Debugging CRM Middleware - Sales Document

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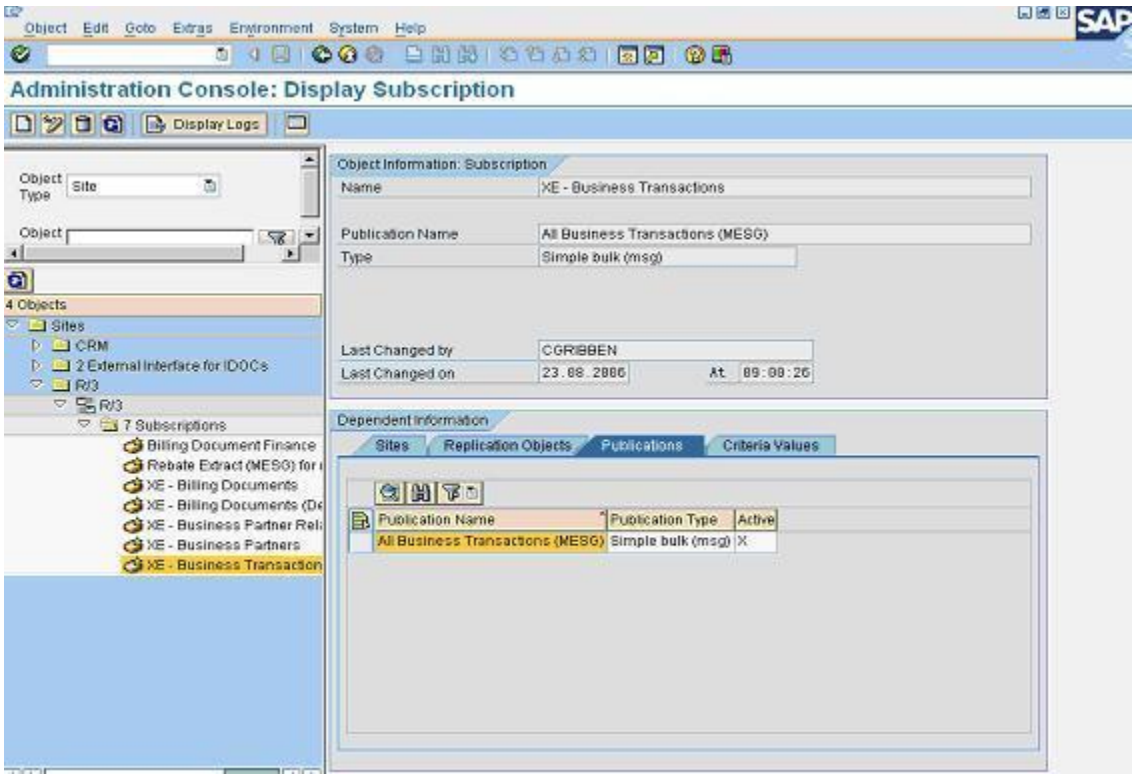
This blog is usefull for those working on CRM and have been struggling to find out reasons why the correct data is not getting posted to ECC. Here are a few simple steps on how to debug CRM middleware. Its difficult only till you read this document.

I am taking an example of a Sales Document posting to ECC. You can use the same technique to debug the middleware for other documents getting posted to ECC.

Here we go....

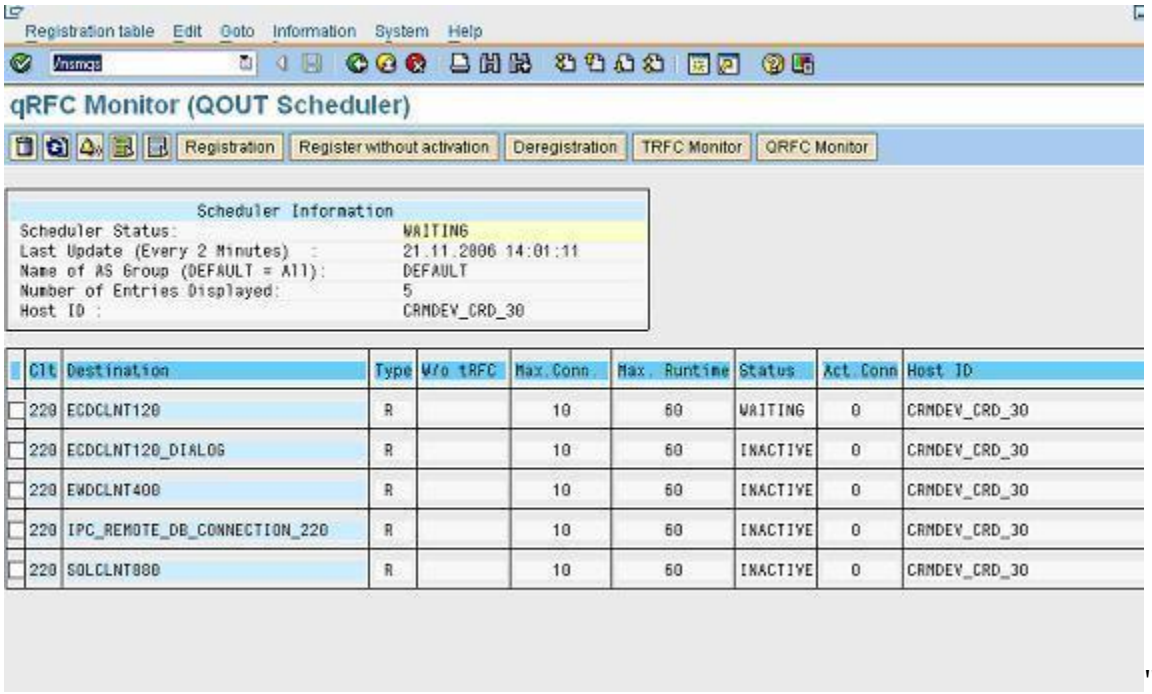
Step1.

Ensure subscription set-up in SMOEAC. Need to ensure that subscription Business Transaction message is created and assigned to R/3 site



Step2.

In Transaction SMQS need to ensure that site ECCCLNT<XXX> has been registered. In order to block transfer to R/3, highlight ECDCLNT<XXX> and select Deregistration.



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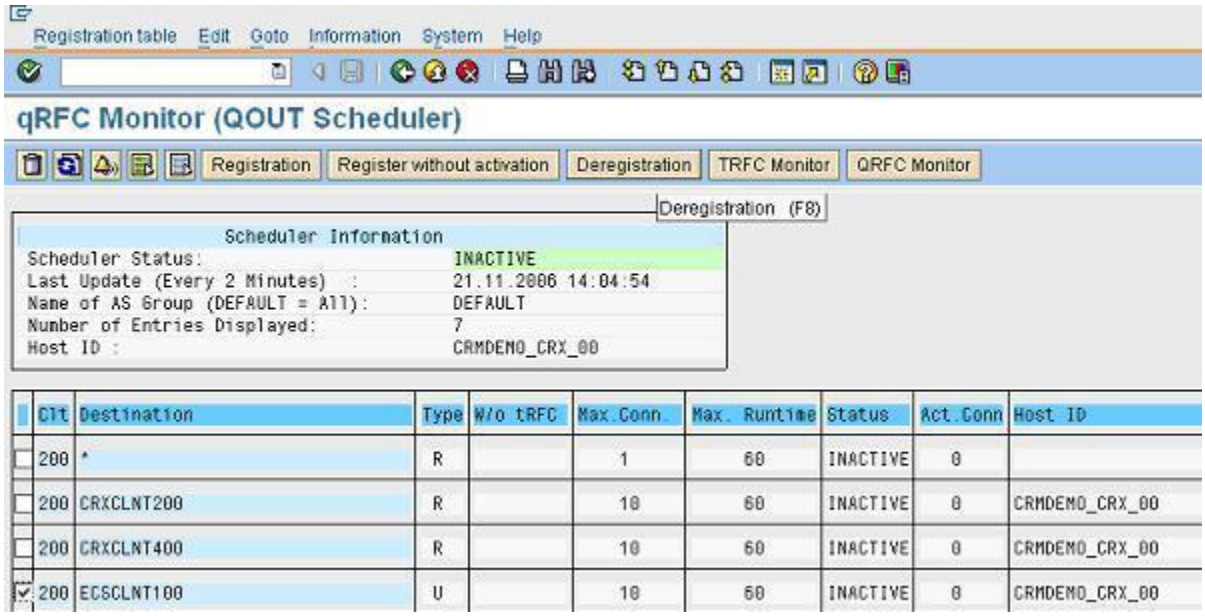
In SMQS the type should change to U (unregistered) this will block all data in CRM outbound queue SMQ1.



