenarios.

Additional Information on AEM and SAP's Event-Driven Ecosystem

For additional information on SAP Integration Suite, advanced event mesh and SAP's Event-Driven Ecosystem check out the following blogs:

SAP Integration Suite, advanced event mesh vis-a-vis SAP Event Mesh and SAP Integration Suite

SAP's Event-Driven Ecosystem Revisited

There are two sessions at TechEd 2022 that can help you to get started with SAP Integration Suite, advanced event mesh:

Experience Event-Driven Integrations Hands-On with SAP Integration Suite (IN261)

and

Discover Event-Driven Integration with SAP Integration Suite (IN103)

[Blog Post] SAP Event Mesh – Enable SAP Cloud Integration Suite to Consume Messages from SAP Event Mesh Service | SAP Blogs

Clipped from: https://blogs.sap.com/2022/06/14/blog-post-enable-sap-cloud-integration-suite-to-consume-messages-from-sap-event-mesh-service/

Authors: Vipul Khullar & Ayush Kumar

Previous blog posts in this series:

Introduction

In the previous blog posts, we saw how we can communicate between different CAP-based microservices using the SAP Event Mesh service to achieve true asynchronous communication and how the CAP framework facilitates the same.

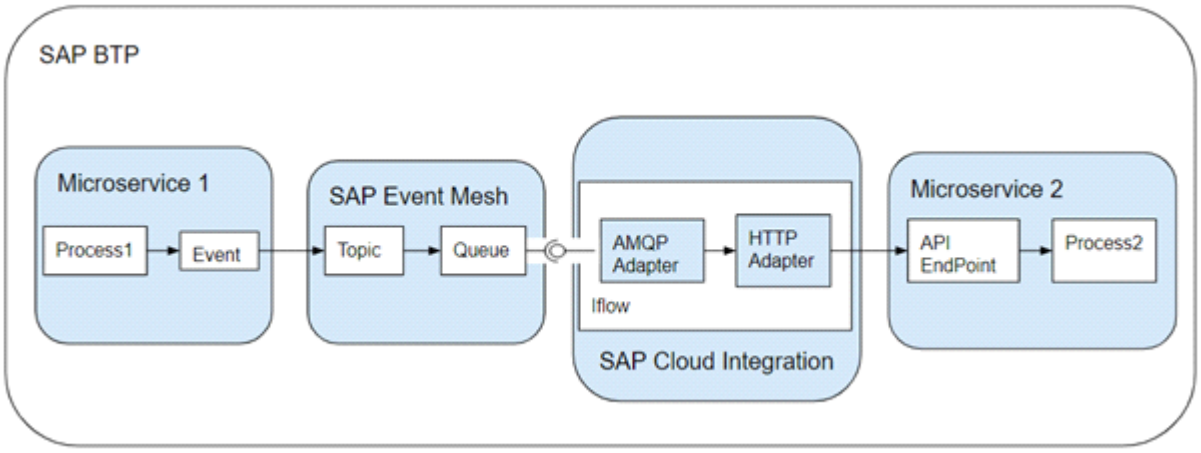
In this blog post, we will try to achieve the same by leveraging SAP Cloud Integration Suite by acting as a middleware between the two microservices, which will be useful, especially in cases where specific event handling is not desired within the 2nd microservice (communication is intended via API only).

Prerequisites:

To execute the following scenario, you need.

- BTP account (trial account would also work).
- Event Mesh subscription for your subaccount.
- Service key for the Event Mesh instance.
- Cloud Integration Suite subscription for your subaccount.
- Local Setup for CAP JAVA (if you already have a CAP application initialized upgrade the CDS service version to 1.22.1 or higher, else you might face runtime errors complaining about bean error).

Scenario:



Architecture Diagram for Event Mesh-based Communication Between two microservices via SAP Integration Suite

In this scenario, we have created two CAP-based microservices on BTP and we have tried to set up an event-based communication between the services with the help of Event Mesh and SAP Cloud Integration Suite. We have tried to leverage the AMQP adaptor in cloud integration flow to listen to the event raised by the first microservice and then leveraged the API endpoint in 2nd microservice to replicate the data to the same.

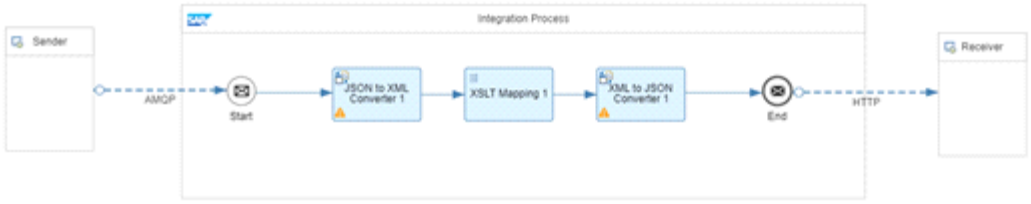
Steps in SAP Event Mesh:

- Open the SAP Event Mesh Message Client UI.
- Select your instance (Message Client).
- Create a queue with any name of your choice.
    - Note: you can use the default queue as well which is generated by the CAP Application at run time.

Note: For demo purposes, we will use the queue name as emDataMappingQueue and subscribe to the same topic as used in the previous blogs.

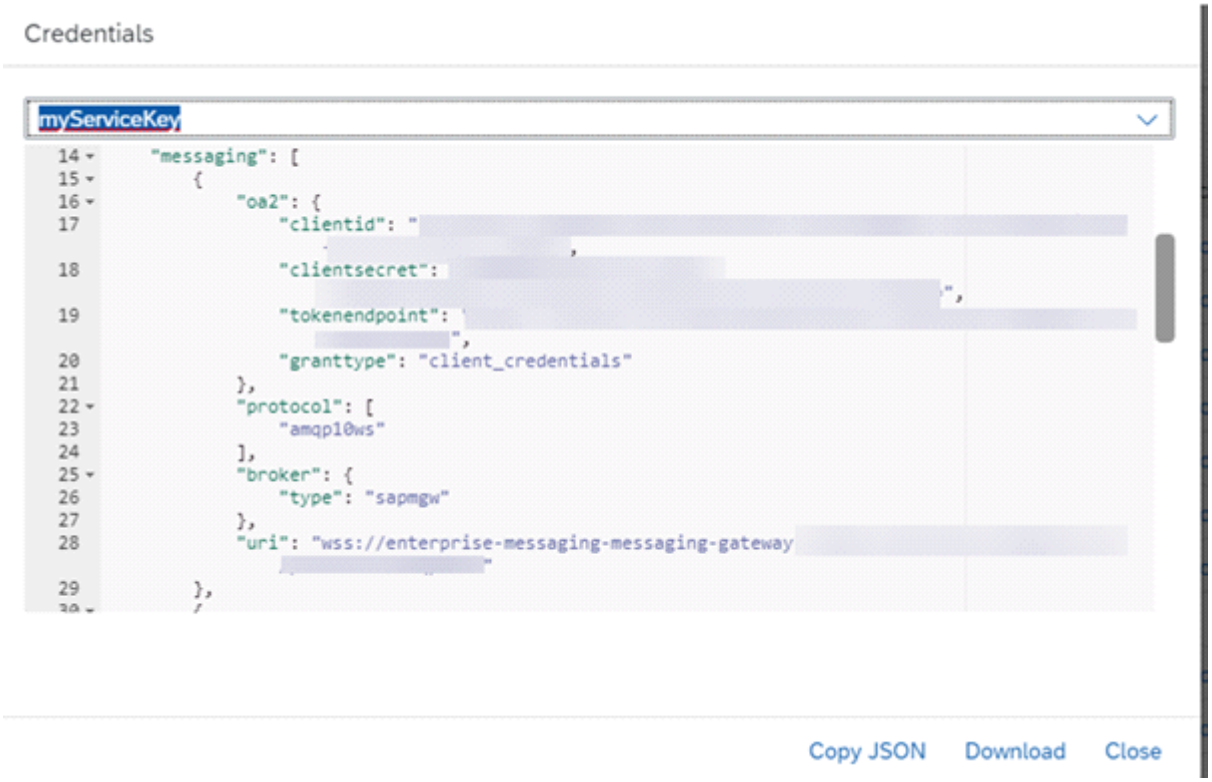
- Now run the **event-producer** application which we have created in the previous blog. In the Event Mesh UI now you will see the messages are incremented in both the queues that are the CAP-created queue and the queue created by us.

Steps in SAP Cloud Integration:



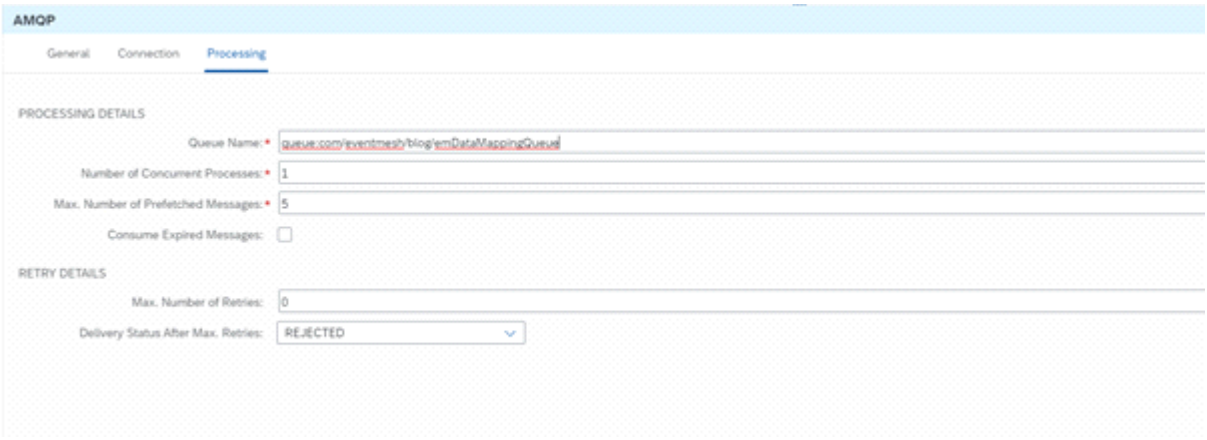
Integration Flow

- Open the SAP Cloud Integration Suite and navigate to security material. Create an oAuth2.0 client Credentials using the SAP Event Mesh instance key created in the previous blogs. (We will use this credential configuration to connect to the Event Mesh)
- Create a new artifact.
- Now connect the sender to the start using AMQP->WebSocket adapter.
- Now again open the key and under the AMQP section, you will find all the values which are required to configure AMQP.



