SAP

Project report submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

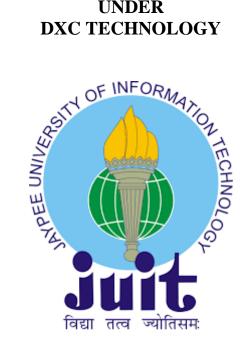
IN

INFORMATION TECHNOLOGY

By

GARIMA KATIYAR (171456)

UNDER **DXC TECHNOLOGY**



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

MAY 2021

DECLARATION

I hereby declare that the work presented in this report entitled "**SAP**" in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Information Technology** submitted in the department of Computer Science & Engineering and Information Technology, Jaypee University of Information Technology Waknaghat is an authentic record of my own work carried out under the supervision of "**DXC Technology**". I have not submitted this work elsewhere for any other degree or diploma.

yer

GARIMA KATIYAR (171456)

ACKNOWLEDGEMENT

I would like to share my sincere gratitude to my company **DXC Technology** for providing their guidance throughout. Their dynamism, vision, sincerity and motivation have deeply inspired me. They have taught me the methodology to carry out the project work and to present it as clearly as possible. It was a great privilege and honor to work and study under their guidance. I am also thankful to all those who have assisted us by supplying the requisite help.

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ABSTRACT

Pre-onboarding training is an essential part of a candidate's life as it paves a path for a smooth transformation from academic life to corporate life. A well-framed and executed training with continuous evaluation helps a lot in developing a professional attitude. It develops an ability to create an approach for problem-solving from an industrial point of view. This training, titled DXC Early Career Professional Program was aimed at giving the candidates essential motivation, skills, teamwork, and technical knowledge in a proper corporate environment.

During 45 days of training from professionals at Manipal edutech, I was taught about the application, usage, and working of SAP servers. A number of assignments and assessments from trainers as well as from the third party made the training more competitive and interesting. As a result, I achieved most of it, which will help the company while handling the projects related to SAP EAO.

This report is made on the learnings obtained from the same training, which contains a total of six chapters, all about the technical details and working of SAP.

The first chapter aims at introducing the SAP ERP, which includes its functions, advantages, disadvantages, purpose of use, etc.

The second chapter aims mostly at the details about the modules of SAP, which includes different types of SAP modules along with their respective functions and roles at different aspects.

The third chapter focuses on introducing the reader to the SAP architecture, which includes information about various layers within the SAP, their roles and benefits as well as the Tcodes for the execution of various tasks related to the respective layers.

The fourth chapter talks mostly about system monitoring, which includes the pieces of information about different Tcodes used for system monitoring, their usage, and the process of application.

The fifth chapter of this report focuses on the remote function cell, which includes the procedure of its formation, types of RFCs its benefits.

The sixth and last chapter of this report focuses on the Transport Management System, which includes its introduction, types, and operating tools.

This whole training and report drafting gave me a good experience in SAP and its components which will be a major addition to my skill set and will lead to a better performance at corporate levels.

CHAPTER-1 INTRODUCTION

1.1 INTRODUCTION

SAP which is stands for Systems Applications and Products in Data Processing. Basically SAP is the another name of Enterprise Resource Planning (ERP). SAP Software is an international European brand, founded in 1972 by Wellenreuther, Hopp, Hector, Plattner, and Tschira. They create software solutions to manage business operations and customer relationships.

SAP is number 1 in the ERP market. SAP has more than 140,000 centers worldwide, more than 25 business solutions and more than 75,000 customers in 120 countries since 2010. Other competitive SAP Software products on the market are Oracle, Microsoft Dynamics, etc.



FIGURE 1.1 SAP LOGO

1.1.1 INTRODUCTION TO ERP

Enterprise Resource Planning (ERP) is a software that's built to organizations belonging to different industrial sectors, no matter their size and strength.

The ERP package is designed to support and integrate almost every functional area of business processes such as procurement of goods and services, sales and distribution, finance, accounting, labor, manufacturing, production planning, asset management and asset management.

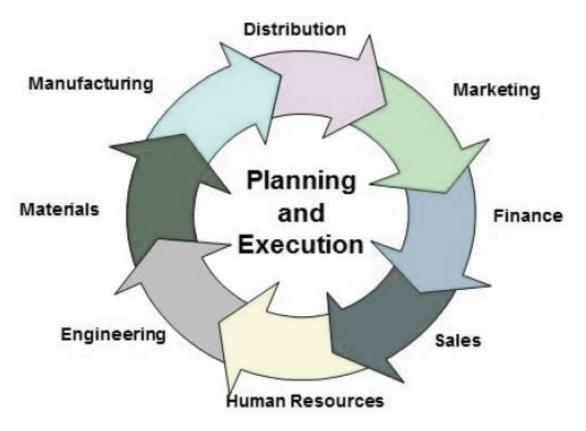


FIGURE 1.2 PLANNING AND EXECUTION

1.1.2 FUNCTIONS OF ERP

Following are the function that are performed by an ERP system:

1. It helps to increase the decision-making process with accuracy.

- 2. Identifies performance risks to improve management.
- 3. Protects the data from attacker to breach the security system.
- 4. Supports integrated business process within an organization.

5. It improves financial planning and assists the implementation of organizational plans and strategies.

6. To increase the customer base it provide long term profit.

1.1.3 ADVANTAGES OF ERP

Following are the advantages of an ERP :

- 1. Allows to make improvement in financial planning.
- 2. It provide long term profit.

3. Provides synchronized data transfer between various workplaces such as sales, marketing, finance, manufacturing, labor, labor, etc.

4. It helps to keep track of everything that happens in the organization, from start to finish.

- 5. Provides real-time details whenever needed.
- 6. Save time and money.
- 7. Single data source and data sharing across all organizational units.

1.1.4 DISADVANTAGES OF ERP

Following are the disadvantages of an ERP :

- 1. Customization is not optional.
- 2. It will cost more if we switch from one ERP solution to another.
- 3. End users should be trained in their daily activities.
- 4. Sometimes critical business processes have to be redesign ERP solution.
- 5. The cost of complex integration can be very high.

1.2 BUISNESS PROCESS INTEGRATION

Every business, no matter what industry, requires connected systems with a smooth flow of information from one business process to another.

To overcome different challenges which allow organizations to connect for this BPI play the major role.

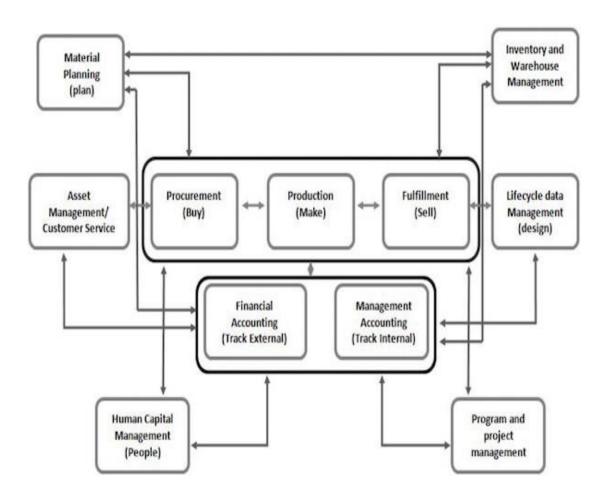


FIGURE 1.3 BUISNESS PROCESS INTEGRATION

1.3 BENEFITS OF SAP

- 1. The data as of now shows that about 80 % of SAP clients are from middle-class companies. Whether it is a large or small business SAP will provide best solutions for its clients.
- 2. Company has to pay only when or whatever needed because SAP allows them to use a public or private cloud. And when talking about business safety then everyone wants an expert so that they are always one step ahead of the attackers so SAP provides full protection for securing the data from such attacks or threats.
- 3. SAP always keeps itself updated. As it provides solutions that give power to the upcoming generation of business which is called in SAP language as "Future-proof Cloud ERP solutions".
- 4. The SAP has different features due to which it automatically automates the company's repetitive work which leads to reduce the use of resources as well as money and time.

1.5 SAP PROJECTS

- **1. Implementation :** Configuration done according to the company's requirement.
- 2. Support : The main role of this are service and change request in the projects.
- 3. Roll out : Company wants to rollout any specific changes in different countries.
- 4. Upgrade : Moving to new versions from old versions.

CHAPTER-2 MODULES

2.1 MODULES WITHIN SAP

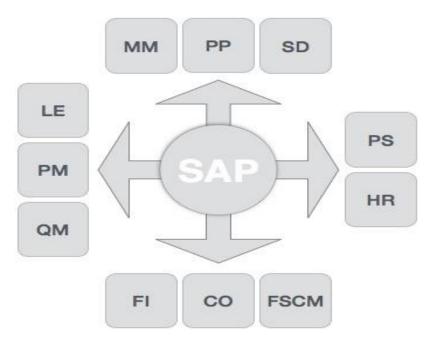


FIGURE 2.1 MODULES OF SAP

There are two types of modules - Functional and Technical modules.

FUNCTIONAL MODULES

1. FINANCE AND CONTROLLING (FICO):

Combining Finance Accounting and Controlling ERP modules leads to FICO. SAP FI is an obligation to monitor the financial flow of data throughout the organization in a controlled manner and to compile all information for informed decisions and SAP CO module helps to coordinate, monitor, and improve all

processes in organizations.

