

Admin table archiving

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Introduction

Admin tables archiving is a process to archive the data from admin and log tables to improve the system performance.

We should not delete the data from certain admin and log tables as it could lead to irreversible issues, dumps and lead to unstable system. So to free up the disk space it is only possible to archive the data which is still accessible by the system and then delete the data from the system. The archived files should never be deleted and should always remain in the system.

Performing this activity **manually** by process chain or tcode SARA periodically (yearly or half yearly) allows up to save space on the database and also improves the system performance. **It can't be automatically because** we need to:

1. Change variants
2. Make sure that there is **no job running to update admin tables during archive data**

The below mentioned tables are part of the admin archiving process. This information can be found in transaction 'AOBJ' for the archiving object 'BWREQARCH'

Table	Description
RSBMLOGPAR	Hierarchical Log: Field/Value Pair
RSBMLOGPAR_DTP	DTP Log: Field/Value Pairs
RSBMNODES	Hierarchical Log: Nodes
RSBMONMESS	Hierarchical Log: Table with Messages
RSBMONMESS_DTP	DTP Log: Table With Messages
RSBMREQ_DTP	DTP Log: Status of Header Table
RSCRTDONE	CRT Packages Enhancements for Apollo
RSDELDONE	BW: Selection Table for Deletion with Full Update Scheduler
RSHIEDONE	Selection table for Fields Scheduler
RSLDTDONE	Texts on the requested InfoPackages and groups
RSMONFACT	Fact table monitor
RSMONICTAB	Monitor IC table
RSMONIPTAB	InfoPackage for the monitor
RSMONMESS	Messages for the monitor
RSMONRQTAB	Monitor table for request IDocs
RSREQDONE	Monitor: Saving of the QM entries
RSRULEDONE	ABAP Code for Scheduler Selections
RSSELDONE	Monitor: Selections for executed request
RSTCPDONE	Selection table for 3rd party; Scheduler

RSUICDONE	BIW: Selection table for user-selection update ICs
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The size of the following SAP Tables cannot be reduced as they contain important information for the smooth operation of the BW System

Table	Description
RSBKREQUEST	(SAP Table - DTP Request)
RSPCCHAIN	(SAP Table - Table for Process Chain details)
RSREQDONE	(SAP Table - Monitor: Saving of the QM entries)
RSMONICDP	(SAP Table – Monitor Request Data Packet Table)
RSPMREQUES T	(SAP Table – RSPM Request Status)

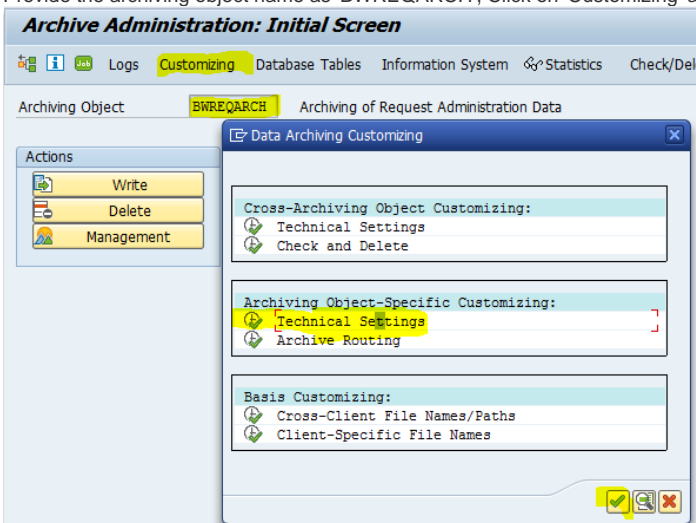
Prerequisites

Logical file names

- Z_ARCH_BW_TECH_FILENAME

In SARA t-code as shown in the below screen shot.

Provide the archiving object name as 'BWREQARCH', Click on 'Customizing' and then double click on the 'Technical Settings'.



Check if the logical file name is maintained or not.

