

Key points about using Pre-Calculation Service



Applies to:

Applicable – BW 3.x and BI 7.0. For more information, visit the [EDW homepage](#)

Summary

Some important points to deal with, while using the Pre-Calculation service in BW / BI for Information Broadcasting.

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A Quick Note

Pre-Calculation service is used to install the server point for Information Broadcasting. That is, the server through which the BEx Workbooks are setup to get broadcasted to multiple users, in different period / frequency.

Pointed below are few notes that are to be concentrated at the time of setting up this service or using it.

For your attention

This article is **not about HOW – TO** set up a Pre-Calculation service, but to remind about the important measures upon the process of setting-up or upon usage.

Related Tables

Pre Calculation Server	
RSPRECADMIN	Table for maintaining prec server workload
RSPRECALCADMIN	Table for maintaining prec server workload
RSR_PREC_LOGSYS	Management of Logical Systems for WB Precalculation
RSR_PREC_LOGSYST	Text Table for Precalculation Servers
RSR_PREC_QUEUE	Persistent Precalculation Queue
RSR_PREC_WB_SET	Settings for a Workbook

Related TCodes

RSRD_ADMIN	Broadcasting Administration
RSRD_LOG	Broadcaster Application Log
RSRD_REPLAY	Restart Broadcasting for Log Number
RSRD_START	Start Broadcaster for Test Purposes
RSRD_TEST	Test Producer/Converter/Distributor
RSRD_LOG	Broadcaster Application Log
RSRD_REPLAY	Restart Broadcasting for Log Number
RSRD_START	Start Broadcaster for Test Purposes
RSPRECADMIN	BW Excel Workbook Precalc Admin
RSPRECMAILTEST	Test for Sending Email
SLG1	Application Log: Display Logs
SCOT	SAP connect - Administration
SM59	RFC Destinations (Display/Maintain)
SOST	SAP connect Send Requests
SM37	Overview of job selection

Related Programs

RSRD_BOOKMARK_REORGANISATION	Pgm : Reorganization of Bookmarks/View IDs (Generated in Broadcasting)
RSRD_CLEAN_SCHEDULES	Clear All BRD Schedules
RSRD_MONITOR_SETTING	Pgm : Display Database Content for Broadcast Setting
RSRD_BROADCAST_START	Pgm : (Alternate for RSRD_START)
RSRD_BROADCAST_LOG	Pgm : (Alternate for RSRD_LOG)
RSRD_BROADCAST_STARTER	Pgm : (Alternate for RSRD_START)
RSRD_BROADCAST_REENTRY	Restarting a Cancelled Job Using the Application Log Number

Pre-Calculation Server - Check List

1. Whenever you install Pre-Calculation server, please take care of installation path as mentioned in SAP note 1039616. The path of the Pre-Calculation service is the same as the path of BI front end installation. (In most cases this would be *C:\Program files\SAP\BW\Frontend*).

After installation checkout if the following files are installed in the location
C:\Program files\SAP\BW\Frontend.

BExPreCalcServerProgram.exe
BExPreCalcServiceRestarter.exe
BExPreCalcWindowsService.exe
BExPrecServiceInstaller.exe
BExPreCalcRfcServer.dll
BExPreCalcInstance.dll
sapbexp.xla

Issue: Sometimes the set-up will throw error like

Precalculation failed: E value cannot be null
Parameter name:buffer
cannot precalculate Workbook wb_70_test2
Error occurred during processing of framework
class CL_RSRD_PRODUCER_EXCEL, type PROD

Solution: This issue is mostly related to inappropriate installation of Pre-Calculation server

To solve this issue, you have to uninstall the Pre-Calculation server & restart the machine, and again install the Pre-Calculation server as specified in note 1039616.

