

SAP BASIS



Work process

- A. All the process which handles by the user task based on the type of the user request.
- B. Types of work process
 - 1) Dialog work process
 - 2) Background work process
 - 3) Update work process
 - 4) Message server
 - 5) Enqueue server
 - 6) Gateway
 - 7) Spool
- C. What are the different types of work process in R/3?
Dialog (D), Update (V), Enqueue (E), Background (B) and Spool(S)

Dialog work process (D)

- A. Dialog work process is used to handle by the user request only
- B. Dialog work process parameter name is – **rdisp\wp_no_dia=2**
- C. Dialog work processes are minimum 2
 - One is user request running another one is distributing the work process
- D. Each request occupies **75mb to 150mb**
- E. Dial work process is **multiplexive**
 - Multiplexive means at a time one (or) more user request is running
- F. The user request handled by the dialog work process maximum up to 1800 seconds
- G. If the user request 600 seconds default in that time data is not completed then user request session is terminated
- H. No of Dialog work process \geq No of non Dialog work process
- I. Dialog work process time out parameter is
rdisp\max_wp_run_timeout=600 to 1800

- J. One dialog work process maximum up to **32 users** are we can create
- K. One application server maximum up to **100 work process** are we can create
- L. Work process statuses are

- 1) Waiting
- 2) Running
- 3) Error
- 4) Stopped
- 5) Private mode: Dedicated to the particular user
- 6) Sleep: Work process is running but not responding

Why: Waiting for resources

M. In sap level work process overview – **SM50**

N. In sap level global work process overview – **SM66**

O. In O.S level work process overview – **dpmon**

Dpmon: when the user could not login to the sap system

P. In sap level display a list of application server – **SM51**

Q. In sm51 transaction to identify the **Relese note**, the R/3 kernel, D/B kernel, O.S.
Kernel and support packages information

R. In sap level version statuses are – **system ---> status**

S. In O.S level version we can see – **disp+work**

T. How to user request flow?

User request ---> dispatcher ---> work process ---> dialog work process --->
update the tables

Background work process (B)

- A. The background work process handle by the long running jobs.

The background work process that process can be executed without the user interaction.

Background jobs are programs, printing specification and interactively can be run automatically by the background processing system

- B. Background work process parameter name is – **rdisp\wp_no_btc=2**

- C. During the installation minimum of 2 background work process

One is defining and another one is executing

- D. Scheduling the background job is – **SM36**

Job name should start either z or y.

Maximum 32 characters are allowed in the name.

- E. **Start conditions**

- 1) Immediate
- 2) Date/time
- 3) After job
- 4) After event
- 5) At operation mode

- F. **Background job steps**

- 1) **ABAP program**: It is a standard program (or) customized program which will execute by variant.

◆ **Variant**: It is a program selection criterion to provide the inputs during the runtime (or) execution of the program.

◆ Variants are stored in the table is **TVARV**

◆ We can create the variant from **SE38**

- 2) **External command**: It is used for pre defined input by system administrator.

◆ External commands are defined in **SM49** (or) **SM69**

- ◆ External commands & external program are executed by SAPXG program
- 3) External program: It is used for direct command input by system administrator
- G. Background job is every 60 seconds default time is – **rdisp\btctime=60sec** ➔ It stored in the default profile
- H. What is the background job scheduler every 60seconds?
- SAPMSSYS
- I. In O.S level background work process stored in global directory **usr\sap\<Sid>\sys\global**
- J. Simple job selection is **SM37**
- K. Job statuses are
- 1) Scheduled: Whenever job is defined in that time job status scheduled.
 - 2) Released: Whenever we specify date & time to schedule job.
 - 3) Ready: When the time is elapsed.
 - 4) Active: Job status is running.
 - 5) Finished: All the job steps are complete successfully.
 - 6) Cancelled: There was an error and job has been terminated, as mentioned in the job log.
- L. Background job table is **TBTC***
- TBTCT table is used for job scheduler
- TBTCS table is used for job time table
- M. Background job status from release to ready program is – SAPMSSYZF
- N. What is the difference between SA38 and SE38?
- SA38 is only we can execute a program and SE38 is we can create; edit a program, changing attributes and documents for the program
- O. If we want suspend all the background jobs are using **BTCTRANS1** report
- P. If we want resume all the background jobs are using **BTCTRANS2** report
- To execute these reports and programs from **SA38 (or) SE38**

SAP BASIS Material

- Q. If you have a long running job, how to you analysis? (Or) How to analyze long running job?

Using the transaction code is – SE30

- R. Standard background jobs (or) Housekeeping jobs are **sap_reorg***

- 1) **Sap_reorg_abapdumps:**

Program: RSSNAPDL

- 2) **Sap_reorg_batchinput:** This job is used for delete batch input files

Program: RSBDCREO

- 3) **Sap_reorg_jobs:** This job is used for delete old background jobs

Program: RSBTCDEL

- 4) **Sap_reorg_statistics:** This job is used for run the statistics of sap tables

Program: RSBPSTDE

- 5) **Sap_reorg_spool:** This job is used for delete the old print request.

Program: RSPO0041

- 6) **Sap_reorg_updaterecords:** this job is used for delete the old update records

Program: RSM13002

- S. Background job issues (or) Why background job is cancelled?

- 1) File system is not accessible.
- 2) User id & password may be expired.
- 3) Dependent job is may be failed.
- 4) RFC connection is failed.
- 5) Incorrect in puts.
- 6) May be files corrupted at O.S level.
- 7) Space issues in database level.
- 8) Memory issues.
- 9) Ora-arch director is may be full.
- 10) Invalid file formats.

Update work process (V)

- A. It is used to update the database by reading from the temporary tables. It can't communicate with user directly
- B. There are 2 types of update work process. They are **v1** and **v2**
V1 update is used for critical jobs and V2 update is used for non critical jobs
- C. We need at least one update work process per sap system and we have more than per dispatcher
- D. The update profile parameter name is **rdisp\wp_no_vb**, **rdisp\wp_no_vb2**
- E. Update monitoring is – **SM13**
Here we can check critical and non critical updates. We can specify date and time
- F. Update program administration – **SM14**
This transaction code is used for active to deactivate & deactivates to activate update request and you configure the update servers, update groups and display & monitoring update parameters.
- G. Update temporary table is **VB***
 - 1) Vbmod – update function module
 - 2) Vbdata – update data
 - 3) Vberror – update error information
 - 4) Vbhdr – update header
 - 5) Vbwrrk – work list for mass processing at a time have update
- H. Update status are
 - 1) Init – the status will be initial.
 - 2) Run – update is started in main database.
 - 3) Error – update is thrown into error.
 - 4) Auto – update is thrown into error due to problem in database space.
- I) Update tables are stored in **TBLOD**
- J) **SAPMV45A:** which update work process is going on?

K) **Update types are 3:** they are

1. Local update: Dialog work processes update directly in Database that is called local update.
2. Synchronous: Dialog work processes update goes to the temporary table that is called synchronous.
3. Asynchronous: temporary table goes to database that is called asynchronous

L) **Update statistics are 4:** they are

Read, Write, Execute and Delete

M) **Update parameters**

- 1) **rdisp\vb_stop_acive:** Set to “0” so that update can be deactivated. If the value is set to be “1” update can be activated.
- 2) **rdisp\vbdelete:** This parameter is used to delete the old update requests based on the no. of days. It will delete default 50 days.
- 3) **rdisp\vbmail:** It is used to send an email. It update thrown an error which can be viewed in “SBWP” (“sap business workplace”) based on your user (set to “0” or “1”).
- 4) **rdisp\vbname :** Name of the server running where update are processed
- 5) **rdisp\vbreqorg:** It is used to delete the incomplete update request.
1=delete, 0=no, we can also schedule a background job “**RSM13002**” but it will delete the update request which are in completed it will be deleted after restarting.
- 6) **rdisp\vb_delete_after_execution:** It is used to delete the update request soon after the execute of the update. Set it to “1” to delete the record (or) “2” to the record will not be deleted. If it is set to “1” the background job “RSM13002” is not required. If not schedule periodically daily during off peak hours.

Enqueue server (E)

- A. Enqueue server handles by the locking and unlocking mechanism
- B. The Enqueue server parameter name is – **rdisp\wp_no_enq**
- C. Enqueue server table size is minimum of **4MB**
- D. We can increase the maximum of size is **100MB**
- E. Enqueue table size is **enq\table_size=4mb to 100mb**
- F. Enqueue server log files will be stored in O.S level
Usr\sap\<Sid>instance<number>\log
- G. The Enqueue server work process administrators a lock table in the shared memory area
- H. Enqueue server 4 types they are
 - 1) Shared locks: one user can read the tables and another one user can write the tables
 - 2) Exclusive locks: only a particular user can read it, nobody else can access it
 - 3) Cumulative locks: The same user with different transaction accessing the same table then the lock will be shared with user transactions
 - 4) Optimistic locks: One user lock the table and another user doesn't have read & access the table permission
- I. Select lock entries – **SM12**
You can check (or) released the locked entries using transaction is sm12.
If there is a sudden power failure. Some of the users update entry might still be locked. If possible asked the user to logoff first, before deleting the lock entries
- J. Transaction codes: locks and unlocks – **SM01**
- K. Enqueue server lock tables are stored in **TLOCK**

Message server (M)

- A. Message servers handle by the load balancing. It distributes the dispatcher where the load balance is less.
- B. Message server log files are stored in O.S level **DEV_MS**
Path is – `usr\sap\<Sid>\<instance (number)>\work\dev_ms`
- C. In O.S level message server monitoring is – **msmon ->cmd**
- D. Message server port number is – **36<instance number>**
- E. Internal port number is – **39<instance number>**
- F. NOTE: sap server has only one message server and enqueue server.
- G. NOTE: application server or dialog instance are same. And central instance is different

Gate way (G)

- A. It is used to communication between the sap system to non sap system
- B. There will be only 1 gate way for each instance.
- C. In sap level gateway monitoring is - **SMGW**
- D. In O.S level gate way monitoring is – **DEV_RD**
Path is – `usr\sap\<Sid>\<instance (number)>\work\dev_rd`
- E. We can check also **DEV_DISP**, i.s dispatcher for log files
- F. **usr\sap\<Sid>\<instance<number>\work** ----> work directory stores log of the work process information in the format of **DEV_W***

Spool (S)

- A. It is used to print the documents to a printer
- B. There should be at least 1 spool process in the entire system
- C. The spool profile parameter name is – **rdisp\wp_no_spo**
- D. Dialog work process (or) background work process are creates a spool request. i.e. to print the documents
- E. In O.S level spool request are stored in global directory **usr\sap\<Sid>\sys\global**
- F. The storage location specific parameter name is – **rdisp\store_location**
- G. This parameter has 2 values they are **global_G** and **database_DB**.
- H. G means it stored in global directory DB means it stored in database tables are “**TST01**” and “**TST03**”
- I. The spool request is also referred as **TEMSE**
Temse is used for temporary sequential objects
- J. **Access method:** It is connection to spool server to O.S spool.
Access methods are 3 types
 - 1) **Local access method:** the spool process and the spool host (printer spool) reside on the same system. Access method type L is used for UNIX O.S and C is used for windows O.S
 - 2) **Remote access method:** the spool process and the spool host reside on two different systems. Access method type U is used for UNIX O.S and S is used for windows O.S
 - 3) **Front end method:** access method p is the printers are connected to end users desktop do not configured to many front and printers F and G
- K. We can see all the clients and users spool request T_Code is – **SP01**
- L. We can see specific client and user spool request T_Code is – **SP02**
- M. Spool administration is - **SPAD**
- N. Default printers are – **SWIN, SAPWIN**

RFC – Remote Function Call

- A. RFC is using connect to the one sap system to another sap system.
 - B. Sap gate way is using of RFC
 - C. RFC connections are 4 types
 - 1) Asynchronous RFC: User doesn't get the any acknowledgement. Whenever using the asynchronous Rfc between the two sap systems
 - 2) Synchronous RFC: User gets the acknowledgement. Whenever using the asynchronous Rfc between the two sap systems
 - 3) Transactional RFC: User doesn't get the any acknowledgement .Each request send to the transactional ID, but there is no order delivered
It is asynchronous RFC extended to the transactional RFC
 - 4) Queued RFC: User gets the acknowledgement. Each request sends to the user request one by one order. Send to the form of logical unit of work
 - D. Transaction RFC T_Code – **SM58**
 - E. Configuration of RFC Connection is – **SM59**
 - F. RFC Connection

	Type	Connection
Abap connection	3	Abap to Abap connection
HTTP connection to external system	G	web browser to non sap system
HTTP connection to Abap system	H	web browser to any Abap system
Internal connection	I	within the system
TCP/IP connection	T	Abap to java connection
 - G. **SMQ1** is monitor for the outbound queue. Outbound queue means sending the request.
 - H. **SMQ2** is monitor for the inbound queue. Inbound queue means sending the request.
 - I. Default communication user **TMSADM**
 - J. Default the Rfc connection is – **TMSADM@<SID>.DOMAIN <SID>**

- K. How many types of connection in Rfc? – **10**
- L. Rfc connections are stored in table is **RFCDES**
- M. Where we have to create the trusted system?