Data Archiving Customizing

Object Name: BWREQARCH Archiving of Request Administration Data

Logical File Name: Z_ARCH_BW_TECH_FILENAME

Archive File Size

Maximum Size in MB:

Maximum Number of Data Objects:

Settings for Delete Program

Test Mode Variant: SAP&TEST Variant

Live Mode Variant: SAP&PROD Variant

Delete Jobs

Not Scheduled

Start Automatically

After Event Event: Parameter:

Place File in Storage System

Content Repository:

Start Automatically

Sequence

Delete Before Storing

Store Before Deleting Delete Program Reads from Storage System

We can check the physical file path in 'FILE' transaction or using the FM 'FILE_GET_NAME'. Execute the FM and provide the file path to get the physical file paths.

Test Function Module: Result Screen

Test for function group: SFIL

Function module: FILE_GET_NAME

Uppercase/Lowercase:

Runtime: 2.270 Microseconds

Import parameters	Value
CLIENT	400
LOGICAL_FILENAME	Z_ARCH_BW_TECH_FILENAME
OPERATING_SYSTEM	AIX
PARAMETER_1	
PARAMETER_2	
PARAMETER_3	
USE_PRESENTATION_SERVER	
WITH_FILE_EXTENSION	
USE_BUFFER	
ELEMINATE_BLANKS	X
INCLUDING_DIR	

Export parameters	Value
EMERGENCY_FLAG	
FILE_FORMAT	ASC
FILE_NAME	/saparchive/WBQ/archive__0717__134507.INAT1258

File name = [Folder]/"archive__[MMDD]"_"[HHMMSS].[UserID]

[Folder] = /saparchive/technical in WBP

Background Jobs

Ensure the background jobs stopped (including process chains) before the archiving process gets started

Others!?

Is the Central Repository for storage maintained using the SAP Content Management Infrastructure? Need to check on this aspect.

Are the deletion program variants maintained?

Is the maximum archive file size correctly set?

Is the deletion program to run automatically?

Have authorization to archive data?

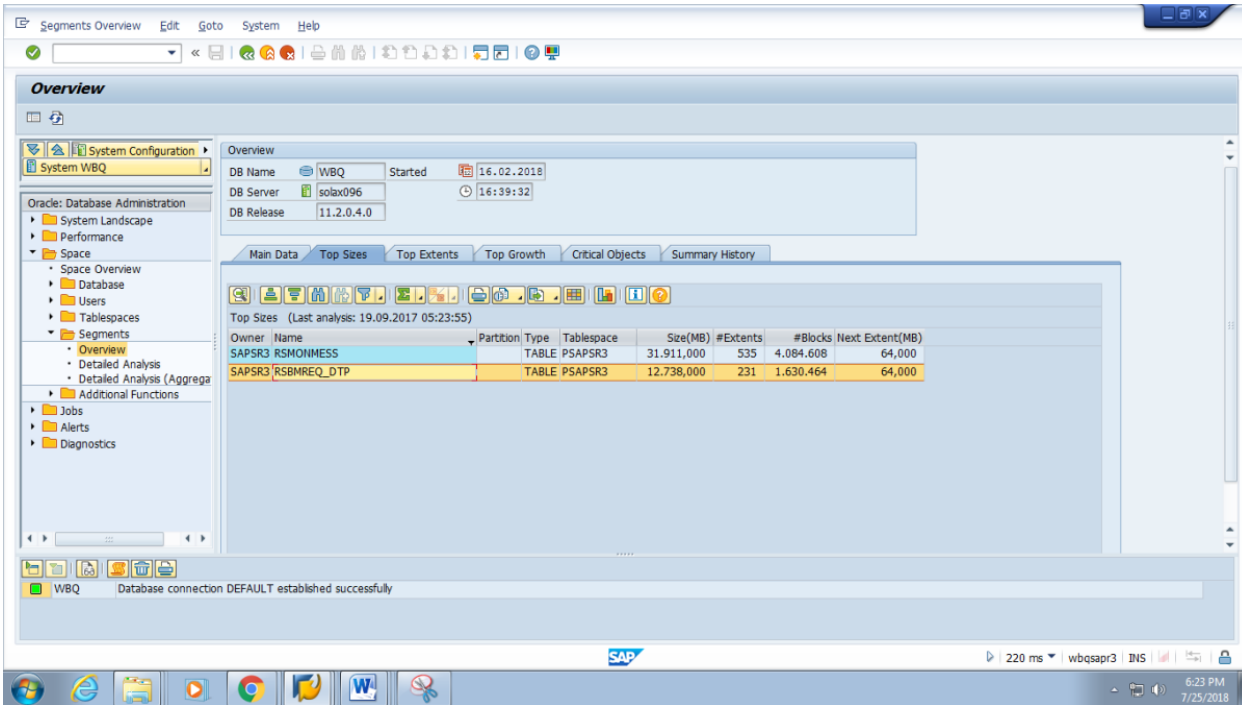
Are enough locks exists in the system?