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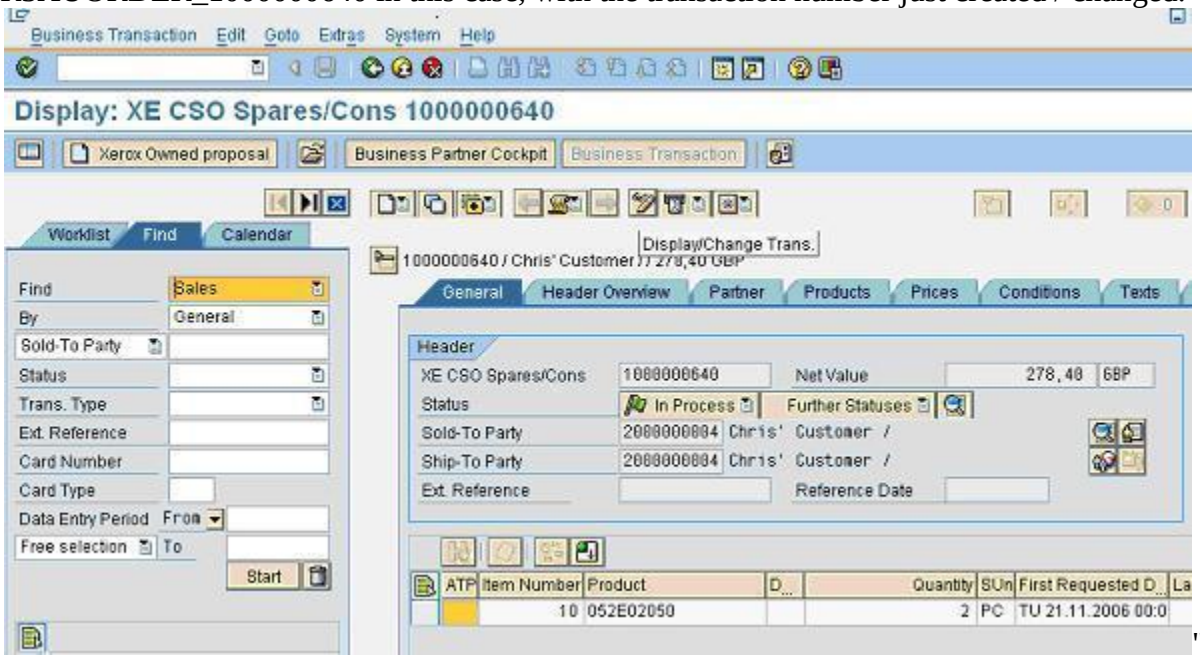
Step 3

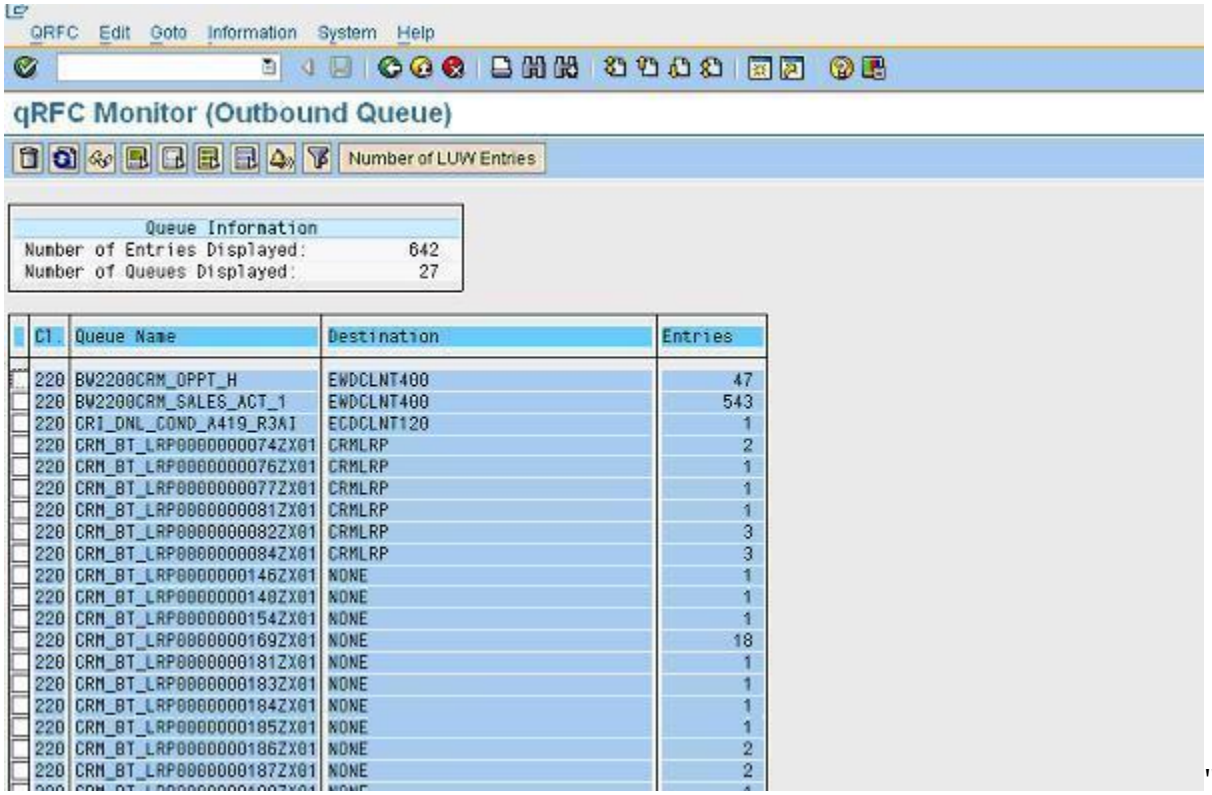
Trigger change or create new sales document in CRM.

If queue in Unregistered this will place an entry in SMQ2 for that order e.g. R3AUORDER_1000000640 in this case, with the transaction number just created / changed.

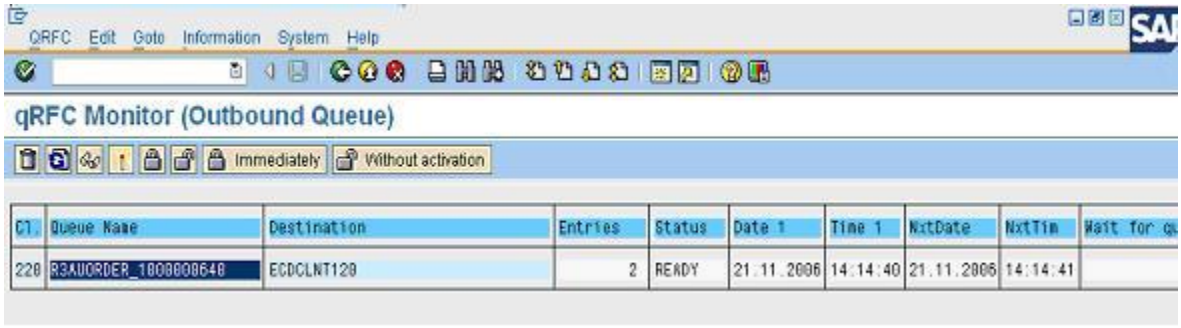


Step 4

View sales document change in CRM outbound queue SMQ1



Step5
Click on entry with display entry in queue with STATUS ready



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Step6
To enable debug, double click on queue name field.

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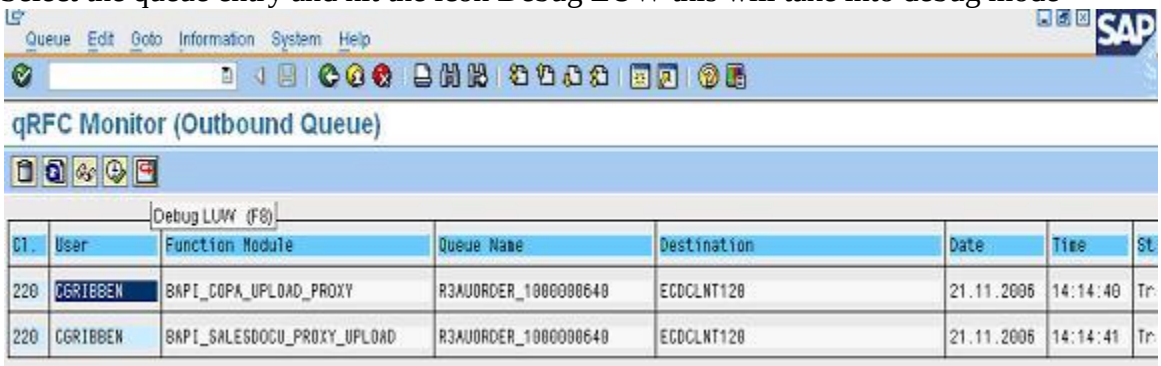
Select the queue entry and hit the icon Debug LUW this will take into debug mode



Step7
This will enable you to debug outbound sales documents

- Breakpoint on function module CRM_R3_SALESDOCUMENT_UPLOAD.
- Continue with F8.
- In this module, the filtering and mapping and the call to the R/3 system (BAPI_SALESDOCU_PROXY_UPLOAD) occurs.

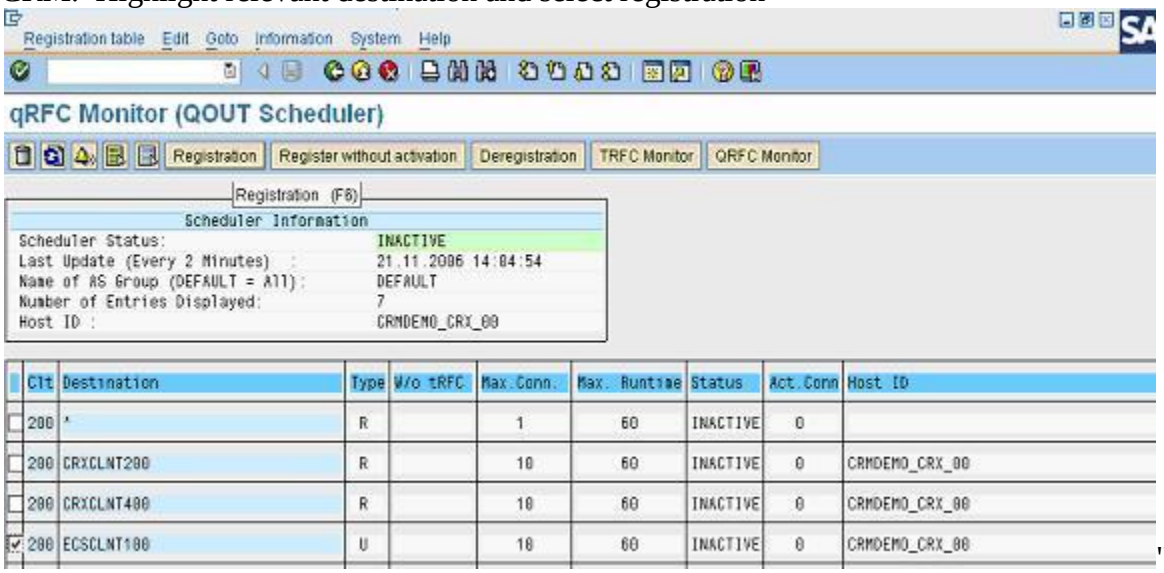
- The call to the R/3 system is performed via module BAPI_SALESDOCU_PROXY_UPLOAD. You can call this module in two different modes: Asynchronous (that is, in the background, which is disadvantageous for debugging), or synchronous (that is, directly). The second method is appropriate for debugging directly to the R/3 system (without a queue). For this purpose, parameter GV_SYNCHRONOUS_CALL must be set to 'X' (preferably immediately before the call of BAPI_SALESDOCU_PROXY_UPLOAD).
- If you use the synchronous method, you can select setting 'In background task: Do not process' in the debugger. In this case, the document should stop in the queue.
- Then it is possible to set a breakpoint in certain function modules, for example: CRMC_OUTPUT_BASIS_MAP_SAVE or MAP_BAPIMTCS_CUSTOMIZING…

Breakpoints can also be set at the particular statement like MESSAGE or RAISE or COMMIT.

