

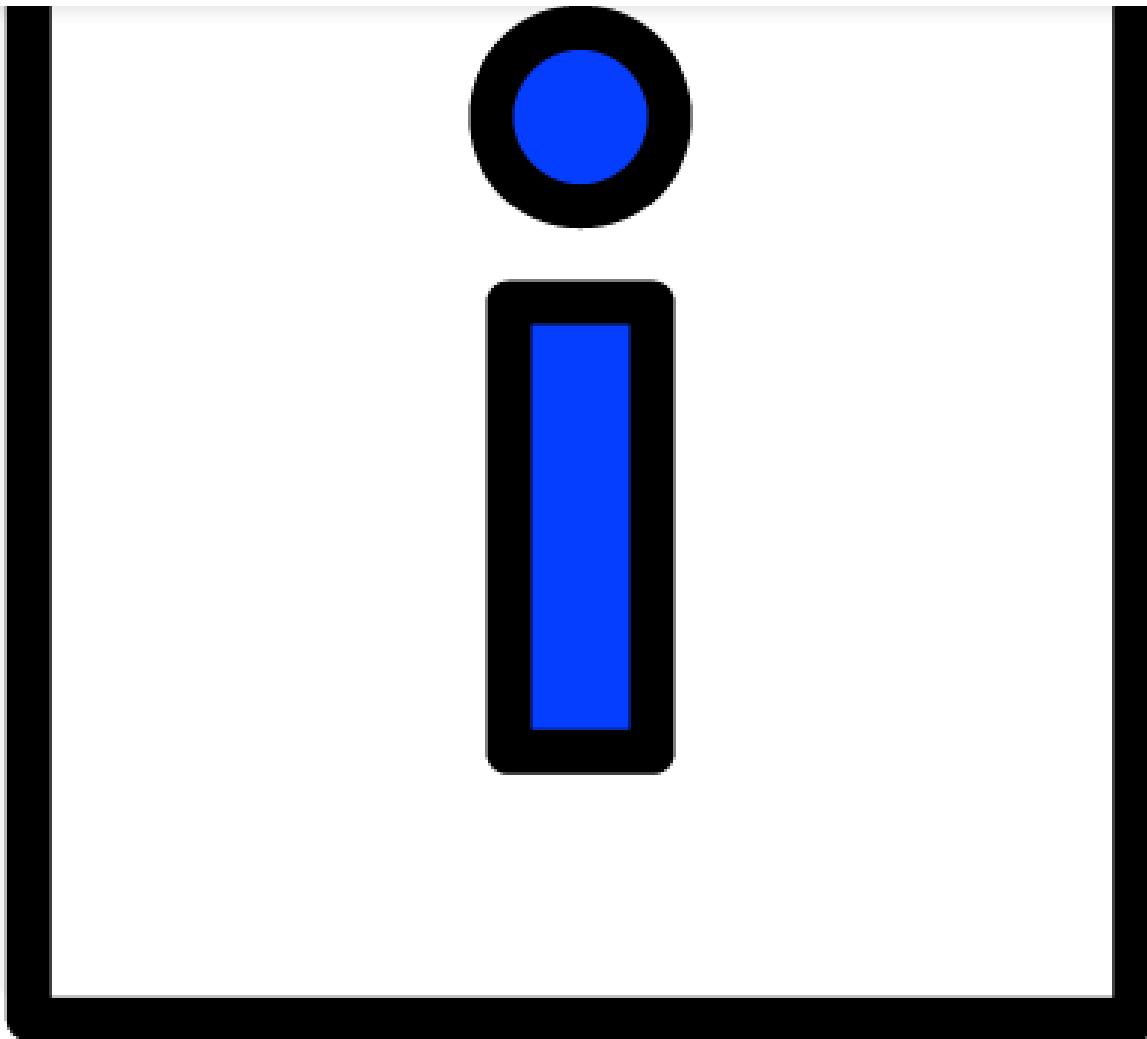
ALE/IDOC

Generate iDocs Using Change Pointers in SAP

POSTED ON [APRIL 21, 2018](#) BY [ISURU FERNANDO](#)



X



systems using iDocs.