In **SM59** click on **logon security**. We can create the trusted system.

- N. Why we need to trusted system?

To communication for business requirement

- O. What is the transaction code RZ12?

It is used to define the RFC Server groups and Assign the instance

- P. Which user is used when you create RFC?

TMSADM

- Q. How to create the RFC connection between source client & target client

- 1) Login with target client
- 2) Using the transaction code SM59
- 3) Create the connection type
- 4) Give the RFC destination, description & connection type and click on administration
- 5) Click on technical settings
- 6) Give the target hostname and system (instance) number & select host name option
- 7) Click on logon security tab
- 8) Give source client details like number, username & password
- 9) Click on save button
- 10) Destination will be saved
- 11) Click on Unicode test button
- 12) Click on remote logon button'
- 13) Click on start sap easy access button
- 14) Here we can find that client number 111 (we logged 222 in client)
- 15) Click on logoff button [exit from 111 clients]

R. Rfc issues (or) Why Rfc connection failure

- 1) Target system to source system does not match like version, production and component.
- 2) May be target system is down.
- 3) May be authorization problems.
- 4) May be incorrect credential of the target system



Operation mode

- 1) What is operation mode?

Switch the dialog work process to background work process vice versa using operation mode.

- 2) **RZ04** is monitor for the operation mode & instances. Create the operation modes and delete the operation modes.

- 3) **SM63** is used time table for operation mode

- 4) **RZ03** is used to switch the operation mode.

- 5) How to create the operation mode?

Maintain the operation modes T_Code is – RZ04. We assign time table for the operation mode T_Code is – sm63. Then assign the instance.

- 6) How to delete the operation mode?

First delete the time table and save empty. Then operation mode using Rz04

- 7) What is exceptional operation mode?

We need extend the maintains +day,-day and date, we will do it

- 8) Operation modes switch automatically at the times defined in the time table – using the system program is **SAPMSSY2**

- 9) No active operation modes – using program is – **SAPMSSY6**

Profile

A. What is the profile?

A profile in the sap system is an operating system file containing parameter and configuration information of an instance.

B. Why profile?

It provides for the governance of the sap system

C. The profile files are located under the directory – **use\sap\<Sid>sys\profile**

D. Profiles are 3 types they are

- 1) Startup profile: The startup profile is an operating system file. That defines which R/3 services are started

◆ The naming convention startup profile is **start_Insatncename_Hostname**

- 2) Default profile: Default profile contains global parameters for all sap application servers.

◆ The naming convention instance profile is **default.pfl**

- 3) Instance profile: instance profile contains instance specific parameter

◆ The naming convention instance profile is **SID_Insatncename_Hostname**

E. In what sequence are profile parameters read?

Start profile ---> default profile ---> instance profile

F. When sap system starts, which profile it reads first?

Startup profile

G. If you want modify any system parameters wide, which profile you, will see?

Default profile

H. Where we can see all parameters in O.S level?

Sappfpar all

I. Where we can see all parameters in sap system?

RSPARAM – SA38 (or) SE38s

J. What is the difference between RZ10 & RZ11?

- ◆ **RZ10** we can change all the profile parameters and we have to restart the sap system. It is a static profile
 - ◆ **RZ11** we can change only dynamic profile parameters and we don't need restart the sap system. It is a dynamic profile
- Ex: Run time parameter can change in rz11

K. What are the edit profiles in RZ10?

- | | |
|----|----------------------|
| 1) | Administration data |
| 2) | Basic maintenance |
| 3) | Extended maintenance |

L. Where you can see the Profiles?

Sap level – transaction code is RZ10 & RZ11

OS level – usr\sap\<Sid>\sys\profile

DB level – PAH1, TPFYPROFTY, TPFET, TPFHR

M. USERS:

I.During the sap installation for windows O.S default users are **<Sid>adm, sap service<Sid>**.

II.During the sap installation for UNIX default users are **<Sid>adm, sap service<Sid>, ora<Sid>**.

1) <Sid>adm: It owns the sap system and start and stop done by <Sid>adm.

2) Sap service<Sid>: It is used to start and stop the services.

Ex: [sap<Sid>_00, sap<Sid>_01.....]

3) Ora<Sid>: It is used to owner to work on database

SAP GUI default users are – **DDIC & sap***

III.After installation database users are – **sys, system**

IV.Database schema users are: Abap level – **SAPSР3, java level – SAPSR3DB**

V.Communication user is **SAP JSF**

VI.Default users are: DDIC is **06071992**, Sap* is **19920706**

N. Default services are

- a. Sap OS Col: sap OS Col collector which is used to collect the O.S resources that are required to start the installation.
- b. Ora TNS Listener: Ora TNS listener service should be started on the specified port number is [1521 – 1529].
- c. Oracle service<Sid>: This is required for the database.
- d. Sap service hostname<Instance number>:
 - ◆ Whether system is down we have to check whether these services (or) not Click on services → start
 - ◆ **Services.msc** – windows O.S (or) start → settings – control panel → administrative tool →services
 - ◆ **Ps -ef|grep ora*** - UNIX O.S

2) How to check whether the sap is running or not on UNIX level?

- ◆ # Ps -Ef|grep DW [check is sap is running or not]
- ◆ # ps -Ef|grep ora [check oracle status]

3) How many initialization files for sap GUI?

- 1) Saplogon.ini
- 2) Saproute.ini
- 3) Sapmsg.ini

4) How you can start & stop the sap system on windows?

- ◆ Go to login as <Sid> adm
- ◆ Password: master password
- ◆ Click on MMC icon on the desktop
- ◆ <Sid> right click
- ◆ Start or stop

5) How you can start & stop the sap system on UNIX?

- ◆ Go to login as <Sid> adm
- ◆ Password: master password

- ◆ Start sap -----> R3 & DB
 - [Command] [SAP]
- ◆ Stop sap -----> R3 & DB [Here system is down]

6) How to start only sap, when DB is up?

- ◆ Startsapr3 -----> to start only R/3 system
- ◆ Stopsapr3 -----> to stop only R/3 system

7) Dispatcher port number is – 32<instance number>

8) Gate way port number is – 33<instance number>

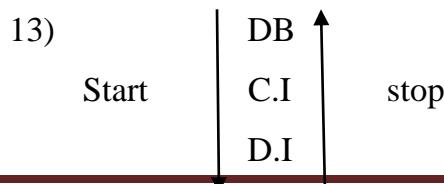
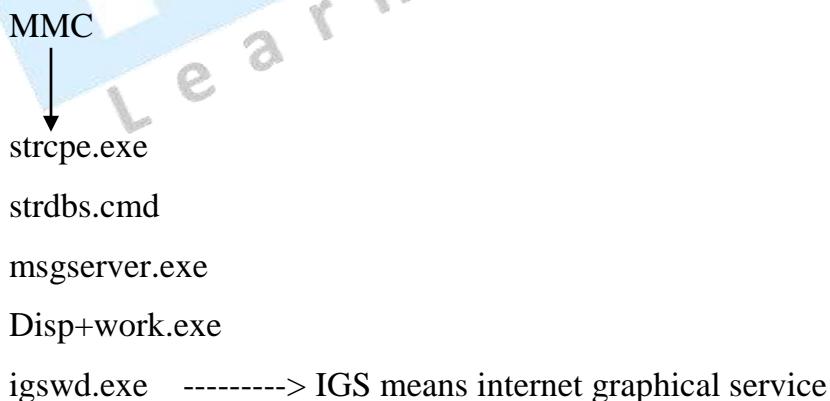
9) Message server port number is – 36<instance number>

10) **Named pipe:** named pipe is used to connect between the MMC and SAP.

11) Default profile parameters:

- ◆ Login\system_client = 001 – the number of the client to display by default for all the users.
- ◆ Zcca\system_language = – to specify the language during logon
- ◆ Login\no_automatic_user_sapstar = 1 – by default this parameter value is 0 then we can change the parameter value is 1 because if any user (or) client you can login with parameter

12) The background process is running when MMC connect to the SAP

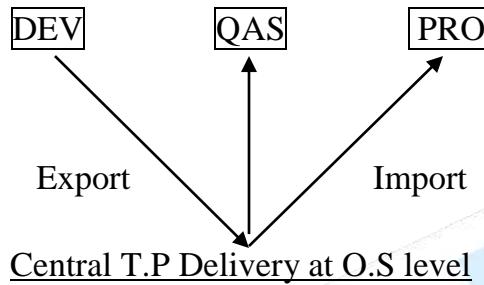


STMS: Sap Transport Management System

1. What is the transport?

Transport is used to moving the object from one sap system to another sap system in the landscape. Export the change request & import the transport request

2. The transport objects are divided into 2 types they are Export & Import



3. What is domain controller?

Domain control is a control all the systems in the landscape. It is used to manage all the transport parameters in the landscape. In the most of the environment there will be only one domain controller.

4. What is Transport domain controller?

It is created as part of the post installation activity.

5. What is the transport domain & domain controller?

All the sap level it is called as transport domain and at O.S level it is called as domain controller.

6. How to configure the domain controller?

- A. First decided which system you could like to define domain controller
- B. Login to the sap system with DDIC in client 000
- C. Go to SE06
- D. Click the post installation activity
- E. Go to STMS
- F. It will ask for the domain controller name
- G. Enter system ID of the domain controller
- H. Enter domain_<Sid> as domain controller name and enter the description

- I. Click save button
7. Steps to add the other system with domain controller

- J. Logon domain controller system
- K. Approve the added system

8. What is landscape?

Landscape is arrangement of group of system to flow the objects



9. Landscape

- ◆ ECC DEV -----> QAS -----> PRO
- ◆ EP DEV -----> QAS -----> PRO
- ◆ BI DEV -----> QAS -----> PRO

Based on the customer requirements we can define the single, two, three and multi systems .in the landscape

10. In order to define landscape we need system

- A. Transport layer
- B. Transport root
- C. Transport group
- D. Transport target group

A. Transport layer: transport layer is used to moving the object path from one system to another system within the landscape.

- ◆ Transport layers are 2 types they are

1. Z<Sid> – customizing object move the Z<Sid> layer
2. SAP – repository objects move the sap layer

B. Transport routs: which shows from the transport direction to the target system?

- ◆ In three system landscape
- Dev -----> integrated system
- Qas -----> consolidated system
- Pro -----> delivery system

- ◆ Transport routs are 2 types they are
 - 1. Consolidated route: the route between development system to quality system is called consolidated route
 - 2. Delivery route: the route between quality systems to production system is called delivery route
- ❖ **NOTE:** In a two system landscape delivery route is not available

- C. Transport group: The systems which are shared a Trans directory is called transport group
- D. Transport target group: more than 3 systems & multiple clients it work's on extended transport controller is called transport target group

- ◆ Extended transport controller: it is used to transport objects within the client & system

11. What is the backup domain controller?

Whenever primary domain controller is failed. In that time it will care of the transportation

12. What is work flow?

To set off the automatic process & responsibility of quality system

13. Transport background jobs are **RDDIMPDP, RDDNEWDP**

14. Transport request are stored in **TRBAT & TRJOB**

15. All the change requests are stored table is **E070**

- ◆ E070 – Change request headers
- ◆ E071 – change request object lists
- ◆ E071k – object key contained within transports

16. At end of the import, transport specific the return codes

- 1) **000**: import the finished with successfully
- 2) **004**: import finished with warnings
- 3) **008**: some objects are not transported
- 4) **0012**: critical transport errors

17. What is the change request?

Whenever we can create a request that is called a change request

18. What is the transport request?

Whenever we will release the change request that is called transport request

19. Which system we can configure the domain controller?

Development system

20. What is transport domain (or) integrated system?

Development system

21. **RSTPTEST:** - Can be extended if there are any problems with TP (or) R/3 instance.

22. How to check the consistence of STMS?

Using the transaction code is SA38 (or) SE38 and run the report is RSTPTEST (it will check the if any errors in STMS or not)

23. User locks the transaction code is **EWZ5** at sap level and in OS level we can lock the system by using Tp # **tp lock sys<Sid>** (or) **tp un lock sys<Sid>**

24. What is the naming convention of the transport request?

<Sid>k9<5 digits>

25. How many types of editors?

A. Graphical editor

B. Hierarchical editor

26. Transports are O.S and Data Base Independent but R/3 system is dependent

27. What is r3trans -d?

r3 trans -d is used to check the R3 trans connecting to the DB (or) not.