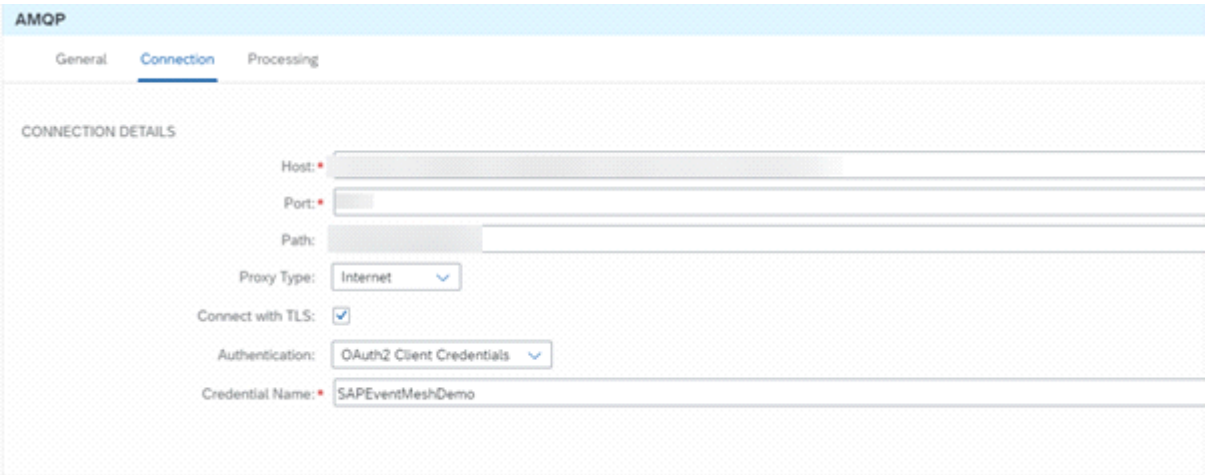
Event Mesh Instance Service Key

In the Processing section:



Event Mesh Configuration in Cloud Integration Flow – Processing Section

In the Connection Section:

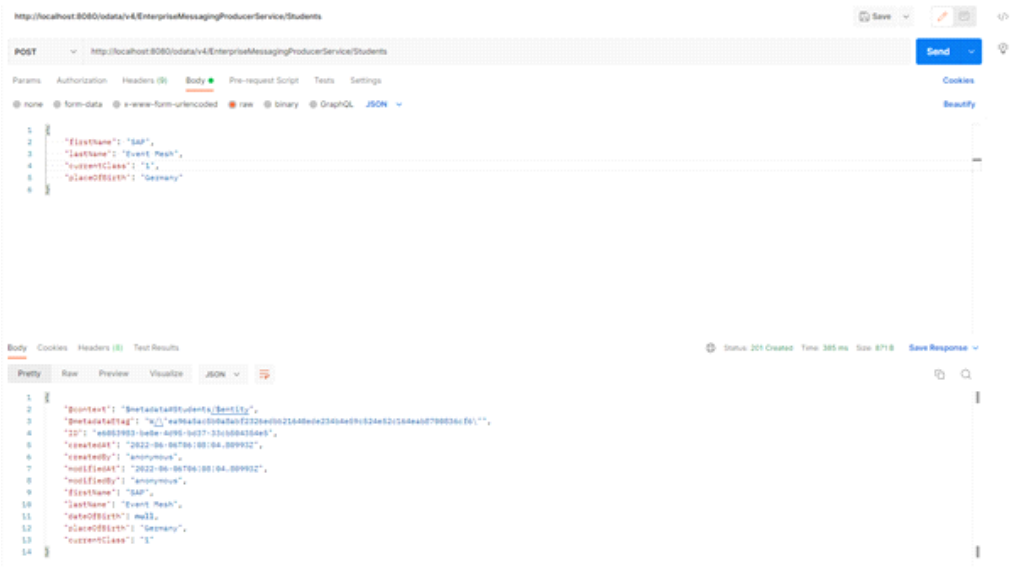


Event Mesh Configuration in Cloud Integration Flow – Connection Section

- Create an XSLT mapping to change the data in the format expected by the consumer.

Input:

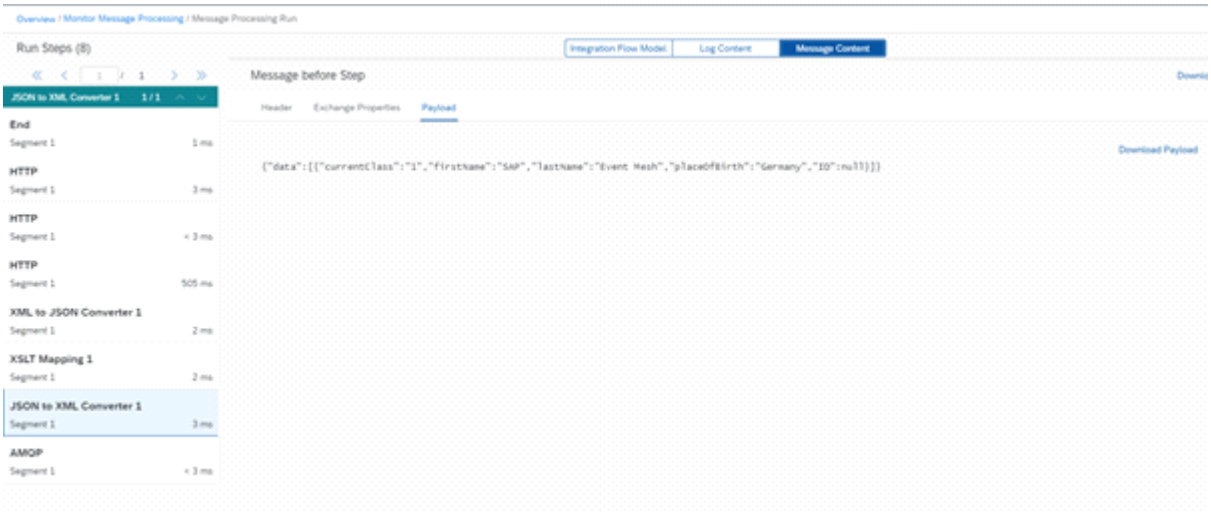
Now run the Event Producer application and create a post request to post student details as done in the previous blog post.



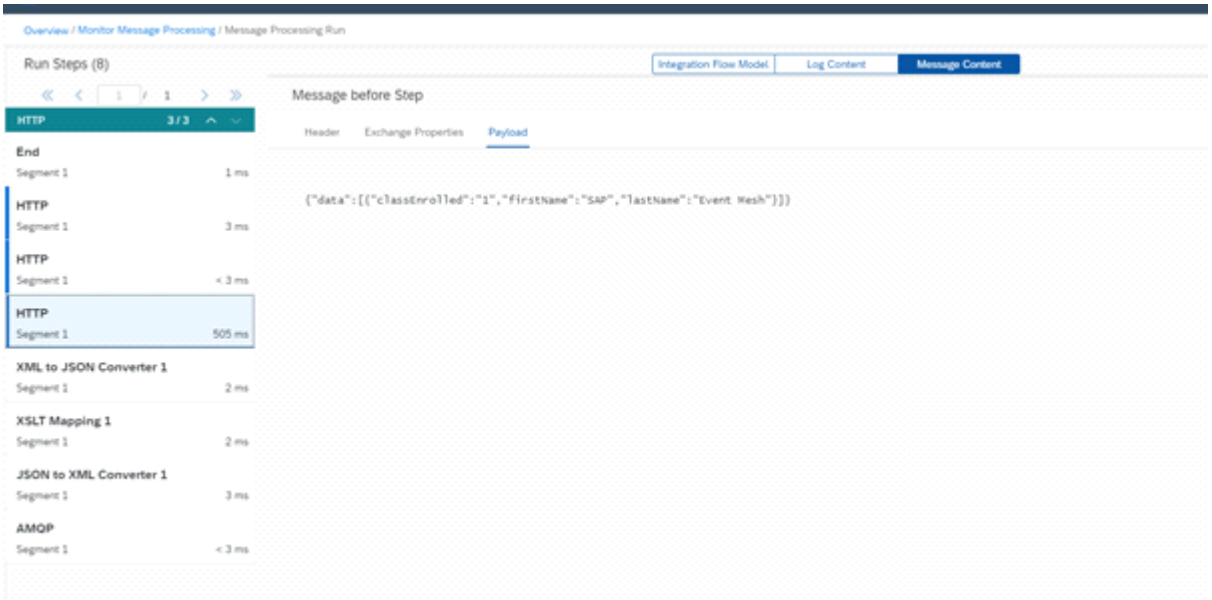
Post Request to Create a Student Record

Output:

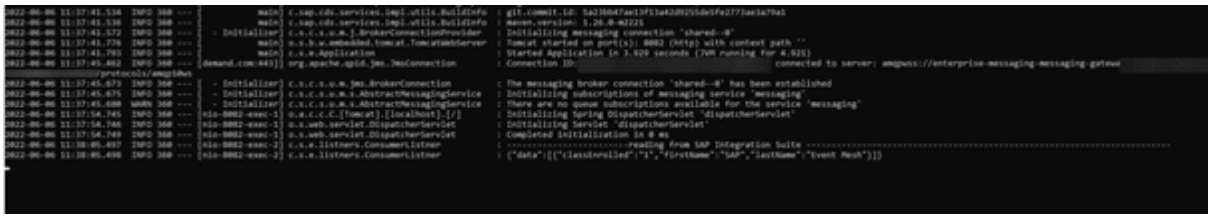
Now, let’s check the trace corresponding to the event raised, in Cloud Integration Suite.