Step8

After finishing debugging **Register Queue** again

When finished debugging remember to register the CRM outbound queue again using SMQS in CRM. Highlight relevant destination and select registration



Also Refer to OSS Note 656823 for Tips and Tricks of debugging, it is a very useful starting point.

ife as a SAP Consultant

Out of college 2 years and 4 Go Lives, I started my career as a SAP Consultant which involved testing of Business processes as well.

So much for a career and so many stark realizations led me to write this blog thinking my learnings might be of some use to someone else.

As of a Business Process Tester I realized it's an entirely different world here or so to say when compared to the live business. Testers and Users are probably people from different galaxies.

Somewhere in the race between beating the tight Deadlines and confirming to the high quality of deliverables many a times as a tester I missed the fact, the critical fact, that ultimately it's a system that someone at a plant, at a shop or at a counter is going to use. The enormity of business and its manifestation in SAP frequently leads testers to become SAP testers rather than Business Process Testers.

The big realization comes on the D Day (for me at least it came) the Go Live when users start asking innocent BUSINESS questions!!! Ohh yes they are innocent users using our SAP systems, as innocent as we are while using an Online fund Transfer system or a Flight Booking System.

While testing SAP I got so obsessed with SAP (I love SAP so much that If I was SAP I would have been Narcissistic) I started validating if the business process is mapped correctly to SAP in terms that SAP does not throw an error Thanks to the established process which we follow in my company I was forced to test everything

But is that all to testing...

The answer is a categorical NO; in fact it's just the beginning of it.

There are a multitude of things business would do apart from standard Business Process.

The standard business process might be a simple sale of a product to a customer but users will find it difficult to use the system initially as its quite common to digress from the standard process leading them to hit the panic button and of course the wrong Buttons at SAP and the way these instructions are understood by SAP might be entirely different from what the user probably actually meant to do.

It is responsibility of the testers to make sure they mess the system more than users and make it behave the way it should. Of course then there comes a trade off between cost of creating a Robust system and Training the Users but let us not get into that for the time being.

There are a few things every tester must keep in mind while testing which will help them remain focused on the business than the business facilitator:

BUSINESS vs SAP

1) Always talk with real life examples The Company I was supporting, we tested all of their business using Vehicles (SAP Terminology), Trucks Rail (Business Terminology) Customers Materials and whatever else the Business might need. A user may not be comfortable with the term Vehicle and discussing him using the term Vehicle can lead to confusion.

Key Learning: Make it a habit to refer to entities by their business names rather than SAP names this takes you closer to business and helps you relate better with the users.

2) As a tester we tend to treat plant 0001 (people who work with SD might appreciate this) as a number in system which is something important. Never ever forget that the Plant 0001 you are using in SAP is much more than a number in fact most of the times it's a multi Million/Billion dollar entity which has its own identity. The simple 0001 which was not assigned a distribution chain is more than critical Configuration error it means you cannot sell from that plant which means huge loss every day, every hour, may be every minute, for business.

Going back to my example of Flight Booking system as users we understand Flight number imagine somebody saying we don't have 0001 assigned to CT01 which might actually mean Lufthansa Counter1 is not supposed to do business with CiTi Bank branch 01.

Similarly there is much better one can connect when they start realizing that a material 1234567 is more Petrol than a number and similarly a customer 1234567 is Mr ABC or Corp XYZ. Unless one starts thinking of these numbers as real time entities than numbers its quite difficult and hence unlikely that you can suggest some business improvements which is one of the Primary Role of Consultants and Goal of Businesses.

But in real life working sitting in an office sooner or later we start losing the connect with the Ground realities and user expectations

Key Learning: Always try to relate from business perspective as to what a Business process would look like or would be meant to do you will test it much better much more robust.

3) Apart from above one must also understand the business soundly, as users will have basic questions, you may end up handling a query saying my so and so output is not getting printed and you should be up on your feet but it is then that we realize that oh my the output ABC1 is Export License and the truck can't move unless it gets printed.

Key Learning: Always try to understand why you are testing what you are testing the purpose of testing is not to pass the test but to make sure it works right.

4) Know your Design: Test however well you might there is nothing like a 0 error system I would love to excuse aviation though. Users may say SAP is suggesting so much quantity but it is not practically feasible it might be an error it might be business ignorance. As a tester you must know the system in and out to be able to sure what you have tested is working right.

Key Learning: Know your design

5) Always give security its due respect. When you are in a development server you have access to the whole world but that is not quite so in real life you cannot approve your own design. Always make sure you test with the right authorities so that right people have got right authorities lest a truck driver chooses which deliveries he carries.

Key Learning: Roles are important part of testing not only to comply standards but to ensure a smooth running business

6) Always try to know the people who are going to use the system you are testing what exactly is it that they do and it is then that it will be easy as a tester to test the process exactly (how many times while using a website you thought why don't they understand what we need)

Key Learning: Know your users

It does not get over once you finish testing and it goes live the post live support especially for first couple of month is critical it is when they will face the maximum problems and would need the maximum support. While you are you helping users resolve their issues it is as important to win a user's trust as it is to solve the problem

How to handle users efficiently

You may get calls from users who are really stressed/angry/furious/verge of crying

Here are a couple of tips about how to handle them efficiently:

1. Greet him/her say how are you this morning. It cools them down believe me it really works
2. Listen to them patiently they are the customers it is for them that we manufacture/Support the software and always remember they are calling us because they have a problem

3. Assure them that its just a issue and it will be resolved sooner than later
4. You are doing your best with the best intent to get his problem solved
5. Simple but significant: Keep them updated with the developments

Conclusion

Always remember SAP is just a facilitator to run business smoothly which is always paramount.

As a SAP consultant whatever you do always think how it is going to affect business and what can you do ease the user's life when he is using SAP.

Integration Testing Strategy in SAP Projects:

I have been working on Integration - Test management for past one year in one of the largest SAP Rollout project in Oil and Gas and I have outlined here the testing strategy, best practices and guide lines for choosing Testing Tool.

Objectives of Integration Testing:

- The overall Design/Solution built is accurate and correct from a technical perspective
- Integration of related SAP R/3 modules and business processes
- Integration of SAP configuration and custom developments, interfaces
- SAP R/3 integrates with the other SAP application (APO, BW, SEM, CRM)
- Integration with the legacy systems

Integration Testing - Preparation Phase:

1. Identify the scope of testing - Scope should include all relevant business scenarios, scenarios to test Interfaces with legacy if any, period-end scenarios.

2. Load the testing scripts in testing tools.

3. Identify Master Data and Organisation structure relevant for testing.

4. Identify testers and schedule testing

5. Testing Environment setup:

- Ensure all transports of configuration and programs are moved to intended Testing Environment

- Perform check on configuration.

- Perform manual configurations (like Variant setup or Number ranges etc)

- Setup user id required for testing.

- Check if any dependencies with other process teams.

6. Create Master Data used for Testing.

7. Define Defect Management procedure and identify focal points in each process areas for defects resolution.

8. Perform check on Master data's (Finance, Costing, Tax check etc) before testing is commenced.

Integration Testing - Execution Phase:

1. Testers will run the test cases and record the results in Testing tool and raise defects where ever applicable.

2. Setup daily testing status review meetings with SAP process team's focal points, defect focal points and legacy team focal points.

3. Run Daily status review meetings to review test execution progress with each process team and set targets for next working day. Also review defects which are blocking testing progress and raise escalation if required to expedite resolution.

4. Generate daily reports covering all topics to provide good visibility on the testing progress to all stakeholders.

5. Bridge the knowledge gaps if any between SAP process teams and Legacy teams before start of the testing cycle.

6. Facilitate communication between SAP process teams, legacy teams and Data load teams etc.

7. Defect Management Process:

All issues found during test execution should be logged in as a Defect.

- Provide defect definitions with respect to severity (Low, Medium, and High) and Priority (Low, Medium, and High)

- Setup defect Management rules on use of severity and priority to classify defects.

- Recommend resolution times for defects based on severity and priority.

- Setup/Mark fields in the defect management tool to capture all inputs required for defect resolution and also to perform defect analysis at end of testing cycle (like cause of defects analysis)

- Define escalation progress and identify escalation focal points.

Best Practices for scoping:

1. Based on Business Value (Which should be present in the design to support Business benefits) and Technical Risk (Complex logic, high volumes, use of new technology) classify each scenarios as low, medium and high. We can be used to reduce testing scope in case Draft scope is high and with current resources it is not achievable to complete testing within the time window

2. If Legacy systems are involved in testing then scoping is one of the most important exercises. Setup review meetings with SAP process teams, legacy team and Middleware teams to discuss and agree testing scope, list and raise exceptions/step outs (step outs are deviations from regular testing plan). Use simple excel checklist to record details of readiness against Data (in legacy), availability of legacy system, training needs to legacy team etc and Signoff.

3. If the solution is rolled out to multiple countries repeat the no of scenarios to cover data sets of all countries.

Guidelines to choose Testing Tool:

I have outlined here the points to be considered when a choice on testing tools is made.

- Testing Tool should have a Global capability with integrated planning and execution capability.

- Tool should be capable of supporting all phases of testing and enabling automation

- Multi user access and appropriate controls and security

- Full audit trail capability - enabling SOX compliance

- Integrated defect management and workflow capabilities

- Robust reporting for tracking and management

- Library based approach to test scripting - enabling reuse through all phases of testing

The price procedure within SAP ECC and SAP CRM is used to calculated different price components like gross price, nett price, taxes, discount and surcharges. The price procedure contains all relevant price conditions to make up the final price for the customer.