Before we start talking about Change Pointers mechanism, you need to [understand iDoc configuration steps](#).

To illustrate how Change Pointers are enabled for master data changes in SAP, let's assume we need to communicate sales pricing conditions to external system (POS) using COND_A iDoc. When price condition values are changed or conditions are created, change point mechanism should be activated and outbound COND_A iDocs in basic type should be generated.

SAP Versions used in the illustration:

- SAP S4 HANA Fashion 1709

Step by Step Guide on How to Activate Change Pointers for Price Conditions:

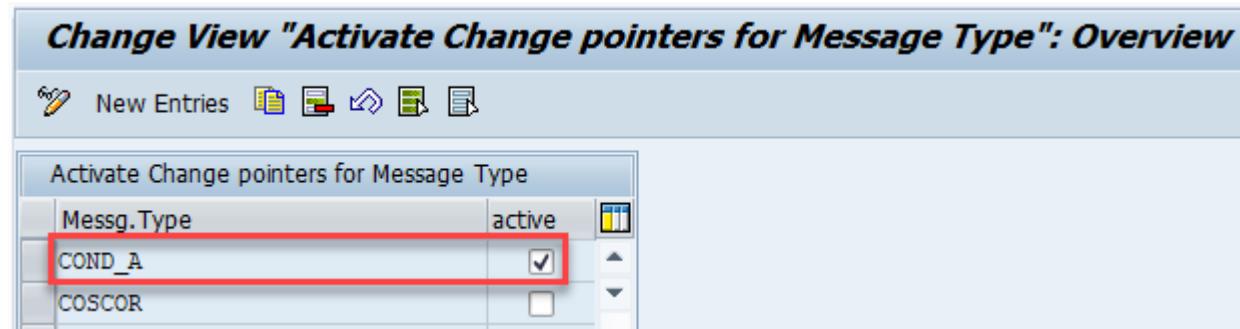
Step 1: Activate Change Pointer Globally – Transaction BD61.

Go to transaction BD61 and activate Change Pointers generally. This is a global setting which should be activated if you want to use Change Pointers in your SAP system.



Step 2: Activate Change Pointers for iDoc Message Type – Transaction BD50

Go to transaction BD50 and activate change pointers for Message Type COND_A.



Messg. Type	active
COND_A	<input checked="" type="checkbox"/>
COSCOR	<input type="checkbox"/>

Activate Change Pointers for Message Type COND_A

Here we can decide for which Message Types Change Pointers should be activated. If you want to capture changes of Material Master activate Change Pointers for Message Type MATMAS or ARTMAS. If you want to distribute changes of Customer Master activate Change Pointers for CREMAS Message Type.

Step 3: Assign Change Point Items for Message Type – Transaction BD52

Go to transaction BD52 and select Message Type COND_A.



Field selection for COND_A message type

Assign table names and fields which change pointers should be activated for. Change pointers will be activated when values of these fields are changed and change log will be maintained in [table BDCP2](#).



Message Type

COND_A

Change document items for message type		
Object	Table Name	Field Name
COND_A	KONDAT	DATAB
COND_A	KONDAT	DATBI
COND_A	KONDAT	KEY
COND_A	KONM	KBETR
COND_A	KONM	KEY
COND_A	KONM	KSTBM
COND_A	KONPAE	AKTNR
COND_A	KONPAE	ANZAUF
COND_A	KONPAE	BOMAT
COND_A	KONPAE	BOSTA
COND_A	KONPAE	FKWRT
COND_A	KONPAE	GKWRT
COND_A	KONPAE	KAPPL
COND_A	KONPAE	KBETR
COND_A	KONPAE	KBRUE

Assign table names and field names

Step 4: Configure Partner Profile – Transaction WE20

Configure partner profile with outbound message type COND_A. In this example we are sending Price Condition changes to POS logical system.