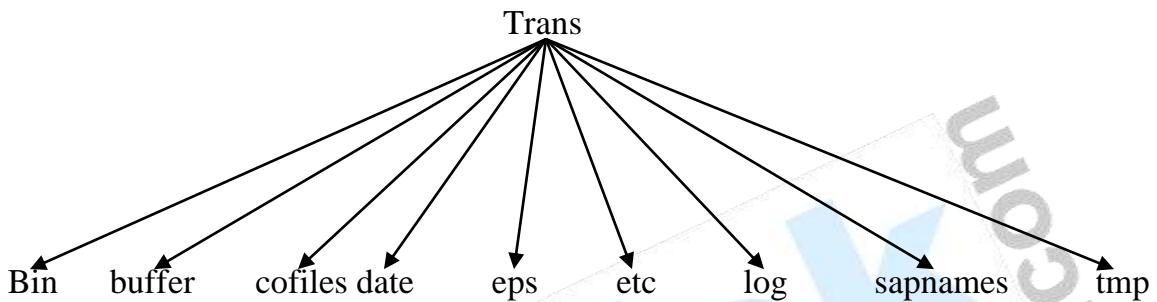
28. Trans directory path is – **usr\sap\trans**

29. Transport request types are
3 they are

- 1) K type – with change in integrated system to consolidated system

- 2) C type – without change in integrated system to consolidated system
- 3) T type – move the one system to another system

30. Tran's directory structure is



- ◆ Bin: it consists of domain configuration files and transport profile parameters.
Tp_domain.<Sid>.pfl, domain.cfg
- ◆ Buffer: buffer contains transport request ready to import
- ◆ Transport request are 2 types they are
- ◆ Cofiles: A cofiles contains control information of the transport request. cofiles start with K
- ◆ Date files: A data file contains data information of the transport request. Data files start with R
- ◆ EPS [Electronic panel service]: which is used to store the support packages?
- ◆ Log: it rides the log files during the change request
 - 1) A log: it contains the information about the transport request. Who is the transport request and name of the consultant?
 - 2) S log: S log files are stored in transport request of specific system
 - 3) U log: U log means it contains the transport command that are executed at OS level

- ◆ Sapnames: the owner of the change request is documented here

31. How to disable the fully loaded truck?

Go to STMS --->overview ----> system ----> double click system (Ex: dev) ---> go to transport tool tab ----> insert row ----> N0_IMPORT ALL = 1 – this is used to disable the fully loaded truck

32. How to create the STMS?

Login to the system with DDIC in client 000

Go to the T_Code STMS ---->configured ---->standard configured ----> single system, development system, three system in group

(Or)

Go to the T_Code STMS ---->overview ----> systems ----> sap systems ----> external system ----> then we have to give the system name, <Sid>

33. How to create the transport route?

Overview ---> transport route ---> change button ---> click the DEV, QAS & PRO ---> here click the add transport route tab ---> then we have to give the <Sid>, transport layer, system name.

34. How to create the change request?

Using the transaction codes are SE01, SE09 and SE10

35. How to import the change request?

Go to STMS --->overview ---> import (or) importoverciew – button

36.

How many types of change request?

Four they are

- 1) Customizing request: customizing request containing client specific object
- 2) Workbench request: workbench request containing cross client objects & repository objects
- 3) Transport of copies: transport of copies is used for more the tables for user date. This is used for DB refresh & Client refresh
- 4) Relocation: relocation object is used for changing the location of object from one system to another system

37. What are the steps for importing at command level?

Login to target system at OS level using <Sid>adm

Type #Add to buffer <transport request number><Sid> (enter)

It should provide you return code 0

Type #import <request number>CLNT<client number><Sid> U1

Now look for return codes 0, 4,8,12

If RC>8 then look for problems with data files & cofiles. Check permissions, check data creation, size.

38. Transport at OS level

Requesting add to buffer: # tp add to buffer <transport request no> <sap Sid>

Import request is: # tp import<transport request no><Sid>

Tp clean the buffer is #tp clean buffer <Sid> ---> to delete the request after completed successfully

#tp del form buffer <tp request no><Sid> ---> here we can delete the particular request

#tp show buffer <Sid> ---> display the buffer request

39. How do you import the transport request at OS level?

```
# tp import <tp request no><Sid>CLNT = <client no> pf =  
usr\sap\trans\bin\Tp_domain_<Sid>.pfl
```

40. How many types of transport request types?

They are 2 one is released and another one is locked

41. Dev system to Qas, Qas system to Prod that is called **transport request**

42. Prod system to Qas system, Qas system to Dev that is called **transport of copies**

43. **SE01** – transaction code is used for transport organization

44. **SE09** – transaction code is used for workbench request

45. **SE10** – transaction code is used for customized transport request

46. Transport request naming convention?

<Sod>k9<5 digits> , <Sod>k9<5 digits>

Prerequisites for ECC installation steps

- A. Go to service market place – www.service.sap.com

Here it will ask for the user ID & password, user ID must start with s000*****

- B. We can download the software's they are

1. Java core software j2sdk 1.4.2_12.windows [sun.java.com]
2. Sap database software [www.service.sap.com/downloads]
3. Sap installation master DVD'S [www.service.sap.com/downloads]
4. Sap kernel software [www.service.sap.com/downloads]
5. Oracle client software [www.service.sap.com/downloads]
6. Sap export software [www.service.sap.com/downloads]
7. Sap java base software components [www.service.sap.com/downloads]
8. JCE policy.zip software [sun java.com]

- C. Verify the software by using **lable.asc**

- D. Define a host name and IP address – **windows\system32\drivers\etc**

- E. PAM (product available matrix) – compatibility of O.S, DB & SAP

- F. Java core software installation – **set the environment variables**

♦ How to the set environment variables?

Go to my computers ---> properties ---> advanced (here click the environment variables) ---> here we have to give the user variables & system variables

- G. Install the database software along with necessary patches.

Here we have to give the particular drive & system ID

- H. We can set the virtual memory- For 32 bit 3*ram size

 - For 64 bit maximum 20GM

- I. Ensure that installation port number is – 21212, 21213 blocked or not

[# **net stat -a**]

- J. Ensure that service port number is – 32<instance number>, 33<instance number>, 36<instance number>, 47<instance number>, 48<instance number> series blocked or not

- K. Internet is available for resolve the issues.
 - L. We can generate the license key based on the system details like <Sid>, instance number and host name in the landscape.
- ◆ Why we need virtual memory?
- To decrease the load on the RAM



ECC Post Installation Steps

- A. SICK (or) SM28 – SAP installation check consistency
 - To check the compatibility between O.S, DB & R/3
- B. Licence – to get the hardware key saplicence –get (cmd)
- C. SE06 – perform the post installation activity and it is used for system level control
- D. STMS – sap transport management system
 - 1. Login to the sap system with DDIC in client 000
 - 2. Go to STMS
 - 3. It will ask for the domain controller name
 - 4. Enter system ID of the domain controller
 - 5. Enter domain_<Sid> as domain controller name and enter the description
 - 6. Click save button
- E. SE03 – system set to modifiable or not
- F. RZ10 – import from the O.S levels to SAP level
 - Go to utilities --->import --->of active servers
- G. SCC4 – create the client
- H. SU01 – create the users
- I. SALE – create the logical system
- J. SMLT – install the language
- K. DB13 – database back up
- L. SGEN – we edges the software component. All the programs are compiler
- M. SR13 – display of the library configuration
 - Dynamic help
 - Plain html http
 - Plain html file
 - Html help file
- N. Check the house keeping jobs

Version of SAP

- A. 4.7 – 470 is kernel version
- B. 4.7EE – 620 is kernel version
- C. NW04 sr1, sr2 – 640 is kernel version
- D. NW2004Ssr1 – 700 is kernel version, patch level – 6
2004Ssr2 – 700 is kernel version, patch level – 9
2004Ssr3 – 700 is kernel version, patch level – 14
- E. ECC 5.0 – 640 is kernel version
It is also called as ERP2004 Sr1, Sr2
- F. ECC 6.0 – 700 is kernel version [ECC means enterprise central component]
It is also called as ERP2005 Sr1, Sr2 and Sr3
- G. Is it possible to install ECC5.0 as a test system and not production, without installing solution manager?
During the installation you will be asked for a key, which can only be generated by the solution manager.

What is the difference between Net weaver and ECC (or) ERP?

- ◆ Net weaver is Abap stack & java stack
ECC is also Abap stack & java stack
- ◆ Net weaver is 4 soft ware components they are SAP_BASIS, SAP_ABA, PI_BASIS, SAP _ BW
ECC6.0 is 35+ software components & ECC5.0 is 25+ software components
(Here ECC 4 application software components mainly)
 1. Net weaver software components
SAP_BASIS, SAP_ABA, PI_BASIS _ SAP _ BW
 2. Application software components
SAP_AP, SAP_APPL, SAP-HR
 3. Enterprise software components
EA_HE, EA_APPL, EA_RETAIL, EA_PS (public sector)
 4. Industrial software components
IA_OIL, IA_PHARMA Ext.....
- ◆ Java stack – EP, Xi/Pi, BW/BI, MI/KM
 1. Whenever you install the EP – EP CORE, AS JAVA
 2. Whenever you install the MI – AS ABAP, AS JAVA
 3. Whenever you install the PI – AS ABAP, AS JAVA
 4. Whenever you install the EP CORE – AS JAVA
 5. Whenever you install the BI JAVA – AS JAVA, EP, EP CORE
 6. Whenever you install the DI – AS JAVA

Clients

01. What is client?

Client is an independent business entity that represents a company

02. How many types of clients?

Clients are three types they are

- 1) Local client copy
 - 2) Remote client copy
 - 3) Client transport
- 1) Local client copy: we can copy the client data one data to another data within the sap system.
 - 2) Remote client copy: we can copy the client data from one sap system another sap system in the landscape
 - 3) Client transport: we can copy the client data copy with (or) without the landscape

03. What are the client dependent and client independent?

Client dependent is only customizing object, client independents are cross client object and repository object

04. How to client creation?

- 1) Using the transaction code is SCC4
- 2) Click on change button
- 3) It gives the information, click on continue
- 4) Click on new entries option
- 5) Give the client number, client name, city, std currency and client role
- 6) Click on save button
- 7) Data will be saved
- 8) Click on back button
- 9) It shows the newly created client in the list.

05. How many types of client roles?

- 1) TEST [Development test client]
- 2) QTST [Quality system]
- 3) CUST [Customizing]
- 4) PROD [Production]
- 5) SAND [Sandbox client] ---> R & D Purpose (Research & Development)
- 6) TRNG [Training client]

06. What are the changes and transports for client specific objects?

- Changes without automatic recording
- Automatic recording of changes
- No changes allowed
- Changes w/o automatic recording, no transport allowed.

07. What are the cross client object changes?

1. Changes to Repository and cross-client Customizing allowed
2. No changes to cross-client Customizing objects
3. No Changes to Repository objects
4. No Changes to Repository objects and cross-client Customizing object

08. How many types of Client properties? (protect client copier and comparison tool)

- ◆ 0 – No restrictions
- ◆ 1 – No overwriting
- ◆ 2 – No overwriting, no extended availability

09. What is the purpose of T000?

List of clients defined in this T000 table. Which we can maintain with transaction SCC4

10. How to lock a client?

SAP BASIS Material

In **SE37** Functional module people we have to give the **SCCR_LOCK_CLIENT** then click on Execute button. Give the client number you want to lock and click on save button. Then client locked successfully.

11. What are the profiles?

- 1) **SAP_ALL**: all client specific data without change documents
- 2) **SAP_APPL**: customizing and application data w/o change documents
- 3) **SAP_APPX**: SAP_APPL w/o authorization profiles and roles
- 4) **SAP_CUST**: customizing
- 5) **SAP_CUSV**: customizing and user variants
- 6) **SAP_UCSR**: customizing, user master record and user variants
- 7) **SAP_UCUS**: customizing & user master records
- 8) **SAP_UONL**: user w/o authorization profiles and
- 9) **SAP_USER**: user master records and authorization profile

12. Where we can see list of clients available in system?

Transaction code is – SE16 or SE16N or SE17 or SM30 or SM31 give the table name t000 and click on table content button after that it displays list of clients available in the system

(Or)

Transaction code is SCC4.it displays list of clients available in the system

13. What is the difference between Simulation & Resource check?

Simulation is only read the data but not write in to the database. Resource check read the data & writes the data in to the database.

14. Why we have to login with target client?

Client copy is based on **pull mechanisms**. We always log in with target client

15. We are client copy in that time client lock so what we have to do?

Lock due to client copy

16. What is the field for client number?

MANDT

17. How to protect the client?

Change the client properties into “**NO CHANGE MODE**”

18. What is the file system?

The files are organized in terms of documents and directories

19. How many client copies you perform the regular basis?

Depends on business requirement. It is not a regular task

20. Client Export & Import, Remote client copy so which one is better?

Client export & import is better

◆ Why?

May be RFC connection is failed in remote client copy. And also it will take long time to process the client copy because depending on the net work problems.

21. How do you move the transport request different clients within the system?

Using the transaction code SCC1

22. How do you find out the client size?

Using the transaction is SA38 (or) SE38 and run the report is **RSSPACECHECK**

23. How do you find out the table size?

Using the transaction code SA38 (or) SE38 an run the report is **RSTABLESIZE**

24. How many clients you can create on the sap system?

997 clients we can create

25. How many clients we can create?

We can create the up to 1000 clients [000 to 999]

26. What are the default clients after installation of sap system?

Three, they are

- 1) 000: it is standard client (or) master client. It contains client independent settings and it is used for applying the patches, add-ons and transport management configuration
- 2) 001: it is a backup of the “000” client can be considered for working as production system

- 3) 066: Early watcher & alert reports – If there is any problem with sap system then the early watch client throws the alerts.