Capture before image of the admin tables

Execute the program ZTECH_TABLES_REC_CNT to get the before image of the admin tables i.e. get the record count of the admin tables.

Admin tables record count - Archiving Object 'BWREQARCH'		
Records count of admin tables in system WBQ as on 25.07.2018 13:23:17		
Total no of records in the table RSBMONMESS		27.330.128
Record count of table RSBMONMESS based on year		
	2001	0
	2002	0
	2003	0
	2004	0
	2005	0
	2006	0
	2007	0
	2008	52.987
	2009	580.680
	2010	1.209.361
	2011	4.495.345
	2012	6.099.038
	2013	7.386.203
	2014	4.597.628
	2015	687.013
	2016	1.177.118
	2017	903.347
	2018	141.408
Total no of records in the table RSREQDONE 5.590.404		
Total no of records in the table RSSELDONE 4.079.436		
Total no of records in the table RSLDIDONE 14.458.378		
Total no of records in the table RSCRIDONE 0		
Total no of records in the table RSDELDONE 65.361		
Total no of records in the table RSHIEDONE 146.604		
Total no of records in the table RSRULEDONE 10.911.299		
Total no of records in the table RSMONMESS 205847.541		
Total no of records in the table RSMONFACT 20.991.090		
Total no of records in the table RSUICDONE 3.376.113		
Total no of records in the table RSTCPDONE 0		
Total no of records in the table RSMONICTAB 2.751.499		
Total no of records in the table RSMONIPTAB 31.570.259		
Total no of records in the table RSMONRQTAB 2.110.529		
Total no of records in the table RSBMLOGPAR 25.663.477		
Total no of records in the table RSBMNODES 76.553.457		
Total no of records in the table RSBMONMESS_DTP 80.132.068		
Total no of records in the table RSBMLOGPAR_DTP 69.090.977		
Total no of records in the table RSBMREQ_DTP 211752.043		
The admin tables records count recorded successfully		

Capture before image of DB02



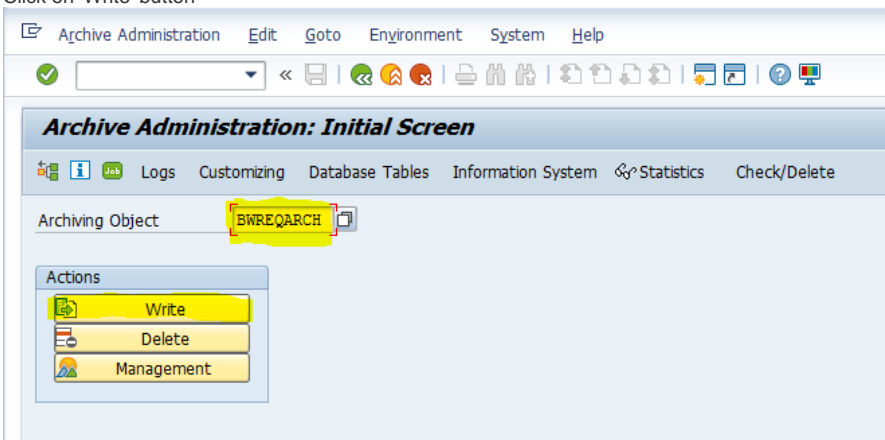
Step by step process

There are two steps involved while performing the archiving.