Partner	Description
POS	Logical system for ID
Partner Profiles	
Partner Type B	Bank
Partner Type BP	Benefits provider
Partner Type GP	Business Partner
Partner Type KU	Customer
Partner Type LI	Vendor
Partner Type LS	Logical system
.	
.	
.	
.	
.	
.	
.	
.	
.	
.	
.	
POS	Logical system for ID

Partner No.	POS	
Partn.Type	IS	Logical system

Post processing: permitted agent Classification T. □ ▢ ▣ ▤

Ty.	US	User
Agent	ISURUF	ISURUF
Lang.	EN	English

Partner Role	Message type	Message va...	MessageFu...	Test	Receiver p...	I...	Pa...	Basic type
LS	COND_A			<input type="checkbox"/>	IDOC_FILE	X 0		COND_A04

Configure partner profile and assign message type in outbound parameters.

There are several other configuration steps to set up iDoc communication. [Complete guide for iDoc configuration transactions](#) can be found here.

Step 5: Configure ALE Distribution Model – Transaction Bd64

To distribute Master Data iDocs we need to configure Distribution Model using transaction BD64.

Create a Distribution Model View. Assign the Message Type, Sender SAP system name and receiver partner name using 'Add Message Type'.





Distribution Model	Description/Technical Name
Model Views	ALE_SYNC . No short text exists POS_OUT

Create Model View

Short text	Conditions to POS
Technical name	POS_OUT
Start date	07.04.2018
End Date	31.12.9999

Form

Save Cancel

Create new model view in BD64

Sender system is the Logical System name of the sender SAP system. Receiver is the name of the partner profile configured in the previous step using transaction we20.



Distribution Model	Description/Technical Name	Business Object
ALE_SYNC	ALE_SYNC . No short text exists CRMSC7	
Conditions to POS	POS_OUT	

Add new Message Type to Model View

Conditions to POS	POS_OUT
Logical System	A 10
Logical system	POS
COND_A	Conditions: master data for price determination

Model View configuration completed

Additionally, you can restrict iDocs being generated for certain Sales Organizations, Material Groups, Distribution Chains etc by creating Filter Groups. Double click on 'filter set' and create a filter group with filter criteria and values. Here I have restricted generation of iDocs only for US region.



Display Distribution Model	
	Description/Technical Name
Distribution Model	
Model Views	
ALE_SYNC	ALE_SYNC . No short text exists
CRM Scenarios	CRMSZ
Conditions to POS	POS_OUT
Logical System	
Logical system	POS
COND_A	Conditions: master data for price determination
Data Filter Active	
Filter Group	
Region	Region (State, Province, County)
US	No short text entered

Filter Groups in BD64

Step 6: Generate Outbound iDocs Using Standard Program RBDMIDOC – Transaction se38.

When you create or change conditions, change pointers mechanism will flag changes in [change pointers table](#) BDCP2. The program RBDMIDOC reads this table and creates master and communication iDocs. This program dynamically executes the Change Point read Function Module of Message Type selected in selection screen. Function Module for COND_A Message Type is MASTERIDOC_CREATE_SMD_COND_A.





Message type

COND_A

RBDMIDOC selection screen. Input Message Type

Create IDocs from Change Pointers with Own Roll Area

Condition exchange based on change documents

Transfer general condition

Message type COND_A

Logical system

IDocs created

0000000000006054 Segment no. 0004for target system POS

Master IDocs created

1

Communication IDocs created

1

Master IDocs w/o receiver

0

RBDMIDOC program output.

In production system you can schedule this program to create outbound iDocs periodically.

Test Change Pointers:

To test change pointers, change condition values using transaction VK12.





Sales Organization X212
Distribution Channel 40
Valid On 07.04.2018

Select Rule

Material	S...	Description	Amount	Unit	per	U...	C..	S..	Valid From	Valid To
184	EA	each	13.00	EUR		1	EA	C	07.04.2018	31.12.9999

VK12 – Change Condition values

Once you change values of conditions, changes will be flagged in table BDCP2. In older SAP versions change points were saved in tables BDCP and BDCPS, but in newer HANA versions data is aggregated to table [BDCP2](#).

Ad removed. [Details](#)





Messg. Type	Chng.ptrn	P	Table	Table Key Long	Field	Time created	Activation time	User	Object	Object Value	Doc. no.	ChangeInd.
COND_A	339909		KONPAE	200000000805101	KBETR	20180407175826	20180407175826	ISURUF	COND_A	0000008051	35606	U

Change pointers ready to be processed

Create IDocs from Change Pointers with Own Roll Area			
Condition exchange based on change documents			
Transfer general condition			
Message type	COND_A		
Logical system			
IDocs created	00000000000006061	Segment no.	0004for target system POS
Master IDocs created		1	
Communication IDocs created		1	
Master IDocs w/o receiver		0	

RBDMIDOC program output.