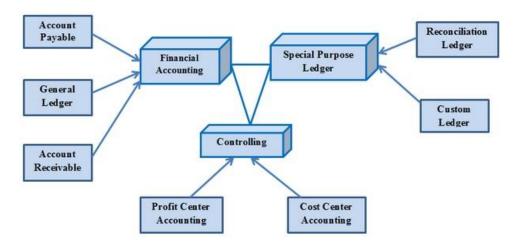


FIGURE 2.2 FINANCE AND CONTROLLING

2. SALES AND DISTRIBUTION MANAGEMENT (SD):

SAP SD is used by organizations to support the marketing and distribution activities of products and services, from ordering inquiries to delivery.

3. MATERIAL MANAGEMENT (MM):

Used by organizations to support delivery of goods through other modules such as asset management.

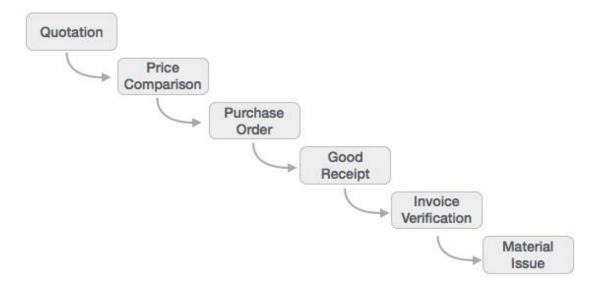


FIGURE 2.3 MATERIAL MANAGEMENT

4. LOGISTIC EXECUTION (LE):

It can be divided into two sub-modules, namely, delivery of goods and warehouse management. These two modules are integrated with sales and distribution, managing materials, and production and planning.

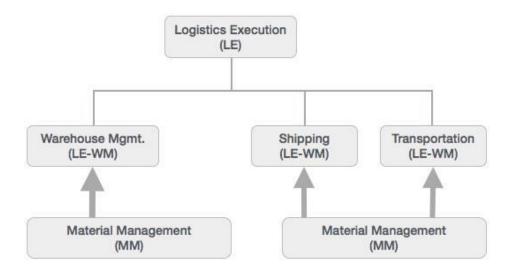


FIGURE 2.4 LOGISTIC EXECUTION

5. SUPPLIER RELATIONSHIP MANAGEMENT (SRM):

This module deals with the effective and efficient exchange of products and services between an organization and its suppliers. The main process covered in this section is the purchase of products such as specific items, indirect items and services.

6. CUSTOMER RELATIONSHIP MANAGEMENT (CRM):

CRM works with processes related to end-to-end clients. It is designed to capture internal data related to all corporate-related clients.



FIGURE 2.5 CUSTOMER RELATIONSHIP MANAGEMENT

7. HUMAN RESOURCE (HR):

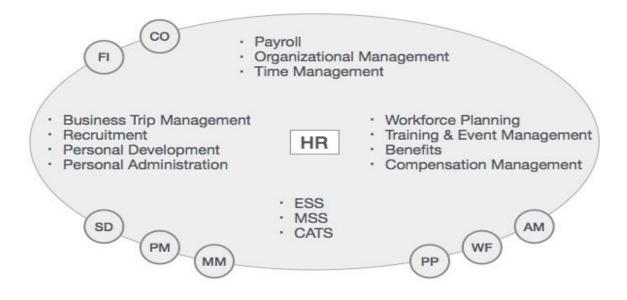


FIGURE 2.6 HUMAN RESOURCE

TECHNICAL MODULES

1. SAP BASIS :

SAP Basis is a collection of programs and tools that serve as an interface with Database, operating system, agreements and other SAP modules like HCM, SD etc.

2. SAP ABAP :

The default programming language for SAP applications is Advanced Business Application Programming (ABAP). One can also use Java as to code in SAP.

3. SAP HANA :

SAP HANA is a next-generation business platform. It speeds up analytics and usage on a single and memory platform.

SAP mair	nmodules
SAP MAIN FUNCTIONAL MODULES	SAP MAIN TECHNICAL MODULES
Human Capital Management (HCM)	Basis
Production Planning (PP)	ABAP
Materials Management (MM)	NetWeaver
Project Systems (PS)	IS (Information Systems) Management
Sales and Distribution (SD)	XI (Exchange Infrastructure)
Plant Maintenance (PM)	Business Intelligence (BI)
Financial Accounting (FI)	Business Warehouse (BW)
Quality Management (QM)	HANA
Controlling (CO)	
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FIGURE 2.7 SAP MODULES

2.2 ROLE OF SAP BASIS

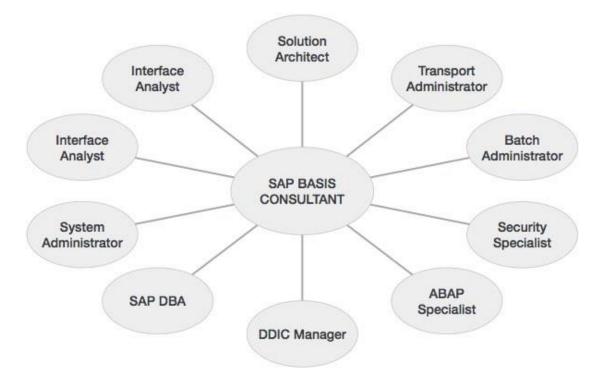


FIGURE 2.8 SAP BASIS ROLE

Task performed under these roles:

System Architect

- Sizing SAP systems
- Design SAP landscape

Transport Administrator

Change control across SAP landscape

Batch Administrator

Create and manage batch jobs across landscape

Security Specialist

Design, monitor, and manage access to SAP landscape

ABAP Specialist

- Troubleshoot and tune ABAP programs
- Apply correction to program

DDIC Manager

Manage changes to SAP data dictionary

SAP DBA

- Manage integrity of SAP database objects
- Manage backups and restore

System Administrator

- Maintain system health
- Monitor and tune system performance

Interface Analyst

- Analyze and Monitor
- Interfaces within SAP landscape

Solutions Specialist

- Installation of AP / Add-On
- Migrate OS / DB
- Upgrade SAP version
- Archiving of SAP Data

2.3 INSTANCES

There are basically three types of instances: Dialog, Central and Database.

In General we can say SAP System is the combination of dialog, central and database instance.

SAP System = Dialog + Central + Database Instance.

CHAPTER-3 ARCHITECTURE

3.1 SAP R/3 ARCHITECTURE

SAP R/3 architecture basically is a client server architecture where,

R - Real time system.

3 - 3 tier architecture.

This architecture is consist of three layers i.e, Presentation layer, Application layer and Database layer.

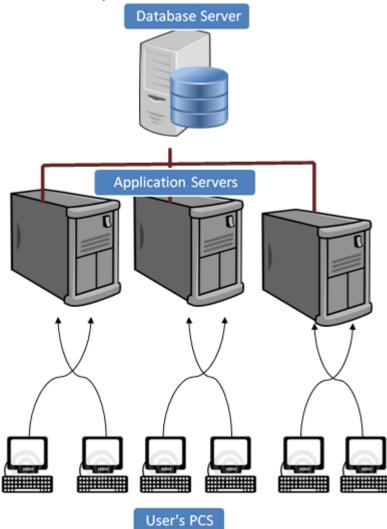


FIGURE 3.1 R/3 ARCHITECTURE

1. PRESENTATION LAYER:

This layer contains software elements that make up SAP GUI. This layer works as an interface between the R/3 system and its users. The R/3 system uses SAP GUI to provide a user-friendly interface for entering and displaying data.

The user input sends to the application server, and receives the data displayed is done in this layer. While part of SAP GUI is active, it is always linked to the last user session in the R/3 System.

2. APPLICATION LAYER:

Application layer contains one or more application server and message server. Each application server contains a set of services used to use the R/3 program. In theory, one only need one application server to run the R/3 application. The messaging server is responsible for communication between system servers. Transfers requests from one application server to another within the application. It also contains information about the application server groups and the current load balancing between them. Uses this information to assign the appropriate server when a user logs into the system.

3. DATABASE LAYER:

Database Layer has a central database system that contains all data in the R/3 System. A database system has two components - a data management system (DBMS), and a database itself. SAP has developed its own database called Hana that is compatible with all major data such as Oracle. All R/3 data is stored in a database. For example, a database contains control and customization data that determines how R/3 system works. It contains the program code for apps. Applications contain program code, screen descriptions, menus, operating modules, and various other items. This is stored in a special part of the data called the R/3 Repository, and is appropriately called storage. R/3 repository, items used on ABAP work bench.