2. Sometimes the Pre-Calculation service will be in start mode in the Windows Services, but in TCode RSPRECALCADMIN, it will be in Yellow (Inactive) / Red (offline). In such cases it is necessary to kill the service and restart it.
3. Please do not create many instances (Register) in RSPRECALCADMIN for your Pre-Calculation servers. It's recommended to have 5 to 7 (max) depending upon the server system and RFC protocol.
4. Check your Microsoft Excel version and its support of Pre-Calculation server. (It is better to know the prerequisite of installing Pre-Calculation server).
5. Sometimes if you Pre-Calculate older Workbooks, it will throw unknown error or read-access error. To avoid this, upgrade your Workbook by opening it in new version of Excel Analyzer and save it again in there. This will upgrade your Workbook in the SAP document store and will be a fresh copy for your broadcasting tasks.
6. If in any time, the Workbook (after a refresh) is not properly saved, it will lead to document-read error during broadcasting.
7. After installing your Pre-Calculation server, check your Pre-Calculation server status (green), and if it is not shown in green, once again go to window services and restart your Pre-Calculation server.
8. Test your Pre-Calculation server in RSPRECALCADMIN. Go to your Pre-Calculation server (registered / instance that you created in RSPRECALCADMIN). Double clicking on it will give the broadcast setting details. You alternatively can use Ctrl+Shift+F10 shortcut key for this option.
9. **BExPrecalcLog.txt** and **SAPBEX.trc**, available in **C:\windows\temp**, are the two vital files we need to check at the time of Pre -Calculation failure.
10. Every Workbook's Pre-Calculation will be started under the name - **SAPBEXPRECxxxx.xls** and will exist in the above mentioned directory.
11. While restarting the Pre-Calculation service, we need to kill the Excel processes in Windows Task manager and try to restart the Pre-Calculation service from the Windows Services.
12. But in addition to these steps, we should also check inside the **temp** folder for the above mentioned files and **SHOULD** remove the files **SAPBEXPRECxxxx.xls**, where **xxxx** are randomly generated numbers. The reason behind this step is, if the Excel file exists (i.e., the copy of the broadcasted WORKBOOK), it will not release the access lock.
13. 10) Please note that if you are using Microsoft Excel 2003, you might have to consider calling Microsoft support in order to get hot fix 912022, (<http://support.microsoft.com/kb/912022/en-us>) since this hot fix is available only on-request.

Whenever a Pre-Calculation is running

1. Latest copy of the Workbook (from the document store) will be taken.
2. Read-Only flag and an access lock will be set up on the original Workbook.
3. During Pre-Calculation (background refresh of Workbook by server) a new copy will be generated in the master system (server) under **Windows\temp** folder (the system in which the precalc server is installed).
4. This file naming convention will be **SAPBEX@@@@.xls** where the **@@@@** is a rolling number automatically considered by the service.
5. Similarly two other trace log files, **BExPrecalcLog.txt** and **SAPBEX.trc** will be generated with all log details. In this file you will come to know –
 - how many times the Pre-Calculation server restarted
 - no. of times the same / different Workbook is refreshed
 - the read only flag and access lock on original Workbook is set and cleared properly before and after Pre-Calculation
 - why the Pre-Calculation stopped
 - whether the copy of Workbook after Pre-Calculation is sent to the client system or not, if not why, etc...
6. If you don't have access to check the **windows\temp\SAPBEX.trc** file in the master system (where the precalc server is installed and running) you can use an alternative TCode in your client system - **RSRD_LOG**.
7. An important thing is if same refreshed copy is generated for any other broadcast then **U HAVE TO** open the windows\temp folder in master system and check the **SAPBEX@@@@.xls** file whether it has older refreshed content or not..
8. The logic behind this task is after every refresh (pre-calculation) this ***.xls** file will get deleted. If not then it is meant that it holds the read-only flag & access lock, and is not allowing the next Pre-Calculation to happen **but sending the older (last) refreshed content**. This is why sometimes the same report is getting broadcasted instead of different Workbook pre-calculation.
9. If the Pre-Calculation starts and if it can't create a copy (**SAPBEX@@@@.xls**) and place a read-only flag over the original Workbook, then it will broadcast the latest version of the same Workbook which is available in the document store. That is, the last copy of the Workbook being manually refreshed and saved in the server (for instance, if we saved a manual refresh copy in last month).

10. There is an option for you to resend (success/failure) Workbook with the same contents, for the same users or different users. Right click on any of one the entries in TCode - **SOST** and you'll see this resend option.

11. After refreshing a Workbook, distributing it to go to web broadcast settings page, in the properties of the BRD setting, we have the option to choose which of our available pre-calc server instances can be used explicitly for it. By default, the BRD settings will try to post the Bg RFC request in BW system and the pre-calc server which is available (may be the 1st or 4th, any server) will grab this request and execute them in serial.

12. One precalc server instance can broadcast one copy of report at a time. Lets say, if you trigger 25 BRD settings and if you have 5 installed precalc servers' instance (in active state) then first precalc server will take the first 10 jobs (not more that that until it finishes) execute them one at a time (serially and NOT parallel) and then again will try to fetch the next queued jobs.

So –

1st server - jobs 1 to 10 (serial execution)

2nd server - jobs 11 to 20 (serial execution)

3rd server - jobs 21 to 25 (serial execution)

Related Content

[Creating Precalculation Servers](#)

For more information, visit the [EDW homepage](#)

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