Using transaction we02, view the iDocs generated.





IDoc display	Additional informa...
- IDoc 00000000000006061	
- Control Record	
- Data records	Total number: 000004
- E1KOMG	Segment 000001
- E1KOMG1	Segment 000002
- E1KONH	Segment 000003
- E1KONP	Segment 000004
- Status records	

Short Technical Information

Direction	1	Outbox
Current Status	03	OO ■
Basic type	COND_A04	
Extension		
Message Type	COND_A	
Partner No.	POS	
Partn.Type	LS	
Port	A000000002	

Content of Selected Segment

Fld Name	Fld Cont.
KSCHL	VKPO
STFKZ	A
KSTBM	0.000
KSTBW	0.00
KRECH	C
KBETR	13.00
KONWA	EUR
KPEIN	1
KMEIN	EA

Master data iDoc generated from Change Pointers

Change Pointers processing status updated.





Messg.Type	Chng.pntr	P	Table	Table Key Long	Field	Time created	Activation time	User	Object	Object Value	Doc. no.	ChangeInd.
COND_A	339909	X	KONPAE	200000000805101	KBETR	20180407175826	20180407175826	ISURUF	COND_A	0000008051	35606	U

Change Pointers table BDCP2 processing status updated.

Hope this guide will help you set up Change Pointers for master data changes in SAP. If you have any questions on creating outbound iDocs using change pointers, leave a comment below.



This entry was posted in [ALE/iDoc](#) and tagged [ALE](#), [ALE Distribution Model](#), [bd50](#), [bd52](#), [bd61](#), [bd64](#), [BDCP](#), [BDCP2](#), [BDCPS](#), [Change Pointers](#), [iDoc](#), [Partner Profile](#), [RBDMIDOC](#), [SE38](#), [vk12](#), [vk13](#), [we02](#), [we20](#).



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 exnperience in SAP project implementation life cycle. Having the opportunity to work





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good information which is not available everywhere

MAY 22, 2018 AT 12:18 PM

REPLY

Isuru Fernando says:

Thank you Venkat!

MAY 26, 2018 AT 8:06 AM

REPLY

Mister says:

Hello,

Thank you for this very rewarding article.

However, I have a problem.

I hope you can have the solution.

In BD64, even though I put my filters on an organizational ELEC structure for example: the generated idocs are also generated on the GAZ organizational structures. Do you know where the problem is coming from?

I admit that I am a little short of ideas regarding this problem 😞

JUNE 7, 2018 AT 7:28 AM

REPLY

Isuru Fernando says:

Hi Mister,

What iDoc type are you using and whats the table/field of the filter field?





However, I have a problem.

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In BD64, even though I put my filters on an organizational ELEC structure for example: the generated idocs are also generated on the GAZ organizational structures. Do you know where the problem is coming from?

I admit that I am a little short of ideas regarding this problem 😕

[JUNE 7, 2018 AT 6:06 AM](#)

[REPLY](#)

Isuru Fernando says:

Hi Mister,

What iDoc type are you using and whats the table/field of the filter field?

[JUNE 9, 2018 AT 2:46 AM](#)

[REPLY](#)

Mister says:

Hello,

Thank you for this very rewarding article.

However, I have a problem.

I hope you can have the solution.

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I admit that I am a little short of ideas regarding this problem 😕 .

[JUNE 7, 2018 AT 6:08 AM](#)

[REPLY](#)

Sean Lu says:





Thanks.

JUNE 28, 2018 AT 8:33 AM

REPLY

Isuru Fernando says:

Hi Sean,

Thank you for reading! Try using wild card for "Customer Number" field's value list in the filter group. But I have not tested this before.

JUNE 30, 2018 AT 2:19 PM

REPLY

MM consultant says:

thanks for the blog!