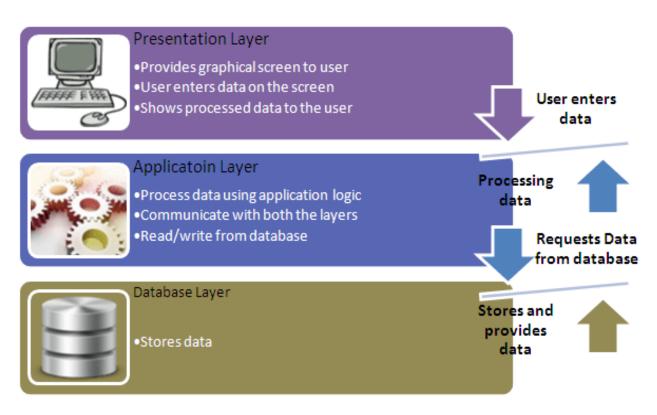


FIGURE 3.2 DIFFERENT LAYERS

3.2 SID

SID basically stands for SAP System Identification. It is a unique identifier code which is three character alphanumeric ID for every R/3 (SAP system) installation that contains multiple data servers and application servers.

For example: C11, PRD, E56 etc.

3.3 CLIENT

In SAP Client is a 'CUSTOMER'. An individual customer maps for one client. In one SAP session, multiple clients can be created. There is no need to install separate softwares for each client. It provides isolation, one client cannot see the other client's data.

Client contains Application data (Stored in database table), Customizing data (Created by clients) and User master record (User authorizations).

3.3.1 ADVANTAGES

1. Costs are not limited to hardware and software sharing but many customers use the same application solution, including management and support.

2. Clients help establish your SAP country layout. For example, you can have a development team client, a test team client and a production client.

3. Clients enable SAP SAS providers to be able to install a small number of SAP Systems, but they provide a large number of customers.

3.3.2 DEFAULT CLIENTS

There are three default clients:

1. **000** Client (Golden client) is available when we install R/3 System. It contain independent data of the clients.

2. **001 Client** is a copy of 000 client including the test company. Basically used to create new clients.

3. **006 Client** (Early Watch client) is used for monitoring services in SAP System.

3.3.3 DEFAULT USERS

There are two default users:

1. **DDIC** is a Master user in which the password is set while installing the system.

2. **SAP*** in this the password set is default all over the world.

SAP NETWEAVER

It is not a product but a new version of basis which provide an integrated technology platform through which by using HTTP protocol one can easily access SAP data. The capability of this are:

People integration (multi-channel access/portal) Information integration (reporting, analytics and master data management) Process integration (integrating with 3rd party tools) Application platform (ABAP/WebAS/J2ee(JAVA))

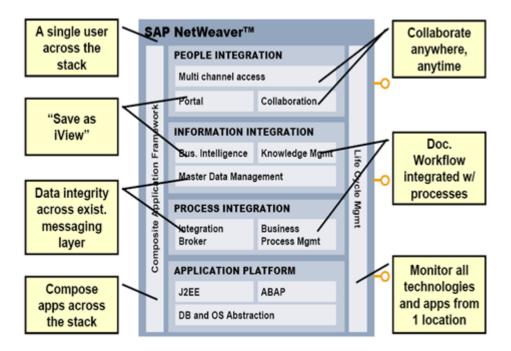


FIGURE 3.3 SAP NETWEAVER

3.4 USER ADMINISTRATION

3.4.1 USER CREATION

Step 1) T-code for creating user is SU01. So, Execute SU01.

- Step 2) Enter username and click on create icon.
- Step 3) Open address tab to fill details.
- Step 4) On logon data choose the user type.
- Step 5) Enter password.

Step 6) Click on roles tab and assign required roles.

Step 7) Click on profiles tab and assign required profiles.

Step 8) Click on save and exit using F3.

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FIGURE 3.4 USER CREATION

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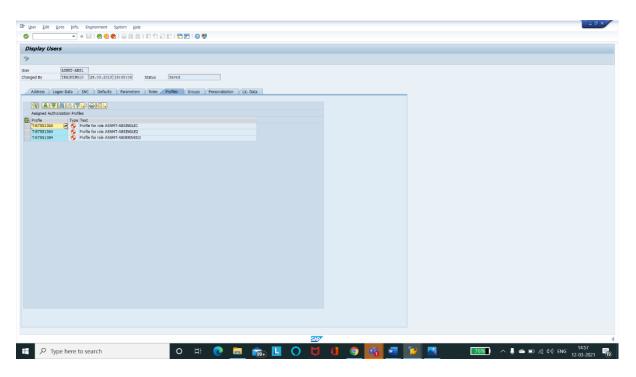


FIGURE 3.6 ASSIGNING PROFILES

LOCKING USER

To deactivating the user temporarily so they cannot access the system anymore locking a user is neccessary.

It can be done by two ways:

1. Automatically (Happen when login attempts failed more than three times).

2. Explicity/ Forcefully

Steps to lock single user:

Step 1) Use T-code SU01 and enter the username that has to be locked.Step 2) Click on lock icon.Step 3) On the dialog box appeared click lock icon again to lock.

Steps to lock multiple users:

Step 1) Use T-code SU10.Step 2) In username field enter user name to be locked.Step 3) Click on lock icon. All the user that are listed will be locked after this.

Steps to unlock single user:

Step 1) Use T-code SU01 and enter the username that has to be unlocked. Step 2) Click on unlock icon. Step 3) On the dialog box appeared click unlock icon again to unlock.

Steps to unlock multiple users:

Step 1) Use T-code SU10.

Step 2) In username field enter user name to be unlocked.

Step 3) Click on unlock icon. All the user that are listed will be unlocked after this.

USERTYPES IN SAP R/3

1. Dialog User : For one account per person. (Personal E-mail ID)

2. System User : For one account mutiple user. (Library IDs)

3. Communication User : For only backend connection. (Remote server RFC)

4. Service User : For background jobs.

5. Reference User : For copying authorization no logon possible. (Referring one's access to other)

3.4.2 PARAMETER

To manage SAP system, parameter is used to set keys and values. Basically it is of two different types i.e,

Static : Require restart of the system. T-code : RZ10.

Dynamic : Does not require restart of the system. T-code : RZ11

3.5 CREATE A NEW CLIENT

In theory, client can be created from 000 to 999.

Step 1) T-Code for client creation is SCC4. So, Execute SCC4.
Step 2) The SAP client's initial screen will be displayed after that click on new entry to make new client.
Step 3) Enter basic details there and then save it.

Step 4) Display the view and the new client got listed there.

CLIENT COPY

Using SCC4 one can only create a blank client. So to fill data in client one should copy the client which is known as client copy. Generally that means transferring client specific data in the same or different instances.

There are three types of client copy :

- 1. Local client copy
- 2. Remote client copy
- 3. Client import/ export

LOCAL CLIENT COPY

T-code used is SCCL. It is used to copy client in the same instance.

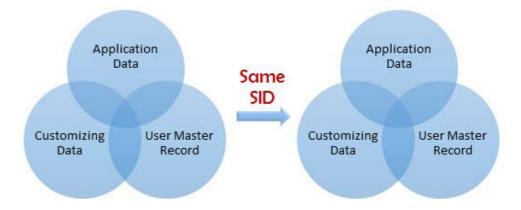


FIGURE 3.7 LOCAL CLIENT COPY

REMOTE CLIENT COPY

T-code used is SCC9. It is used to copy client between different instances.

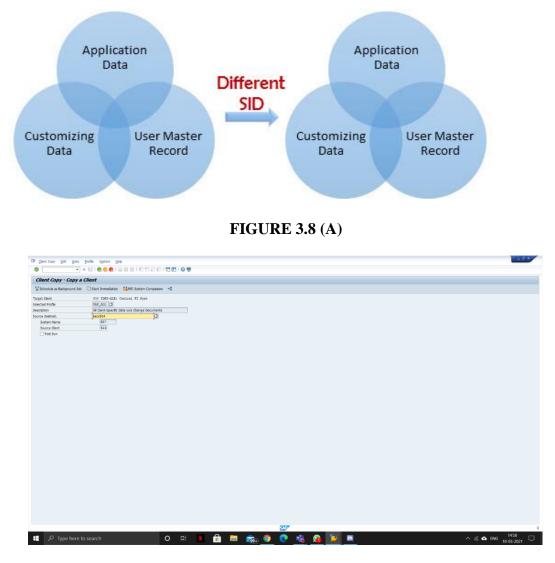


FIGURE 3.8 (B) REMOTE CLIENT COPY

CLIENT IMPORT/EXPORT

T-code used is SCC8.

DELETING CLIENT

Step 1) Execute T-code SCC5.

Step 2) Choose option delete entry from T000.

Step 3) Once the process completed the client will be deleted. To check this process use T-code SM50.

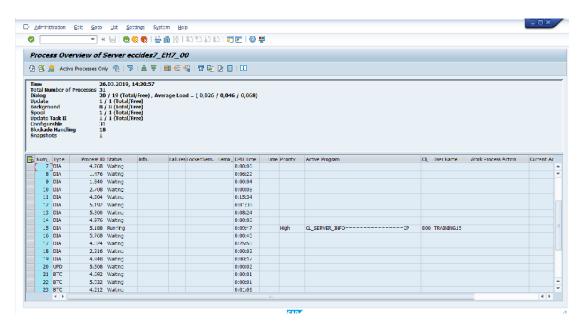


FIGURE 3.9 SM50

3.6 BACKGROUND JOBS

Background processes generally run along with the foreground processes and operations without disturbing them.

They are non-interactive kind of jobs and runs behind the foreground jobs. T-code used is SM36 and SM37.