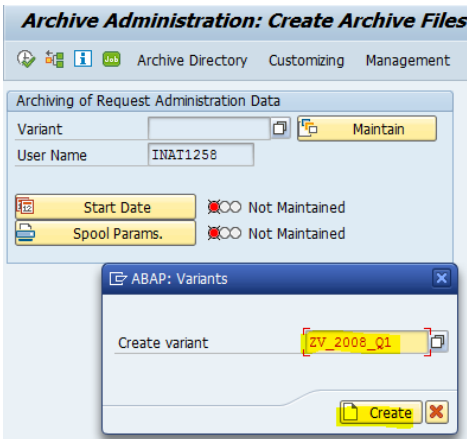
1. Write data to archive files
2. Delete the archived data from the respective tables

1. Write data to archived files

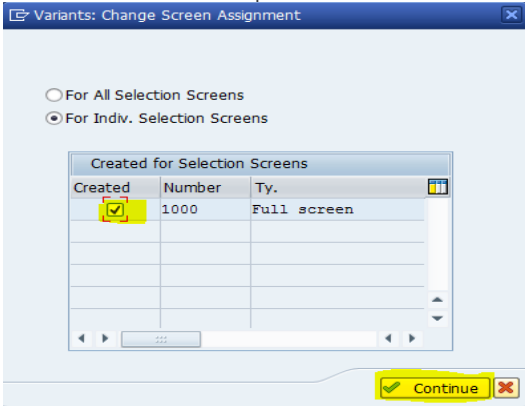
Go to T-code 'SARA' and provide the archiving object name as 'BWREQARCH'
Click on 'Write' button



We need to create a variant for the data archival process i.e. selection parameters which specifies what data to be written on files.
Click on the 'Maintain' button then provide the new variant name and click on 'Create' button




As shown below check the option and click 'Continue' button



Provide the date range if a specific period of data to archive else just provide the value in the field 'Request Older than (months)'.
 Choose the radio button 'Only Archive New Requests' if we want to archive the new data (which was not archived before); Choose 'Only Reloaded Requests' if we want to archive the reloaded requests(i.e.Archived data which was reloaded); Choose 'Archive All Requests' if we want to archive both the new and reloaded data.
 Let the Min. Number Requests remain '1000' i.e. If the no requests to be archived be more than 1000 else the archiving won't start.
 Check the button 'With DTP Requests' as we also archive the DTP requests.
 For a simulation run then select the radio button 'Test Run' and select 'Production Mode' for the archiving the data

Edit Variants: Variant ZV_2008_Q1

Restrictions


Selection Date of Request: 01.01.2008 to 31.03.2008 

Requests Older than (Months): 3

Only Archive New Requests
 Only Reloaded Requests
 Archive All Requests

Min. Number Requests: 1000

With DTP Requests

For more information, see SAP Note 950612 or here: 

Processing Options

Test Mode
 Production Mode

Delete with Test Variant

Detail Log: No Detail Log

Log Output: List

Archiving Session Note:

Restriction (Note 950612)

Selection Date of Request: The program for choosing the requests in ascending order, it selects from the most recent request to all requests in the field "Selection date of requests" that have not yet been archived (if this selection remains empty, all requests are selected). It is better to identify each year to identify the log file later when we want to reload.

Requests Older than: This field must contain at least a "1" for a month. Months are always calculated with 31 days.

If the button "Only Archive New Requests" is set, requests that were archived once before but were then reloaded from the archive are not archived again. If the button "Only Archive Reloaded Requests" is set, ONLY those requests that have already been archived once and reloaded again are archived. The button set to "Archive All Requests" archives all the requests that are not currently archived, regardless of whether these were already archived once and were reloaded again or not.