JULY 2, 2018 AT 7:20 AM

REPLY

Isuru Fernando says:

Your welcome! Thank you 😊

JULY 6, 2018 AT 11:42 AM

REPLY

Sujith Weerasinghe says:

Really useful article 😊

JULY 4, 2018 AT 5:09 PM

REPLY



kalyanam says:

Hello

i have added new field of material master in exist change pointer (functionality working for other field changes), when i ran bd21 it is showing 1 master idoc generated and '0 communication idoc created"

what will be rootcause ?

AUGUST 14, 2018 AT 3:43 PM

REPLY

Isuru Fernando says:

Hi Kalyanam,

Is it a custom data field or a standard data element? Check if the "change document" of the data element is activated using transaction se11.

Cheers,

Isuru

AUGUST 19, 2018 AT 7:39 PM

REPLY

Handous says:

Hello,

Thank you for the article!

However, I wanted to generate IDOCs automatically (DEVMAS, MATMAS, BOMMAT, LOIPRO, etc.)

I executed Tcode se38 and went to RBDMIDOC. When, I execute message type BOMMAT, I get "0 change poi. de





Hello,

Thank you for the article!

However, I wanted to generate IDOCs automatically (DEVMAS, MATMAS, BOMMAT, LOIPRO, etc.)

I executed Tcode se38 and went to RBDMIDOC. When, I execute message type BOMMAT, I get "0 change poi. deleted before processing: 0 inbound events checked" and "0 master IDocs set up for message type BOMMAT" even though I already sent manually BOMMAT IDocs.

Thank you!

AUGUST 29, 2018 AT 1:49 PM

REPLY

Aniket Rathod says:

Hi,

For MATMAS use below link :

<https://sapcodes.com/2015/11/22/collective-transfer-of-material-from-one-sap-server-to-another-sap-server-by-idoc/>

For BOMMAT use : BD30 t code or se38 prog : RBDSEBOM

For LOIPRO: use Se38 prog RCCLORD.

Then check in we02

To automate the above processes call above of the prgram in BADI. Plz check the BADI name on internet

Aniket Rathod

SEPTEMBER 6, 2018 AT 12:10 PM

REPLY

Iqbal Khan says:

Hi Fernandez,

X



I salute your explanation.

OCTOBER 6, 2018 AT 9:58 PM

[REPLY](#)

Isuru Fernando says:

Thank you Iqbal!

OCTOBER 10, 2018 AT 12:00 PM

[REPLY](#)

Fabio says:

Hello Fernando,

thanks for your blog.

I have this kind of problem: for a pricing condition record I close the item with the "Valid To date" = 10/10/2018 using VK12, then I create a new record with the same key information starting from 11/10/2018 to 31/12/9999. The system create just one IDOC with 2 segment E1KONH.

Is it possible to have two Idoc each with one E1Konh segment only?

Thanks in advance

OCTOBER 9, 2018 AT 9:50 AM

[REPLY](#)

Isuru Fernando says:

Hi Fabio,

Good question! But this is the standard behavior each condition will be populated in a separate K1KONH segment. What is your access sequence?





Hi Fernando,

thank you for your replay but I was not able to explain my problem..

I'll try to explain better.

My problem it is not that each condition is populated in one E1Konh: this is OK for me.

I would like to have two different IDOCs each with one segment E1KONH under the segment E1KOMG, instead of one single IDOC with 2 segment E1KONH under the same segment E1KOMG.

Do you think , it is possible?

Thanks, Fabio

OCTOBER 11, 2018 AT 7:47 AM

[REPLY](#)

Shiva says:

Hi, nice blog. I have similar issue, but not related to pricing. Its related to customer master. Do you know how to change customer master without triggering IDOCs ? Its for KNA1-KATR4 field.

DECEMBER 27, 2018 AT 5:01 PM

[REPLY](#)

Isuru Fernando says:

Hi Shiva, Please provide more information about the requirement.

Cheers!

JANUARY 14, 2019 AT 9:28 PM

[REPLY](#)

Parameswara Reddy says:

Hello Fernando,

My requirement is to delete the Change pointers entries(BDCP2) by validating the S.Org of Material from custom





APRIL 29, 2019 AT 7:28 AM

REPLY

Isuru Fernando says:

Hello Reddy,

You are in the correct path. If you need to filter change pointers being updated in BDPCP2 table use the BADI BDPCP_BEFORE_WRITE. That is the standard method. If the required information is not available in the BADI, fetch them from SAP tables and validate.