ADVANTAGES

1. It reduces user interaction and can work seamlessly in the background without user input.

2. It can be set as the user's choice.

3. Once you have defined a variant for the background function, the user does not have to worry about value field input. Therefore, user confusion is also reduced.

- 4. Ideal for time consuming.
- 5. Long running jobs.
- 6. It could be scheduled periodically.
- 7. It doesn't require foreground or a separate PC.

STATUS OF BACKGROUND JOBS

1. **Scheduled :** You have defined the program call and version however now not described begin condition like start date, cease date, Frequency etc. that means you have not defined while a job need to be scheduled in system.

2. **Released :** All required criteria are fulfilled for activity definition. Begin situation is essential for the task to be in launch status.

3. **Ready :** All of the required situations are met to run the activity in a background workprocess. However job scheduler has positioned the job inside the queue because it's far looking ahead to background workprocess to be unfastened.

4. Active : Process has started out running inside the background. We cannot alternate the repute of the process once it's miles in active reputation.

5. **Finished :** Process finished correctly. It way the favored project is filshed with zero errors.

6. **Cancelled :** Job got cancelled by administrator forcefully or there might be few problem so you have to look into job logs to find out the issue.

SCHEDULE BACKGROUND JOB

Step 1) T-code used is SM36 so execute T-code SM36.

Step 2) Fill the details and click on spool list recipient.

Step 3) Write SAP username and copy. Then choose step button.

Step 4) Define name of program and various details to schedule job.

Step 5) Then choose start and fill the requirement of the job as start date, frequency etc for job.

Step 6) After filling and saving all the condition save the job. Your job is scheduled.

Step 7) To check the status execute T-code SM37.

Step 8) Select the criteria and search.

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FIGURE 3.10 EXECUTION OF SM36

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		and a v v			

FIGURE 3.11 EXECUTION OF SM37

CHAPTER- 4 SYSTEM MONITORING

The SAP Solution Manager provides an overview of current state of the art systems, including related conditions, information details and hosts. System Monitoring is based on automated testing at regular intervals in the four categories Availability, Performance, Alternative, and Configuration. In each of these categories, multiple metrics and related boundaries can be defined for each controlled object.

Configuration is based on the concept of the template. The pre-defined templates can be used as a starting point for finding specific templates for your customers.

The System Monitoring application provides details about the current situation according to the final rating of each metric. Additionally, alerts will be created and can be managed via the Alert Inbox in case the thresholds are broken.

4.1 TRANSACTION CODE

SM01

It is used to lock/ unlock T-codes and also display locked / unlocked T-codes.

	• «	< 🔚 🗟 🚱 🗟 🕅 👘 🎝 🖒	D 20 🐺 🗷	0 🖳	
Trans	action Codes: Lo	ock/Unlock			
1 7	D.				
	-				
Transac	tion Code SU10				
Lock	Transaction Code	Program Name	Screen	Transaction Text	
	SU10	SAPMSUU0M	1000	User Mass Maintenance	
	SU10_OLD	SAPMSUU0M_OLD	1000	User Mass Maintenance	
	SU12		0000	Mass Changes to User Master Records	
	SU2		0000	Maintain Own User Parameters	
	SU20	RSU20_NEW	0000	Maintain Authorization Fields	
	SU20_BTCH	SAPMSU20	0100	Maintain Authorization Fields	
	SU21	RSU21_NEW	0000	Maintain Authorization Objects	
	SU22	SU2X_MAINTAIN_DEFAULT	1000	Maintain Authorization Defaults(SAP)	
	SU22_HISTORY	SU2X_SHOW_HISTORY	1000	Change Documents for Default Values	
	SU22_OLD	SAPMS920	1000	Auth. Object Usage in Transactions	
	SU24	SU2X_MAINTAIN_DEFAULT	1000	Maintain Authorization Defaults	
	SU24_HISTORY	SU2X_SHOW_HISTORY	1000	Change Documents for Default Values	
	SU24_OLD	SAPMS921	1000	Auth. Obj. Check Under Transactions	
	SU24_S_TABU_NAM	SU2X_UPDATE_S_TABU_NAM	1000	SU24 for S_TABU_NAM Activation	
	SU25	SAPLPRGN	0101	Upgrade Tool for Profile Generator	
	SU25_2A_SEL	SU26_STEP_2A_SELECT	1000	Authorization Defaults Comparison	
	SU25_OLD	SAPLPRGN	0101	Upgrade Tool for Profile Generator	
	SU26	SAPLPRGN	0101	Upgrade Tool for Profile Generator	
	SU3	SAPMSUU0O	1000	Maintain Users Own Data	
	SU3_OLD	SAPMSUU0O_OLD	1000	Maintain Users Own Data	
				Own data	

FIGURE 4.1 SM01

Trans	sactic	🔄 Display Locked Tran	nsactions			×
	63	Transaction Code	Program Name	Screen	Transaction Text	
_		AIN/38000001	SAPLS_CUS_IMG_ACTIVITY	200		•
Transac	tion Co	AIN/38000002	SAPLS_CUS_IMG_ACTIVITY	200		-
		/AIN/38000003	SAPLS_CUS_IMG_ACTIVITY	200		
Lock	Trans	/AIN/38000004	SAPLS_CUS_IMG_ACTIVITY	200		
	SU10	/AIN/38000005	SAPLS_CUS_IMG_ACTIVITY	200		
	SU10	/AIN/38000006	SAPLS_CUS_IMG_ACTIVITY	200		
	SU12	/AIN/38000007	SAPLS_CUS_IMG_ACTIVITY	200		
	SU2	/AIN/38000008	SAPLS_CUS_IMG_ACTIVITY	200		
	SU20	/AIN/38000009	SAPLS_CUS_IMG_ACTIVITY	200		
	SU20	/AIN/38000010	SAPLS_CUS_IMG_ACTIVITY	200		
	SU21	/AIN/38000011	SAPLS_CUS_IMG_ACTIVITY	200		
	SU22	/AIN/38000012	SAPLS_CUS_IMG_ACTIVITY	200		
	SU22	/AIN/38000013	SAPLS_CUS_IMG_ACTIVITY	200		
	SU22	/AIN/38000014	SAPLS_CUS_IMG_ACTIVITY	200		
	SU24	GJV0	MENUGJV0	1000		
	SU24	GJV6	MENUGJV6	1000		
	SU24	J1S1		0	IS-M: CH/S: Basic Postal Codes	
	SU24	O5AB	SAPMSNUM	100	Number range maintenance: OIG_DRIVER	
	SU25	SFW_BROWSER	SFW_SWITCH_BROWSER	100	Switch Framework Browser	
	SU25	SWF_DEBUG	SAPLSWF_DEBUG_GUI	1100	Edit Workflow Breakpoints	
	SU25	ZHR1	ZZTRHR10	0	HR: Translate special tables	
	SU26	ZSKA	ZZTRFI10	0	Translate SKAT	
	SU3					
	SU3_					-
	SU50					

FIGURE 4.2 DISPLAYED LOCKED TRANSACTIONS

SM02

It is a very useful to communicate system changes or alerts to the entire SAP user community. Most importantly, it can be used to broadcast messages related to security profile changes so that users will have time to rest for any changes or details about the system.

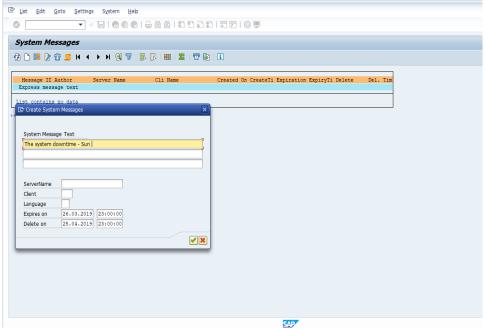


FIGURE 4.3 SM02

SM04

Currently logged in user can be displayed by this t-code. Total number of users and times are given at the bottom of the list.

7 User	Edit Goto L	ist Settings Sy	/stem Help							
0581		ist <u>S</u> ettings S <u>y</u>	<u>/</u> stem <u>H</u> elp							
9	,	🔹 « 🗄 I 🕲 🤇	s 😪 I 🖨 🕅 i			0 📮				
Logor	n List of Serv	ver eccides7_	EH7_00							
a 🗛	Cassian 0 0		8 🖪 🖪 🔳							
2 🗡	Session 👛 🖂				<u> </u>					
_		Logon Location		Dialog time	_	Priority	Session Type	Memory	RFC Hand	Application Info.
_	User Name				Sessi		Session Type RFC		RFC Hand 78407792	Application Info.
Client	User Name	Logon Location		Dialog time	Sessi1	Priority		8.252		Application Info.
Client	User Name	Logon Location eccides7.mydomai		Dialog time 26.03.2019 22:19:26	Sessi 1	Priority Medium	RFC	8.252 8.252	78407792	Application Info.
Client	User Name SAP_WSRT SAP_WSRT	Logon Location eccides7.mydomai eccides7.mydomai		Dialog time 26.03.2019 22:19:26 26.03.2019 22:19:25	Sessi1 1 1	Priority Medium Medium	RFC RFC	8.252 8.252 3.089	78407792 15781467	Application Info.
Client 000 000 800	SAP_WSRT SAP_WSRT SAP_WSRT BGRFC_SUPER BGRFC_SUPER	Logon Location eccides7.mydomai eccides7.mydomai eccides7.mydomai		Dialog time 26.03.2019 22:19:26 26.03.2019 22:19:25 26.03.2019 22:19:03	Sessi 1 1 1 1	Priority Medium Medium Medium	RFC RFC RFC	8.252 8.252 3.089 3.082	78407792 15781467 38511356	Application Info.