Incoming Event Payload



Payload After Mapping to the New Data model



Reading Consumer Microservice After Update

We observe that now the data has been mapped according to the consumer microservice which can now consume this information without knowing the data model of the event producer.

Conclusion: In this blog post, we presented a use case where we can enable multiple microservices which may or may not have similar data models to communicate with each other without having to modify anything within the microservices. We achieved this with the help of SAP Event Mesh and SAP Cloud Integration Suite.

In the next few blog posts, we will cover how we can raise and consume business events from an SAP S/4HANA system using SAP Event Mesh and how we can consume them in SAP Cloud Integration Suite or any other application on BTP.

Please do like the blog post if you find the content helpful. Also, do share your comments and inputs, if any.

Next blog post in the series: [Blog Post] SAP Event Mesh – S/4HANA On

Premise integration with Event Mesh | SAP Blogs

[Blog Series] SAP Event Mesh – Deep Dive | SAP Blogs

Wednesday, May 3, 2023 11:43 AM

Clipped from: https://blogs.sap.com/2022/05/16/blog-series-sap-event-mesh-deep-dive/

Authors: Ayush Kumar & Vipul Khullar

Introduction:

Hi all, for the past couple of months me and my team are working on the SAP Event Mesh service to decouple our SAP BTP-based solution from tight integration with other SAP products/services. Through the course of our implementation of the SAP Event Mesh service, we learned quite a lot. Hence we would like to share those findings with others as well. To help other developers/customers get an understanding of various concepts involved in SAP Event Mesh service, we are starting with a series comprising of multiple technical how-to-guides. Since we are planning to publish multiple blog posts on the same topic, it's good to have a single reference for all the content we publish.

Main Content:

SAP Event Mesh is a fully managed cloud service on the **SAP Business Technology Platform** that allows asynchronous communication between different systems with the help of business events. This allows greater agility and scalability when you create responsive applications that work independently and participate in event-driven business processes across your business ecosystem.

Topics that we plan to cover as part of this series are as follows:

1. [Blog Post] SAP Event Mesh – Event-Driven Architecture Explained: In this blog post we have tried to explain event-driven architecture, its use cases, and how the SAP Event Mesh service in BTP facilitates event-driven architecture.
2. [Blog Post] SAP Event Mesh – Single Tenancy & Multi-Tenancy Explained: In this blog post we have explained the concept of single tenancy and multi-tenancy and a rest Based implementation for the same.
3. [Blog Post] SAP Event Mesh – CAP based implementation of SAP Event Mesh in a Single-Tenant Scenario | SAP Blogs: In this blog post we have explained a scenario where we have tried to set up an event-based communication between two CAP-based microservices with the help of Event Mesh.
4. [Blog Post] Enable SAP Cloud Integration Suite to Consume Messages from SAP Event Mesh Service | SAP Blogs: In this blog post, we will try to achieve event-based communication by leveraging SAP Cloud

Integration Suite by acting as a middleware between the two microservices, which will be useful, especially in cases where specific event handling is not desired within the 2nd microservice (communication is intended via API only).

5. [Blog Post] SAP Event Mesh – S/4HANA On-Premise integration with Event Mesh: In this post, we have explained on how to setup S4HANA for communication to SAP Event Mesh.
   Event-Based Communication from SAP S/4HANA to Event Mesh.
6. [Blog Post] SAP Event Mesh – Consuming S4 events simultaneously in CAP-based applications and SAP Integration Suite: In this blog post, we have presented a use case where different sets of systems need to listen to the same events via different channels.
7. Error Handling Scenarios.

Conclusion:

This blog post is just heads-up information on what you can expect from this blog series.

We will try to keep this page up to date with all the links as and when they are available, if not please refer to the bottom space of every subsequent blog post to find the reference link for the next blog.

Let us know in the comments if you are looking for something apart from the topics already covered or if you have any suggestions/questions related to the topics we plan on covering.

[Blog Post] SAP Event Mesh – Event Driven Architecture Explained | SAP Blogs

Wednesday, May 3, 2023 11:44 AM

Clipped from: https://blogs.sap.com/2022/05/11/sap-event-mesh-event-driven-architecture-explained/

Authors: Vipul Khullar & Ayush Kumar

This is the first blog post in the series SAP Event Mesh – Deep Dive.

Before we deep dive into the technical implementation details of the SAP Event Mesh service, it is paramount to understand the general overview of the event-driven architecture and how SAP Event Mesh in BTP enables the same.

What is Event-Driven Architecture and why should we care about it?

Let's take an example from day-to-day life. You take your car out for a ride and you encounter a signal which is red, what do you do, you apply the brakes and stop the car.
Again when the signal turns green, you put your leg on the accelerator and start moving.

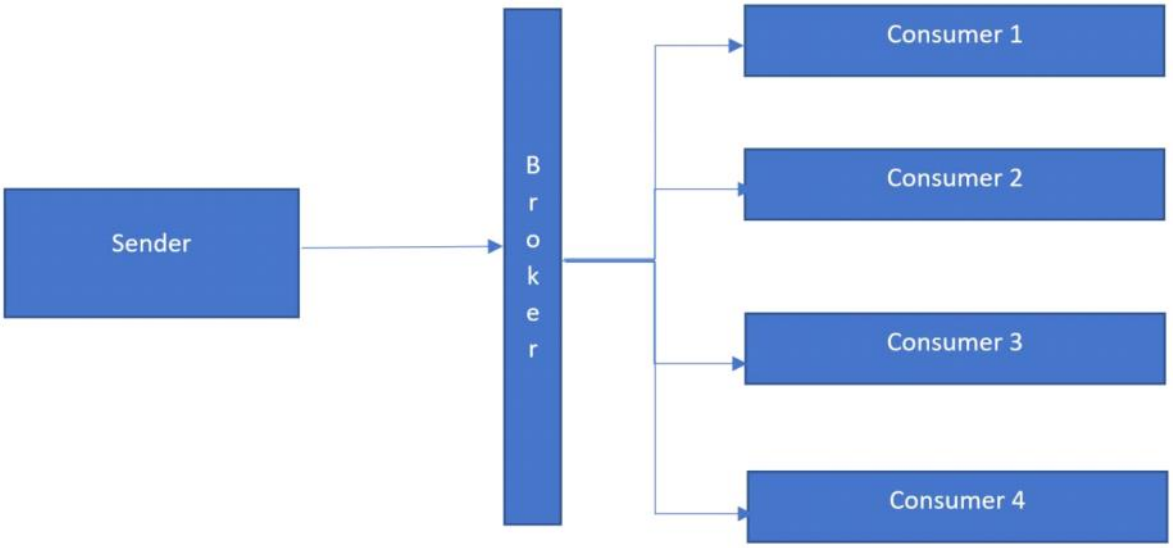
In this example, your actions are dictated based on the signal. Red light is an event signal to stop the car and is similar to a green light to move.

This is the very basic foundation/essence of the event-driven architecture, that is you don't react until and unless an event occurs.

In the current world and the industry requirement, a consumer does not prefer to work with a strongly coupled solution. Event-driven architecture provides us the advantage to decouple our solution and communicate with any system only through events. This means that the systems are no longer required to know each other.

Raising the event is not the same as calling an API because, in an API call, we need to decide the end systems, but the events are just raised and now the **broker** can take care of routing it.

The advantage of such events is that once it is raised it can be consumed by any consumer who wishes to, without requesting it explicitly in real-time.



Event-Driven Architecture

Generic use cases for Event-Driven Architecture are as follows:

1. **Communication between different microservices** – Information can be efficiently shared between independent micro-services without the need for tight coupling.
2. **Data replication between different systems** – Save events (create, change and delete) can be consumed by different services/systems at once.
3. **Parallel processing** – A single event can trigger multiple processes which execute asynchronously.
4. **Resilience via redundancy** – If the consumer service is not available, the data persists with the broker until the service is live again.

How does SAP Event Mesh fit in?

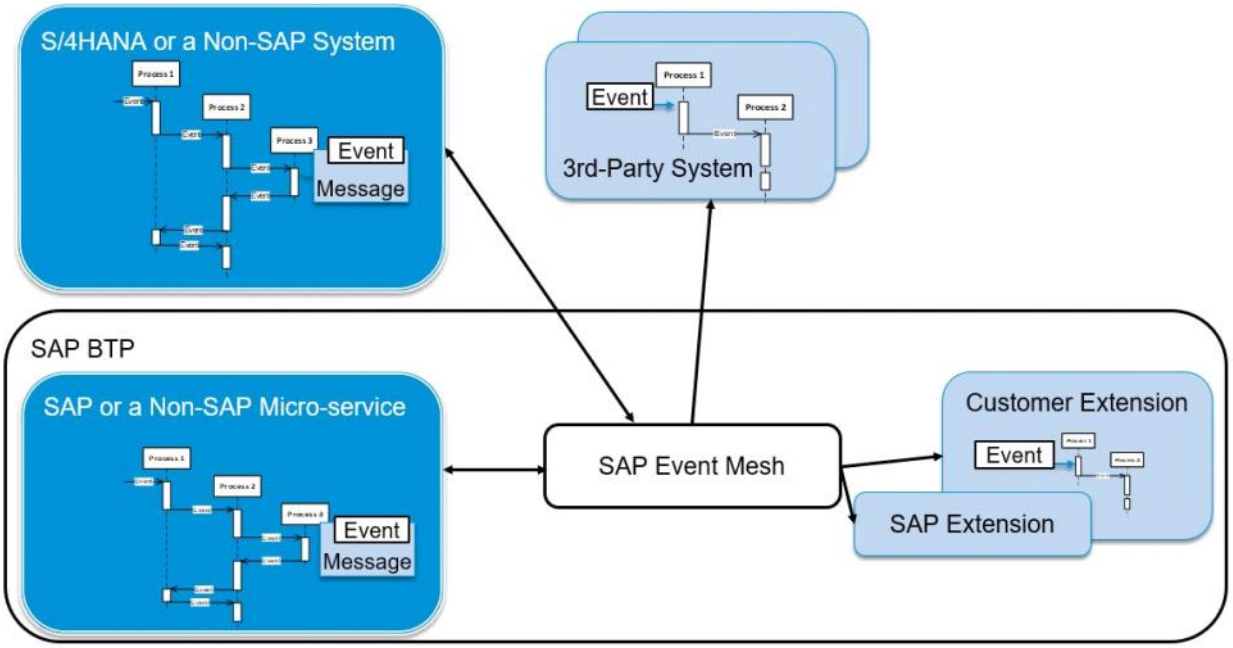
Sap Event Mesh is a fully managed service by SAP that allows you to communicate between different systems, applications, or services using event/messages allowing us to decouple our solutions at different levels/services.
It acts as a central message broker/messaging service which captures the messages when and where the event is raised. Now it's up to the end consumer on how it is going to consume those events. It can be done via SAP Cloud Integration, some Webhooks, CAP-based applications, etc.