27. How do you disable multiple login in the same client?

To disable multiple users login within the same client implementation this parameter in the instance profile **login\disable_multi_gui_login = 1**

28. Exception login?

In case you are wondering how to allow multiple login for certain key users you can implement parameter **login\multi_login_users =**

29.

Login\system_client – it is

used for when we open the screen we will get this client number whatever we set in the default profile parameter

30. How to delete the client deletion?

- 1) Login in the client which you want to delete
- 2) Using the transaction code SCC5
- 3) Check delete entry from T000 option & click delete in background job button
- 4) Double click on server name
- 5) Check immediately option & click on schedule job button click on continue button
- 6) Go to the transaction code SCC3 to see log analysis
- 7) After taking some time status become success fully completed

31. Tell the steps for a local client copy?

- 1) Login with sap* & password pass in newly create client
- 2) Using the transaction code is SCCL
- 3) Target is displayed
- 4) Select the profile which you want to copy
- 5) Selected source client
- 6) Select on start immediately button (or) schedule as background job
- 7) Click on continue button – to continue the client copy

32. Tell the steps for remote client copy?

- 1) Using the transaction code in target client
- 2) Target client is displayed
- 3) Select the profile which you want to copy
- 4) Click on RFC connection which related to target & source client
- 5) Click on RFC system comparison button
- 6) It displays the statistics about copy
- 7) Click on immediately (or) schedule as background job
- 8) Click on continue button

33. What are pre requisites for client Export & Import?

- 1) Reorganize which is source system & which is target system
- 2) Establish the RFC connection between source system and destination system
- 3) Check the availability of background work process (must needs one work process)
- 4) We need to check the source client size
- 5) We need to check the spaces at sap level & O.S level

34. Tell the steps for client export & import

- 1) Log on to the source client (in source system)
- 2) Using the transaction code is SCC8
- 3) Select the profile which you want to export
- 4) Select the target system
- 5) Double click on the system name
- 6) Click on copy button
- 7) Click on RFC system check
- 8) Select RFC connection & click on choose button
- 9) Click on continue button
- 10) It displays if any inconsistencies
- 11) Click on schedule as background job button

- 12) Double click on selected server
 - 13) Selected immediate option & click on schedule job button
 - 14) Once verify all the values & click on continue button
 - 15) Using the transaction code SCC3
 - 16) Click on export button
 - 17) Copy Ex: RT01148.ECC from D:\user\sap\trans\data
 - 18) Copy Ex: KT01148.ECC from D:\user\sap\trans\cofiles
 - 19) Log on to target client (in target system)
 - 20) Using the transaction code STMS
 - 21) Go to overview tab and click on import option
 - 22) Double click on our system
 - 23) Go to extras ---> other request ---> add
 - 24) Select our transport request number & click on copy button
 - 25) Click on continue button
 - 26) Select our request number click on import request[semi loaded truck] option.
 - ◆ NOTE: here transport request status is stopped(red color)
 - 27) Select the target client & click on choose button
 - 28) Click on import button
 - 29) Give the target client number, user name & password
 - 30) Here transport request status is running (truck button)
 - 31) Click on continue button
35. Post client copy:
- 1) Using the transaction code scc7(in target client)
 - 2) Click on schedule as background job button
 - 3) Double click on selected server
 - 4) Selected immediately option & click on schedule job button
 - 5) Once verify all the values & click on continue button
 - 6) Using the transaction code SCC3

- 7) Double click on our job log
- 8) It displays import successfully

36. Using the logical system transaction code is **SALE**

37. What is logical system?

To identify the client in the landscape .it is unique identified

38. Where we have to store the logical system?

TBDLS

39. What is the naming convention of logical system?

<Sid>client<client number> Ex: BPDCLNT555

40. **BDLS** – Tool: conversion of logical system names

41. How to assign the logical system to client a client?

- 1) Using the transaction code SALE
- 2) Click on Basis settings ---> logical system ---> assign the logical system to client
- 3) Double click on the client which you want to assign the logical system
- 4) Select the logical system & click on copy button
- 5) Click on save button
- 6) Data was saved that means logical system assigned successfully
(Or)
- 7) Using the transaction is SCC4 is also we can assign the logical system to client

Support packages

- A. **Patches:** To fix the bugs, to get the functional enhancement and To upgrade the system to next level
- B. **SNOTE:** SNOTE is the single object correction. They are 2 types
 1. Manual note: the note is provided the runtime issues.
 2. Corrective note: The note is providing the functional enhancement and fixes the bugs.
- C. The process of applying NOTE got to the transaction is **SNOTE**
- D. What is the process for applying SAP NOTES to sap system?

Go to transaction code SNOTE ---> go to menu ---> download sap note ---> give the NOTE number ---> after downloading check the status. If it shows that it can be implemented then select the NOTE go to menu SAPNOTE ---> implement note

- E. **How to install the Add-ons?**
Using the transaction code – SAINT\
- F. **Support packages:** support packages are multiple of object corrections
Support packages contain the set of patches. Support packages we should apply on sequence manner.
- G. The support packages status are stored in “**PAT01**” table and “**PAT03**”
- H. **How do you get latest kernel, support packages & Add-ons?**
Service market place [www.service.sap.com]
- I. **While applying support packages. If users accurse in SPAU & SPDD phases then what will you do?**
SPAU in problems accurse I can skip the problem. If it is SPDD in problems accurse I can execute technical people.
- J. SPDD & SPAU ---> please inform the customer to take care. If locked objects found can be Release using the transaction code is SE03

K. What is naming convention for support packs?

Kb46c005

L. What is the difference between sap note & support packages?

SNOTE – single object correction

Support package – multiple object correction

M. With solution manager can I apply support packages in C.I & D.I?

Yes, I can

♦ How?

We can install the C.I & D.I on the host and on the same <Sid> can apply support packages.

N. **Usr\sap\trans\eps\in:**

This directory stores uncar patches which are download from the service market place

O. Table “TPFET” is used for store the parameter values along with patches

P. 156/291 Kernel patch latest number:

Q. level: 26 Support package highest

R. called patches **Patch:** Group of NOTES is

S. is called packages **Packages:** Group of patches

T. is called stacks **Stacks:** Group of packages

U. How to uncar .car/.sar files in UNIX single shot?

\$for I in *, SAR: do SAPCAR -XVF \$I: done

V. We can't able to see uncar files in EPS directory then what will you do?

1. May be file corrupted
2. Sap car may old version

W. Can you apply the support packages in Java system?

Yes, through SDM and JSPM

X. Why we required 2 background work process in support packages?

Support package is the time taking process in this process due to some problems.
If one job is failed another one job is take the backup.

Y. What are prerequisites for applying support packages?

1. Ensure that SPAM/SAINT version is updated to the current version.
2. Ensure that valid backup is available
3. Ensure that STMS is consistence checked
4. Ensure that at least two background work process are available
5. Ensure that “RDDIMPDP” job schedule in the background in client “000” with user “DDIC”
6. Patches should be applied in the sequence SAP_BASIS, SAP_ABAP, SAP_APPL, SAP_HR
7. Ensure that there should enough space in the Database
8. Ensure that there should be enough space in the `usr\sap\trans\eps\in` directory
9. Apply the patches in the client 000 with user like DDIC
10. We need lock the users in the sap system and also we need to intimate them well advanced before applying support packages using SM02
11. Ensure that internet connection is available to resolve the issues
12. If the support packages are more than 10MB apply through application server, if not then through frontend
13. Download the support packages from www.service.sap.com
14. After April 1st 2007 can be downloading only through solution manager

15. Apply the patches in the landscape sequence. That is (DEV – QAS – PRD)
16. Once support packages applied can't be reverted back
17. The patches comes in the format .sar (or) .car
18. Download the patches into Tran's directory and uncar the file using this command **Sap car – xvf <filename> –R**
19. It will check for eps\en directory format is .ATT and .PAT files

Z. How to apply the support packages?

1. Download the SAPKB***.car/SAPKA***.car/SAPKH***.car files
2. Uncar into the Eps\In directory
3. Go to SPAM
4. Load the packages from front – end (or) application server
5. Display define the Queue
6. Import Queue
7. The import can be scheduled immediately (or) background immediately (or) at later time during off peak hours

Phases of the Support Package Manager

- ◆ The Support Package Manager runs through a series of phases when it imports Support Packages. If you want to know which phases were performed for which scenario (test scenario or standard scenario), execute program RSSPAM10.
- ◆ The following list provides an overview of all the modules and phases and list them in the order in which they are executed by the Support Package Manager:

Module: Preparation

1. PROLOGUE

This phase checks if you are authorized to import Support Packages.

2. CHECK_REQUIREMENTS

This phase checks various prerequisites for importing Support Packages such as the tp logon to your system.

3. DISASSEMBLE

This phase disassembles, or unpacks, the data files from the relevant EPS parcels and copies them to the transport directory.

4. ADD_TO_BUFFER

This phase copies the queue to the transport buffer of your system.

5. MODIFY_BUFFER

In this phase, the transport buffer is prepared for correct processing of the following import phases.

6. IMPORT_OBJECT_LIST

This phase imports the object lists of the Support Packages in the queue into the system.

7. TEST_IMPORT

This phase performs a test import for the current queue using tp. It checks if there are objects that are in open repairs and will be overwritten during the import, or if any other circumstances are preventing an object from being imported successfully.

8. OBJECTS_LOCKED_?

This phase checks if there are objects that will be overwritten by the Support Package, and that are still in requests that have not yet been released.

9. ADDON_CONFLICTS_?

This phase checks if there are conflicts between the objects in the queue and the installed add-ons.

10. SCHEDULE_RDDIMPDP

This phase schedules the transport daemon (program RDDIMPDP).

Module Import 1

11. CREATE_VERS_BEFORE

This phase generates versions of the objects in the Support Packages that are in the queue.

12. SPDD_SPAU_CHECK

This phase checks if a modification adjustment is necessary (Transactions SPDD/SPAU).

13. DDIC_IMPORT

This phase imports all ABAP Dictionary objects in the queue.

14. AUTO_MOD_SPDD

This phase checks if modifications to ABAP Dictionary objects can be adjusted automatically.

15. RUN_SPDD_?

This phase prompts you to adjust your modifications to ABAP Dictionary objects with Transaction SPDD.

16. LOCK_EU (For Import Mode *Downtime-Minimized* Only)

This phase locks the development environment.

17. INACTIVE_IMPORT (For Import Mode *Downtime-Minimized* Only)

This phase imports program code and program texts in an inactive state.

18. DDIC_ACTIVATION

This phase activates the imported Data Dictionary objects.

19. IMPORT_PROPER

This phase imports all Repository objects and table entries, provided they have not already been imported during the phase INACTIVE_IMPORT. This is preceded by actions such as table conversion and activation of the name tabs.

20. PREPARE_XPRA

This phase prepares the XPRAs and after-import methods to be executed.

21. UNLOCK_EU (For Import Mode *Downtime-Minimized* Only)

This phase unlocks the development environment.

22. AUTO_MOD_SPAU

This phase checks whether modifications can be adjusted automatically.

23. XPRA_EXECUTION

This step executes the XPRAs and the post-import methods.

24. ABAP_GENERATION

This phase generates runtime objects for the imported Repository objects (ABAP source texts and screens).

25. RUN_SPAU_?

This phase prompts you to adjust your modifications to Repository objects with transaction SPAU.

26. CLEAR_OLD_REPORTS (For Import Mode *Downtime-Minimized* Only)

This phase deletes obsolete versions of the program code and program texts in the database.

27. EPILOGUE

This phase completes the import of the Support Package. It also checks if the queue was processed completely.

Kernel patch upgrade

A. What is the kernel patch upgrade?

Kernel patch upgrade is a process of upgrading the executables files in the run directory with current version

B. What are prerequisites for applying kernel patch upgrationad?

- 1) Before applying kernel patch we have to take online backup (or) off line backup of the system
- 2) Before applying kernel patch we have to take backup of this folder
usr\sap\<Sid>\sys\exe\uc\nti386\run
- 3) Stop the sap system and stop all the sap services
- 4) Download the current kernel from www.service.sap.com
- 5) Download the kernel files they are Database Independent & Database dependent
- 6) After downloading this files with get the file format.car (or) .sar files
 - ◆ Ex: file format is SAPEXE_Patchlevel.sar (DB independent), file format SAPEXEDB_Patchlevel.sar (DB dependent)
- 7) Extract the downloaded files from by using following command

```
SAPCAR -XVF Filenam.sar new folder
SAPCAR -XVF SAPEXE_Patchlevel.sar
SAPCAR -XVF SAPEXEDB_Patchlevel.sar
```
- 8) The files will be in the format of .EXE (or) .DLL (or) .DBext

C. How to apply the kernel?

1. Take the extracted files from new folder and replace the existing kernel
usr\sap\<Sid>\sys\exe\uc\nti386\run with newly extracted files
2. Once replacement has finished we need to start the services
3. Go to services.msc then select the following files are started
4. Go to MMC select the instance click the start button
5. Once sap system is up & running check the kernel version

Go to cmd prompt -----> disp+work (it will show the upgrade kernel version)

D. How to get the sap kernel files?

Logon market place ---> s/w downloads ---> entry by application group ---> additional component ---> click0n sap kernel (32 bit uc, 64 bit uc, 32 bit nuc, 64 bit nuc.)