6 logons with 6 sessions

FIGURE 4.4 SM04

SM04 can also display the transactions as well as the time so one can end and examine the session as well at the particular time the server logged in.

<u>U</u> ser		List <u>S</u> ettings S <u>y</u>		6186D.:	1.2	0				
ogon	List of Ser	ver eccides7_	EH7_00							
🕅 <u> </u> S	Session 🚨 🔤	714 718		🖽 📆 i 👿 😼) 🖹 🗌 🗵	i				
Client	User Name	Logon Location	Application	Dialog time	Sessi	Priority	Session Type	Memory	RFC Hand	Application Info.
000	SAP_WSRT	eccides7.mydomai		26.03.2019 22:2	0:25 1	Medium	RFC	8.252	78407792	
000	SAP_WSRT	eccides7.mydomai		26.03.2019 22:2		Medium	RFC	8.252	15781467	
े पिरे Sess	sion List of Server	81		× 2:1	6:54 1	High	BGRFC Scheduler	3.082	15773939	
				2:10		High	BGRFC Scheduler	3.078	15772939	
				2:2	0:26 1	High	GUI	15.214		
No	Transaction		Time							
				-						
1	User List		14:20:	31						
				-						
		✓ End Se	ssion Examine	Session X						
_										

FIGURE 4.5 SESSION LIST OF SERVER

AL08

Displaying the users list logged at that time into the global system or in all active system settings.

 The second second	« 📃 👧 🙆	👷 I 🖨 🕅 🕯	8 I X	12121	7 🕜 🖳						
List of All Users Log	ged On										
Refresh 🔓											
ystem EH7 Date, Time 26.03.2019 14:2	Overview 20:43 users log										
Active Instances	Number	of Active Us	ers	Interactive Use	ers	Number of	f RFC Users	. 1	Number o	of Plug-I	n User:
eccides7 EH7 00	6					-					
eccides/_En/_00				1		5			0		
Destinations with 6 users	3.	User Name	Termi		Transactio		Time	Ext. Se		nt. Sess.	1
	Client	User Name TRAINING15 TRAINING15	DESKT		Transactio		14:20:43	Ext. Se		1	
. Destinations with 6 users	Client 800 800 000	TRAINING15	DESKT DESKT eccid	nal OP-BG105BN				Ext. S	ess. Ir	nt. Sess. 1 2 1	

FIGURE 4.6 AL08

SM50

It is used to monitor and manage work processes.

G & Active Time Total Number of Dialog Update	26.03.2019, Processes 31	- 1 4 7 1	EH7_00 ■ € € 17 17 12 12 13 14					
Time Total Number of Dialog Update	26.03.2019, Processes 31		📾 🐔 📲 🐨 🕼 🍃 🔚 🗈					
Total Number of Dialog Update	Processes 31	14:20:57						
Total Number of Dialog Update	Processes 31	14:20:57						
Background Spool Update Task II Configurable Blockade Handlin	1 / 1 (Total/ 8 / 8 (Iotal/ 1 / 1 (Total/ 1 / 1 (Total/ 11	Free) Free)	erage Load – (0,026 / 0,046 / 0,068)					
Snapshots	Process ID Status 4.708 Waiting	Info.	TaluresLockedSem. Sema_CPU Time 0:00:05	Lime Pronty	Active Program	CljUser Name	Work Process Action	Orrent A
8 D1A	1.476 Walting		0:06:22					
0.014								
9 D1A	1.840 Waiting		0:00:04					
10 DIA	1.840 Waiting 2.708 Waiting		0:00:04 0:00:08					
	-							
10 DIA	2.708 Waiting		0:00:08					
10 DIA 11 DIA	2.708 Waiting 4.304 Waiting		0:00:08 0:15:34					
10 DIA 11 DIA 12 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting		0:00:08 0:15:34 0:01:08					
10 DIA 11 DIA 12 DIA 13 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting 5.300 Waiting		0:00:08 0:15:34 0:08:24	High	G_SERVER_INFOCP	E00 TRAINING15		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting 5.300 Waiting 4.976 Waiting		0:00:05 0:15:34 0:01:18 0:08:24 0:00:05	High	Q_SERVER_INFO	E00 TRAINING15		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA 15 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting 5.300 Waiting 4.976 Waiting 5.188 Running		0:00:08 0:15:34 0:01:18 0:08:24 0:00:05 0:00:05 0:09:77	High	Q_SERVER_INFOCP	E00 TRAJINIGIS		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA 15 DIA 16 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting 5.300 Waiting 4.976 Waiting 5.188 Running 5.768 Waiting		0:00:00 0:15:34 0:06:24 0:00:05 0:00:05 0:00:07 0:00:40	High	Q_SERVER_INFOCP	EOO TRAJNINGIS		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA 15 DIA 16 DIA 17 DIA	2.708 Waiting 4.304 Waiting 5.192 Waiting 5.300 Waiting 5.188 Running 5.708 Waiting 4.324 Waiting		010008 011534 011539 010824 0100824 0100824 0100827 0100824 0100977 010042 0109450	High	Q_SERVER_INFOCP	E00 TRAJUNGIS		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA 15 DIA 16 DIA 17 DIA	2.708 Waiting 4.304 Waiting 5.300 Waiting 4.976 Waiting 5.188 Running 5.188 Running 5.768 Waiting 4.174 Waiting 2.216 Waiting		U10009 01:15:34 10:11:84 0:06:24 0:00:00 0:00:00 0:00:00 10:05:50 10:05:50 0:00:02	High	Q_SERVER_INFOCP	500 TRAJKJNG15		
10 DIA 11 DIA 12 DIA 13 DIA 14 DIA 15 DIA 16 DIA 17 DIA 18 DIA	2.708 Waiting 4.304 Waiting 5.309 Waiting 4.976 Waiting 5.768 Waiting 4.174 Waiting 2.216 Waiting 4.174 Waiting 4.948 Waiting		U100005 0115:34 0105:24 010002 0100002 0100007 0100002 0100002 0100002 0100002 0100002 0100002	High	Q_SERVER_INFOCP	800 TRAINING15		
10 DJA 11 DJA 12 DJA 13 DJA 14 DJA 15 DJA 16 DJA 17 DJA 18 DJA 14 DJA 20 UPD	2.708 Waiting 4.304 Waiting 5.300 Waiting 4.376 Waiting 5.768 Waiting 4.774 Waiting 2.216 Waiting 4.474 Waiting 2.508 Waiting		U10008 0115334 01117 PI 0100824 010002 010047 010047 010047 010047 010042 010040 010040 010002	High	Q_SERVER_JINFOCP	EOO TRAJNJNG15		

FIGURE 4.7 SM50

SM51

It is used to show a list of active application servers registered on the SAP message server.

Server List				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
System Overview started Server 1 Server Name Host Message Types Server Sta	System Overview started Server 1 Server Name Host Message Types Server Stat	Server List			
Started Server 1 Server Name Host Message Types Server Sta	Started Server 1	🔁 🌻 🚢 🎁 Release Not	es 💐 💯 🤮 🖓 🚢 ਵ		
		Started Server 1			Γ
	ecclues/_en/_uu				
				blandy bacen optable optablished inter-	Active

FIGURE 4.8 SM51

SM 12

It is used to used to show and remove lock in SAP. For making it safe from the changes done by other user SAP provides a locking mechanism. We only record key entries with the previous day stamp.

🖻 Lock Entry	<u>E</u> dit	<u>G</u> oto <u>S</u> ettings Extr <u>a</u> s	System Help
Ø		🔹 🔊 🖯 » 💌	👷 🖨 🝈 🎼 😂 🏷 🎝 🎝 🌄 🔽 🛛 🕜 🖳
Select Lo	ck En	tries	
List			
Table anna			7
Table name Lock argument		- <u> </u>	
Client		800	
User name		TRAINING15	

FIGURE 4.9(a) SM12

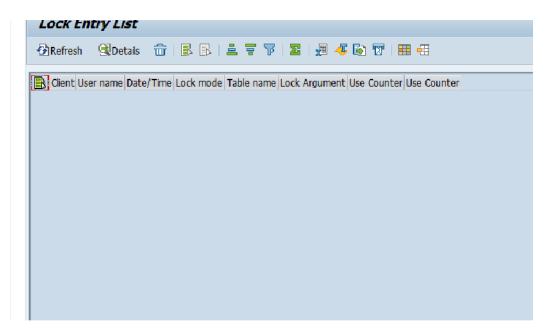


FIGURE 4.9(b) SM12 LOCK ENTRY LIST

AL11

To display all SAP directions we use AL11 T-code.