Since SAP Event Mesh is responsible for the delivery of the messages, the sender need not worry about the endpoints. Hence, they can perform their functions without worrying about the end systems.

Use SAP Event Mesh to:

- Support **event-driven architectures** and **microservices.**
- **Publish business events f**rom SAP and non-SAP sources across hybrid landscapes from the digital core to extension applications
- Build **event-driven extensions and integrations** and subscribe to events from core SAP systems to enable cloud-native extensions and integrations to respond to the latest business developments in **real-time**

- Part of the **SAP Integration Suite and SAP Extension Suite** to implement extension and integration scenarios in guided and at the same time flexible approaches



SAP Event Mesh Use-Case Architecture

In this blog post, we tried to explain event-driven architecture, its use cases, and how the SAP Event Mesh service in BTP facilitates event-driven architecture.

In the next few blog posts in the series, we will talk in detail about the SAP Event Mesh service in SAP BTP and how it caters to single-tenancy and multi-tenancy scenarios.

Please do like the blog post, if you find the content helpful. Also, do share your comments and inputs, if any.

Next blog post in the series: [[Blog Post] SAP Event Mesh – Single Tenancy & Multi-Tenancy Explained]

[Blog Post] SAP Event Mesh – CAP based implementation of SAP Event Mesh in a Single-Tenant Scenario | SAP Blogs

Wednesday, May 3, 2023 11:45 AM

Clipped from: https://blogs.sap.com/2022/06/06/blog-post-sap-event-mesh-cap-based-implementation-of-sap-event-mesh-in-a-single-tenant-scenario/

Authors: Ayush Kumar & Vipul Khullar

Previous blog post in this series:

Introduction:

In the previous few blog posts, we covered the basic concept and understanding of event-driven architecture, SAP Event Mesh Service, and its rest-based implementation.

In this blog post, we will explore how we can use the CAP framework to abstract ourselves from the underlying implementation thereby simplifying the work for us, unlike what we saw in the rest-based examples in the previous blog post.
There are multiple flavors of Messaging services, but the focus of this blog will be on SAP Event Mesh.

1. Local Messaging
2. File-Based Messaging
3. Real Broker Based [SAP Event Mesh]

It is also possible to use local messaging and file-based messaging in CAP for asynchronous event-based communication. However, as part of this ongoing series, we will only focus on SAP Event Mesh Implementation.

Note:

1. We will showcase all the implementations in a local setup, using the event mesh instance created in the previous blog post and not by deploying to BTP. However, all the steps remain the same even if you deploy to BTP.
2. We plan only to cover the JAVA-based implementation, for Node-based implementation you can refer to SAP Event Mesh: Multitenant Sample Scenario 1 | SAP Blogs

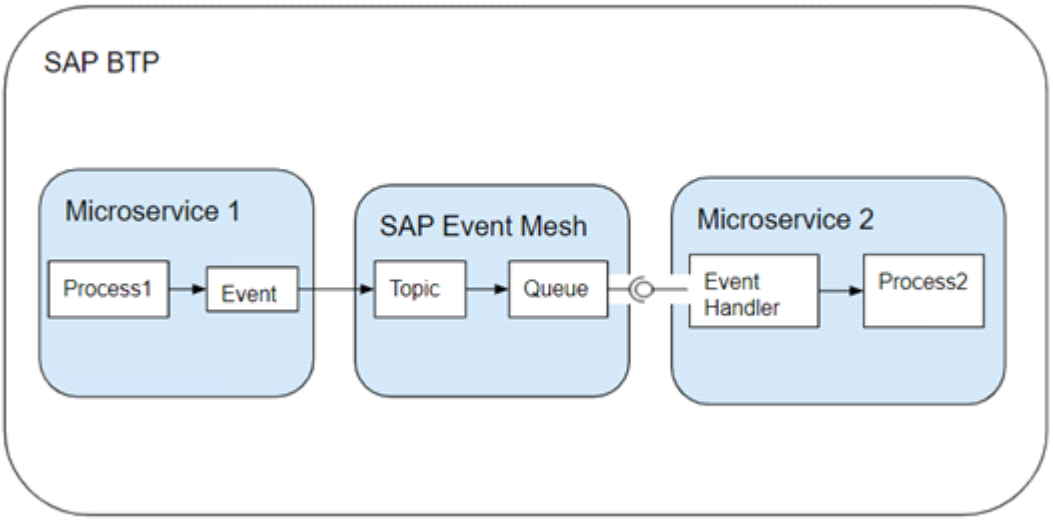
Pre-requisites:

To execute the following scenario, you need.

1. BTP account (trail account would also work).
2. Event Mesh entitlement for your subaccount.

3. Service key for the Event Mesh instance.
4. Local Setup for CAP JAVA (if you already have a CAP application initialized upgrade the CDS service version to **1.22.1** or higher, else you might face runtime errors complaining about bean error).

Scenario:



Architecture Diagram for Event Mesh-based Communication Between Two CAP based Microservices

In this scenario, we have created two CAP-based microservices on BTP and we have tried to set up an event-based communication between the services with the help of Event Mesh. We have tried to leverage the CAP framework in JAVA for the emission and consumption of the event.

Project Setup

- Use the CAP Java Maven archetype to bootstrap a new CAP Java project< capire – Getting Started (cloud.sap)>

```
mvn archetype:generate -DarchetypeArtifactId="cds-services-
archetype" -DarchetypeGroupId="com.sap.cds" -
DarchetypeVersion="RELEASE"
```

This opens an interactive mode to setup your application in terminal/Command Line.

OR

you can download our sample application here.

Note: Your application name need not be the same as ours.

- Navigate to **db** and create a **schema.cds** file

```
namespace sap.capire.enterpriseMessagingProducer;

 using {  cuid, managed } from '@sap/cds/common';

entity student : cuid , managed {

    firstName : localized String(100);
    lastName : localized String(100);
    currentClass : String(10);

}
```

- **Create a <service>.cds file**

```
using { sap.capire.enterpriseMessagingProducer as db}  from
'../db/schema';

service EnterpriseMessagingProducerService {

    entity Students as projection on db.student;

}
```

- **In parent Pom.xml add the dependencies**

```
<dependency>
    <groupId>com.sap.cds</groupId>
    <artifactId>cds-feature-enterprise-messaging</artifactId>
    <scope>runtime</scope>
</dependency>
```

- **Navigate to srv->src->main->resources->application.yaml**

```
cds:
  messaging.services:
    - name: "messaging"
      kind: "enterprise-messaging"
```

If you get a message saying MessagingService bean not found try adding the below snippet in the application.yaml file

```
cds:
  messaging.services:
    messaging-em:
      name: "messaging"
      kind: "enterprise-messaging"
```

```
      publishPrefix: '$namespace/'
      subscribePrefix: '$namespace/'
```

- **Add default-env.json file to simulate binding to the Event Mesh instance in BTP**

```
{
    "VCAP_SERVICES" : {
    "enterprise-messaging": [{
      "label": "enterprise-messaging",
      "credentials":{
        /*  add your service key here*/

      }
    }]
  }
}
```

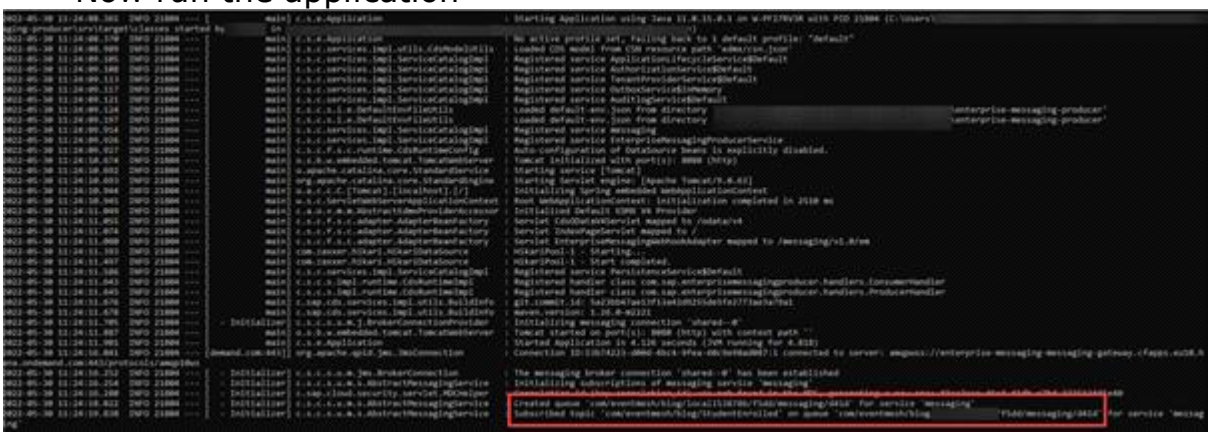
- **Producer Handler.java**

```
package com.sap.enterprisemessagingproducer.handlers;

import java.util.List;

import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.beans.factory.annotation.Qualifier;
import org.springframework.stereotype.Component;

import com.nimbusds.jose.shaded.json.JSONArray;
import com.nimbusds.jose.shaded.json.JSONObject;
import com.sap.cds.services.cds.CdsService;
import com.sap.cds.services.handler.EventHandler;
import com.sap.cds.services.handler.annotations.On;
import com.sap.cds.services.handler.annotations.ServiceName;
import com.sap.cds.services.messaging.MessagingService;

import cds.gen.enterprisemessagingproducerservice.Students;
import cds.gen.sap.capire.enterprisemessagingproducer.Student;

@Component
@ServiceName("EnterpriseMessagingProducerService")
public class ProducerHandler implements EventHandler {

    private static final Logger logger =
LoggerFactory.getLogger(ProducerHandler.class);

    @Autowired
```

```
    @Qualifier("messaging")
    MessagingService messagingService;

    @On(event = CdsService.EVENT_CREATE, entity =
"EnterpriseMessagingProducerService.Students")
    public void produceStudentEnrollementEvent(List<Students>
studentlists) throws Exception {

        JSONObject payload = new JSONObject();

        JSONArray jsonArray = new JSONArray();

        for (Students students : studentlists) {
            JSONObject jsonObject = new JSONObject();

            jsonObject.put(Student.FIRST_NAME,
students.getFirstName());
            jsonObject.put(Student.LAST_NAME, students.getLastName());
            jsonObject.put(Student.CURRENT_CLASS,
students.getCurrentClass());

            jsonArray.add(jsonObject);

        }

        payload.put("data", jsonArray);

        logger.info("Data Emitted to the topic  {}",
payload.toJSONString());
        messagingService.emit("com/eventmesh/blog/StudentEnrolled",
payload);

    }
}
```

Here, we have used a handler to emit events but it is also possible to emit events directly from CDS service layer. You can refer here for more details.

