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Reduce number of Inbound Queues

1. Reduce single of records in the R/3
2. Change the naming queues
3. Use R/3 parameter CRM_MAX_QUEUE_NUMBER_DELTA
4. Maintain parameter MAX_PARALLEL_PROCESSES
5. SAP Note 350176 - CRM/EBP: Performance improvement during exchange of data
6. SAP Note 1441788 - Composite SAP note: Middleware performance (CRM server)

Reduce single of records in the R/3

Changes need to be done from the R/3 system. The main idea is to change reporting in the way that COMMIT WORK is executed only after n data records, but not after every single data record. This will reduce number of inbound queues. Please also put in mind that many (500_ CSA queues can be generated from one R3A queue, since CSA are also inbound queues in terms of CRM MW the will also overload CRM scheduler.

Change Naming queues

Delta R/3 queues by default have the following name convention

R3AD_<object_part><object_id>.

CRMQNAMEs table contains one entry for each object type

MANDT	CONSUMER	OBJNAME	SORT_ORDER	BAPISTRUCT	QOBJPART	BAPIFLD	BAPIOFFSET	BAPI
100		ADPTESTMBDOC	1	CRMADPTST1	ADPTST	KEYFIELD1	000003	00003
100		ADPTESTMBDOC	2	CRMADPTST1	ADP_ERR	KEYFIELD1	000003	00003
100	CRM	ADPTESTMBDOC	1	CRMADPTST1	ADPTST	KEYFIELD1	000003	00003
100	CRM	ADPTESTMBDOC	2	CRMADPTST1	ADP_ERR	KEYFIELD1	000003	00003

BAPIFLD indicates which field is used to fill the object ID. By changing the naming for queues, several BP are written in he same queue. LENGTH field is used to control number of relevant positions for naming queues and FLDOFFSET field to select position

	FLDOFFSET	LENGTH
	000000	000000
	000000	000000
	000000	000000
	000000	000000

If LENGTH = 1 and FLDOFFSET = 9 > all items that have the same number on the tenth position are written into the same queue. 10 queues in that case can be created. So we can say that LENGTH = number of positions in the queue, the bigger number it is, more customer (positions) are linked to the same queue.

Example: FLDOFFSET = 9 LENGTH = 1

R/3 customer	CRM Queue Name
0000003781	R3AD_CUSTOME0000003781
0000006791	

0000003782	R3AD_CUSTOME0000003782
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FLDOFFSET =6 LENGTH =2

R/3 customer	CRM Queue Name
000573781	R3AD_CUSTOME000573781
000004791	R3AD_CUSTOME000004791
000006772	R3AD_CUSTOME000006772
000365772	

These parameters have to be maintained in the R/3 system:

SM30 > CRMQNAME> change FLDOFFSET and LENGTH parameters.

Make sure that total number of 2 values is not bigger than maximum length of the object ID (BAPIFLDLEN field)

The same can be done for the CSA* queues in the CRM system:

SM30 > SMOFQFIND > Find required object

Queue Finder Table for MW-Queue finder					
BDoc Type	Sort Order	Segm. Name	Prefix	Queue Obj...	Segment Field
ALLOCITEMS_W...	1	ALLOCITEMS	CSA	MKTPL	ALLOGUID
BEABILLDLVCR...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BEABILLDOCCR...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BEABILLDOCCR...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BEABILLDOCFB...	1	BEA_BDOC_HEADER	CSA	FINVDOC	QUEUE_NAME
BEABILLDOCFI...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BEABILLDOCIP...	1	BEA_BDOC_HEADER	CSA	IPMIDOC	QUEUE_NAME
BEABILLDOCIP...	1	BEA_BDOC_HEADER	CSA	IPMODOC	QUEUE_NAME
BEABILLDOCTC...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BEABILLSTACR...	1	BEA_BDOC_HEADE...	CSA	BILLSTA	QUEUE_NAME
BEABILLSTACR...	1	BEA_BDOC_HEADE...	CSA	BILLSTA	QUEUE_NAME
BEABILLSTAFB...	1	BEA_BDOC_HEADE...	CSA	BILLSTA	QUEUE_NAME
BEABILLSTAFI...	1	BEA_BDOC_HEADE...	CSA	BILLSTA	QUEUE_NAME
BEABILLSTAIP...	1	BEA_BDOC_HEADE...	CSA	IPMISTA	QUEUE_NAME
BEABILLSTAIP...	1	BEA_BDOC_HEADE...	CSA	IPMOSTA	QUEUE_NAME
BEABILLSTATC...	1	BEA_BDOC_HEADE...	CSA	BILLSTA	QUEUE_NAME
BEABILLTDECR...	1	BEA_BDOC_HEADER	CSA	BILLDOC	QUEUE_NAME
BUAG_MAIN	1	CRMT_BUAGS_MW...	CSA	BUPA	PARTNER
BUHI_MAIN	1	BUHIS_EI_HIER...	CSA	BUHI	HIERARCHY_TYPE

Changes need to be applied for all same QUEUE OBJECT PART and SEGMENT FIELD fields. This can be done only if the queues are empty.

Use R/3 parameter **CRM_MAX_QUEUE_NUMBER_DELTA**

This parameter is maintained in the and determines how many queues are created, irrespective of the setting in the **CRMQNAME** table. If the parameter is set, the ASCII values of the last three positions of the queue name are combined and calculated modulo **CRM_MAX_QUEUE_NUMBER_DELTA**. The result is a number that is lower than 1000 and lower than **CRM_MAX_QUEUE_NUMBER_DELTA**.

SM30 > CRMPAROLT

Enter **CRM_MAX_QUEUE_NUMBER_DELTA** in the PARNAME

Enter the name of the object type in the PARNAME2

Enter the name of the your CRM system in the CONSUMER
Enter the number of queues in the PARVAL1

Maintain parameter MAX_PARALLEL_PROCESSES

You can check parameter MAX_PARALLEL_PROCESSES in table **SMOFPARSFA**, eg. If it's 5, this means you can have at most 5 running queues in total(for request, initial and SDIMA queues). If there are already five queues running, the rest of the queues will have to wait.

The status of all initial and synchronization download objects is stored in table SMOFDSTAT.
The status of all request downloads is stored in table SMOFRSTAT.
DIMa downloads (table SDIMASTAT).

Sometimes there's no running load seen in r3am1 or r3ar3, but the most accurate place to check if these db tables. If any load running is shown in these tables, you have to manually delete them in these tables by debugging

SAP Note	Description
1365310	qRFC occupies all work processes on the CRM system
763680	CSA* qRFC queues occupy all work processes on CRM
1314510	Parallelization of queues in CRM landscape

Modifying block size of Adapter Object (R3AC1)

Setting the block size to 1 , will create lot many BDocs, i.e number of BDocs = no: of records to be downloaded. block size do not have any impact on selection of records. so I really wonder how certain BP's might not get selected

when you set block size = 100.

If you are running request load, then please observe that filters set in R3AC1, would also be considered.