 • 	« 🖯 🗞 🚷 🚔 🛍 🏠 I 🏝 🛣 🏹 🔚 🕼 🦳
SAP Directories (26	.03.2019 14:22:40 EH7 eccides7)
•	-
영 📴 🏛 🐺 🖓 🔊 🦧 🖷	
Name of Directory Parameter	Directory
DIR ATRA	C:\usr\sap\D I7\DVEDMGS00\data
DIR BINARY	C:\usr\ssp\D I7\DVEBMGS00\exe
DIR CCMS	C:\usr\sab\CCMS
DIR_CT_LOGGING	C:\usr\sap\EH7\SYS\global
DIR_CT_RUN	C:\usr\sap\EH7\SYS\exe\uc\NTAMDC4
DIR_DATA	C:\usr\sap\EH7\DVEBMGSD0\data
DTR_DBMS	C:\usi\san\FH7\SYS\SAPDB
DIR_EXECUTABLE	C:\usi\sii)FH7\DVFBMG\$00\exe
DIR_EXE_ROOT	C:\usi\sii/FH7\SYS\exe
	C:\usr\sap\=H7\SYS\gen\dbg
DIR GEN ROOT	C:\usr\sab\EH7\SYS\gen
DIR_GLOBAL	C:\usr\sap\EH7\SYS\global
JIR_GRAPH_EXE	C:\usr\sap\EH7\DVEBM6SUU\exe
DIR_GRAPH_LIE	C:\usr\sap\HH/DVEBMGSUU\exe
DIR_HOME	C:\usr\sap\EH7\DVEBMGSUU\work
DIR_INSTALL	C:\usr\sap\EH7\SYS
DIR_INSTANCE	C:\usr\ssp\EH7\DVEBMGS00
DIR_LIBRARY	C:\usr\ssp\EH7\DVE3MG\$30\cxc
DIR_LOGGING	C:\usr\ssp\EH7\DVEBMGS00\/og
DIR_MEMORY_INSPECTOR	C:\usr\sap\D I7\DVEBMGS00\data
DIR PAGING	C:\usr\sap\D I7\DVEDMGS00\data
DIR PERF	C:\usr\sab\PRTCLOG
DIR PROFILE	\\eccides7\sapmnt\EII7\SYS\profie
DIR_PROTOKOLLS	C:\usr\sao\EH7\DVEBMGSD0\\og
DIR_PUT	C:\usr\sap\out
DIR_REORG	C:\usr\sao\EH7\DVEBMGS00\data
DIR RSYN	C:\usi\san\EH7\DVE8MGS00\exe

FIGURE 4.10 AL11

SM13

It is used for Administrate Update Record in SAP. Details such as Client, User, Date, Time, T-code and status for update rate failure.

Update Req	uests: Initi	ial Screen	
₽ 8 ²			
Client	*	2	
User	*	Ľ	
Status			
Canceled			
○ To be updated			
○V1 executed			
○V2 Executed			
● All	G	ilobal View	
Selection			
From date	27.03.2019	To date	
From time	00:00:00	To time 0	0:00:00
Maximum no. reco	rds 99.999		
Update server			
Update System		Real Administration	
opuace system		t8∞ Authinistration	

FIGURE 4.11 (a) SM13

Ż	<u>U</u> pdate	e requests	<u>G</u> oto	List	<u>F</u> ilter / So	orting	<u>S</u> ettings	System	<u>H</u> elp				
Ø			Ŧ	«	🔍 🤇	à 😪 I	₽ M M	188	DDI	.	0 📮		
L	lpda	te Requ	ests										
9	8	🚱 Repeat	Update	Û	8 🛛 M	odules	1 2 B	B	i 7	9 7	1 🔁 👿		
	0	Upda	ate rec	cord	s found								
B	Cint U	ser	Date		Time	TCOD	E		In f	0	Sta	tus	

FIGURE 4.11 (b) SM13 UPDATE REQUESTS

SM21

It is used to view and analyze system logs for any sensitive log entries. SAP System logs are all system errors, alerts, user locks due to log failures in attempts from known users, and they are processing messages in the system log.

Display the system log	,
Use old Syslog transaction	
asic attributes	
From Date / Time	27.03.2019 7 10:00:00
To Date / Time	/ CO:CO:00
Message ID	to 🗗
Client	
User	to 💽
High severity messages only	
High sevency messages only	
xtended attributes	
	eccides7_EH7_00 to
xtended attributes	
xtended attributes Extended Instance Name	
xtended attributes Extended Instance Name Transaction Code	
xtended attributes Extended Instance Name Transection Code Workprocess Type	
xtended attributes Extended Instance Name Transection Code Workprocess Type Process No.	to C
xtended attributes Extended Instance Name Transaction Code Workprocess Type Process No. Program	to C
xtended attributes Extended Instance Name Transaction Code Workprocess Type Process No. Program Package	to Control Con
xtended attributes Extended Instance Name Transaction Code Workprocess Type Process No. Program Package Transaction ID	to C

FIGURE 4.12 SM21

In the system log analysis window, we can view/analyze a critical error message with a double click on it.

We also get T-code details used by the user when an error occurs.

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Date 27.03.2019	TIME		instance.			Process No		User		-	Message Text Bokarnd def.srvr crp SAP DEFAULT BTC does not contain any active bokarnd srv
27.03.2019	10:00:		-	_EH7_00				SAPSYS		EKL	
				_EH7_00				SAPSYS	-	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:04:		-	_EH7_00				SAPSYS	~	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:14:			_EH7_00				SAPSYS	~	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:14:			_EH7_00				SAPSYS		Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:20:			_EH7_00				SAPSYS		EKL	Bckgrnd def.srvr grp SAP_DEFAULT_BTC does not contain any active bckgrnd srv
27.03.2019	10:24:			_EH7_00				SAPSYS	100	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:24:			_EH7_00				SAPSYS	~	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:29:		-	_EH7_00				SAPSYS	~~~~	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:29:		-	_EH7_00				SAPSYS	·	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:34:			_EH7_00				SAPSYS	~	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:34:			_EH7_00				SAPSYS	~~~	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:39:			_EH7_00				SAPSYS	~~~	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:39:			_EH7_00		013	000	SAPSYS		Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:40:	50 e	eccides7_	_EH7_00	DIA	001	000	SAPSYS	X	EKL	Bckgrnd def.srvr grp SAP_DEFAULT_BTC does not contain any active bckgrnd sn
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27.03.2019	10:44:	04 e	eccides7_	_EH7_00	DIA	017	000	SAPSYS	Ø	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:49:	09 e	eccides7_	_EH7_00	DIA	001	000	SAPSYS	۲	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:49:	09 e	eccides7_	_EH7_00	DIA	001	000	SAPSYS	۲	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:54:	09 e	eccides7_	_EH7_00	DIA	017	000	SAPSYS	۲	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	10:54:	09 e	eccides7_	_EH7_00	DIA	017	000	SAPSYS	۲	Q0I	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	11:00:	51 e	eccides7_	_EH7_00	DIA	011	000	SAPSYS	۲	EKL	Bckgrnd def.srvr grp SAP_DEFAULT_BTC does not contain any active bckgrnd sn
27.03.2019	11:04:	24 e	eccides7_	_EH7_00	DIA	017	000	SAPSYS	Ø	Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	11:04:	24 e	eccides7	EH7_00	DIA	017	000	SAPSYS		Q01	Operating system call getaddrinfo failed (error no. 0)
27.03.2019	11:14:	04 e	eccides7	EH7 00	DIA	001	000	SAPSYS	8	001	Operating system call getaddrinfo failed (error no. 0.)

FIGURE 4.13 SM21 SYSTEM LOG MESSAGES

SM37

It is used for background monitoring, batch functions running in the system. From the first screen, you can search by username, username or program name according to the time zone.

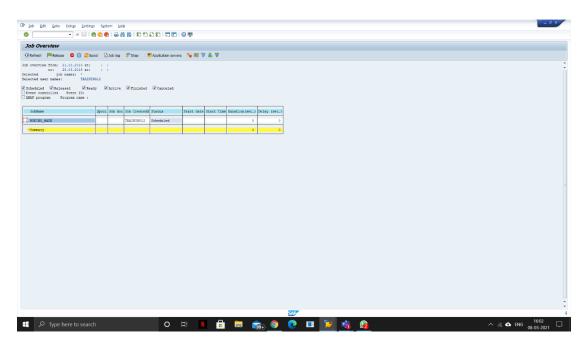


FIGURE 4.14 SM37

RZ20

It is used to used for CCMS Monitoring in SAP. It comes under the SMOI package. When we create this transaction code, RSALSTMO is a standard SAP system developed in the background.

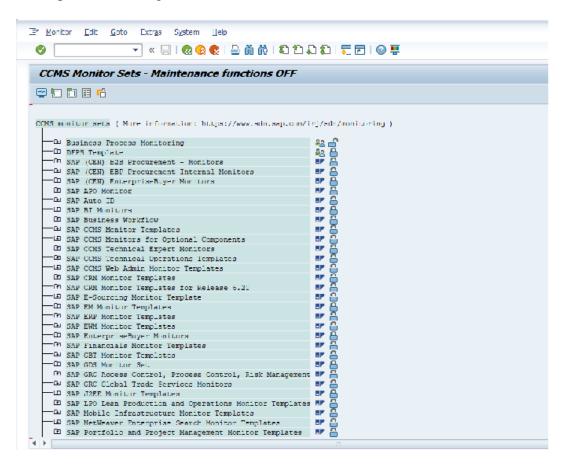


FIGURE 4.15 RZ20

ST01

It is Security Trace Tool (transaction ST01) provides a way to track the full sequence of transaction security tests. As all checks are shown, this is an irrational way to investigate potential issues.