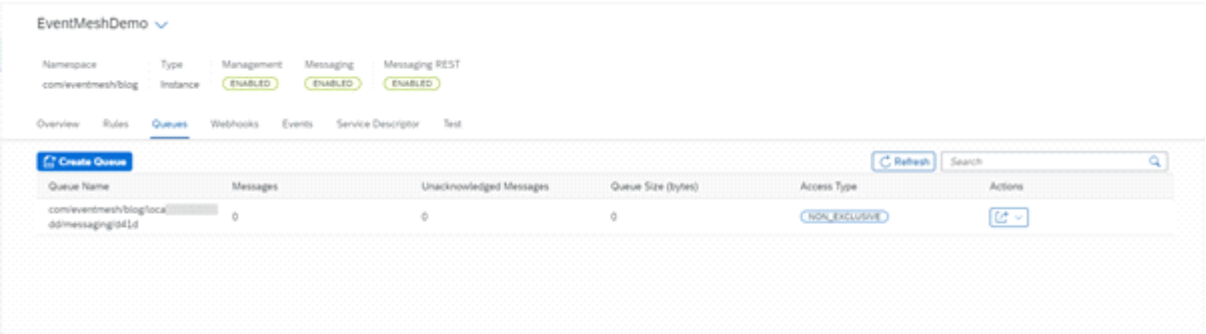
- Now run the application



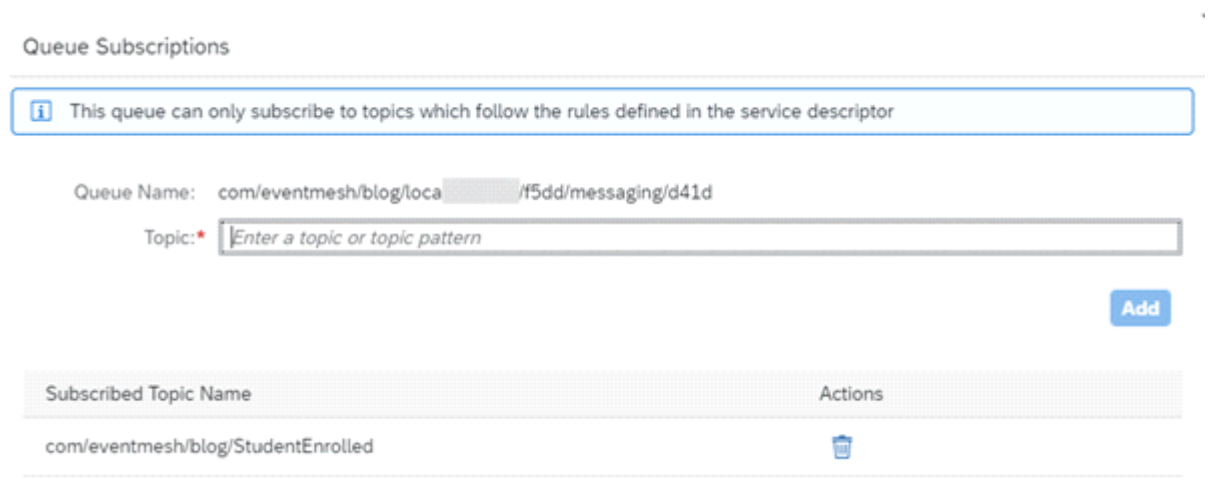
Application Log for CAP Microservice

Observations:

1. If you do not explicitly create a queue and assign a topic to it, then the enterprise-messaging service automatically creates a queue for you and subscribes to the topic implicitly.
2. If you create a queue yourself and refer to it in your application.yaml file no such random queue is created.
3. It will also point out that we are not able to register the queue subscription automatically, the reason being that we did not follow the rules specified by the event mesh service to append the topic/queue names with respective namespaces (**if you don't follow the specified naming structure as described in the previous blog post**).

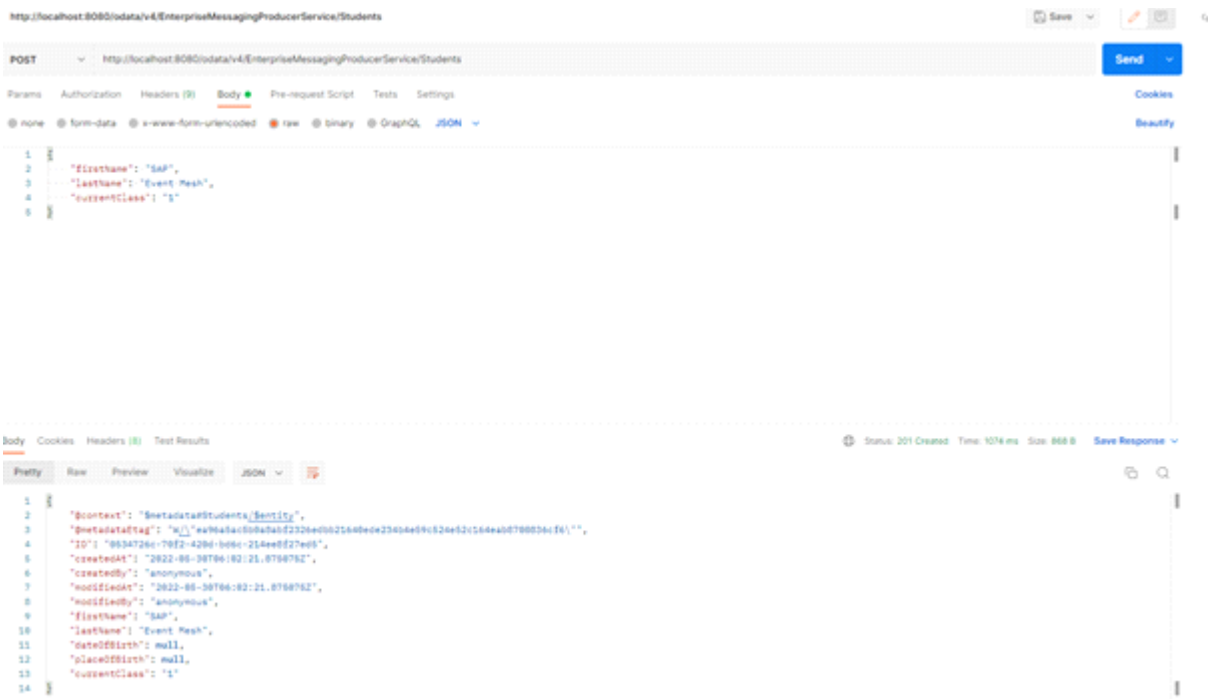


Queue Created in SAP Event Mesh by CAP



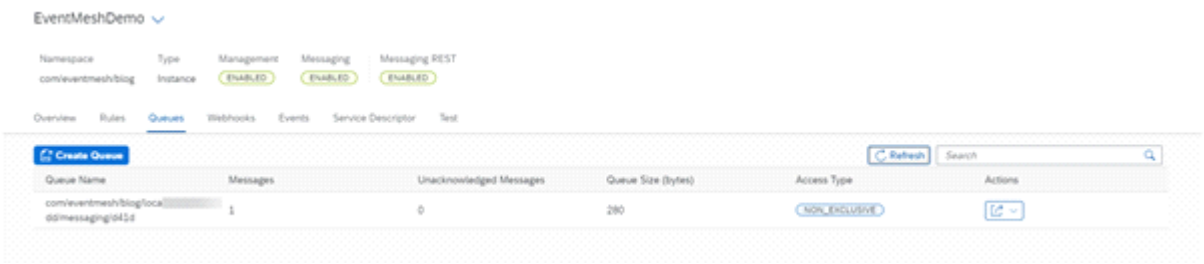
Queue Subscription Created by CAP

Input:

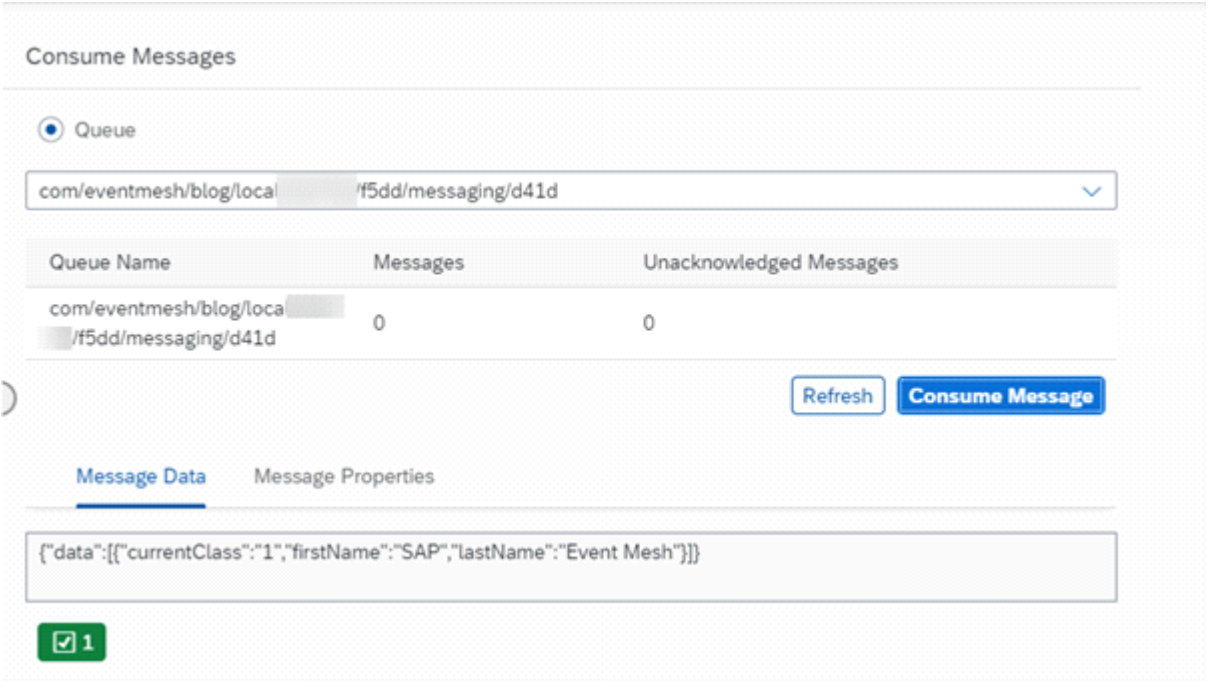


Post Request to Create a Student Record

Output :



Receiving Message from CAP Based Microservice



Reading the Event In SAP Event Mesh UI

Now let's create two consumers one within the same microservice and the other one in a different microservice.

1. For the same microservice you just need to create a new handler/java class.
2. For different microservice we need to follow the same steps as we have followed to create the producer or you can download it from here

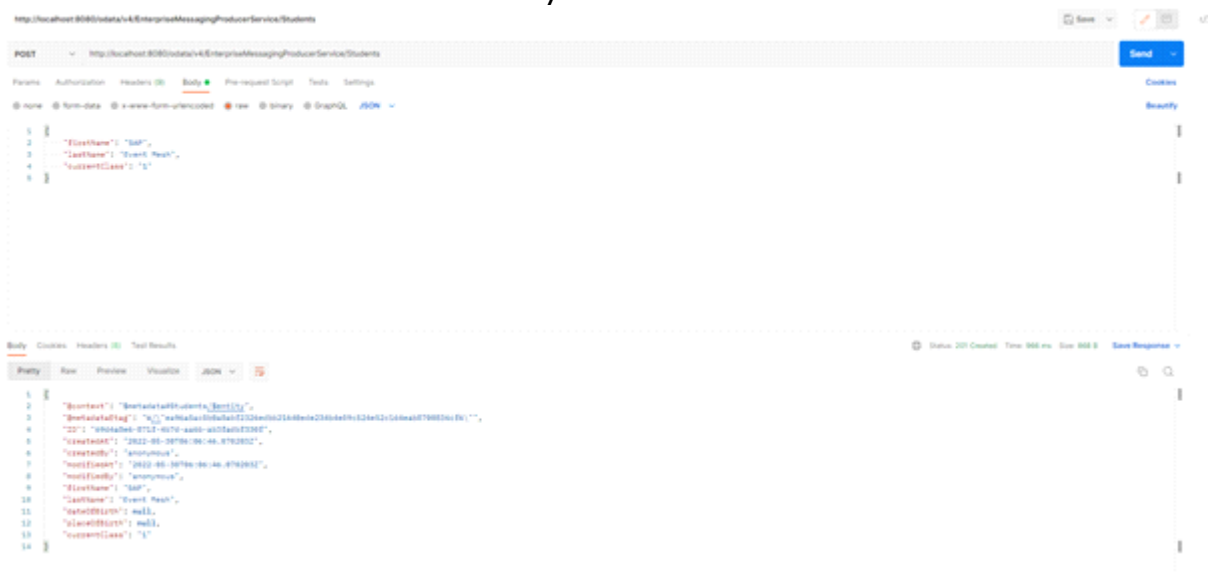
    1. You need to have the same default-env.json as that of the producer to bind it to the same instance.
    2. Now run it on any other port as we will run the first microservice on 8080.

- **Consumer Handler.java**

```
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.stereotype.Component;

import com.sap.cds.services.handler.EventHandler;
import com.sap.cds.services.handler.annotations.On;
import com.sap.cds.services.messaging.TopicMessageEventContext;

@Component
public class ConsumerHandler implements EventHandler{


    private static final Logger logger =
LoggerFactory.getLogger(ConsumerHandler.class);

    @On(service = "messaging", event =
```

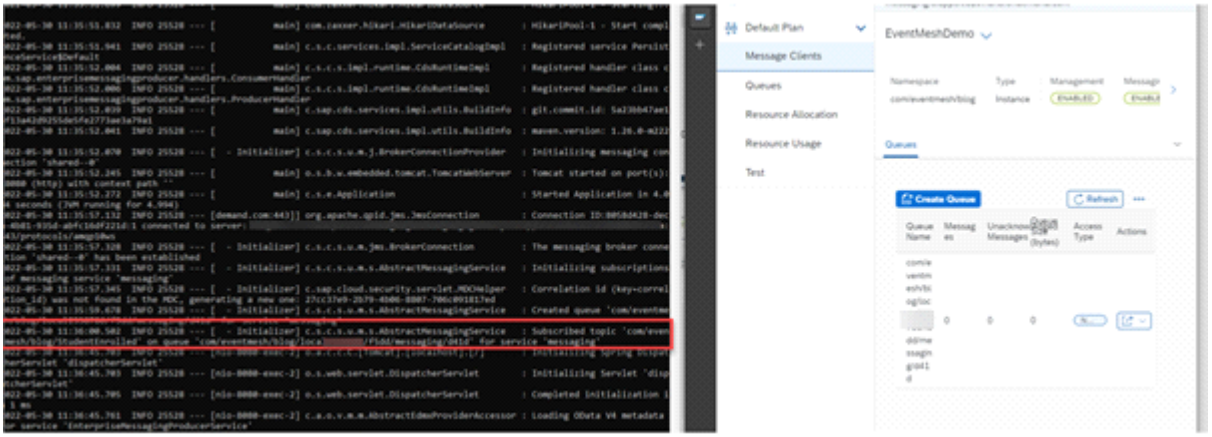
```
"com/eventmesh/blog/StudentEnrolled")
    public void listen(TopicMessageEventContext context) {

        logger.info("--------------------------Reading Payload
Emitted by the
Event-----------------------------------------------------");
         logger.info("checking if the message if read from SAP Event
Mesh
{}",context.getIsInbound());
        logger.info("reading event id{}",context.getMessageId());
        logger.info("reading event data{}", context.getData());
    }

}
```

- **context.getIsInbound** returns true if the message is received from a remote service and not locally.



Creating a New Student Entity in Producer Microservice

Consuming Event in a Different Microservice



Snapshot of the Queue and the Consuming Microservice

If you look at the SAP Event Mesh queue you will see that we have read the message from the queue.
Sometimes it might happen that for a fraction of a second you might see the message count as non-zero but that's because the messages in the queues are waiting for the acknowledgment from your application before it gets removed.

Conclusion:
In this blog post, we have showcased how we can leverage the CAP framework to easily implement SAP Event Mesh Service in our application. It is also important to note that we can use multiple types of messaging services in a single application to perform various operations if required. Also since this series is specifically related to SAP Event Mesh, we did not discuss the working and implementation of other types of messaging services available in CAP. But we will highly encourage you to look at our repository where we have implemented all of them in separate branches.
We also did not look upon the webhook mechanism which can be very useful if we are using any other application apart from CAP to communicate with SAP Event Mesh. Let us know in the comment section if you wish to know more about them then we will take these topics in future blog posts.

In the next few blog posts of this series, we will focus on how we can leverage SAP Integration Suite to establish communication between different microservices.

Next blog in this series: [Blog Post] SAP Event Mesh – Enable SAP Cloud Integration Suite to Consume Messages from SAP Event Mesh Service | SAP Blogs

ESA and AERO Event mesh

Thursday, February 22, 2024 10:43 AM

https://eaton.sharepoint.com/sites/Team_EMEAEHSSharePoint/EMEA%20EHS%20Procedures/EMEA-EHS-PROCEDURE-041-MESH%2010%20EVENT%20REPORTING%20AND%20INVESTIGATION%20rev3.pdf

Adding a New Event Mesh Outbound Message Work Instructions

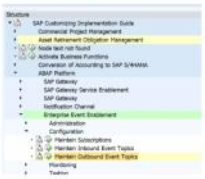
Adding a New Event Mesh Outbound Message Work Instructions

Purpose

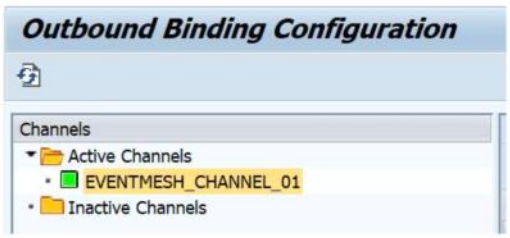
Provide the steps necessary to add a standard event to the SAP Event Mesh service and then consume that message in SAP CPI.