Once database independent is completed after that Database dependent completed

E. **usr\sap\<Sid>\sys\exe\uc\nti386\run**

Run directory is called as a kernel directory

This stores all the executables through which sap runs

F. Kernel is provided the communication between SAP, DB & O.S

SMLG – Logon load balancing

A. More than one instance we can configured the in that time we can use logon load balancing

B. Decreasing the load balancing on the C.I

C. Effective utilization of buffers

D. We can create and delete groups entire system

E. If the one instance is failed then the request goes to another instance failover

F. How to create the logon load balancing?

Using the transaction code – SMLG ---> click on the create button ---> here we have to give the logon group and instance ---> copy ---> after open the GUI pad ---> click the NEW ITEM ---> next ---> here we have to give the connection type (group server selection) ---> we have to the description, application server, system number, system ID ---> next ---> finish

Sap startup problems

1. Services may be stopped
2. Maybe no spaces at work directory in O.S level – dev_ms, dev_disp, sapstart.log, sapstartsrv.log, STD. Err
3. May be problems in startup, instance & default profile parameters
4. Work process may be crossed 100
5. Message server hostname may be changed
6. We have to check whether logged <Sid>adm (or) not
7. We have to check the oracle status up (or) not
 - ◆ Cmd – sqlplus /as sysdba (enter)
 - ◆ SQL :> select status from v\$instance;
Open (or) mount (or) no mount (or) not available
8. If oracle is not coming up we need to start it
 - ◆ SQL :> startup [to open the oracle]
9. Oracle blocks may be corrupted (we need to recover the data)
10. Ora arch directory may be full [backup & delete the old data]
11. Table space issues (or) space issues at O.S level [then increase the table space issues (or) increase O.S level spaces]
12. Dispatcher is not coming up in that time we have to check the listener
Cmd: lsnctl (enter)
Listener :> status (to check whether it is started or not)
Listener :> start [to start the listener]
Listeners :> stop [to stop the listener]
13. If system is not coming up then change in instance profile that is rdisp\trace = 0, 1,2,3,4 then start sap again it will writes the logs into work directory (after starting sap system we need to change the trace level = “0”)
[Trace = 0 – no trace is written to files]
[Trace =1 – write error messages in the trace file]

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[Trace = 2 – write the full trace]

[Trace = 3 – write the full trace including data blocks]



Performance

1. ST01 – system trace

- ◆ How to identify the expensive SQL statement?

We can identify the expensive SQL statements in st05

- ◆ We can check kernel functions and authorization checking
- ◆ SQL trace, buffer trace and RFC also we can check here

2. ST02 – buffer swap

- ◆ What is the sap memory management?

Roll area, page area, extended memory, heap memory

3. ST03 – workload analysis

- ◆ Database performance and monitoring, workload collector & statistic records are based on day, weekly & monthly we can see

- ◆ How to delete the entire in table MONI

loss the performance the data

ST03 – go to ---> performance DB ---> clients of DB

4. ST04 – database overview

- ◆ We can check database buffer, shared pool, log buffer, time statistics & redo logs

5. ST05 – performance analysis

- ◆ What is SQL trace?

To identify the expensive SQL statement path enqueue trace

- ◆ Enqueue time goes to behind threshold value occurs

1 milliseconds on central instance

5 milliseconds on database instance

- ◆ **Rfc trace:** Rfc time exceeds threshold value occurs & Rfc time is 10 to 40% average of responsibility of time table buffer trace

Load generation time exceed the threshold value occurs time is 200 milliseconds

6. ST06 – OS monitoring

- ◆ It is used for CPU utilization, number of CPU'S physical memory available and utilized
- ◆ It is used to start & stop the sap OS Col services. Click on detailed analysis menu to display the top CPU users
- ◆ If fetches the data using service saposcol and it displays
- ◆ Memory utilization
- ◆ Disk response time
- ◆ CPU idle time not less than 30% [for portal up to 80 to 85%]
- ◆ This transaction code is also used start & stop the sap operating system collector
- ◆ Click on LANCHECK by ping to check the number of presentation server. You can ping to the servers (or) to a specific IP address
- ◆ NOTE: OScol brings the OS information into ST06. If OS call not stared ST06 will be blank

We can check top CPU utilization for the current last 24 hours

7. ST07 – application monitoring

- ◆ Here we can see how many users are log, number of servers, clients & work process
- ◆ it is used to identify whether the system is optimally designed or not, this is also used to identify the buffer utilization & response TIME

8. ST11 – it is used to display the developer traces of work directory
\\usr\\sap\\<Sid>\\sys\\work

9.

How to delete the statistics

of file R/3?

- | | | |
|----|-----------|---------|
| 1) | Sometimes | deleted |
| | manually | |

- 2) Using ST03 or ST03N
- 3) OS level: DVEBMGS/data
file

NET WEAVER

EP (Enterprise Portal)

- A. Portal components are as java, EP, EP Core
- B. Portal system logon URL: <http://hostname:5<instance number>00/irj/portal>
 - ◆ irj = iview runtime java
- C. In java login URL:<http://hostname:5<instance number>00>
- D. java users are – j2ee_admin
and administrator

E. What is the use of portal system?

1. Portal is the middle ware technology
2. It is a web based technology based on web site

F. What is purpose of collaboration?

Chat with in the company, the people who are under the company

G. What is knowledge management?

We are storing the sap documents in the company. It gets from the BW system.

H. EP post installation steps:

1. Maintain the JVM settings in config tool
2. Configure the SLD for portal system
3. Configure the single sign on
4. Create the JCO RFC destination between portal and backend systems
5. Installation the license for the portal system
6. Configure the backup for portal system

I. When we login to the portal system the tables are

1. Content administration

By using this we configure the portal content like iView, work sets & pages

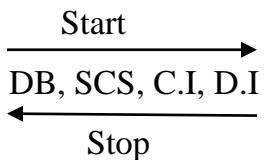
2. User administration

By using this we can create the portal users assign the portal roles to particular users and export import of the roles, users

3. System administration

By using this we can configure the SSO and key store administration & UWL [universal work list configuration]

J. How to start the java system?



K. Work process overview – JCMON

Config tool

- A. To logon the config tool database should be up but their java is not mandatory
- B. Without user ID & password we can log in the config tool
- C. If you change this config tool then we can restart the sap system
- D. Config tool path is – **usr\sap\<Sid>\<instance number>\j2ee\config tool\config.bat** ---> windows OS (**config.sh** ---> UNIX)

E. Options:

1. Cluster data
2. Secure store
3. UME LDAP Data

1. Cluster data:

- 1) Global dispatcher configuration
- 2) Global server configuration
- 3) Instance – id 60466 ---> for a specific instance changes of parameters

- ◆ If we change in the global that effect to instance
- ◆ If we change in the instance that effect to that instance only

➤ JVM settings

- ◆ Secure store area
- ◆ Default logon tickets
- ◆ If we want to add one more server node (or) server process click on instance ---> click on add server button using config tool we can change the JVM settings

2. Secure store area:

- 1) We can change the parameter in security in config tool
- 2) Secure store we can change the password (administration user password)
- 3) We can maintain the administration and java schema user & password in secure store area using config tool
- 4) Whenever we want to change the password we have to restart the sap system

Com.sap.security.core.ume.service



1. Ume.saperadmin.active

Ume.superadmin.password

2. Ume.logon.logon_help

Key store --->default log on tickets)

3. UME LDAP Date:

- 1) In the config tool we can updated the LDAP Data server information if we are using active directory for the user connection

LDAP ---> LIGHT WEIGHT DATA ACCESS PROTOCOL

- 2) To fetched the data from active servers using LDAP Data

3) Services:

1. Licensing service

2. Locking service
3. Log viewer service
4. Log configure service
5. JCO RFC service
6. Security service
7. SLD service
8. SSL service

4) Manager:

1. Configuration manager: it process the configuration data from relationship of database
2. Cluster manager: it manage the communication b/w J2EE engine cluster elements
3. Service manager: it provides runtime elements of the J2EE engine
4. Thread manager:
5. Port manager: it manages the process of pooling java object.
6. Long manager: it manages process of logging system

Visual admin tool

- A. To login to the visual admin tool data base and java system must be up
- B. We need user ID & password for login to the visual admin tool
- C. If you change this visual admin tool then we don't need restart the sap system
- D. Visual admin tool path is –
- E. Visual admin tool port number is: **5<instance number>04**
- F. Destination for java system: [destination (or) target system] [one java is connected to another java system]
- G. Licensing adapter: after downloading the market place we give license here
- H. JCORFC Provider

This is used for connecting the Abap system and java system

- Program – SSO

- Gwservice – sapgw00
 - Server count – 2
 - Application server host –
 - System no –
 - User ID –
 - Password –
 - Log viewer – here we can see all the logs
- I. All the runtime errors we can check in the file Default. Trace file
Usr\sap\<Sid>\<instance number>\J2EE\cluster\security\log

J. **Monitoring services:**

These used for monitoring the java system

1. Application
2. Kernel
3. Performance
4. Services
5. System

K. **Key store services:** these are the services we can to create the sap logon tickets.

These log on tickets used for authorization and security for java system.

SDM (Software Deployment Manager)

L. **What is the SDM?**

SDM is only for the C.I, there is no SDM for dialog instance

M. SDM tool is used for deploy (or) un deploy the Java patches

1. **Deploy:** It is using their services we can start & stop the application server runtime. Java patch extension .SCA (or) .SDA
 - ◆ SCA: component archive
 - ◆ SDA: software deployment archive
2. **Un deployment:**

- ◆ Click on un deployment tab
- ◆ Selection file
- ◆ Start un deployment

N. For up to 640 kernel for deployment & un deployment

O. SDM path is – **usr\sap\<instance number>\SDM\program\remotogui.bat**

P. SDM port number is – **5<instance number>18**

Q. SDM we can run in two modules

1. Stand alone mode: whenever we start the system then we have to start the SDM separately
2. Integrate mode: the SDM automatically started

JSPM (Java Support Package Manager)

A. JSPM is used for deployment of the patch of java system from 700 kernel onwards

B. JSPM Path is – **usr\sap\<Sid>\<instance number>\j2ee\JSPM\go.bat**

C. Download the support patches put in **usr\sap\trans\eps\in**

D. **JSPM contains are**

1. Support stack
2. Single support stack
3. New s/w component
4. Business packages

E. Here no need to apply the support packages in sequence

F. If we want login the JSPM it asks the password then we must give the SDM password

G. Before applying the JSPM we need to check the trance directory is full (or) not

H. How to apply the support packages in JSPM?

1. Download the java support pack stack from the market place
2. Keep the stack files under **usr\sap\trans\eps\in**

I. We can apply the kernel patches also using the JSPM

SINGLE SIGN ON (SSO)

- ◆ Single sign on setup as following steps:
 - I. Create Backend system in portal.
 - II. Create System alias name
 - III. Download portal certificate from portal.
 - IV. Import portal certificate in portal
- I. Creating connections to backend systems:**
1. Under System Administration → System Configuration → System Landscape, search for the ERP folder in the Portal Catalog. Under ‘Systems’, create a new system by right-clicking on the folder and selecting new system from template
 2. You will be taken to an interview creation wizard.
Select SAP system using dedicated application server.
 3. Enter required information:
System name, System ID (same as name), system id prefix (com.pg), System Description (as seen from SAPGUI pick list). Hit ‘Next’ when done.
 4. Review the information given, then hit ‘Finish’
 5. Open the newly-created system for editing

6. Select property category

connector and give all backend system details

II. **Navigate to the system object you want to add the system alias:**

1. System Administration->System Configuration->Portal Content->ERP Content->Systems->Right click on system object->Open->System Aliases

2. Type the new system alias,
Add, then Save.

III. **download portal certificate**

1. As a user with administrator privileges, logon to the portal and navigate to System Administration → System Configuration

2. In the left navigation tree, choose Key store Administration

3. In the Content tab, choose the right certificate download the verify.der file on your PC

4. The following profile parameters should be defined for all parameter files in backend system

◆

2

◆

1

login/create_sso2_ticket

login/accept_sso2_ticket

SAPSECULIB/sapmnt/<SID>/exe/libsapsecu.sl

IV. **Import Portal Certificate**

1. Login to target SAP system
and run transaction **STRUSTSSO2**.

2. In the left navigation tree, under the System PSE node, double click on the system PSE.
3. In the right panel, click on Import Certificate button .
4. In the Import Certificate screen, browse to the Portal certificate file (the one saved and extracted in step #4 named verify.der) and click Open.
5. Make sure that “Binary” is selected as the File format. Click on green check mark.
6. Click on Add to Certificate List button, Notice that the Portal Certificate is now added to the list of certificates.
7. Click on Add to ACL button. When prompted, fill in the WPS System with the SID of Portal and WPS Client to 002.
Login to portal click on system administrator ---> system configuration --->portal content->ERP folder-> System right click on connection test

DATABASE

What are ora – 01555 errors?