We usually use tracking to check authorization, RFC calls, HTTP calls etc, so look at the ST01 transaction and set the 'authorization test' flag first.

🕼 Jace Edit. Joto System Help	
◎ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	
System Trace	
🚯 🗡 Change Trace off 🖡 🖟 🤧 Analysis 🖓 Save 🧍 🗓 Onine Documentation	
Trace Status: [Trace switched on (main switch on)	
Trace Components Last Change	
Authorization check TRAININGIS 25.03.2019 19:52:01	
Al Error Only	
Kernel Functions 🔐 🛃 Settings	
General Kernel	
CB Access (SCL Trace)	
Table Buffer Traca	
□ RFC Cult	
Lack Operations	
Centeral Fitters	
SADY	4

FIGURE 4.16 ST01

ST02

It is used to display the present memory usage status of a selected SAP application server.

The beat rate of R/3 buffers should be 98% or better. Hit rate of but 98% can only be considered acceptable for the system bath, single recording bath and export/import bath.

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Field definiti	on 71,0	5 251.65	5 79.690	34,14	231.419	187.154	80,18	163.060	211.985
Initial record	90,0 Is 4,1				51.354	57.955	99,32 19,15	69.174	410
program	\$7.2	5 1.753.08	8 390.903	24,19	435.270	311.999	71,19	0	378.909
CUA	96,9	5 3.00 8 4.29			2.000	1.854	92,70 93,25	6.473	1.952
Calendar	40,2	48	8 297	62,13	200	105	52,50	0	95
OTR		4.09	6 3.355	5 100,00	2.000	2.000	100,00	0	
Tables Buffer	\$9,2	5 1.412.16	3 1.226.34	09,05	256.761	240.300	93,59	0	52.568
						40.219	96,49	0	
Export/import Exp./ Imp. SHM	56,6	4.05				40.219	99,49	0	
SAP Memory	Curr.Use %	CurUse [KB]	MaxUse [KB]	In Mem[HB]	OnDisk[KB]	SAPCurCach	HitRatic %		
Roll area		D	0	131.072	0	IDs	99,69		
Page area Extended memory	0,19	489	41.744	131.072	131.072	Statement	97,00		
Heap memory	20,39	2.3/9.7/6	1.965.386	0	ő		0,00		
Call Stati H	litRatio % A	BAR/4 Reg A	BAP Fails DE	STotCalls Av	Time[as] I	ERowsAff.			
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Select Insert	73,56 1		2.058	590.287 25.577	0 15	732.913			
Update	0,00	11.314	999	11.532	0	11.550			
Total	0,01 83,76 7	34.553	16.408 544.222 1.	35.535	0 25	740.152			
· · · ·									

FIGURE 4.17 ST02

ST03

It is used to get the list of the overview of instances and the last analysis data.

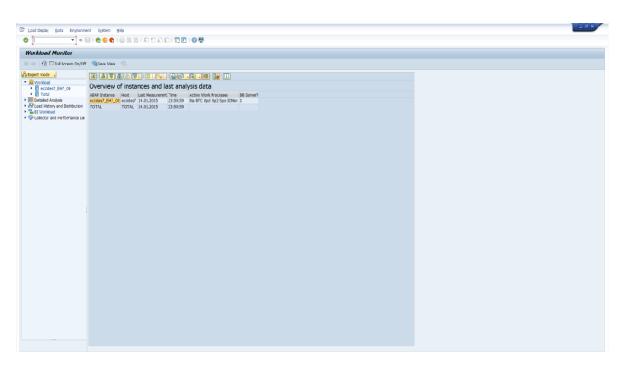


FIGURE 4.18 ST03

ST04

It is used for SQL server performance analysis. It is wont to display the database buffer hit ratio.

rformance Overview												
🗆 🖗 🛶 Reset 🔹 Since Reset	🕅 Since DB Start 🕞 🕞											
Image: Section Configuration Image: Section DO System DO Image: System DO Oracle: Database Administration Image: System Landscape	Performance Description Of Name & Bit Of States (0) (22-03-2019) Of Name & Directory (0) (22-03-2019) Of Network (12-20-2-0) Of Network (12-20-2-0)											
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Wat Event Analysis												
 SQL Statement Analysis Statestical Information 	D8 instance eh7	Day, Time	25.03.2019	11:39:34								
Feature Monitoring	D8 node ECCIDES7	(and and a	Start up at	22.03.2019	20:17:16							
Additional Functions	08 release 11.2.0.3.0	a Bundle Patches	Sec. since start		228.137							
Space Jobs	Cuta Buffer											
Alerts	Size (KB)	2.211.840	Logical reads		96.159.918 -							
Diagnostics	Quality [%]	98,5	Physical reads		9.911.761							
	Size default pool (KB)	2,211,640	Physical writes		6.361.010							
	Size keep pool [KB]	0	Buffer busy wats		20.655							
	Sze others (KB)		Buffer wait time [s]		175							
	Shared pool		Log buffer									
	Sce [KB]	2.211.840	52e [KB]		10.652							
	DD-cache Quality [%]	93,8	Entries	1 I	17.279.207							
	SQL area petrato (%)	84,0	Allocation retries		24.959							
	SQL area pintatio [%]	98,4	Aloc fault rate [%]		0,01							
	SQLA.Rebads/prs (%)	0,0163	Redo log wait (s)		640							
			Log files (in use)		81							
	Call											
	User cals	26.160.422	Recursive calls		29.147.181							
	User commits	200.195	Parse count		1.360.037							
	User rolbacks	480	User/recursive calls		0,9							
			Log.Reads/User Calls		19,0							
	Time statistics											
	Busy wait time [s]	45.471	Sessons buty [%]		0,38							

FIGURE 4.19 ST04

ST06

It is used to fetches and displays the data like CPU Utilization, Memory Utilization and disk response time.

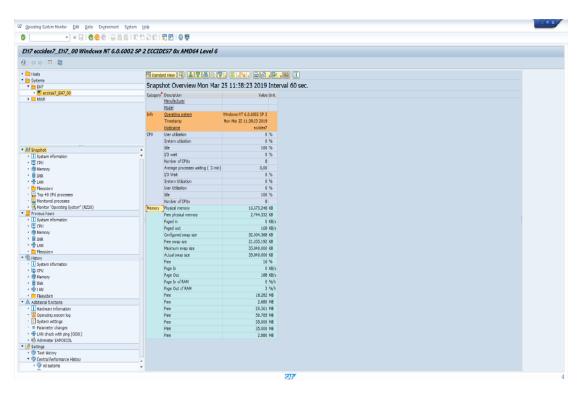


FIGURE 4.20 ST06

ST22

- It is used to:
- 1. Displays and analyzes update statistics again
- 2. Save in a local file
- 3. Print
- 4. Store for a longer period of time.

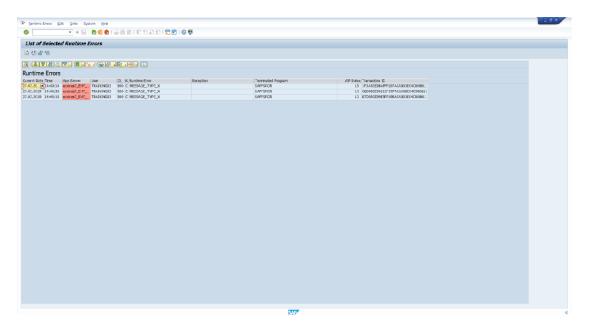


FIGURE 4.21 ST22

DB02

It is used to research and monitor database statistics (db growth, table space size , missing index and lots of more).

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		10000	E 🛛 🛡			
Space Overview						
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V A Estern Configuration 1	I form forming					
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	DB Server II ECCIDE		20:17:16			
Oracle: Database Administration	DB Reliance 11.2.0.	3.0				
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F in segments	Pree Space:	15,18 95		Total free space:	1.133,55 98	
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						SAP.

FIGURE 4.22 DB02

CHAPTER - 5 REMOTE FUNCTION CELL

5.1 REMOTE FUNCTION CELL

RFC stands for 'Remote Function Call'.

Basically RFC is used to sent and receive data from different SAP system. If one SAP system wants to connect with the other SAP system then it is required to create a RFC connection first.

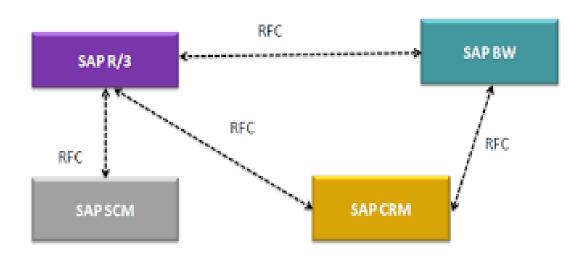


FIGURE 5.1 RFC

In fig. 5.1 Here shows if SAP R/3 wants to sent or receive any data with SAP SCM or SAP CRM or SAP BW then it have to create RFC. Same goes between SAP CRM and SAP BW.