Some of the price conditions are not used to calculate the price, but contains important price information used for reporting purposes or used to calculate margins. When implementing SAP CRM Sales, the price procedure of ECC will become fully available during qoutation and order creation. However some parts of the price procedure should not be visible for sales representatives (or other employee's). SAP delivers a nice and simple solution for this. Within the price procedure in CRM there is an additional column called 'Authorization level' which can

be filled with a number. Based on the number, an employee cannot see the price condition, can see the price condition or can change the price condition.

Symptom

This note contains a list of frequently asked questions relating to purchase orders (ME21N, ME22N, ME23N). For general information about the purchase order, see also FAQ Note 491211.

Catalog of questions

1. Where can I find **detailed information about transactions ME21N, ME22N, and ME23N** in purchasing?
2. In transaction ME23N, I can choose "Create" to create new purchase orders. Why is the **transaction code** still ME23N and not ME21N?
3. Why is a **purchase order on hold** relevant to material requirements planning (MRP)?
4. Can I prevent the **holding of purchase orders**?
5. Why can a purchase order be put **on hold** if the user **does not have authorization** for the used document type or organizational unit?
6. Transaction ME22N can be used to change the **document type**, even when the new document type is assigned to another number range interval. How can I prevent the document type from being changed?
7. A purchase order is created with **reference to the purchase requisition (PReq)**. Afterwards, the PReq number is deleted from schedule line level. Why is the reference to the PReq kept at item level?
8. The **F4 input help for the material group** displays only the first 20 characters of the material group description. How can I display the full description?
9. Why does transaction ME21N not contain some of the fields and functions of transaction ME21?
10. Why can I not change the **language** in the purchase order (ME21N, ME22N, ME32N)?
11. I enter the net value without **currency** in the purchase order. Why does the system display the message 'Enter currency' when the currency can be derived from the vendor master?
12. I change, for example, **material master data** from within the purchase order. Why is the data I changed not taken into account in the purchase order?
13. Why do the **field exits** no longer work in the purchase order?
14. Why is only a limited use of **screen variants** and **transaction variants** possible with the new transactions?
15. Why are materials with **subitems** not supported?
16. How do I save and/or change a **standard display variant** for the document overview?
17. Why does the 'AKTV' **field selection key** not have the same effect as in the old purchase order (transaction ME21)?
18. Why does the system no longer display an **enhancement dialog box** in the purchase order (ME21N, ME22N, ME23N) to draw the user's attention to purchase orders that already exist for the same vendor on the same day?

19. Why is it not possible to change the quantity of a purchase order item that is assigned to a technically completed **maintenance order**?
20. Why can I not change any customer-defined fields using the **fast change** function?
21. Why is the **field selection** ineffective for the fields 'Item interval', 'Subitem interval', 'Supplying vendor' and 'Invoicing party'?
22. Why can I still change the **company code** at purchase order header level when follow-on documents (goods receipt, invoice receipt, and so on) already exist?
23. What significance does the **company code** have at purchase order header level?
24. Why are **batch input** and **CATT** not possible in the purchase order (ME21N, ME22N, ME23N)?
25. Why is transaction **ME23 instead of ME23N** called (or vice versa) from certain applications?
26. I use transaction **PFCG** (role maintenance) to maintain **authorizations**. Why are the same (SU24) values not suggested for transactions ME21 and ME21N?
27. What are the differences between the **authorization concepts** for transactions ME21, ME22, and so on and those for new transactions ME21N, ME51N and so on?
28. When I create a purchase order with transaction ME21N the system displays an error message because a **certain field** was not filled correctly. The **cursor** is not automatically positioned on this field so that I can make the correction.
29. Certain **fields** in the purchase order exist **at header level and at item level** (for example, KONNR and ANGNR). How are the default values determined for the fields at header level?
30. Why does the material number column sometimes disappear in transactions ME21N/ME22N?

Symptom

You experience errors processing the EarlyWatch Alert or other services in your SAP Solution Manager and want to report this issue. The symptom is either

- in the log of the job SM:EXEC SERVICES you find messages Message class 'DSWP', Message no. 880 and 881. The message text points to this SAP Note 700518;
- or a short dump during SAP service processing;
- or errors opening or processing a Service Session (e.g. with Message no. DSVAS214);
- or failure of the job SM:EXEC SERVICES;
- or on SAP Solution Manager 7.0 EhP1 SPS24 only: Early Watch Alert reports are completley empty although the job SM:EXEC SERVICES finished successfully and the job log reports successful processing of the session;

- an unprocessed EarlyWatch Alert session (or some other session periodically processed in background);
  in the EarlyWatch Alert Operations screen the session is shown in status "Data is available" (icon with two small bottles) with the description "The service is ready to process session data. The data will be processed automatically by the background job 'SM:EXEC SERVICES'.".

Other terms

EWA ; ST-SER ; SAP Support Services ; SM:EXEC SERVICES ; RDSMOPBACK_AUTOSESSIONS_ALL ; RDSMOPBACK_AUTOSESSIONS ; Service Level Reporting ; SLR ; EarlyWatch Alert for Solutions ; EWAfS ; /1AGS/* ; RSDVAS*

Reason and Prerequisites

Services are started in Solution Manager Work Centers like 'Technical Monitoring' or 'SAP Engagement and Service Delivery' or in transaction SOLUTION_MANAGER (= DSWP) in SAP Solution Manager. The EaryWatch Alert (EWA), EarlyWatch Alert for Solutions (EWAfS) and the Service Level Reporting (SLR) are processed in background job SM:EXEC SERVICES. If processing a sessions fails with a short dump message DSWP 880 is written to the job log and the job continous processing further sessions. The sessions are processed in a synchronous RFC call (this is introduced with Solution Manager 7.0 EhP1 SP 26).
Different behaviour upto Solution Manager 7.0 EhP1 SP25 except for SP24: If the job SM:EXEC SERVICES fails with a short dump while processing a session not only this session stays unprocessed but also other sessions that would have been processed by the background job afterwards. The job cancels writing message 671 on message class 00 to the job log and a short dump is written.
Different behaviour on Solution Manager 7.0 EhP1 SP24 only: Please be aware that this is not true on SAP Solution Manager 7.0 EhP1 SPS24: if a session fails no short dump is written and the job SM:EXEC SERVICES continues without notice (see SAP Note 1496931 for further details; implementation of that note implements the old behaviour described above; recommended is to update to SP26 or higher).

Remarks: The job SM:EXEC SERVICES runs program RDSMOPBACK_AUTOSESSIONS_ALL (formely RDSMOPBACK_AUTOSESSIONS) and is monitored in the Solution Manager Self Diagnosis.
This note does not deal with issues regarding the setup of EarlyWatch Alert or other services. For setup topics see the related notes

- 1257308 - FAQ: Using EarlyWatch Alert
- 1332428 - Missing data in service sessions from BI/CCDB
- 1172939 - Technical prerequisites for remote service delivery in SSM
- 91488 - SAP Support Services - Central preparatory note

As supplemental illustration this notes attachments are

- an example for a short dump
- an introduction to transactions DSA and DSADEV.

Solution

The following details will help you

- analyzing errors,
- choosing keywords while searching notes,
- providing all the relevant information when opening a message.

Errors which occur in background processing can be reproduced in dialog by manually opening the session in transaction SOLUTION_MANAGER or DSA. In DSA the session can be found with the session number. The session number is retrieved from the short dump by searching for "sessno".

Error Analysis onSAP Solution Manager 7.0 EhP1 SPS24
This section only applies if SAP Note 1496931 (SP25) in not yet implemented.
In case the symptoms of note 1496931 apply you can proceed with the error analysis as follows:

- Get the session number of the failing session (as hoover over text in transaction SOLUTION_MANAGER, from the log of job SM:EXEC SERVICES or in transaction DSA).
- Call transaction DSA and enter the session number. Process the session manually (and in dialog task) in DSA. If the session fails a short dump is written and displayed to you. Continue as described in the next section.

Analyzing a Short Dump In SAP Solution Manager

1. Finding short dumps (transaction ST22)
User: The "Job Initiator" is not necessarily the same user who executed the failing job step and who is shown in the short dump in section "User and Transaction". The later user name is found in SM37 in the step list of job SM:EXEC SERVICES. When checking in ST22 for short dumps enter this user as search criterium.

Date/time: Check the job log of SM:EXEC SERVICES in SM37. The short dump occurs

arround the time of messages Message class 'DSWP', Message no. 880 and 881 or of 'Job cancelled'.

Exception/Runtime error: Many different runtime errors and exceptions can occur. The following exceptions exclusively occur duing the processing of service sessions (runtime error 'UNCAUGHT_EXCEPTION'):
CX_DSVAS_API_SERVICE_SESSION, CX_DSVAS_API_CONTEXT_INSTANCE, CX_DSVAS_API_ATTRIBUT_INSTANCE, CX_DSVAS_API_CHECK_INSTANCE, CX_DSVAS_API_CHART_PROPERTIES, CX_DSVAS_API_TEXT_PROPERTIES, CX_DSVAS_API_TABLE_PROPERTIES, CX_DSVAS_API_COLUMN_PROPERTIES.

When a short dump of the background job SM:EXEC SERVICES is displayed in ST22 the following signature will be found:

- **Solution Manager 7.0 EhP1 SP26 and higher:**In section "Active Calls/Events" the entries 1 to 3 will be like this:
  3 FORM SAPLDSVAS_FL LDSVAS_FLU09 1 DSVAS_FL_OPEN_SESSION
  2 FORM SAPMSSY1 SAPMSSY1 85 REMOTE_FUNCTION_CALL
  1 MODULE (PBO) SAPMSSY1 SAPMSSY1 30 %_RFC_START

- **Upto Solution Manager 7.0 EhP1 SP25 except for SP24:** In section "Information on where terminated" the short dump will contain lines like this:
  Job Name..... "SM:EXEC SERVICES"
  Job Initiator.. "<user who created the job as shown in SM37>"
  Job Number..... <00012345>

- **Solution Manager 7.0 EhP1 SP24:** Similar to SP26, but function module DSVAS_PROC_SESSION_OPEN is called.