This is also called read in consistency error. This is called “snapshot too old “create some more roll back segments to avoid this error.

DB13: define backup schedule

Click on date and select backup – type [offline/online] and save

Error codes:

TNS 12560 – listener problems

ORA 253, 255 – oracle struck

ORA 01034 – no comparable error

What is sap scheduler?

DB calendar (DB14)

While starting sap, I get an error, how to the problems?

Login as <Sid>adm

#r3trance -d

Should returns you 0000 return codes if it is 0012, then look for trans/log file for detail error.

BRTOOLS

Br tools read the parameter init<Sid>.sap

BRCONNECT:

It is used to connect the database and perform the various administrative tasks

Brconnect -f check: to check the database and writes the logs into sap check directory

brconnect -f stats: it is used to run the database statistics. It identifies the tables whose statistics are out based and update them.

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Brconnect -f cleanup: it is used to clean the old log files from sap trace & sap check directory

Brconnect -f next: next extents can be increase automatically

Db optimizer: all the tables & indexes will be stored known as a DB optimizer

Br – backup: it is used to take the take the backup of the database. These are 2 types

Offline backup: the database is down during backup & no transaction is allowed

Online backup: the database is up & running without effecting the user transaction

Redo logs the generate during the back up

Partial backup: it is taken for a specific table is during the patch

Complete backup: take the full backup of system without catalog information

Wholes ---> take the backup with catalog information

Incremental: for incremental backup, first take the full backup system [Ex: 1 2 3 4, add the 5 6 then incremental]

Parameters:

Backup_mode = all

Backup_type = off line

Backup_dev_type = tape (or) disk

Backup_root_dir = e:\oracle\<Sid>\sap backup

Br archive: it is used to backup the offline redo log file to tape (or) disk from ora arch directory to tape (or) disk

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---> when online redo logs are full then ora arch writes contents to ora arch (offline redo logs) the content of ora arch is reference of off line redo logs

Restore database – from database back up

Restore database – from redo log backup

How to sap is independent of database?

There is a mediator is called DB client with the help of DB client. It becomes as database independent

What is database client?

Database client is used to convert the open SQL statement into native SQL statement and vice versa

How to db client connect to oracle?

LISTNER will provide the connectivity between the sap system and database during startup of sap system

During the starting of sap system LISTNER will create shadow process in the ratio of 1:1 to connect to database

LISTNER: create the shadow process which are going to connect the database table “SAPUSER” by using ops\$ mechanism

Ops\$ mechanism contain the one table in database, that table is “SAPUSER” this table contains schema owner name & password. Shadow work process get the scheme owner name & pass word, disconnect (choose connection database) the database.

Shadow process again connects to database by using schema owner name & password.

What is the ops\$ mechanism:

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The user who is authorized at o.s level is automatically authenticated at Database level.

That means no user ID & password is required to login to Database

It is provide the 2 parameters are contained in RZ10 T_Code

OS_authent_prefix = ops\$

Remote_OS_authent = true

822379 support package know problems

SGEN is running one background program is PARAGENER8

Which performing the client copy PSAPUNDO table space will be increase

NOTE: If there is no space in space in PSAPUNDO table space SNAPSHOT too old dump is thrown into ST22 then we need to lock after the “PSAPUNDO” table space

CATT: computer Aided Test tool

DATABASE:

What is database?

It is used to store the data in tables

Table contains of Rows & Columns

Where column represents fields & row represents

Advantages:

Consistency

Availability

Reliability

Uniqueness

Redundancy

Indexing

Cross client object changes:

Changes to repository and cross client customizing allowed

No changes to cross client customizing objects

No changes to repository objects

No changes to repository and cross client customizing objects

BRBACKUP: Backup of data files, control files and online redo log files

BRARCHIVE: Backup of offline redo log files

BRRESTORE: Restore the data files, control files, online redo log files & offline redo log files

BRRECOVERY: Interactive tool for database restore & recovery

BRCONNECT: DBA- instance management, space management and Reorganization

Symbol:

+: control file – the action is completed

- : control choice list – you can choose (or) execute this now

*: control I/P – you can't choose (or) execute this now

-: I/P – you can choose this parameter

N: I/P – you can choose this option parameter

Stop: all menus – this cancel the program

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Help: all menus –

Back: all menus – go back

Continue yes: all menus – continue to next menu

No: not used – skips the following actions to normal program steps; it is recorded in IR06761 in the detaillog

=: control choose list – this is the initial default choice with yellow background

? : I/P – you must enter a value for this parameter

: control I/P – you can't 1. Execute this action 2. Change this parameter

Changing the password of sap owner:

Option8: additional program

1 – Show profile & logs

2 – Clean up DBA logs & tables

3 – Adapt next extents

4 – Change password of DB User

5 – create/change synonyms for DBA tables

6 – Reset program status

Option 4 choice

Modification of original object is called correction

If lots of archive logs are getting generated in minutes then what will do?

Increase the redo log file size

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Reorganization: reconstruction of objects in the database

Re org jobs: table contains the information of the standard background jobs

Oracle listener: it is used to connecting the R/3 work process and shadow process

3 O.S files are used configuration

Tnsnames.ora

SQLnet.ora

Listener.ora

Here listener address = IP address or hostname

Port number = 1521 to 1529

Restore from the database backup recover from the redo log files, alter database backup from control file to trace

Four housekeeping jobs:

Brconnect -f check

Brconnect -f status

Brconnect -f next

Brconnect -f cleanup

Buffer size will be 150mb by default we can increase up to 600 GB

Buffer settings which can be modified SE13

SQL :> delete from sapar3.usr02 where bname = sap* and mandt = client number

Roll in: the process of copying the user related information in to work process handler

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The work process continues to process the user request and response back to the user

Roll out: the process of copying the user related information into user context

User context displayed the transaction code is – SU56

SAP USER: sap user is the table which contains database scheme user ID & password

Data dictionary is stored in DD – cache

Init <Sid>.ora ---> it is store the parameter related the BRTOOLS

The user complaints that he could not log into the system in our glass mode?

Work process in to private mode

Archive struck

The user could not update any record and result in our glass mode

Buffer hitratioo: sap recommanded the value to be around 98%

For every 100 request the 2 request goes to database and remaining shoud be form the buffers

DSDLOG: buffer synchronous table

R/3 memory management:

User needs 2 kind of memory

R/3 buffers: [memory accessible for all users] – programs, table and field definition, customizing tables.

User context: [memory attached individual users] – variables, lists, internal tables, administration data (authorizations)

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Local memory: local memory is associated with individual work process, local memory is executables, data, stack, buffer for data transfer, local roll area, local paging area.

Shared memory: shared memory is associated with all the process of one instance R/3 buffer contains global objects for all users and work process such as programs and customizing tables.

Heap memory: it contains user context, when extended memory is full. It is called and released on demand.

The six R/3 memory areas are:

Buffers, extended memory, heap memory, roll memory, R/3 paging memory, local work process memory.

What is roll area & page area?

Roll area: user context data is store of that is authorizations, set/get parametes, internal tables and report lists.

Paging area: which stores application program data that corresponding to specific Abap commands?

Parameters:

Ztta/roll_first – define first port of the roll area set to 1.17kb to 4.6

Ztta/roll_extention – extended memory

Ztta/roll_area – total roll area for work process

Ztta/roll_shm – the size of the roll buffers

Ztta/roll_maxfs – the size of the roll buffers and roll file

Em/intial_size_mb – the fixed size of extended memory

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Em/address_space_mb – amount of extended memory for work process

Abap/heap_area_total – total amount of heap memory allocated to all work process

Abap/heap_area_dia – limit for the amount of local memory allocated to dialog work process

Abap/heap_area_media – amount of local memory allocated to dialog work process

Abap/heaplimits – maximum heap limit – if it is reached the work process is flagged for restart

Heap memory is released after use. After ending the transaction the heap memory is automatically released and the work process restarted to release the swap memory.

Oracle startup options: startup no mounts: oracle is not operational and oracle background process is not started. It will used to create the control file.

Startup mount: oracle is not open and not operational. Oracle background process is started. SGA is created [SGA means shared global area]

Startup: oracle is open and operational

Oracle shutdown 4 types the are

Abort

Immediate

Transactional

Normal

Abort: here we forcefully shutdown the database without intimating any users. The total cache information in the lost and SMON can recover the information from online redo log files whenever system is restarts

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Immediate: the committed transactions are updated in to the database. the database open transactions are rolled back

Transactional: open transactional are successfully updated in to the database. No new connections are allowed. Shutdown is normal transactions are also not allowed.

Normal: no connections are allowed exist user can perform transaction till complete the task

Oracle files structure:

Oracle – sid – sapdata1

Oracle – sai – sapdata2

Oracle – sai – sapdatan

Oracle – sid – sap backup

Oracle – sid – sap arch [recover purpose data]

Oracle – sid – sap trace – user trace – trace file

Oracle – sid sap trace – background trace – alter_<Sid>.trace [it contain all profile information about oracle]

Oravle – sid – orig log A [online redo log files & control files]

Oravle – sid – orig log B [online redo log files & control files]

Oracle – sid – mirror log A [mirror of orig log files]

Oracle – sid – mirror log B [mirror of orig log files]

Oracle – sid - Ora arch [off line redo logs]

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Control file: it contains the oracle structure. It is a binary file. It can be updated only by oracle. We can't edit manually.

If lot of archive logs are getting generated in minutes then what do we do?

Increase the redo log file size

What is your database size?

Start from 500 GB

What is your database growth?

Monthly 20 GB (or) 30 GB growth

What do you check in DB02?

Table space utilization, space critical objects and table space growth

What is your action, if any space critical objects are there?

Go to DB02, click on space critical objects, then note down the objects, go to SAPDBA, go to reorganization (option d), then use option b ---> show extent ---> resize the extent (take the recommended value)

How do you check the backup log?

In sap level – DB12

In OS level (log in as <Sid>adm)

Go to oracle/<Sid>/sap backup

Tail back<Sid>.log

What is sap scheduler (or) database backup?

DB calendar (DB13)

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What file is responsible for sap backup?

Init<Sid>.sap

What is your backup strategy?

We do daily on line backup on all servers and weekly offline backup on DEV and Quality system

Why mapping?

The user ID's are particular system & back end system are different then we need to perform the user mapping

DB02: this transaction is used for checking the database table space

What are the table spaces?

System – oracle table spaces

Sysaux – oracle table spaces

Psapsr3 – component specific

Psapsr3700

Paspsr3usr

Psapundo – for roll back information

Psapremp

If abap+java stack are one more table is added

Psapsr3db

Db backup calendar transaction code is – DB13

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Db backup logs transaction code is – DB12

Data base log & BRTOOLS logs transaction code is – DB14 & DB24

To check the performance of the Database transaction code is – ST04

How to add the data files for database table space?

Brspace –f tsextended –t <tablename> (enter)

What are the database initialization files?

Init <Sid>.ora ---> p file

Sp file<Sid>.ora ---> sp file

Init<Sid>.ora

Init<Sid>.sap

What is the difference between p file & sp file?

P file is the static file, it is a test file and we can edit manually by using notepad.

Sp file is server parameter file. It is a binary file and we can't edit the manually. It can modified with the ALTER SYSTEM SET command

```
# alter system set timed statistics = true scope = both;
```

Init <Sid>.sap is used for generation of BRTOOLS option

Database locks transaction code is – DB01

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Workload analysis transaction code is – ST03 & ST03N

Here we can see database response time 150millisecinods

CPU response time is 150ms

Rollin/rollout response time 50ms

GUI response time 200ms

RFC response time 200ms

Log_archive_start = true ---> indicates to automatically start the archive process when the database is start

Log_archive_dest ---> archiving directory for offline redo log files

Db_block_size ---> specifies the size of the oracle block in bytes

Db_block_buffer --->total no. of data buffer in SGA

Shared_pool_size ---> specifies in bytes the amount of space that SGA reserved to cashed & SQL start

Log_buffer ---> space allocated to the redo log buffers

Disk_copy ---> it is used for copying the database to disk

Why we need to DB refresh?

To test the object or changes which are made to system like production environment. We need to restore the production data to QAS data.

What are homogeneous system copy & heterogeneous system copy and how you will do that?

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A system copy without a change in the database type and the OS is called a homogeneous system copy.

A system copy with a change in the database type and the operating system is called a heterogeneous system copy

What is db refresh?

It is the process of refreshing the data of one system by another system [OS, DB & R3] remains the same but only database is refreshed

Pre steps for db refresh?

Create the transport of copies by using SE01 and specify the following tables are USR01, USR02, RFCDES and TBDLS. Then we need to release the transport of copies.