Cheers!

Isuru

APRIL 29, 2019 AT 12:02 PM

REPLY

Jo Robertson says:

Hello – I am sending ODTF_CCTR IDOCs for SAP Success Factors integration.

All was working fine. We then realised we were missing the Cost Centre Name field (Object KOSTL CSKSB-KTEXT) in the IDOC so it has been added to BD52. All works fine in the DEV system, the IDOC creates the extra segment field. Once I released the transport to our Quality system, I can see BD52 is updated with the extra line, and BDPCP2 is updated also with changes to that field, yet when I generate an IDOC this segment is missing still.

Is there some kind of refresh that is needed when BD52 is updated?

Thanks for your help

SEPTEMBER 20, 2019 AT 5:31 AM

REPLY

Isuru Fernando says:





pointer configuration in development and quality systems, get help from an ABAP consultant to debug the iDoc generating Function Module.

Hope that helps, update us if you find the reason.

Cheers!

Isuru

[SEPTEMBER 22, 2019 AT 11:21 AM](#)

[REPLY](#)

Igor Nikolic says:

Hello,

Nice and informative blog. Well done.

I have a few questions about the steps in the integration process that I could not find explained in detail. During the setting of the system at our company, we have encountered a few problems that we could not resolve. A lot of sources explain how to set the system, but there is no information about possible problems that may appear during the setting of the system. We were integrating SAP ERP system with SAP SuccessFactors using ODTF_CCTR message type. After following the all necessary steps we have stopped at transferring changes with the RBDMIDOC program. Change pointers were turned on, but we could not find ODTF_CCTR message type in the list. Is there any additional step that we have missed? Is it necessary to do some initial transfer before using the RBDMIDOC program?

Regards,

Igor

[OCTOBER 8, 2019 AT 11:19 AM](#)

[REPLY](#)





Cheers!
Isuru

OCTOBER 9, 2019 AT 2:44 PM

REPLY

Igor Nikolic says:
Thank you, Isuru.

Regards,
Igor

OCTOBER 16, 2019 AT 7:52 AM

REPLY

Ginu says:
Hello, We have triggered the IDOC using the program RBDMIDOC. the IDOC is generated sucessfully. but the process indicator flag is not getting set to X . Do we need to do any additional step for this?

NOVEMBER 20, 2019 AT 6:45 AM

REPLY

Isuru Fernando says:
Hi Ginu,

If a change pointer is processed successfully the processed flag and the time of activation should be automatically updated in the [BDCP2](#) table.

No additional configuration required for this.





Hi Isuru,

Very thorough and informative article.

Trying to get /ISDFPS/MDMA IDOC created via change pointers. Got the msg type added and activated in BD50 and MRP_AREA/MDMA/field entries created in BD52. Still have no MDMA records in BDCP2 table, neither /ISDFPS/MDMA type can be selected in BD21. Any idea what could be possibly wrong?

Thanks very much,

Alex

JANUARY 28, 2020 AT 12:28 PM

REPLY

Luiza says:

Hello,

I have activated change pointers for a reduced DEBMAS Idoc message type and I am trying to find out if it is possible to have the Idocs automatically created when customer master data is created/changed without having to run program RBDMIDOC. Our requirement is to have the information sent to the target system real time as soon as there is change in the customer master data. Thanks!

MARCH 25, 2020 AT 12:47 PM

REPLY

Isuru Fernando says:

Hello Luiza,

I am not sure if this is possible. You can schedule the program RBDMIDOC at a higher frequency but I am not sure you can send it immediately.

Cheers!

Isuru





you have a nice tutorial on activating the change pointer.

I have a question for HRMD_A. We have an ERP and a HR system. ERP will update the OM and HR the employee master data. Daily HR sends employee (P and C Object) changes to ERP and after that ERP sends OM (O, S, C [Infotype 1000] and C, O, S to C, K, O, P, S, US [Infotype 1001 with subtype Filter]) to HR. The Change pointer now works nice with one exception:

The Relations infotype is sending the key data (E1PITYP), but there is no data in it (E1P1001 is missing).