2. Dump analysis: Finding the session number
Search in the dump for PS_STDPARAMETER or SESSNO. You will find a number like EA0010001784716 . The first two letters indicate the type of session (in this example, EA):

- EA : EarlyWatch Alert.
- VE : EarlyWatch Alert for Solutions.
- EC : Service Level Reporting.
- IC : Setup Service Level Reporting.
- SM : Solution Monitoring (Central System Administration).
- GA , GV : GoingLive Analysis, GoingLive Verification.

- EW : EarlyWatch Service
- EX : Data Volume Management (ConsPack DMA).

(To find other session types call transaction DSA and choose the F4 help for field "Session package".)

The session number consists of 13 digits (in this example, 0010001784716). The first 3 digits are the client used in Solution Manager. The session number is displayed in the report, in transaction SOLUTION_MANAGER (select your Solution Landscape, in "Operations" select "Solution Monitoring" and then "EarlyWatch Alert"; the session number is shown in the "mouse over" text), and in Session Workbench (transaction DSA).

The session number can be used e.g. in transaction DSA or in table DSVASSESSADMIN to retrieve more details. The "Description" for the session shows the solution's name (scheduling of a session is always done with reference to a solution where the system is included).

3. Dump analysis: Finding the relevant coding

The program and the line in the program code where a short dump happens is often not very specific and therefore of little use for error analysis. This is due to the fact that the Service Session coding uses a framework located in a different package (DSVAS). When the short dump occurs in this framework the error still resided in the invoking check coding which can be identified from the section "Active Calls/Events". The calls are listed in backward order, i.e. the call that occured last is listed first.

Search from top for the first program that starts with "RDSVAS" or "/1AGS/" (the later is used when the service is included in the Service Content Update, for more information see note 1143775). The following is an extract of an "Active Calls/Events" section:

Type/Name	Program	Line
METHOD LCL_SESSION=>ATTRIBUTE_SEARCH	SAPLDSVAS_PROC	1956
FUNCTION DSVAS_PROC_API_VALUE_SET	SAPLDSVAS_PROC	43
FORM ACTION_001	RDSVASATECH_INIT_SFS_____005	1589

In this example the program to be anaylzed is "RDSVASATECH_INIT_SFS_____005" together with the line number 1589 and the name of the form routine "ACTION_001".

The program name "RDSVASATECH_INIT_SFS_____005" consists of the following parts:

Example	Part Name	Length (characters)
RDSVASA	prefix	7
TECH_INIT_SFS	check group	upto 20
_____	filling underscores	upto 19
005	version number	3

A check group is a collection of service coding all related to the same area. E.g. a check group EA_CRM will contain service coding for CRM systems. The check group is important on development support level allowing to direct the message to the team responsible. In the service development system the responsible teams are maintained per check group.

The version number corresponds to a ST-SER release (the mapping being different for every check group). If you do a notes search with the report name as a search term the version number automatically limits the search to the specific ST-SER release. In this example "RDSVASATECH_INIT_SFS_____005" is only used in ST-SER 701_2008_2. To extend the search to the preceding release you would add "RDSVASATECH_INIT_SFS_____004" as search term in this example.

From the report name the ST-SER release can be verified as follows

- Call transaction SE38.
- Copy the report name into the "Program" field.
- Select "Attributes".
- Choose "Display".
- In the "Package" field you find e.g.

  Package DSVAS_APPL_2008_2 ST-SER Release 2008_2

Note: If the report name starts with /1AGS/ (services using the Service Content Update) the report is created in $TMP, the package for temporary objects. This is a useless information. In this case replace "/1AGS/" by"RDSVAS" in the program name first.

In the example use for a notes search "RDSVASATECH_INIT_SFS_____005" and "ACTION_001" as search terms (beside the terms highlighted in the short dump). In case the program name starts with "/1AGS/" like "/1AGS/ATECH_INIT_SFS_____005" replace this part of the program name by "RDSVAS" and search additionally for "RDSVASATECH_INIT_SFS_____005". "/1AGS/" is the name space for temporary objects created by Service Content Update.

4. Dump analysis: Finding check group and check ID
The check group and check ID can sometimes be found from the values of variable PS_STDPARAMETER or LS_STDPARAMETER. This is an alternative to analyzing the "Active Calls/Events" section (from the calling form routine - "ACTION_001" in the example - the check ID can be found in transaction DSADEV by using the "Where Used" list for the ACTION_001. Search in the dump for the string "_STDPARAMETER" to find "PS_STDPARAMETER" or "LS_STDPARAMETER".

Variable Name	Contents

```
PS_STDPARAMETER-GRP            check group
PS_STDPARAMETER-ID             check ID (identification number)
PS_STDPARAMETER-SESSION_NUMBER session number
```

These parts can be retrieved from PS_STDPARAMETER in the short dump like this:

```
PS_STDPARAMETER        EA0010001784716#####ER3_SYSTEM HPC
                  443333333333333000004535555442454222222
                  5100100017847160100052 3F39345D0803000000
... +  40                                  00015EA_C
                  222222222222222222222222222222333334454
                  000000000000000000000000000000001551F3
... +  80           RM_PERF        0002500015EA_CRM_PERF
                  5455454222222222333333333344545455454222
                  2DF0526000000000000250001551F32DF0526000
... + 120            00025
```

Row 1 contains the session number (EA0010001784716; more precisely this is the concatenation of session type and session number). Row +40 and +80 contain the check group and check id (in this example EA_CRM_PERF and 00025). (For completeness it mentioned here that row +80 and +120 contain check group and check ID of the referencing check, in this example also EA_CRM_PERF and 00025). The check ID is the technical coordinate to identify the unit in the service session workbench, in the service report, or in the service development workbench.
The dump display changed slightly in new releases. If no more than 94 bytes of PS_STDPARAMETER are displayed change to "Unformatted Display". The variables are found at the following positions:

- session type at 1
- session number at 3
- check group at 75 (referencing check group at 105)
- check id at 95 (length 5) (referencing check id at 125)

5. Dumps of various types

a) Runtime Errors UNCAUGHT_EXCEPTION (exception CX_DSVAS_API_SERVICE_SESSION, CX_DSVAS_API_CHECK_INSTANCE, or other exceptions starting with CX_DSVAS_API_*)
Relevant coding can be found as described above. In the "Error analysis" section important information follows after "The reason for the exception is", e.g.:

- Attribute DATABASE PARAMETER _optim_peek_user_binds is not declared in the check group EW_ROOT

- EA0010004315763: Attribute not found: ABC SESSENV PRODUCT_NAME

This already gives the session number, the kind of error, and details of the erroneous call.

If a notes search let you find a solution for a similar error, the note will only solve the error if it mentions exactly the attribute specified in the dump: in the later example "SESSENV PRODUCT_NAME" are describing the missing attribute while "ABC" is the system id and therefore variable. In the former example all "DATABASE PARAMETER _optim_peek_user_binds" are describing the missing attribute.

b) Runtime Errors MESSAGE_TYPE_X
Relevant coding can be found as described above. In the "Error analysis" section important information follows after "Short text of error message". For examples see the section for CX_DSVAS_API_SERVICE_SESSION above.
c) Runtime Errors COMPUTE_BCD_OVERFLOW, CONVT_NO_NUMBER, CONVT_OVERFLOW
These runtime errors are due to unsupported data operations such as data overflow (e.g. COMPUTE_BCD_OVERFLOW) or type conversion errors (e.g. CONVT_NO_NUMBER, CONVT_OVERFLOW).
Such errors occur in the coding of the check group, so the relevant report is named in the "What happened?" section and the "Source Code Extract" section shows the critical coding.
d) Runtime Errors SYNTAX_ERROR
- If a syntax error occurs in coding of the Service Content Update (report name starting with '/1AGS/') please follow solution #4 of SAP Note 1491227.
Background: Serious syntactical errors like incorrect nesting of 'IF - ELSE - ENDIF' or 'LOOP - ENDLOOP' statements only occur due to some error during the generation of the '/1AGS/' report. Regenerating this coding solves the issue.
- If a syntax error like '/1CAGTF/IF_LOGFUNC_00nnnn not found' occurs please do a 'Delete and Replace Service Definitions' in transaction SDCCN -> Utilities -> Maintain Service Definitions. Details are described in SAP Note 727998.

Error Opening a Service Session
When opening a session fails with message DSVAS 214:
'Opening the session component <XXX> failed : Message no. DSVAS214'
the session may have been written in an inconsistent state to disk. This may happen on Solution Manager 7.0 Support Package 24. In this case apply SAP Note 1496931.
When you encounter message DSVAS 214 you may try to reprocess the session manually:
In transaction DSA enter the session number and continue with 'Enter'. On the left hand side click on the session. On the right hand side access the session object and from the context menu (right mouse click) 'Reset' the session. After you have confirmed the reset and the reset finished you can start processing the session by opening it. (An automatic session will not be reexcuted

by SM:EXEC SERVICES after reset, but only if additionally the RATING is set to blank and the STATUS to 'I'. Both can be done in table DSVASSESSADMIN using transaction SE16.) If processing fails again record any message displayed or short dump occurring, and open a message at SAP.

Error Processing a Service Session

When an error occurs while processing a session in the Service Session Workbench (DSA) and a certain check is not correct, the "technical information" of the check is to be used in the issues description:

To find technical information of the check, open the service session and then navigate to the check where the problem occurred. Choose "Goto" --> "Technical Information".

Example:

Session Number 1000000002878
Session Type IC

Session Pack./Vers. EWA_CUST 38

Service Description Setup SL Reporting
Session Group/Vers. IT 35
Session Type EWA Customizing

Check Group/Version EWA_CUSTOMIZING 41

Check ID / Description 20 Setup SL Reporting
Context SESSION
Context Instance

Version numbers refer to the ST-SER specific versioning and are different for each ST-SER release. Session groups and check groups have versions. If versions above 50000 are used the Service Content Update is activated.

Job Log Messages

After import of ST-SER 701_2010_1 SP08 the following message appears in the job log (error message DSWP 881):
Error message: SESSION_DEF_INCONSISTENT
Apply SAP Note 1614130.