Add the outbound event configuration in S/4

1. Log into the S/4 instance
2. Go to transaction SPRO
3. Execute the maintain outbound event topics configuration item
    a. Path: ABAP Platform→Enterprise Event Enablement→Maintain Outbound Event Topics

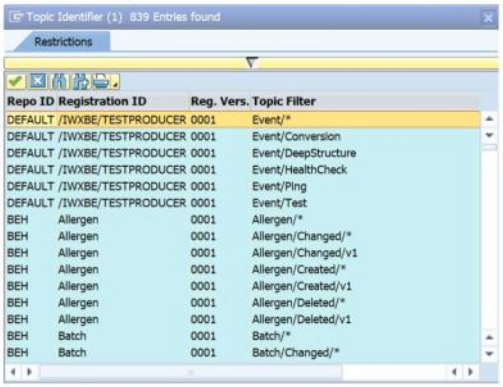


4. Double click the EVENTMESH_CHANNEL_01 active channel

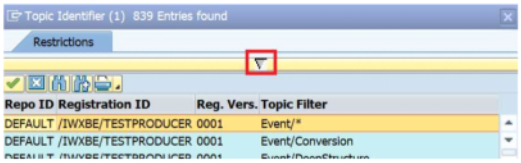


    a.
5. Click the create button
6. Select the topic parameter and then the drop down menu (or press F4)

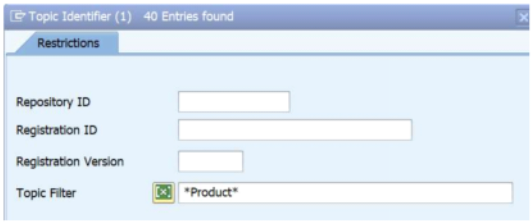
    a. You will be presented with a drop down menu



7. Click the expand selection criteria icon

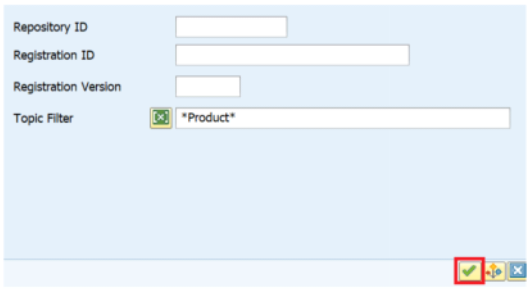


8. In the topic filter enter your logical search criteria

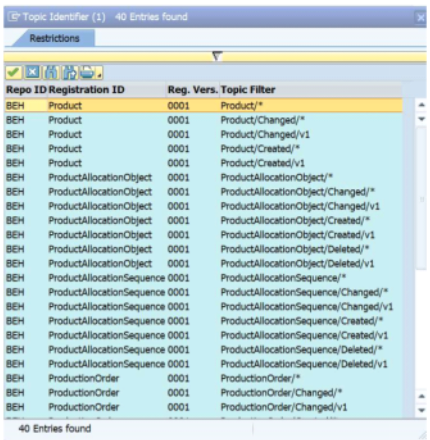


**Hint you can search for events at api.sap.com*

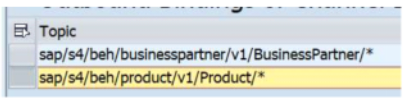
9. Click OK (green checkmark in the bottom right)



10. Double click the event you want to include

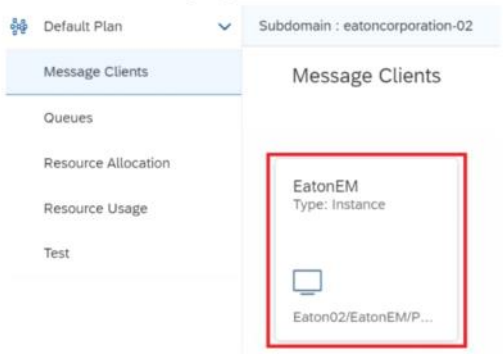


11. Click save
    a. S/4 will now begin sending these events to the configured channel
12. Capture the topic name (you will need this to add the topic to SAP Event Mesh)
    a.

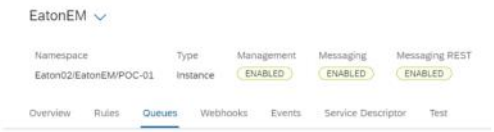


Add the event to a Topic in SAP Event Mesh

1. Connect to the SAP Event Mesh Application
2. Click the EatonEM messaging client

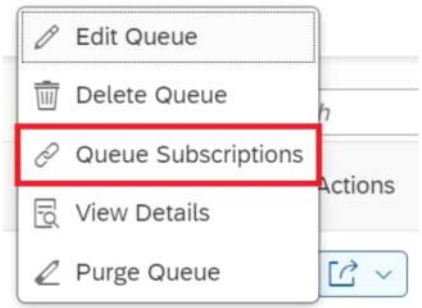


3. Click Queues



4. Select Actions -> Queue Subscriptions
   a.

   b.



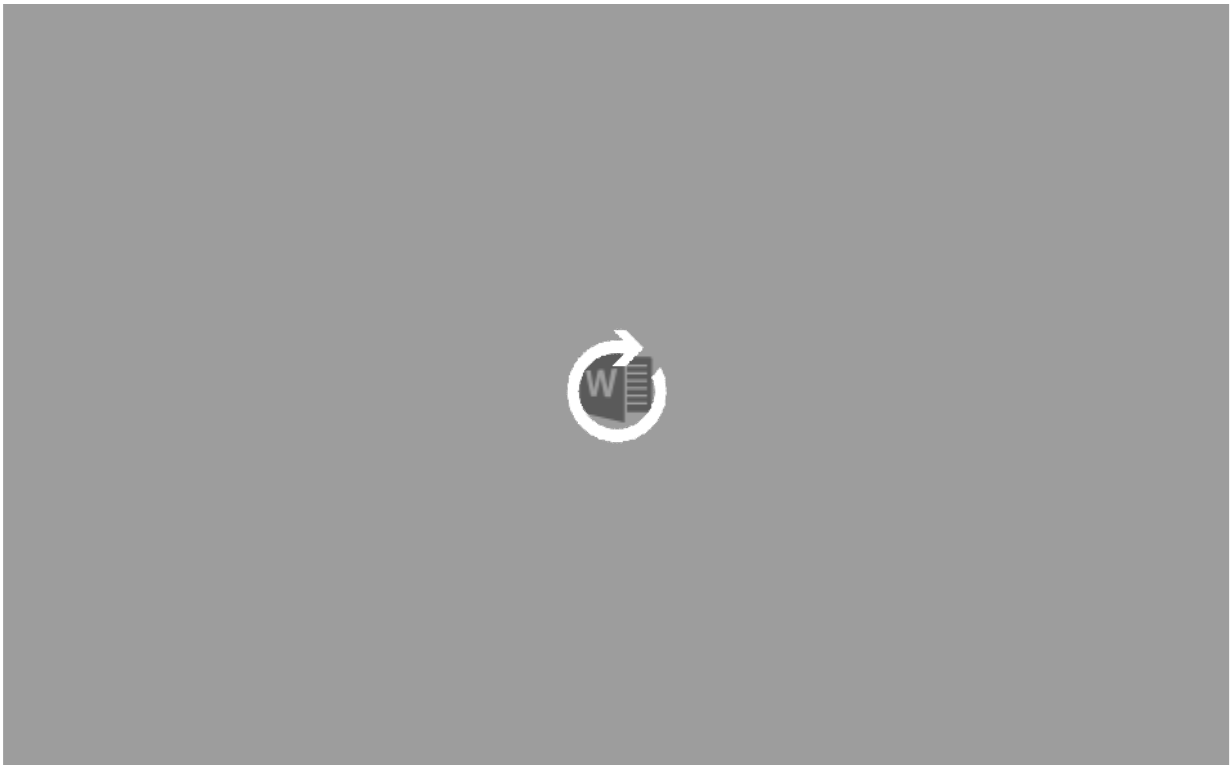
5. Enter the topic name <namespace> + / + S/4 topic name
   a. In this case the namespace is Eaton02/EatonEM/POC-01 (everything up to the final / in the queue name) and the topic name is sap/s4/beh/product/v1/Product/*
   b. So the final topic name is Eaton02/EatonEM/POC-01/ce/sap/s4/beh/products/v1/Product/*
6. Click Add

   a.
7. Click Close
   a. When a product is changed in S/4 we will now see the message incremented in this queue

Event Mesh Channel Configuration

Thursday, February 22, 2024 10:45 AM

Event Mesh Channel Configuration

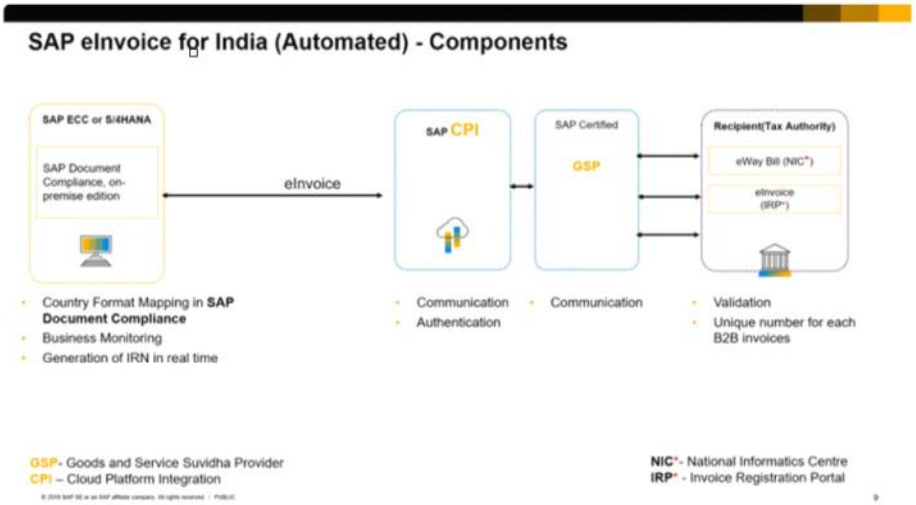


SAP CPI example FS

Friday, February 14, 2020 4:44 PM

FS_FICO_Einvoice im...