We recommend that you set the button "Only Archive New Requests" for initial archiving because after several months you can check whether archived requests had to be reloaded again.

Min. Number Requests: An archive is only created if the report finds at least this number of requests that it can archive.

The report collects the first 10,000 requests that meet the criteria and archives them. The report then stops.

This guarantees that an archive does not have too many requests. We do NOT recommend that you set the parameter "Min. Number Requests" to a value lower than 1,000. If you have too many requests, you should set the parameter to 9,999.

Caution: You must save all requests that you want to archive in transaction SM12. This means that an enqueue lock is set for each request before it can be written to the archive.

Therefore, you must set the BW so that at least 12000 enqueues can be set or created at the same time.

If there is not enough memory for the enqueues (not enough can be allocated), then the process hangs.

Delete with Test Variant

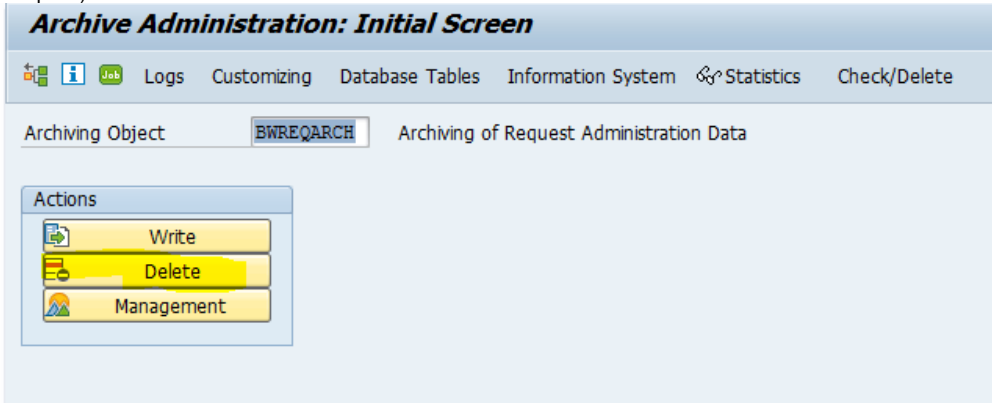
If this indicator is set, the delete program of the archiving object will be started with the test mode variant that was specified in the archiving-object-specific customizing. You can set the customizing of the variant so that the delete program will be run in in the test mode. No data will be deleted from the database, because deletion is only simulated. The program will generate statistics about the table entries that would be deleted from the database in the production mode.

If the indicator is not set, the delete program will be started with the production mode variant that was specified in the archiving-object-specific customizing. You can set the customizing of the variant so that the delete program will be run in the production mode and the program will delete the archived data from the database. It will also generate statistics about the table entries that were deleted.

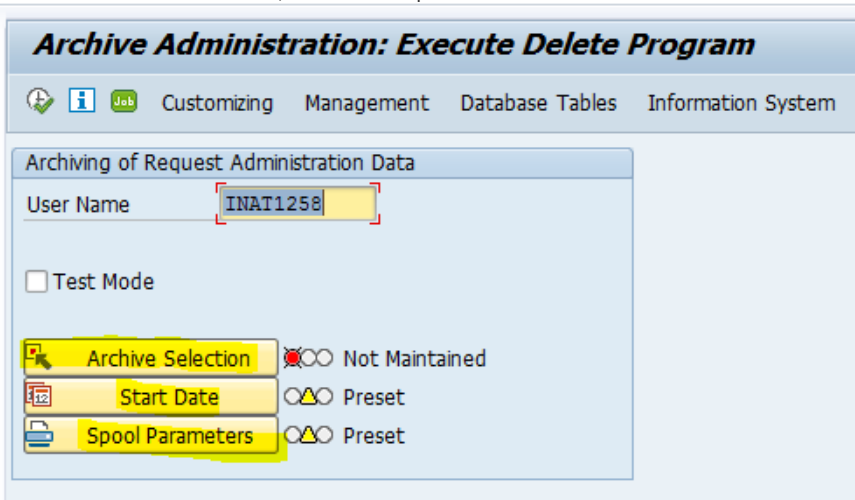
The spool output will give the detail how many records and size to be written and deleted.