Job Cancels

The job SM:EXEC SERVICES may cancel without a short dump but with messages in the job log (accessible in transaction SM37; the messages may also be found in system log SM21 or the developer trace files ST11) like the following:

Enter a valid date (for example, 01/05/2009)
Job cancelled after system exception ERROR_MESSAGE

or:
ABAP/4 processor: SYNTAX_ERROR
Job cancelled
You also find 'Message class' and 'Message number' in the job log.
This is to be used in the notes search.
In the job log the session number is always displayed as:
Trying to perform session EA3330000035584
The parts of this session designator are explained above.
If you process such a session manually (in dialog) the message appears in the status bar like this:
Enter a valid date (for example, 01/05/2009)
Message no. FK888
The message number is the concatenation or 'Message class' ("FK") and 'Message number' ("888"). The SAP development support can identify the erroneous coding using the Where-used list for the message.
Processing a session can be started from transaction SOLUTION_MANAGER (navigation starts by selecting the Solution which is also documented in the job protocol) or in transaction DSA (selection by session number).

Notes Search
Search in Application Component SV-SMG-SER* (to include both SV-SMG-SER and SV-SMG-SER-EWA).
Search in software component ST-SER with the release of the Solution Manager, e.g. 701_2008_2. The support package can be used to further restrict the search (in case of using the Service Content Update the support package would be determined by the content update date and not the SP of the Solution Manager).
As keywords use:

1. Short dump: beside the keywords in the short dump use the method described above to find program name, check group, check id, or check name (= section in the service report).
2. Error processing a service session: check group, check id or check name from the technical information.
3. Job cancels without dump: all message details.

Creating a Message
Messages should be opened for the SAP Solution Manager system on component SV-SMG-SER. For the EWA a sub-component SV-SMG-SER-EWA exists.

1. Short dump: Download the complete shortdump and attach it to the message as text file. In detail:

    - Call transaction ST22 and select the relevant dump.

    - Choose System -> List -> Save -> Local File to download the dump as a text file (file extension .txt).

- Attach the text file to the message.

2. Error processing a service session: provide the "Technical information" of the erroneous check. Use CRTL + Y to copy all the technical information. Paste it into the message.
3. Job cancels without dump (job protocol): all of the analysis details like the message, session number, job details.
4. The software release of Solution Manager is essential. In case the System Data on the Support Portal for the Solution Manager are updated regularly this information is automatically available at SAP with the message.
If not the software release can also be added manually to the message:

Copy and paste all installed software components. To get this information choose System -> Status. In the 'SAP System data' group box, click the 'Component Information' icon, and copy and paste the information from the following columns: Software Component, Release, Level, and Highest Support Package.
The most relevant software components are ST, ST-SER, BI_CONT, ST-PI, and ST/A-PI.

Please be aware that only the latest ST-SER release may be in maintenance (that is further corrections will only be provided for this release). For details see SAP Notes

569116 "Release strategy for Solution Manager Service Tools (ST-SER)",

608277 "SAP Solution Manager content add-ons".

5. Managed systems (also known as satellite systems)
Especially if the the problem is related to the data retrieval from the managed system the details of the system where the problem occurs is important:

- List the satellite system(s) relevant to the problem being reported
- System ID <SID>
- Installation number <instno>
- In case the System Data on the Support Portal for these managed systems are not updated automatically (background job in Solution Manager) provide the details. In case of an ABAP system this is: Copy and paste all installed software components. To get this information, call transaction SAINT, or choose System -> Status. In the 'SAP System data' group box, click the 'Component Information' icon, and copy and paste the information from the following columns: Software Component, Release, Level, and Highest Support Package.

6. Name of the solution landscape
In case the repro requires to choose the right solution (this is e.g. always the case in

transaction SOLUTION_MANAGER) don't forget to specify the name of the solution landscape.

Symptom

This consulting note describes the pricing analysis in the R/3 system. For transparency reasons, the note is divided into the following sections:

1. Definition of terms
2. Clarification of terms
3. Availability and start of the pricing analysis
4. Technical execution of the pricing analysis
5. Relevant structures for the pricing (analysis) or the condition access
6. Display scope of the pricing analysis
7. Which stage or system status does the pricing analysis reflect?
8. How do changes of the pricing-relevant Customizing and the condition master data as well as the pricing-relevant user exits affect the pricing analysis?
9. Program-technical details for the execution of the pricing analysis

1. Definition of terms:

A pricing analysis is the way to find information about the following in the pricing screen of a document:

a) the used condition types in the pricing procedure of the document

b) the execution of the condition access (automatic pricing)

In this case, the pricing analysis serves for the analysis of document conditions.

2. Clarification of terms:

The pricing analysis is to be distinguished from the analysis of conditions in the area of the master data. Information about the master data (condition records) available for the pricing can be found by means of indexes. With such indexes, you can, for example, search fro all condition records (independently of the condition type), in which a certain material belongs to the key of the condition record. Details for the condition index can be found in the SAP R/3 library.

3. Availability and start of the pricing analysis:

Since the automatic pricing (= condition access) occurs within the framework of the item pricing, the pricing analysis is only available on the items of the document. Just as there is no automatic determination of header conditions, there is also no pricing analysis on the document header. The pricing analysis is started by means of the 'Analysis' button.

4. Technical execution of the pricing analysis:

The pricing analysis is based on a call of the 'PRICING_DIALOG_PAI' function module (LV61AU05) with pricing type '+'. However, the individual routines of the pricing are run with pricing type 'B', since the goal of the pricing analysis is a complete analysis of the condition access (with regard to pricing type 'B' ==> compare Note 24832).
The outcomes of this condition access are logged so that they can be displayed later.
The result of pricing from the redetermination with pricing type 'B' is of course not set in the internal tables that are used for the data retention of an 'actual pricing run '. The analysis result is dynamic only stored in the memory. There is no storage at database level.

5. Relevant structures for the pricing (analysis) or the condition access:

For the execution of the pricing and in particular the condition access, the structures KOMP and KOMK and the field contents of their fields are decisive. The Customizing of the access sequences determines which KOMK or KOMP fields the key fields of the condition tables are to correspond with during the read access (for example A004-VKORG < KOMK-VKORG).
The program that calls the pricing is reponsible for the correct filling of the structures. In the SD order, the filling occurs in the routine FORM PREISFINDUNG_VORBEREITEN (FV45PF0P), and in the SD billing document it occurs in the routine FORM PREISFINDUNG_VORBEREITEN (LV60AA58).
The filling of user-defined fields in the KOMK and KOMP structures or a filling of the standard fields deviating from the R/3 standard system can be made in the user exits FORM USEREXIT_PRICING_PREPARE_TKOMK (MV45AFZZ or RV60AFZZ) or FORM USEREXIT_PRICING_PREPARE_TKOMP (MV45AFZZ or RV60AFZZ).

6. Display scope of the pricing analysis:

As already mentioned in section 1, all condition types of the used pricing procedure are listed. For condition types without access sequence or for condition types, where there is no access due to not filled requirements, the display is limited to one row. For example, the attached message text (from message class 'VE') is one of the following, depending on the current situation:

- '208 Condition record has been found' for a condition with access sequence for which a condition record was maintained and set (PR00 with access 40 in the following example)
- '001 Manual condition' for a manual condition (for example HB00) that was not yet entered

(ZGR1 in the following example)

- '201 Condition entered manually' for a manual condition (for example HB00) that was already entered (ZGR2 in the following example)

- '207 Condition has been found (without condition record)' for a condition without access sequence, for which the indicator 'Manual' (field KAUTO) is not set in the pricing procedure

- '011 Condition ignored (requirement xyz not fulfilled)', if a requirement that is assigned to the condition type in the pricing procedure is not fulfilled (PR02 with requirement 008 in the following example)

- '213 Amount copied from material valuation data' for the cost VPRS.

For conditions with access sequence, you can double-click the condition type to navigate to the individual accesses. The accesses display with which document fields (KOMK and KOMP fields, such as KOMK-VKORG or KOMP-PMATN, compare point 5) and field contents (for example '0001' or 'MAT-0815' in the following example) the access to the key fields of the condition tables is made. Also here, the attached message text is according to the current situation, for example:

- '009 Condition record missing', if no condition record (K004 and K005 or access 10 for condition type PR00 in the following example) was maintained for the corresponding combination of key fields

- '102 Access not made (initialized field)', if the field contents of at least one KOMK/KOMP field that is needed for the access to the affected condition table is not filled (access 20 for condition type PR00 in the following example)

- '110 Access not executed (Requirement & not fulfilled)', if a requirement that is assigned to an access in the access sequence is not fulfilled (access 30 for condition type PR00 in the following example)

- '017 Manual condition over condition records' for a condition, for which the 'Manual' indicator (field KAUTO) is set in the pricing procedure and that has an access sequence has, but was not yet entered manually (Z004 in the following example, compare also Note 392668)

- '202 Condition entered manually (condition record exists)' for a condition, for which the 'Manual' indicator (field KAUTO) is set in the pricing procedure, access sequence and condition records exist and that was entered manually (Z005 in the following example, compare also Note 392668)

- '203 Condition record was found and changed manually' for a condition/access for which a condition record was maintained and set in the pricing result, but whose condition rate was subsequently changed manually (K007 in the following example)

- '008 Condition record exists (manually removed)': A suitable condition record could be

determined, but was deleted manually by the user from the pricing result. This message is also issued in special error situations which are described in detail in Note 859876.

- '108 Condition record exists, but has not been set': A suitable condition record exists on the database, but it could not be read at the time of the relevant item pricing due to missing access information. See also the detailed information in Note 859876 as well as the information in section 8 of this note.

For condition types with accesses, you should note that the row with the condition type in the output log displays the message text that follows from the access that was last executed (compare PR00 with access 40 in the following example).

In the case of determined condition records, you can double-click the 'Condition records' button in the old output format or the condition rate in the new output format to go to the screen of the condition master data maintenance in order to display all information associated with the condition record.

Finally, also the subtotal lines used in the pricing procedure are listed at their corresponding items in the log (compare rows with text '200 Subtotal' in the following example).