Copy the cofiles & datafiles in `usr\sap\<Sid>\trans`

Take the screen shots of SM59, BD54, DB13, SM37, AL11, SMLG, RZ12, RZ04, SCC4 & SPAM

And then we need to delete all the datafiles related to QAS system. Data1, Data2 ---- ext first we need to stop the oracle services, the structure should remain same

Directories like `sapdata1sap data n`

Mirrorloga

Mirror log b

Orig log a

Orig log b

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Copy the sap back up folder from PRD, along with the control.sql file pasted on the desk top to QAS (\oracle\QAS\sap backup)

Open the .afd/.and backup file (ex: bdjvujux.afd) present in sap directory. Replace the PRD with the QAS and save it

Go to \oracle\QAS\sap backup**** (ex: bdjvux.afd) backup filename folder; location rename the files with PRD to QAS

Start ---> run ---> cmd goes to the location \oracle\QAS\sap backup and type

Brestore -m full -b <file name>.afd -c (backup is restored success fully)

Check the present of the paths for the creation of the control file oracle

\Oracle\Qas\orig log A\cntrl

\Oracle\Qas\orig log B\cntrl

\Oracle\Qas\sapdata1\cntrl

If one of these path is not created . then create it

Start the oracle services

Oracle<Qas102>SQL* plus

Oracle<Qas102>TNSLISTNER

Oracle service <Sid>

Login to SQL from the location where the control SQL file is located.

E:\oracle\Qas\sapbackup> sqlplus "/as sysdba"

SQL: > select status from v\$instance;

SQL: > startup nomount;

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Oracle instance is started

Archive to carried on PRD system

1. take the backup using BRTOOLS

Here I have considered off line back up[compression mode]

Click start ---> run ---> type ---> BRTOOLS and click ok

1. instance management

2. space management

Segment management

Backup and database copy

Restore and recovery

Check and verification

Database statistics

Additional functions

Exit program

----> enter choice 4

Database backup

Archive log backup

database copy

Archive log backup

Database copy

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Non database copy-----ext

Reset program status

Enter your choice 1 ---> c ---> c ---> c ---> c

The above window denotes that the backup has stored and being saved in the location

D:\oracle\PRD\sap back up

Here the backup file name is <file name>.afd

If shows down the database instance as we are taking on offline backup (then backup has been completed successfully)

Exit from the BRTOOLS by selecting option S and then select the option y

Create a control file

Click start ---> run ---> type ---> sqlplus “as sysdba” and click ok

SQL: > alter database backup control file to trace; [then database alerted]

You can find the trace file in the following location “d:\oracle\<Sid> (PRD)\sap trace\user trace” [then check the latest file that is generated]

Copy that file and paste it onto the desktop and rename it with control.sql

Open the control.sql file and perform the following

Remove the lines present above “startupnomount” and below “charactersetutf8” and save the file

Replace the <source SID> with <target SID>

Example: here it is from PRD to QAS

Replace REUSE with SET

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Replace NORESETLOGS with RESETLOGS

Replace ARCHIVELOG with NOARCHIVELOG

After control file is created , the oracle is in mounted state

SQL: > select status from v\$ instance;

STATUS

MOUNTED

SQL: >alter database open reset logs; [then database is alerted]

SQL: >select status from v\$ instance;

STATUS

OPEN

Now the database is open status

SQL: > select username from dba_users;

USER NAME

----- 9 rows selected

You can view the PRD op\$ users in the above screen

Go to location: c:\program file\sapinst_instdir\ERP\system\ora\central\as copy the ORADBUSER.SQL file and past it in \oracle\QAS\sap backup\

Execute the ORADBUSER.SQL file and provide the inputs as follows

Enter value for 1: SAPR3

Enter value for 2: NT

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Enter value for 3: Target host name

Enter value for 4: target<Sid> i.e.QAS

Login to SQL and check the users

SQL: > select user name from dba_users;

USERNAME:

-----> 12 rows selected

Drop the source system users. i.e PRD users

D:\oracle\qas\sap backup\sqlplus "as sysdba"

SQL :> drop user "ops\$<host name>\sap service<Sid>" (PRD) cascade;

User dropped

SQL :> drop user "ops\$<host name>\<Sid>adm" cascade;

User dropped

Below screen displays the list of users available after dropping PRD users

SQL: > select user name from dba_users;

USERNAME:

-----> 10 rows selected

Provide permissions to the following QAS users as mentioned in the bellow screen

SQL: >select status from v\$instance

STATUS

OPEN

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START THE SAP INSTANCE OR MMC

Install the license for QAS system and remove the PRD system license

Saplicence –show (display the license of both QAS and PRD system)

Saplicense –delete (delete the PRD system license)

Saplicence –install (install license for the QAS system)

Perform post installation activities as shown bellow

SICK

SEO6 and select “database copy or database migration” option click perform post installation action ---> yes ---> accept the source system ---> yes accept ---> yes ---> yes

Configure the STMS. Run the transaction code is STMS

Note: here we are considering the system as (NAG) domain controller. If it is a child system, including that system in to the domain controller as per bellow screen that system in to domain controller as bellow per screen

Run the transaction code is RZ10

Selected extended maintenance and click & display button

To delete profile of PRD system for that follow to bellow path

Profile ---> delete ---> all versions ---> of a profile ---> click yes ---> no ---> click on continue ---> similarly delete start profile & delete profile as shown screen

After deleting all profile of the PRD system then import profile of NAG system by using bellow path go to utilities ---> import profile ---> of active servers

Seo6 – post installation action for transport organizer

Standard installation

Database copy or database migration

Perform post installation actions

Where we have to see the user list?

Select BNAME, UFLOG from sapsr3.usr02 where MANDT = “000”

In one client all the users are locked. How you can login the particular client?

Listener path:

Oracle\<Sid>\instance number>\NETWORK\ADMIN\listner.ora
startup pf = d:\oracle\dev\102\database\initdev.ora

How to increase the table space?

Using the SQL: > create sp file from p file; [then file is created]

Using the SQL: > create p file from sp file; [then file is created]

In BRTOOLS

Go to BRTOOLS --> option 2 --> option 1 --> option 3 --> PASPSR3 --> c --> c

DBACOCKPIT – table space monitoring, missing indexes monitoring, performance monitoring everything belongs to database.

DBREFRESH:

Redo log full size is 50MB

Backup mode: (all, full, table space, incremental ...etc)

Db client: communication with database and native language

User buffer – once we log off every thing os rolled off

Public buffer – until the instance is restarted

---> Block – 8 kb minimum

Group of blocks is called – extent

Group of extent is called – segment

Group of segment is called – table space

Database copy: when a system is setup as a copy of production

Intermediate buffers: Frequently accessed content to reduce the load on the data base server

Database client to communicate with DB server

Buffer: buffer is used to stored frequently accessed data

Where you have to check the java software status and java version?

Java c

Java –version

1. DB01 – database locks
2. DB02 – database performance: table & indexes
3. Choose: space statistics, free space, statistics, missing indexes, space critical objects current sizes

4. DB08: parameter changes
are here
5. DB11 – select database connection.
6. DB12 – backup logs
7. Redo log backup and database
8. DB13 – planning calendar
9. DB14 – BR tools logs
10. DB15 – tables & archiving objects
11. DB16 – database check
12. Find out the errors & warnings



Interview question

How many users you have?

400 users

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What is your team size?

Basis we have 4 and security we have 2 in current project

How many servers you have?

Four Servers

Sap all tables are stored in DD02L

Where we have to see all the transaction codes?

SE93, Table level TSTC

How can you confirm the patch level for SAP GUI?

Log in to sap GUI, and hit alt – f12 -> about patch level information.

What is the difference between central instance & dialog instance?

Instance where message server and enqueue server is present that is called central instance

Which doesn't contain message server and enqueue server that is called dialog instance

How to connect to sap server?

As Abap -----> SAP GUI

As Java -----> Web browser (HTML)

What is the latest version in sap?

ECC6.0 (or) ERP2005 Sr1, Sr2, Sr3

What is the user to communication between ABAP & JAVA?

SAPJSF

What is the connection between presentation layers to application layer?

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DIAG Protocol

What is your landscape?

Three system landscape

What system landscape you have?

R/3 system, EP system & BI system

What are modules configured?

We have ECC6.0, EP and BI

What operating system you worked on?

Windows 2003

Which database you worked on?

Oracle 10g with patch 10.2.1.0.7

SM20 transaction code is user for user login details in month

What is the difference between ECC5.0& 4.7EE?

ECC5-0 is used for installation master (sapint.exe)

4.7EE is used for setup.cmd

SM62: event history

What system you installed?

ECC6.0, Net weaver

What is sap net weaver?

Sap net weaver is a as Java, EP and EP core

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Any idea about ECC5.0?

ECC 25+ components we can use

How to delete 1000 users of a particular client?

SCATT: sap computer aided tasting tool

LSMW: legacy system migration workbench

These 3 are used to administrative users massively [deletion, modification and creation whatever]

How to assign same role to 200 users?

Using PFGH transaction code ---> enter a role ---> change ---> go to user tab ---> past the users ---> click on comparison ---> complete comparison ---> save the role.

Scripts (or) forms available – SE71

Development packages are defined in SE80/SE84

Customizing project – sp20

Customizing – a customer's needs by adjusting parameter & settings

What is difference between sap* & DDIC?

Sap*: sap* does not contain any user master records. It will be adjusted at kernel level. If you delete sap* then it will be automatically with password PASS

Sap* contains only sap_all profile only

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DDIC: DDIC is the data dictionary incharge it will contains the all authorization & profiles

DDIS contains SAP_ALL & SAP_NEW

Where to check for system logs of sap application at OS level?

The system logs of SAP application at OS level can be checked at sap MMC ---> sap system ---> <Sid> ---> sys log

SAP R/3 log on appears 4 fields – client, user, password, language

SAPMCCMSR: is used for runtime java & Abap connection services

What is the difference between ST22 & SM21?

ST22

SM21

Program errors

ST22 and extra in work process errors

System errors

Startup errors

Critical & non critical update request errors

Update de active mechanism

Time out error

Memory related issues with error logs

Enqueue table overflow

Illegal time

SM02 – this transaction is used for system messages

Application server naming convention

<Project name>ECCSAPC.I

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What is the difference between Unicode & non Unicode?

Unicode means it will support for all the languages and code pages

Non Unicode – it will not support the all the language except English & german

What is the difference between typical & custom?

Typical: typical is nothing but the system will take automatically the installation drivers

Custom: Custom is nothing but it will ask for the installation drovers

IP address we need to check the system status

Go to cmd ---> ping 10.11.128.130 [10.11 is mandatory]

If the ping is unsuccsesfull. It will show request failed or request error

To check the IP address of the server.

Go to cmd ---> ipconfig [ip means internet protocol]

→ we don't install ECC system and net weaver is one system. If any problems accures we have to restart the system. At that time along net weaver system and ECC system will also turn off then business will lose

What is software component?

Software component is which including the all applications is called software component

What is OSS connection? [online support services]

This connection is used to connect the sapserver to business peoples

---> before going to the sap installation, first insatall operatin system and database

---> hard ware sizing based on the end users using “QUICK SIZE TOOL”

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What is sizing?

The sap basis consultant should decided the hard ware capacity on the end users this concept is Known as Sizing. It will done by “quick size tool”

Single GUI to access all the sap application [ERP, CRM, SCM, XI, PI, BI & SRM]

Instance type:

Central instance

Dialog instance

Database instance

Non ides [international demo educational system]

Ides additional client – 800, 811, 812 clients are available

Installation logs:

Sapinst.log – specifies installation success or failure

Sapinst_dev.log – installation is aborted

.tsk – specified the table/indexes ...ext

Keydb.xml – kernel to restart installation from the point where it is failed

---> create local groups and global groups and assigns them to users

Local group – locally

Global group – domain level

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--->in the production system never changes made

- How to check the system availability?

Using the transaction code RZ20 (or) available.log file on windows

Work directory: this stores startup and error logs

How to lock & unlock the users?

Alter user <user name> unlock account;

1.

System logs at OS level --->

MMC ---> SAP system ---> <Sid> ---> sys log

UNIX command:

Ls -ll ---> long list of file

Pwd ---> present working directory

Whoami ---> which is user you login currently

Cdpro --->profile directory

Cd <directoryname> ---> change directory

Cat <filename> ---> to open the file & read the files

Ri <file name> ---> if you want modify any file it is use full

Su <filename> <target location> ---> to move the other directory or rename the file

Cp <filename> <target location> ---> to copy one location to another location

Rn <file name> ---> remove the file

Rm -r <directory name> ---> to remove the directory and sub folder

UNIX commands:

Ps -ef ---> to know all process

Kill pid ---> to kill particular process

Kill -9pid ---> to kill process forcefully

Ls -ll ---> give full information of files and directories

ls -a ---> display hidden files

ls -p ---> shows difference between files and directories

SM51 SAP Servers :

- 1- Check Availability of All Servers
- 2- Check Process Lists for All Servers for Unusual Processes or Activities (e.g. Extra-long execution times, too many errored processes, too many sequential reports)

SM66 Global Process Monitor:

- 1- Check for over-all system process utilization
- 2- Are Batch id's taking up too many DIA processes
- 3- Is one user running too many BGD jobs for the same report
- 4- Is one **server** being used heavily compared to others

SM21 System Logs:

- 1- Is there any repetitive errors in the system log
- 2- Any unusual repetitive failed login attempts

ST22 Short Dumps:

- 1- Except 'Time-Out' errors, is there any short dumps.