When sending selected Objects with PFAL (RHALEINI) and insert mode, the IDoc is complete.

Do you have any advise, where to check?

PS: We have no filter set up in BD52

Regards,

Frederic

[MARCH 27, 2020 AT 12:13 PM](#)

[REPLY](#)

Frederic says:

Hi Isuru,

we have opened a SAP Ticket now, because the Relations are transported correctly when they are saved again lateron. But they still are not fully transported, when the Object is created (copied in PPOME) and relations are the same moment. This happens even if the change pointer table BDCP2 is filled correctly.

Regards,

Frederic

[APRIL 1, 2020 AT 5:26 AM](#)

[REPLY](#)





sequence pricing record Maintenance.

JULY 7, 2020 AT 9:01 PM

REPLY

Katherine Betancourt says:

Hola! Tengo una duda. Al hacer esta configuración si yo cambio un precio en la VK12, por ejemplo, se va a generar el IDOC COND_A? o tengo que hacer algún proceso adicional?

Ya hice todos los pasos pero aunque cambie o cree un nuevo registro de condición, no se crea un IDOC nuevo.

Gracias!!

APRIL 16, 2021 AT 3:33 AM

REPLY

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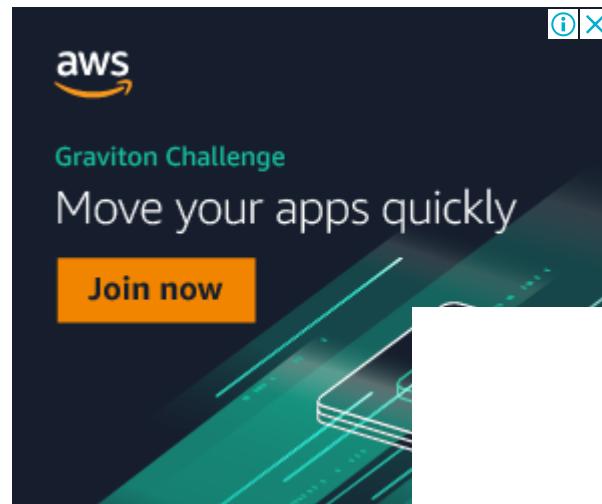
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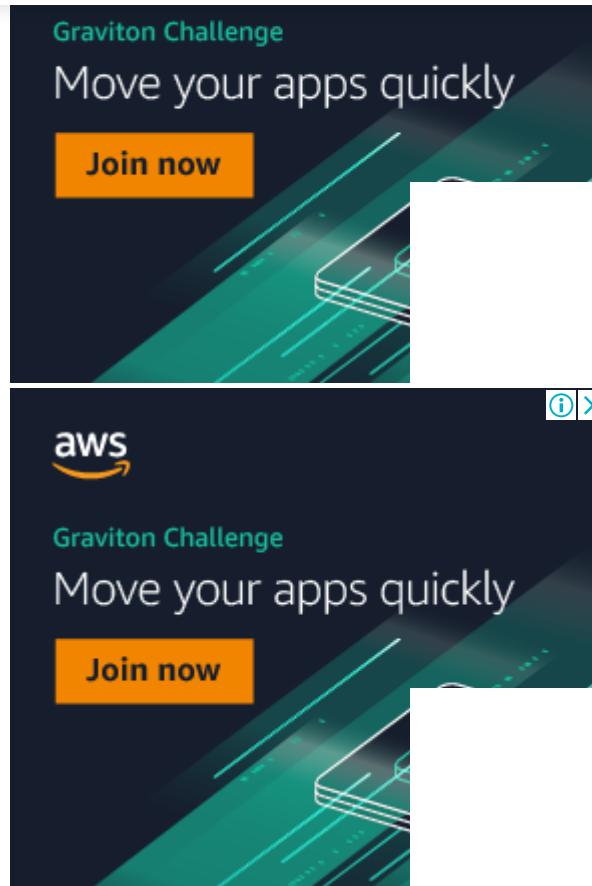
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