Example:

Excerpt from the log of a pricing analysis:

```
PR00 Price              208 Condition record has been found
ZGR1 Special price 1     001 Manual condition
ZGR2 Special price 2    201 Condition entered manually
PR02 Interval price      011 Condition ignored
                           (requirement 008 not fulfilled)
                         200 Subtotal
K005 Customer/material  009 Condition record is missing
K007 Customer discount   203 Condition record was found
                           and changed manually
K004 Material           109 Condition record is missing
Z004 Special discount 1  017 Manual condition over
                           condition records
Z005 Special discount 2  202 Condition entered manually
                           (Condition record exists)
Discount amount          200 Subtotal
...
```

For the condition type PR00, going to the condition accesses returns the following, for example:

```
SqNo                 Note
05 "Empties" Prices     110 Access not made
                           (requirement not fulfilled)
```

10 Customer/material 009 Condition record missing
20 Price List Type/ 102 Access not made
Currency/Material (initialized field)
30 Price List Type/ 110 Access not executed
Currency/Material (requirement not fulfilled)
40 Material 208 Condition record has been
found

For access 40, it can finally be displayed, with which pricing date and which field contents the key fields of the Konditionsabelle A004 were accessed:

Condition field Document field Value in doc
The complete key is used
A004-VKORG KOMK-VKORG 0001
A004-VTWEG KOMK-VTWEG 01
A004-MATNR KOMP-PMATN MAT-0815
KOMK-PRSDT 09/05/2003

7. Which stage or system status does the pricing analysis reflect?

As already mentioned in section 4, the pricing analysis is based on the simulation (!) In other words, there is no (!) access of a saved log that was set during the last saving of the document and the pricing carried out then.
Instead, the current Customizing settings of the system are valid during the execution of the pricing analysis (in particular for the access sequences, condition types and pricing procedures, see Transactions V/07, V/06 and V/08).
In addition, interim changes to the condition master data (deletion and creation of condition records, change of validity periods) of course also affect the pricing and therefore the analysis. For the pricing analysis, the current status is decisive.
Finally, the use of the user exits for the preparation of the pricing mentioned in section 5 affects the pricing (analysis). The status of the source code currently implemented in the user exits is decisive.

8. How do changes of the pricing-relevant Customizing and the condition master data as well as the pricing-relevant user exits affect the pricing analysis?

As already listed in section 7, the current status of the system is relevant for the pricing analysis. 'Inconsistencies' between the originally determined and the saved pricing analysis may give the impression of an error behaviour of the condition access, but are (generally) due to interim changes to the system.
The pricing analysis tries to make allowance for these cases, where there is now a different picture due to changes to the system, by carrying out a comparison of the new determined pricing result with the pricing result that was set in the document up to now. Deviations found

during this comparison are also logged by corresponding message texts. The following are some examples.

a) The message text '208 Condition record has been found' and the display of the text 'Deleted' occurs instead of the condition rate (only in the new output format) in the following case:

- An originally automatically determined condition record was deleted in the meantime in the master data (by setting the deletion indicator).

b) The message text '108 Condition record exists, but has not been set' is logged in the following cases, for example:

- An originally automatically determined condition record was in the meantime manually deleted in the document.
- A originally not yet existing condition record and therefore not set in the pricing result, has been created in the meantime (or has become valid for the first time by enlarging the validity period).
- A condition record was originally not set due to the set 'Manual' indicator in the pricing procedure (KAUTO), but would now be set because the indicator was removed.

9. Program-technical details for the execution of the pricing analysis:

By pressing the 'Analysis' button, the FCODE for Releases up to and including 4.5 is set to 'PROT' and for Releases as of 4.6 first to 'V69A_PROT' and then in the PRICING_PASS_FCODE function module (LV69AU03) to 'PROT'. The FCODE 'PROT' now cuases the RV61A-KSTEU variable for Releases up to and including 4.5 to be set to '+' in the routine FORM FCODE_PROT (MV61AF0F) as well as for Releases as of 4.6 in the routine FORM FCODE_PROT (LV69AF24). First of all, the possibly still existing data of a previously executed log run is deleted by execution of the 'COND_PROTOCOL_REFRESH' function module (LV610U01). Then the 'PRICING_DIALOG_PAI' function module (LV61AU05) of the pricing is called, to which RV61A-KSTEU is transferred as pricing type. After execution of the 'PRICING_DIALOG_PAI' function module, the logged analysis (==> function module 'COND_PROTOCOL_UPDATE', LV610U02) is displayed at the end of the routine FORM FCODE_PROT (MV61AF0F) for Releases up to and including 4.5 by calling the 'COND_PROTOCOL_SHOW' function module (LV610U03) and at the end of the routine FORM FCODE_PROT (MV61AF0F) for Releases as of 4.6 by calling the 'COND_PROTOCOL_SHOW_NEW' function module (LV610U07).

If you want to use the old output format of the analysis log in Releases as of 4.6, you can do this by replacing the default value 'X' with the default value SPACE in the source code ot the LV69ATOP include in the following row:

data use_control type c value 'X'.

Other terms

Pricing analysis, analysis, condition analysis, access analysis, log, COND_PROTOCOL_SHOW, COND_PROTOCOL_UPDATE, COND_PROTOCOL_GET, COND_PROTOCOL_SHOW_NEW, SAPLV61U

Reason and Prerequisites

This is due to the mode of operation and the design of the pricing analysis.

Solution

Not relevant. This is a consulting note.

Related Notes

1026423	Determining required pricing attributes
1010258	Pricing analysis after CRM replication (VE 108)
195168	Confusing pricing analysis with tax jurisdiction
131396	Display of validity date in pricing analysis
113506	Incomplete pricing analysis
27636	Message: Condition exists (removed manually)

Symptom

This note contains a list of frequently asked questions about "BAPIs for purchase orders". The following notes contain more information about BAPIs in purchasing:

499626 - FAQ: BAPIs in the service procurement
499627 - FAQ: BAPIs for purchase requisitions

Question catalog

1. As of which release are the EnjoySAP purchase order BAPIs released?
2. Is there any **documentation** on EnjoySAP purchase order BAPIs?

3. What options do you have to influence **price determination** if you create a purchase order using BAPI_PO_CREATE1 or BAPI_PO_CHANGE?
4. Why do some purchase orders contain **several condition records** for the same condition type?
5. Can several **header conditions** of the same condition type be added and/or edited using the BAPI?
6. Is it possible to carry out a **new price determination** using BAPI_PO_CHANGE?
7. Which condition type is valid (active) if a purchase order contains both **PBXX** and **PB00**?
8. Is it possible to **hold** purchase orders using BAPIs?
9. Why are all **partner roles** that are maintained in the vendor master not transferred when a purchase order is created?
10. Is it possible to change **services** using BAPI_PO_CHANGE?
11. Can I create **texts** using purchase order BAPIs?
12. Can I change only **header** and/or **item texts** using BAPI_PO_CHANGE?
13. Why are some **fields ignored**, even though they are filled correctly in the BAPI interface?
14. Are EnjoySAP purchase order BAPIs available in **Release 4.6B**?
15. User-defined fields are supplied with BAPI_PO_CREATE1 and BAPI_PO_CHANGE for the tables EKKO, EKPO, and EKKN. The system terminates with **DBIF_RSQL_INVALID_REQUEST** during the update.
16. You use BAPI_PO_CREATE1 to create a purchase order via the middleware and the system issues an error message for a master record. The user then logs on in the R/3 system and maintains the master data, and then transfers the purchase order again. The same error message appears again. Why?
17. What should I take into account when doing a **preliminary analysis** of problems with BAPIs?
18. For testing purposes, you execute a BAPI in transaction SE37 and you create or change the purchase order. However, the purchase order does not exist or the changes are not visible in transaction ME23N. How can I generate a **COMMIT WORK**?
19. Is it possible to assign **foreign trade data** (import/export) to BAPIs?
20. Why is it impossible to determine the **requester** (field EKPO-AFNAM) using BAPI_PO_GETDETAIL?
21. When you create a purchase order without account assignment using BAPI_PO_CREATE, the fields CMMT_ITEM (**commitment item**), FUNDS_CTR (**funds center**), and FUND (**funds**) are transferred in the table PO_ITEM_ACCOUNT_ASSIGNMENT. Why are these fields not transferred to the purchase order?
22. What functions are currently **not available**?
23. Why is the **address number** (field PO_ITEMS-ADDRESS) not checked by BAPI_PO_CREATE?
24. In a customer program, BAPI_PO_CREATE is called in order to create a purchase order, and then BAPI_PO_CHANGE is called. In this case, a program termination/update termination occurs in the program **SAPLEKPA** with **SAPSQL_ARRAY_INSERT_DUPREC**. Why?

25. Can you use the function module BAPI_P_CREATE1 or BAPI_PO_CHANGE to carry out the **material configuration**?
26. Can service specifications also be created or changed using EnjoySAP purchase order BAPIs?
27. Why is the deletion indicator that was assigned via BAPI_PO_CHANGE for an item not displayed in the online transaction (ME22N, ME23N)?
28. Is it possible to use the ALE interface for BAPI_PO_CREATE1 and BAPI_PO_CHANGE in SAP R/3 Release 4.6C?
29. Why does the system issue error message MEPO 034 when you set the inward delivery completed indicator using BAPI_PO_CHANGE?
30. Can BAPI_PO_CREATE1 and BAPI_PO_CHANGE be used for stack processing (several calls are completed with a COMMIT WORK)?
31. Can foreign trade data be displayed using BAPI_PO_GETDETAIL1?

---

1. **Question:**

As of which release are the EnjoySAP purchase order BAPIs released?

Answer:

The EnjoySAP BAPIs **BAPI_PO_CREATE1** and <BAPI_PO_CHANGE are released officially in SAP R/3 Enterprise Edition (4.70).
As of this release level, the ALE interface is also available for the first time.

1. **Question:**

Is there any **documentation** on EnjoySAP purchase order BAPIs?