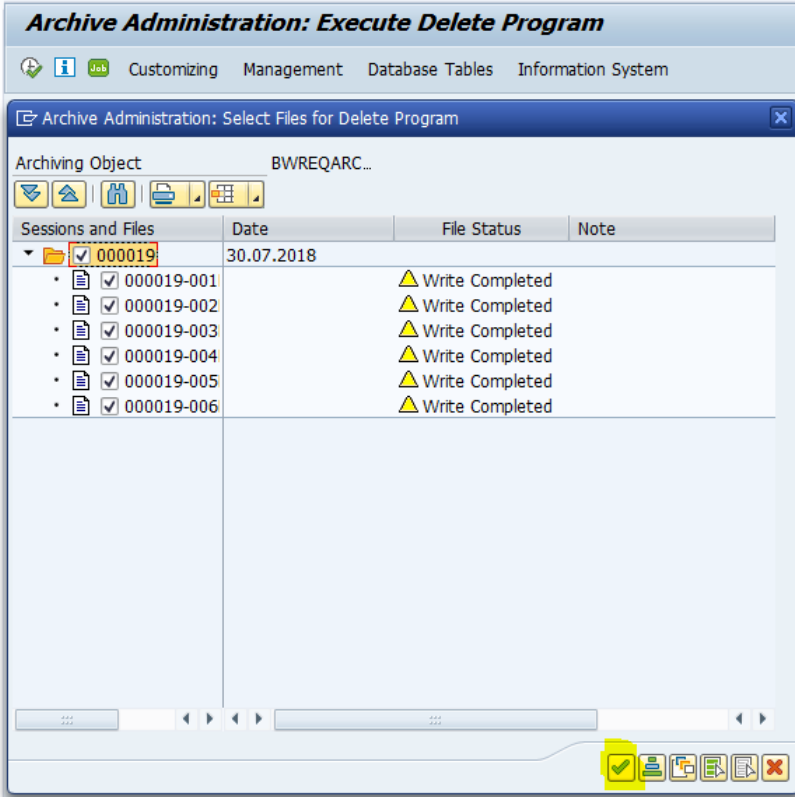
2. Delete the archived data from the respective tables

Go to t-code 'SARA' and click on 'Delete' button (Do not do if uncheck on option "Delete with Test Variant"), The deletion job will start after write job complete)

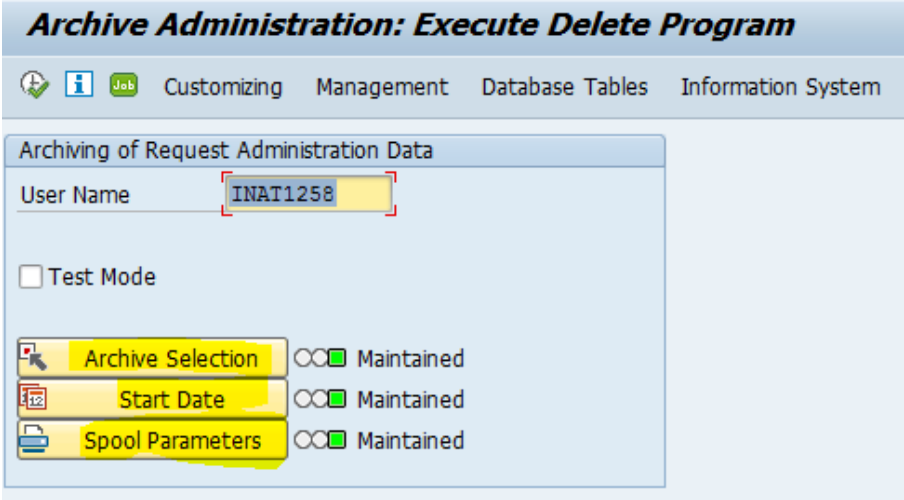


Maintain the Archive Selections, Start Date & Spool Parameters.