SMLG Logon Groups:

- 1- Check load distribution (Menu: Goto-->Load Distribution)
- 2- Are server response times acceptable? (< 2 sec)
- 3- Is user distribution even among active servers

ST03N Workload Analysis:

- 1- Check is daily, weekly and monthly totals are being calculated for each server
- 2- Check for Avg. Dialog Response Times. Is it below 2 secs

SM12 Lock Overview:

- 1- Check for outdated lock records

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2- Verify that these lock records are not actively being used and delete these lock records if they are obsolete

SM13 Update Records:

- 1- Check if the 'Update System' is active.
- 2- If not active, investigate what happened
- 3- Activate 'Update System' after fixing the problem
- 4- Review update records of past two days and delete if errored or obsolete

SM37 Background Job log:

- 1- Check if there are any critical jobs that were canceled
- 2- Identify/Fix the problem
- 3- Contact canceled job user for details
- 4- Reschedule if needed

SP01 Spool Request overview:

- 1- Check if there are unusual number of errors in spool (>100)
- 2- Check if there are spool request with more than 200 pages
- 3- Should not be a need to delete any as the daily job should handle, unless too many spools are old.

ST04 Database Activity Monitor:

- 1- Check 'Data Buffer' and 'Shared Pool Cache' quality
- 2- Investigate and make suggestions to the team to improve quality of these buffers

DB02 Database Performance:

- 1- Check 'Current Sizes' to see if any tablespace is above %90
- 2- Add new datafile to the tablespace if needed
- 3- Check if there are space-critical objects
- 4- Check if there are any missing objects in DB or R/3 [Data](#) Dictionary

DB16 Database Check, Overview of message:

- 1- Check if there are any messages
- 2- Take immediate action to fix the problem
- 3- Notify the team if there are any parameter changes or assistance needed for Production Systems

DB24 Database Operations Logs:

- 1- Check if all DB Operations are executed
- 2- Check if any of the operations generated any errors
- 3- Fix the problem. Notify team if needed

DB12 Database confirm backup success:

- 1- Check to see that the previous backup was successful
- 2- If a backup is currently running check its status
- 3- If the last backup failed, check the reason correct and resubmit.

ST06 OS Monitor:

- 1- Click on 'Detailed Analysis menu'
- 2- Click on 'CPU' in 'Previous Hours' Group
- 3- Check if at any past hours is > %80
- 4- Notify Team if there is any such case

The Following are the transaction codes used for the System Monitoring:

SM12:

This Transaction is used for Check for Lock Entries. There may be old locks still in place from transactions that did not release, or from when the user was cut off from the Network. If any lock entries are exist then we have to check since how long this lock existing. If, this lock existing from more than one day then we should check that particular User is available or not (By using the Transaction Code AL08). If he is not available then Delete that lock. Otherwise we should wait 1 or 2 Days.

SM13 :

This Transaction is used for Check for any Errors in Update Records. A failed or “Update Terminate” is an update to the failed database. These failed Updates occurs when a user entry or transaction is not entered or Updated in database. And we should check Whether Update is ACTIVE or not. And also we should check any Update Records are terminated.

SM21 :

This Transaction is used to check System Logs. After hitting the traction we should goto System log--> Chooseà All Remote System logs, and set Date and time to before the Last log review. And we should check whether any Errors, Warnings, Security Messages, Database, Abends, Any other different Events are there. The log is important because unexpected or unknown warnings and errors could indicate a serious problem.

SM51 :

This Transaction is used to check that all Application Servers are UP. And also This transaction is a central transaction from which you can select the instance to be monitor.

SM50 :

This Transaction is used to check Work Process Overview and for Systems with out Servers. Here all work processes with a “Running” or “Waiting” State. If Batch Jobs are not Running, If all the work processes are in use, this transaction provide a hint of this problem.

ST01 :

This Transaction is used for System Trace. By this transaction we can trace that what are the operations performed on particular file by particular user on which dates.

ST02 :

This transaction is used for Buffer tuning or Buffer Statistics. And it is used to tune Buffer parameters of R/3. The Buffer is important because significant buffer swaping reduces performance. Look under “Swaps” for Red Entries. Regularly check these entries to establish trends and get a feel of the Buffer behaviour. And in this transaction we should Maintain “Hit

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Ratio” is in between 90 – 100% for all , and “Heap Memory” allocated should be “0” , and “Swaps” is 0.

ST03 :

This Transaction is used to Check Work Load Analysis of. Workload Analysis is used to determine System performance. Check Statistics and Record Trends to get a feel for the System’s Behaviour and Performance. Understanding the System when it is running well helps us to determine what changes may need to be made when it is not.

ST04 :

This Transaction is used for Database Performance Analysis. This transaction provides the ability to Monitor the Database in related to 1) In Shared Pool “[SQL](#) Area Get Ratio” should be 90 – 95% 2) In Log Buffer Allocation Retries / Entries <1% 3) In Data Buffer “Quality” should be in 90 – 95% 4) In Sorts Disk / Memory <1% 5) In Table Scan & Fetches “Long Table Scans” should maintain as minimum as possible. And we should check Detailed Analysis then we should hit “Detailed Analysis menu” Button in this screen. In that we can check Database Overview like “Exclusive Lock Waits” , “Wait Events”, “Buffer Busy Waits”, “ File System Request”, “ Database Message logs”, “ SQL Requests”, Summery Report for all activities, etc

ST22 :

This Transaction is used to Analyse ABAP Dumps or Short Dumps. This transaction is also used for Analyse and Determine why the error occurred and take corrective action. It looks for an excessive number of dumps, and also dumps of an unusual nature. A ABAP dump is generated when a report or transaction terminates as a result of a serious error. The system records in the System Log(SM21) and writes a snapshot of the program terminate to a special table.

DB02 :

This transaction is used to check all table Spaces and Indexes. Here we should check table spaces sizes. If any table used space is =>99 then we should increase add the space for particular table space. And this transaction is provides a way to examine database allocation. And this transaction is allows us to monitor items such as: a) DB Space History b) DB Analysis By this transaction we can view Database history by Dates and Times.

DB12 :

This Transaction is used to check database Backups. And in this we should see successful Backups and Unsuccessful Backups list

AL08 :

This transaction is used to Check the users on the System. This transaction displays User Ids and Terminal Names who are currently logged on the system.

SM37 :

This transaction is used for Monitoring Background Jobs. Background are batch jobs scheduled to run at specific time during the day. Here we should check for cancelled jobs. Here If we want to check particular job then,we should enter the Job Name and enter User name in User name field or '*' and hit execute Button. And verify that all critical jobs are successful.

<u>T Code</u>	<u>Description</u>	<u>Action</u>
SM66	1. Check Long running job. (Job running for more than 12 hours (43200Secs) 2. Check the status for all work processes. There should not be lot of dialog work processes in PRIV mode.	1 You can Send a mail to user confirming the runtime for the same. 2. For dialog work process in PRIV mode for more than 12 hrs contact the user and take confirmation and kill the sessions.
SM50	Check for the long running work process	If you find any anomalies, Contact the user and check whether we can kill the process. Once user gives the confirmation, kill the WP without core.
SM51	1. Check if all application servers are running. Double click on each application server and check whether you are able to login	1. If you find problems in logging to application servers, login to OS level of the app server and check the wps using dpmon.
SM21	1. Check for Database errors, Oracle error, System Errors etc. 2. Refer to "Sys log Codes" Sheet for errors Note: Please check the system log starting from yesterday 00:00:00 till Current time. This should help to see the errors which occurred yesterday	1. Analyse & take appropriate action
SM12	1. Check for old lock entries (Generally 1	1. Check if there is any active job running for

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	day old)	that user using SM66. If not then write email to user and take the confirmation for clearing old lock entries after confirmation from user. 2. Note down the actual utile value. This value should be <= 80% of
SM13	1. Check for " Update is active " 2. Check for Update failures.	1. Note down the number of V1 and V2 update failures
ST02	1. Ensure Hit ratio for each buffer is more than 95 %. 2. Sometimes if hit ratio is below 95 % & no Swaps you can ignore it. 3. Ensure extended memory should not cross more than 80% use. 4. Please check the following thresholds for SWAPS for individual	1) Note down the buffer and value if hit ratio is <95% 2) No action to be taken if sometimes hit ratio is <95%,
ST03N	1. Check and note the following parameters. Dia. Response time DB Response Time Compare all these times with previous data. If there is sudden increase then analyze & corrective action 2. Check for collector status.	1. Note down the values for all application servers (yesterday's value) and analyze. If the response time is above 1200 ms then detail analysis is required 2. For SAP-standard expensive transactions check for SAP notes and for Z-transactions check with AB
ST06	Check for following utilization in all instances 1. CPU Utilization. Ideally 60 % should be free. 2. Page out/s should be 0. 3. Check for SAPOS COL Status	1. Note down the idle avg value for yesterday . ST06 -> Detail Analysis -> Compare recent days . Use Next server tab and note down the values for each application server. 2. If SAPOS COL is not running. check the same at OS level.
ST22	1. Check for the dump which is appearing more than 20 times 2. Check for dumps appearing more than 100 times.	1. Analyze the Dump. 2. If Dump is caused by the program/auth.object send a mail to respective team 3. Note down the total number of dumps (yesterday's value)
ST04	Check following settings for all instances 1. Check for Data Buffer quality. It should	1. Note down data buffer value . If value is less than 95 % check for expensive SQL statements

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	<p>be above 95 %.</p> <p>2. Check for DD Cache quality . It should be above 97 %.</p> <p>3. Check for Read/User Calls. It should be below 30.</p> <p>4. Check for Alert log file Detail</p>	<p>in ST04.</p> <p>2. Note down DD-cache value. If value is less than 97 % check for expensive SQL statements in ST04.</p> <p>3. Note down the Read/user calls . If this value is above 30</p>
DB01	1. Oracle Lock Monitor. There should not be any entry	1. Check the PID which is holding the lock. Check for user name in SM66 for this PID. Send email to this user informing about the wait locks/ deadlocks.
DB02	1.Check the free size of the tablespace	1.Check the free size of tablespace and add the datafile via BR tools and send a email to Basis Support group, mentioning the details of the tablespace. 2.Execute txn code DB02 and click on C
DB12	1. Check the Last successful backup 2.Archive directory status(Free space).	if you find any failed backups send email to operations team.
DB16	1. Check for Errors or warnings & take corrective actions. Goto DBA operations . Select All operations. Check the detail logs for all the operations (yesterday + today)	if you find any failed backups send email to operations team.
SM37	1. Check long running active jobs running for more than 10000 secs(Check for last one week) 2. Check for repetitive cancelled jobs 3. Check if standard house keeping jobs are running	1. Run a check-status for that job. To do check status SM37 . Select job Job -> check status. If job still continues to remain in active status then check last successful run for that job (time taken). If current job is taking more time then check with
AL08	1. Use this transaction if you want to find out user across the application servers	
SMLG	SMLG. Go to -> load distribution	1. If response time / number of users is high on specific one server then check SM66 to see what jobs are executing and analyse them.
RZ03	1. Use this transaction for analysis purpose (To check trace file & logs) Path: Select server name --> Utilities --> Trace files --> Startup log file	
	<u>Portal System</u>	

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S.no	Description	Action
1	Check Portal is available via Internet Explorer	Enter portal URL http://s49cam.corp.wrgrace.com:51600/irj/portal check whether you are able to get to the login screen
2	Check Server Processes via Internet Explorer	login to NWA url http://s49cam.corp.wrgrace.com:51600/nwa Administration -> Systems -> Click on JC49 to expand. Check both server processes are running and dispatcher is OK.
3	Check logs via Internet Explorer	login to NWA url http://s49cam.corp.wrgrace.com:51600/nwa Monitoring -> Logs and traces -> SAP Logs
4	Check Resource consumption via Internet Explorer	login to NWA url http://s49cam.corp.wrgrace.com:51600/nwa Monitoring -> Java System reports
	Database Checks	
1	Run/Review Database Check job via BR tools	Run the database check job. This will highlight any errors that have turned up in the oracle alert logs, table space problems, statistics etc. Logon as oraepg user to the DB server Run brtools 6 - Check and verification, continue 1 = Database system check,
2	Check Database backup and Redo log backups via BR tools	Check the status of the BR backups/ BR Connect and view the log if required. Logon as oraepg user to the DB server Run brtools 8 - Additional functions 1 = Show profiles and logs Select either 3 - BRBACKUP logs 4 - BRARCHIVE logs

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	<p>Check Table space Free space via Br tools</p>	<p>Check the free space left in the table spaces: Logon as oraepg user to the DB server Run Br tools 2 - Space management 7 - Additional space functions 1 = Show table spaces Continue Continue</p>
--	--	--