Answer:

In transaction BAPI of Release 4.70 (SAP R/3 Enterprise), you can find the documentation on the methods PurchaseOrder.CreateFromData1 and PurchaseOrder.Change in the node "Materials Management" -> "Purchasing". For SAP R/3 Releases 4.6B and 4.6C, you can find the documentation in **Documentation_Enjoy_PO_BAPIs.zip**, which is attached to this note.
You should also read the function module documentation.

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1. **Question:**

What options do you have to influence **price determination** if you create a purchase order using BAPI_PO_CREATE1 or BAPI_PO_CHANGE?

Answer:

See Note 580225.

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1. **Question:**

Why do some purchase orders contain **several condition records** for the same condition type?

Answer:

See Note 539950.

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1. **Question:**

Can several **header conditions** of the same condition type be added and/or edited using the BAPI?

Answer:

Due to technical restrictions, only one header condition type can be added or changed. It is not possible to process several header condition types of the same condition type with the BAPI.

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1. **Question:**

Is it possible to carry out a **new price determination** using BAPI_PO_CHANGE?

Answer:

See Note 428621.

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1. **Question:**

Which condition type is valid (active) if a purchase order contains both **PBXX** and **PB00**?

Answer:

See Note 578253.

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1. **Question:**

Is it possible to **hold** purchase orders using BAPIs?

Answer:

See Note 354771.

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1. **Question:**

Why are all **partner roles** that are maintained in the vendor master not transferred when a purchase order is created?

Answer:

Make sure that the "Higher lv." indicator (search at higher level) is set in the partner schema for the corresponding partner role. You can find this indicator in purchasing Customizing (transaction OLME) under "Partner Determination" -> "Partner Settings in Purchasing Documents" -> "Define Partner Schemas".
If this indicator is not set, the system transfers only partner roles that are maintained at plant level.
Also read FAQ Note 459350 (FAQ: Partner determination in purchasing).

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1. **Question:**

Is it possible to change **services** using BAPI_PO_CHANGE?

Answer:

Yes.

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1. **Question:**

Can I create **texts** using purchase order BAPIs?

Answer:

See Note 491835.

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1. **Question:**

Can I change (delete) only **header** and/or **item texts** using BAPI_PO_CHANGE?

Answer:

You can change header and/or item texts without filling another transfer structure. See Note 782948 for more information about this.

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1. **Question:**

Why are some **fields ignored**, even though they are filled correctly in the BAPI interface?

Answer:

This is due to the fact that no X is set for the corresponding field in the corresponding X structure.
If, for example, you want to assign your own short text using BAPI_PO_CREATE1, you must fill the field PO_ITEMS-SHORT_TEXT AND PO_ITEMSX-SHORT_TEXT = X.
See Note 484692 also.
For SAP R/3 Enterprise Edition, we introduced a field firewall, which is based on the field selection in the online transaction. If you change a field using BAPI_PO_CHANGE that you cannot change using transaction ME22N, the system does not accept the change.

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1. **Question:**

Are EnjoySAP purchase order BAPIs available in **Release 4.6B**?

Answer:

See Note 577398.

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1. **Question:**

User-defined fields are supplied with BAPI_PO_CREATE1 and BAPI_PO_CHANGE for the tables EKKO, EKPO, and EKKN. The system terminates with **DBIF_RSQL_INVALID_REQUEST** during the update.

Answer:

Check in the CI structures of the corresponding database table as to whether there are type **P** (packed) fields. Refer to the online documentation for user-defined fields and the "ExtensionIn" parameter:
Customers can use only fields of data type CHAR and similar data types in BAPI table extensions. This restriction is due to the reference structure BAPIPAREX of the extension parameters. Customers cannot use fields from the standard table in the APPEND of the BAPI table extension because a 'move corresponding' would overwrite the SAP field.
Note **509898** describes a solution for this.

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1. **Question:**

You use BAPI_PO_CREATE1 to create a purchase order via the middleware and the system issues an error message for a master record. The user then logs on in the R/3 system and maintains the master data, and then transfers the purchase order again. The same error message appears again. Why?

Answer:

A link to the R/3 system is not always set up when you creation a purchase order via the middleware, rather, it is simply still there. In this case, the system does not generate a new purchase order instance. As a result, the master data buffer is not reset after the first call. Deactivating this function in the BAPI case seriously impairs performance. If you have problems with the buffering of master data when you create a purchase order using BAPI_PO_CREATE1 via middelware, you can call the corresponding initialization or refresh module in the user exit EXIT_SAPL2012_001.

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1. **Question:**

What should I take into account when doing a **preliminary analysis** of problems with BAPIs?

Answer:

See Note 375886.

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1. **Question:**

For testing purposes, you execute a BAPI in transaction SE37 and you create or change the purchase order. However, the purchase order does not exist or the changes are not visible in transaction ME23N. How can I generate a **COMMIT WORK**?

Answer:

See Note 420646.

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1. **Question:**

Is it possible to assign **foreign trade data** (import/export) to BAPIs?

Answer:

See Note 419838.

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1. **Question:**

Why is it impossible to determine the **requester** (field EKPO-AFNAM) using BAPI_PO_GETDETAIL?

Answer:

This function is not available for technical reasons. See Note 373190 also.
As of Release ERP 2005, a new GetDetail method is available that integrates the structure definitions of the BAPI_PO_CREATE1 and BAPI_PO_CHANGE functions.

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1. **Question:**

When you create a purchase order without account assignment using BAPI_PO_CREATE, the fields CMMT_ITEM (**commitment item**), FUNDS_CTR (**funds center**), and FUND (**funds**) are transferred in the table PO_ITEM_ACCOUNT_ASSIGNMENT. Why are these fields not transferred to the purchase order?

Answer:

For technical reasons, the data of the table PO_ITEM_ACCOUNT_ASSIGNMENT can be transferred only if the purchase order is assigned to an account. If you cannot assign an account

assignment category, use BAPI_PO_CREATE1. Here, the fields in the table POITEM can be transferred and they are copied irrespective of the account assignment category.

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1. **Question:**

What functions are currently **not available**?

Answer:

You can find a detailed description in Note 197958.

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1. **Question:**

Why is the **address number** (field PO_ITEMS-ADDRESS) not checked by BAPI_PO_CREATE?

Answer:

For technical reasons, this is not possible. See Note 180172 also.

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1. **Question:**

In a customer program, BAPI_PO_CREATE1 is called to create a purchase order and then BAPI_PO_CHANGE is called. In this case, a program termination/update termination occurs in the program **SAPLEKPA** with **SAPSQL_ARRAY_INSERT_DUPREC**. Why?

Answer:

When BAPI_PO_CREATE is called, the parameter YMMPA_FILLED is set by the partner determination. To avoid dumps during partner processing, the routine **PERFORM MEPO_REFRESH(saplmepo).** should be called in the customer program to reset all data before calling BAPI_PO_CHANGE.

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1. **Question:**

Can you use the function module BAPI_P_CREATE1 or BAPI_PO_CHANGE to carry out the **material configuration**?

Answer:

This function for the **variant configuration in the purchase order** is not currently contained in the standard SAP system.

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1. **Question:**

Can service specifications also be changed or created using the EnjoySAP purchase order BAPIs?

Answer:

Yes, see Note 754879 for further information.

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1. **Question:**

Why is the deletion indicator that was assigned via BAPI_PO_CHANGE for an item not displayed in the online transaction (ME22N, ME23N)?

Answer:

See Note 698686.

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1. **Question:**

Is it possible to use the ALE interface for BAPI_PO_CREATE1 and BAPI_PO_CHANGE in SAP R/3 Release 4.6C?

Answer:

SAP only provides standardized ALE interfaces for these two methods as of the official release of the two BAPIs in the R/3 Enterprise Edition. If you want to use the ALE interface in SAP R/3 Release 4.6C, you have to generate these interfaces yourself. Use transaction **BDBG** to do so. You can find instructions in the user guide for transaction **BAPI** by following the path **"Environment" -> "BAPI User Guide"**.

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1. **Question:**

Why does the system issue error message MEPO 034 when you set the inward delivery completed indicator using BAPI_PO_CHANGE?

Answer:

You used the field DELIV_COMPL (see structure BAPIMEPOITEM) to set the inward delivery completed indicator. However, this field is assigned to the outward delivery completed indicator. Use the field NO_MORE_GR to set the inward delivery completed indicator.

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1. **Question:**

Can BAPI_PO_CREATE1 and BAPI_PO_CHANGE be used for stack processing (several calls are completed with a COMMIT WORK)?

Answer:

The API BAPI_PO_CREATE1 supports stack processing. The API BAPI_PO_CHANGE does **not** support stack processing. After each call, a COMMIT WORK or a ROLLBACK WORK must be carried out; in particular, if you try to change a purchase order several times. Refer to the online documentation also: http://help.sap.com -> Cross-Application Components -> Business Framework Architecture (CA-BFA) -> BAPI User Handbook -> BAPI Programming Guide -> Transaction Model for Developing BAPIs. The suboption "Transaction Control in Client" contains additional information about this.

1. **Question:**

Can foreign trade data be displayed using BAPI_PO_GETDETAIL1?

Answer:

No. At present, this function is not implemented.

Other terms

Frequently asked questions (FAQ), BAPI, purchase order, BAPI_PO_CREATE, BAPI_PO_CREATE1, BAPI_PO_CHANGE, BAPI_PO_GETDETAIL, BAPI_PO_GETDETAIL1, BUS2012, PurchaseOrder, partner, partner role, partner schema, partner determination, conditions, price determination, Business Application Interface, Business Application Programming Interface (BAPI), net price, gross price, CHANGE_ID, EnjoySAP purchase BAPIs, hold, texts, documentation, preliminary analysis, preclarification, COMMIT WORK, foreign trade data, import, export, BAPI_PO_GETDETAIL, requester, EKPO-AFNAM, address number, PO_ITEMS-ADDRESS, PO_ITEM_ACCOUNT_ASSIGNMENT, CMMT_ITEM, commitment item, FUNDS_CTR, funds center, FUND, fund, SAPLEKPU, LEKPUU01, MM_UPDATE_PARTNERS,

DBIF_RSQL_INVALID_REQUEST, buffer, initialization, refresh, INIT, RESET,
PoExpImpHeader,
PoExpImpItem

Reason and Prerequisites