Maintain start date and spool parameters and then click execute.



Check logs

Job Overview

Refresh
 Release
 Stop
 Spool
 Job log
 Step
 Application servers

Job overview from: 30.07.2018 at: : :
to: 30.07.2018 at: : :

Selected job names: ARV_BWREQARCH_*
Selected user names: INAT1258

Scheduled
 Released
 Ready
 Active
 Finished
 Canceled
 Event controlled Event ID:
 ABAP program Program name :

JobName	Spool	Job doc	Job CreatedB	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
<input type="checkbox"/> ARV_BWREQARCH_SUB20180730140758			INAT1258	Finished	30.07.2018	14:07:58	0	0
<input type="checkbox"/> ARV_BWREQARCH_WRI20180730140758			INAT1258	Finished	30.07.2018	14:07:58	402	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141438			INAT1258	Finished	30.07.2018	14:14:38	78	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141438			INAT1258	Finished	30.07.2018	14:14:38	52	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141438			INAT1258	Finished	30.07.2018	14:14:38	29	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141438			INAT1258	Finished	30.07.2018	14:14:39	101	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141439			INAT1258	Finished	30.07.2018	14:14:39	72	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730141439			INAT1258	Finished	30.07.2018	14:14:39	3	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	261	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	116	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	244	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	315	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	177	0
<input type="checkbox"/> ARV_BWREQARCH_DEL20180730142840			INAT1258	Finished	30.07.2018	14:28:40	6	0
*Summary							1.856	0

Click on management & Statistics to check the load status & overall statistics.

Archive Administration: Overview of Archiving Sessions

Job
 Logs
 Spool List
 Storage System
 Customizing
 Database Tables
 Information System
 Statistics

Archiving object BWREQARC... Archiving of Request Administration Data

Sessions and Files for Archiving Object	Note
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Archiving Sessions with Errors <ul style="list-style-type: none"> ▶ 18 (30.07.2018) Complete Archiving Sessions <ul style="list-style-type: none"> ▶ 12 - 19 (20.02.2009 - 30.07.2018) <ul style="list-style-type: none"> ▶ 19 - 30.07.2018 <ul style="list-style-type: none"> • 000019-001BWREQARCH • 000019-002BWREQARCH • 000019-003BWREQARCH • 000019-004BWREQARCH • 000019-005BWREQARCH • 000019-006BWREQARCH ▶ 15 - 26.02.2009 ▶ 14 - 26.02.2009 ▶ 13 - 23.02.2009 ▶ 12 - 20.02.2009 Invalid Archiving Sessions <ul style="list-style-type: none"> ▶ 16 - 17 (25.07.2018 - 25.07.2018) 	

Display Statistics for Data Archiving

Display Statistics

Selection

Client: 400 to: []

Archiving Object: BWREQARCH to: []

Archived On: 30.07.2018 to: []

Status of the Archiving Session

Incomplete Complete Replaced

Run Num.	Object	Client	Date	Status	Desk Space	Head...	DB Space	DB Table	DB Index	DB Cluster	DB Struct...	DB Space	DB Table	DB Index	DB Cluster	DB Struct...	DB Space	DB Table	
19	BWREQARCH	400	30.07.2018	OK	44,874	0,1	800,468	553,314	247,154	0,000	0,000	800,468	553,314	247,154	0,000	0,000	800,468	553,314	247,154
					44,874		800,468	553,314	247,154	0,000	0,000	800,468	553,314	247,154	0,000	0,000	800,468	553,314	247,154

Check the files on AL11.