5.2 CREATING RFC

Step 1) Firstly, we have to create a client.

spla	y View "Clients":	Overview				
91	8 8 6					
ent	Name	City	Crcy	Changed on		
3	Sunidhi123	Raipur		18.03.2019	•	
5	pallavi	kadapa		18.03.2019	*	
5	SWETHA	WARANGAL		18.03.2019		
7	abj	delhi		23.03.2019		
1	Google	Santa Clara	USD	23.03.2019		
6	Thor	Kanpur		21.03.2019		
)	rohini.pvt.ltd.	kanpur		18.03.2019		
2	Boeing	Frankfurt		18.03.2019		
3	Apple Inc.	Cupertino	USD	22.03.2019		
7	Batch6	warangal		23.03.2019		
8	saimounika	Hanamkonda		18.03.2019		
8	sausuad	delhi		19.03.2019		
1	ANANT PVT. LTD.	LUCKNOW	INR	18.03.2019		
2	ASNMT-ANANT	LUCKNOW	INR	25.03.2019		
ŧ	PRCTC-ANANT	LUCKNOW	INR	26.03.2019		
6	ABCD PVT. LTD.	LUCKNOW	INR	27.03.2019		
7	SAP_Grp4			23.03.2019		
•	GROUP 1	Dehi	INR	21.03.2019		
					-	
	•• =			•	•	
	(T)					Activate Windows
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FIGURE 5.2

Step 2) After that we have to login the system which is supposed to be on the receiving end of the RFC.

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FIGURE 5.3

Step 3) Then, we have to create RFC connection.

로 Connection Edit Goto Extras Litilities System Help	
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RFC Destination RFCDemo	
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Description 2	
Description 3	
Administration Technical Settings Logon & Security Unicode Special Options	
Administration Technical Settings Logon & Security Unicode Special Options	
Logon Procedure	
Language	
Clent 994	
User sap* Current User	
PW Status is initial	
Password	
Trust Relationshp No Yes Logon Screen	
Status of Secure Protocol	
SNC O Active	
Authorization for Destination	
	Activate Windows
SAP - SAP	
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FIGURE 5.4

Step 4) After all this we perform the connection test.

IP LAR BAR SHAD S	jettings System Help						
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RFC - Connection	Test						
Connection Te	et PECDomo						
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Action	Result						
Logon	3 meec						
Transfer of 0 KB	1 meec						
Transfer of 10 KB	1 msec						
Transfer of 20 KB	1 meec						
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FIGURE 5.5

Step 5) Then we proceed to perform the Authorization Test.

mote Logon Connection Test Unicode Test *> C Destruction RFCDemo onnection Type (3) ABAP Connection Selection Selection 1 Description Selection 2	
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emote Logon Connection Test Unicode Test *	
PC Destruction RFCDemo onnection Type 3 ABAP Connection Description Description Description 1 Description 2	
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Description 2	
Description 2 Description 3	
Description 3	
Administration Technical Settings Logon & Security Unicode Special Options	
Logon Procedure	
Language	
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User SA2+ Current User	
PW Status earred	
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Trust Relationship Rive Yes Logon Screen Status of Secure Protocol	
The swc @ Inactive O Active	
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FIGURE 5.6

Step 6) At the last when authorization test is passed without any errors then we can confirm whether the RFC connection is successful or not.

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Transfer of 10 KB	1 msec						
Transfer of 20 KB	1 msec						
Transfer of 30 KB	2 msec						
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FIGURE 5.7

5.3 TYPES OF RFCs

Four types of RFCs are there.

- 1. Synchronous RFC
- 2. Asynchronous RFC
- 3. Transactional RFC
- 4. Queued RFC

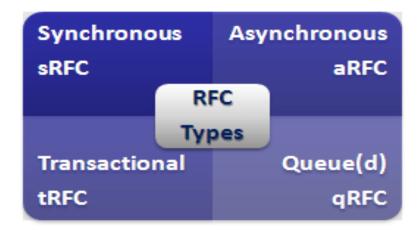


FIGURE 5.8 TYPES OF RFC

5.3.1 SYNCHRONOUS RFC

It connects SAP web application server with SAP GUI.

5.3.2 ASYNCHRONOUS RFC

It is used for processing parallely and communicating between systems.

5.3.3 TRANSACTIONAL RFC

It is used for secure communication between systems basically, it is the extension of Asynchronous RFC.

5.3.4 QUEUED RFC

Basically it is the extension of transactional RFC and used for defining preocess sequencing.

5.4 ADVANTAGES

- 1. It can easily convert format of the data.
- 2. To set up communication between systems it can call required functions.
- 3. The errors occur in process of communication can be handle by this easily.

CHAPTER-6 TRANSPORT MANAGEMENT SYSTEM

6.1 TMS

TMS is used to deploy, manage, manage, copy development materials and customize settings in all SAP systems across the country with the development of predefined RFC Connections. This is used to export items outside the SAP source system and sending it into the intended SAP system. TMS stands for Transportation Management System.

T-code for TMS admin is TMSADM.

6.2 SYSTEM LADSCAPE

System Landscape also known as 3 landscape configuration consists of following servers:

- 1. Development Server (DEV)
- 2. Quality Assurance Server (QAS)
- 3. Production Server (PRD)

As it is clear by the name also that the new changes is done in DEV then imported to QAS for quality purpose. Though importing to PRD is possible only if the combination of testing and quality assurance is done in QAS.

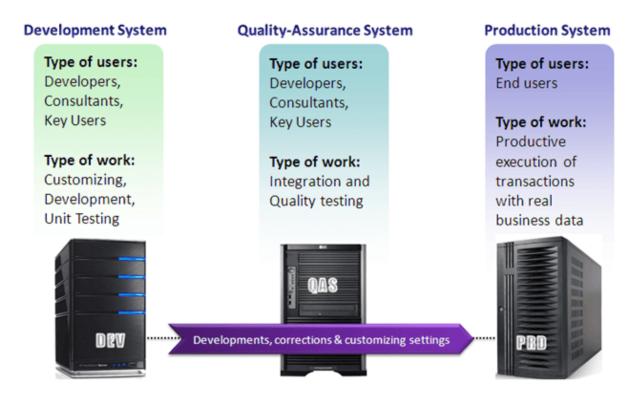


FIGURE 6.1 3 LANDSCAPE CONFIGURATION

6.3 OPERATING SYSTEM TOOLS

6.3.1 TRANSPORT CONTROL PROGRAM (TP)

TP is an SAP system used by management to create and manage transit between systems.

In fact, TP uses different tools. Basically, it costs a plan to use R3trans. However, it also provides comprehensive control of the transportation process to avoid complex system inconsistencies, which may arise as a result of incorrect sequencing.

6.3.2 R3TRANS

R3trans is an SAP transport system system that use to transfer data between different SAP systems. Usually it is not used directly but is called from the TP control system or through SAP development resources.

6.4 TRANSPORT REQUEST

Transport request also known as change request.

Standard format of change request is-

<SID>K<NUMBER>

Where, SID stands for System ID K stands for fixed keyword Number stands for anything whose range start with 900001 Example- DEVK900056

TWO STATES OF TR

1. Modifiable **2.** Released

TWO TYPES OF TR

1. Workbench Request : If there is application table which include master data and transactional data then we use workbench request.

2. Customizing Request : If there is customizing table which include maintenance only by customer nothing else then we use customizing request.

Transport Request (Workbench/Customizing)

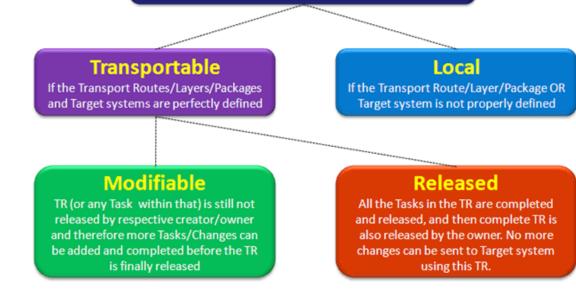


FIGURE 6.2 TRANSPORT REQUEST

CONCLUSION

During 45 days of industrial training at DXC Technology in collaboration with Manipal and IIHT, candidates were provided with brilliant learning videos as well as live training sessions to make them comfortable and handy for the evolving future of work and the working environment of the industry. These programs were designed as a self-paced learning program, enabling the student to plan and learn in their style. The program also connects with Subject Matter Experts to get professional guidance on any queries during the learning journey.

I can conclude that through this industrial training, I have acquired a lot of exposure in the SAP EAO and am now more ready to face the challenges while working for the industry. This training has also helped me to get my skills up in the fields of learning through practice. Overall it was a good experience while communicating and learning throughout the training.

REFERENCES

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- <u>https://www.tutorialspoint.com/sap_basis/index.htm</u>
- <u>https://blogs.sap.com/</u>
- <u>https://www.sap.com/india/index.html</u>
- <u>https://www.guru99.com/what-is-sap.html</u>
- <u>https://www.guru99.com/introduction-to-basis.html</u>