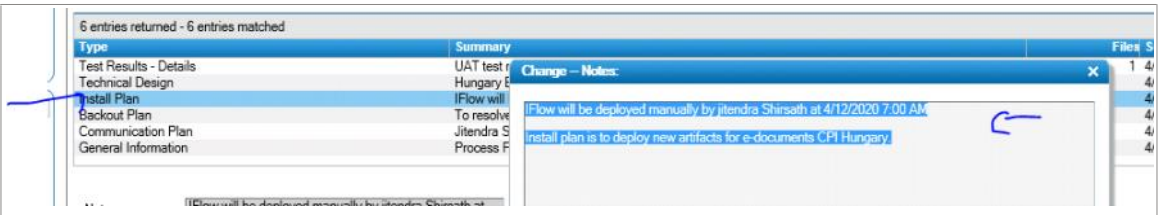
The GST council of India has decided to introduce with centralized issuance of a unique number (Invoice Reference Number) and a QR code for each B2B invoice on reporting of invoice data to a central portal with effective mandate date from 1st April 2020 for tax payers having turnover of INR 100 Cr and above. As per the automated solution provided by SAP below will be the setup of the data flow. The invoices will be get available in the E-document cockpit in ECC and once submit will flow to SAP CPI then to a SAP certified GSP (GST Suvidha provider) and then to the IRP (Invoice Registration Portal). The IRN number and the QR code will be generated in the IRP portal and communicated back through the same flow to the SAP ERP system.



SAP CPI course

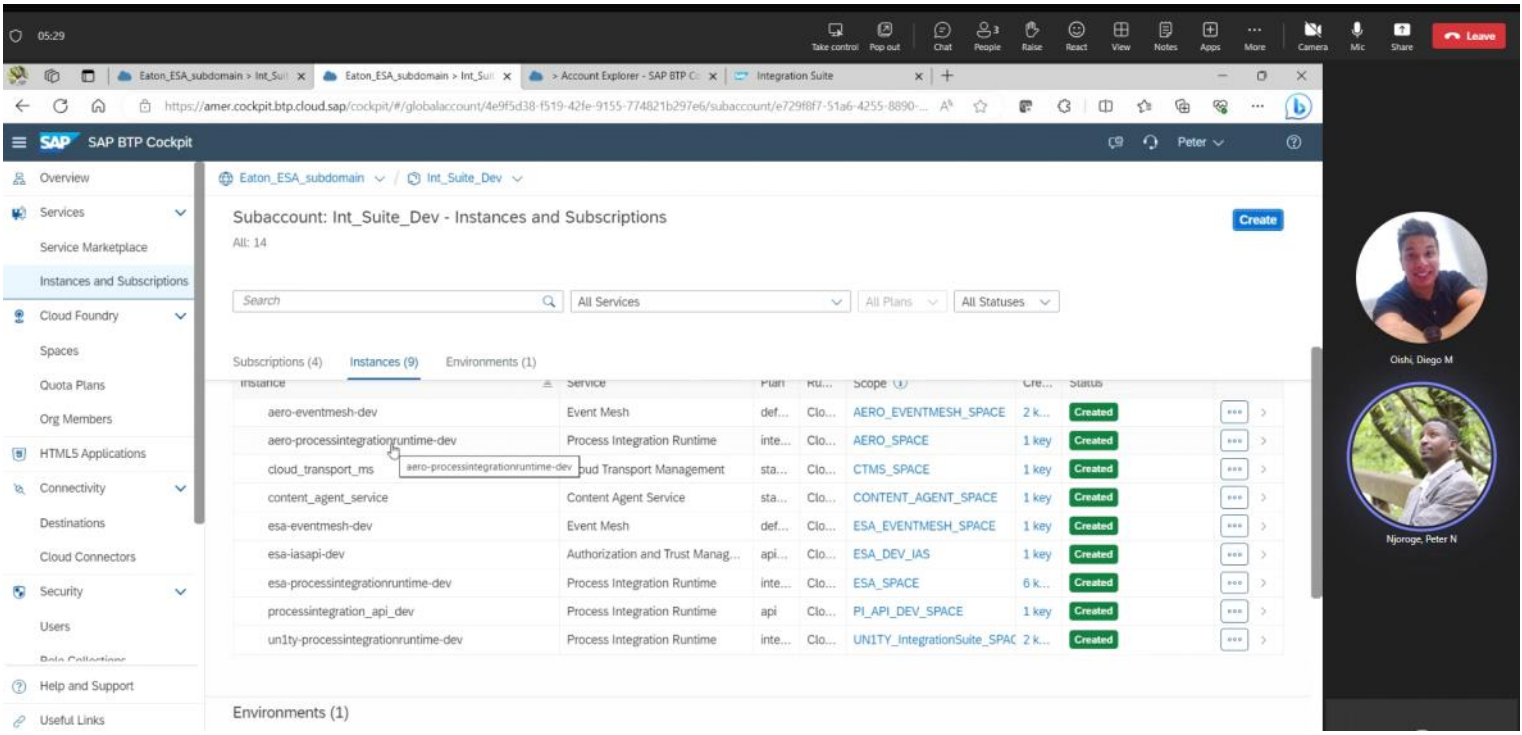
Sunday, March 1, 2020 6:22 PM

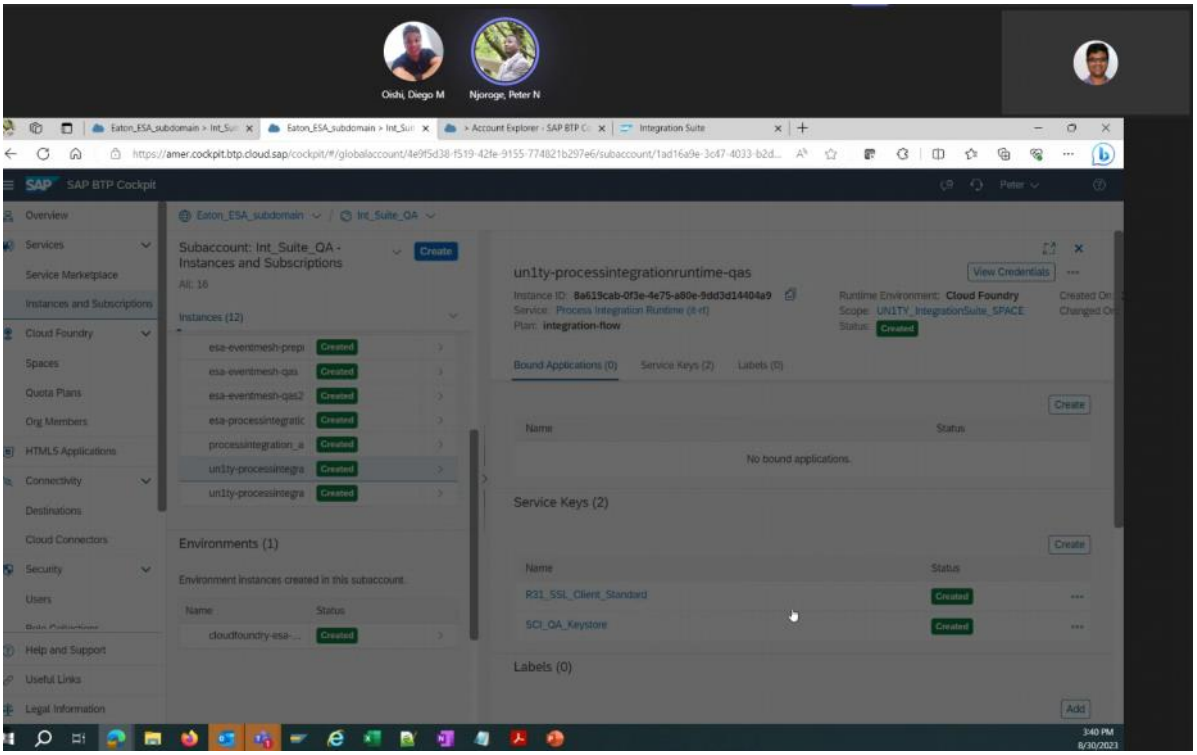
https://www.cpicourse.com/sap-cpi-course?track=dgyoutube&utm_source=youtube&utm_medium=video&utm_campaign=learncpi

CRQ000000379295	RE_+New+HU+eDoc...	

CPI Instances in global account

Wednesday, August 30, 2023 3:42 PM





CPI account

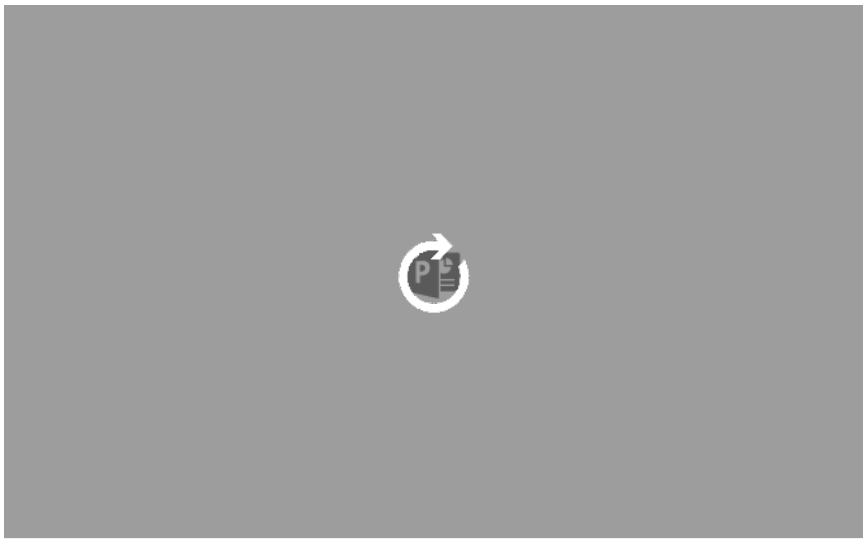
Friday, November 10, 2023 11:00 AM

Diana's CPI password

S0024242132
Cooper@2023

ERP Integration Patterns (SAP)

Friday, September 8, 2023 3:15 PM

https://confluence-prod.tcc.etn.com/display/AMMD/Application+Connectivity+Guidelines	Application Connectivity Guidelines
ERP Integration Patterns (SAP) 	

Thursday, March 7, 2024 12:33 PM

https://webinars.sap.com/2021-12-31-sap-btp-customer-value-network-global/en/upcoming#03072024

https://community.sap.com/t5/technology-blogs-by-sap/sap-integration-suite-advanced-event-mesh-vis-%C3%A0-vis-sap-event-mesh-and-sap/ba-p/13531535	Compare Event mesh and Advanced Event mesh