Directory: /saparchive/technical

Useable	View...	Chang...	Length of file	Owner	Lastchange	Lastchange	File Name
			4096	wbqadm	30.07.2018	14:14:37	.
			256	wbqadm	12.06.2018	09:39:03	..
X			1987307	wbqadm	30.07.2018	14:09:25	archive_BW_0730_0.140828.INAT1258
X			12069075	wbqadm	30.07.2018	14:11:03	archive_BW_0730_0.140927.INAT1258
X			10937104	wbqadm	30.07.2018	14:12:15	archive_BW_0730_0.141103.INAT1258
X			11792670	wbqadm	30.07.2018	14:13:32	archive_BW_0730_0.141215.INAT1258
X			10241501	wbqadm	30.07.2018	14:14:37	archive_BW_0730_0.141332.INAT1258
X			26641	wbqadm	30.07.2018	14:14:38	archive_BW_0730_0.141437.INAT1258

3. Reload archive file

1. Run program RSREQARCH_RELOAD (or manage files by tcode RSREQARCH)
2. Select Test or Production mode
3. Select the archive files that want to reload (only the file available to be reloaded)

SAP

Archive Administration: Select Files for Reload Program

Archiving Object: BWREQARCH

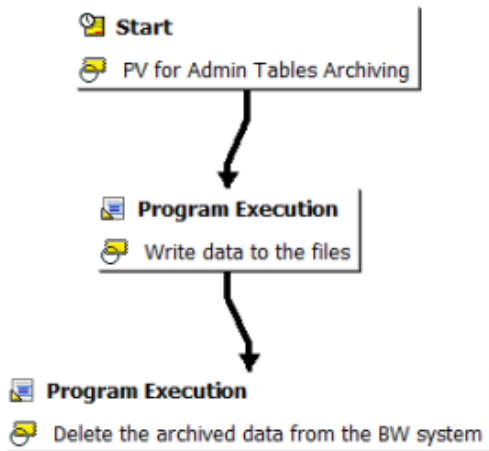
Sessions and Files	Date
<input type="checkbox"/> 001785	03.02.2021
<input type="checkbox"/> 001784	03.02.2021
<input type="checkbox"/> 001783	02.02.2021
<input type="checkbox"/> 001782	02.02.2021
<input checked="" type="checkbox"/> 000028	05.02.2009
<input checked="" type="checkbox"/> 000026	04.02.2009

⚠ It is important to archive files with variants to be clear of the period of archive since the file can't identify the data inside. We must record the session ID + archive date in order to identify the date of the log by file name.

For example, archive session file 26-18 is the 2008 log and 1782-1785 is 2013 log

How to archive by process chain

Process chain PC_AAT_01 (Admin Tables Archiving) includes 2 programs that are the same as tcode SARA.



1. To archive data, which use program RSREQARCH_WRITE with variant ZV_2014_ALL (it must be changed the date before run the PC)
2. To delete data, which use program RSREQARCH_DELETE with variant SAP&PROD (no need to change - only mark production mode)However, we need change variant manually.

Reference SAP Notes

SAP NOTE	SHORT TEXT – remark
1812 238	Archive File Not Accessible" in SARA (no backup available)
9506 12	P9; request archiving: Archiving multiple requests as initial
2177 801	provides report RSREQARCH_DTP_CONDENSE_LOGS in order to delete after the 'normal' archiving, more records of table RSBMONMESS_DTP, RSBMREQ_DTP, and RSBMLOGPAR_DTP, correction of SAP Note 2239379 should be available
2346 654	report RSREQARCH_CHECK_DEL_OBS_MESS

Reference Links

https://help.sap.com/saphelp_erp60_sp/helpdata/en/42/ea99e6b2161bc9e10000000a11466f/content.htm?no_cache=true
https://help.sap.com/saphelp_erp60_sp/helpdata/en/4d/8c8487910b154ee10000000a42189e/frameset.htm
<https://wiki.scn.sap.com/wiki/display/BI/Reduce+BW+Request+Administration+Tables> <https://wiki.scn.sap.com/wiki/display/BI/Archiving+Request+Information+in+BW>