

SAP - Basis

Basically SAP System ko administer karna or we can say maintain karna so SAP - Functional consultants can use this system.

- Jo SAP ki login screen mein different server configured hote hai wo unko manager karta hai
- System Administrator will give you user & password

T Code - Transaction Code - Commands to hume execute karne hote hai unko code.

How to enable T Code Visualisation.

Extras → Settings — Display Technical Names

#

User Menu

Manually Assigned to user
Specialised Menu.

#

BASIS Consultant can Create a customized user acc to user authorization & Access.

Favorites

Specific Codes (T) You can add in fav tab

Favorites → Add.

Can also create folder.

T Codes

/n

Cancel Current Transaction

/n xxxx

Run new transaction directly from another transaction

/o

Display overview of sessions running.

/o xxxx

Initiate the specified transaction in new session

/mend

Ends log on Session with Confirmation

/n ex

" without Confirmation.

. / i

Deletes Your current Session.

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/o Display overview of sessions running.

/o xxxx Initiate the specified transaction in new session

/mend Ends log on session with Confirmation

/mex " without Confirmation.

/i Deletes your current session.

Multiple Logon.

- Log on with same User
- Log on with Different User.

Multiple Sessions - Different screens same User.

→ By default 10 sessions are allowed.
→ BASTI Configure it ↑

If you already are logged in & other system you are logging on through other system it will generate a Caution.

Help

Application

Library

Glossary

Release Notes

SAP Service Marketplace

Create Support Message.

Find help

→ F1 (Meaning & Technical)

→ F4 (possible Entries).

SAP - System Concepts.

Client
Controlling Area
Company Code
Organizational Unit
Position
Sales Organisation
Division
Plant
Storage Locations.

Client Highest Level

Controlling Area -

Company Code - Smallest Entity that perform its own like Balance Sheet • Tax, Salary payment. External Accounting

Org Unit Department — production
QA & Control
Marketing

position — Head of Department.

Sales Organization - Organizational Unit Acc
to Sales Subsidiaries of
a Company.

Division - It can Represent Group of
product Line Services.

Plant - Physical locations from where
material & services are distributed

Storage Locations - Place where materials
are stored.

Master Data

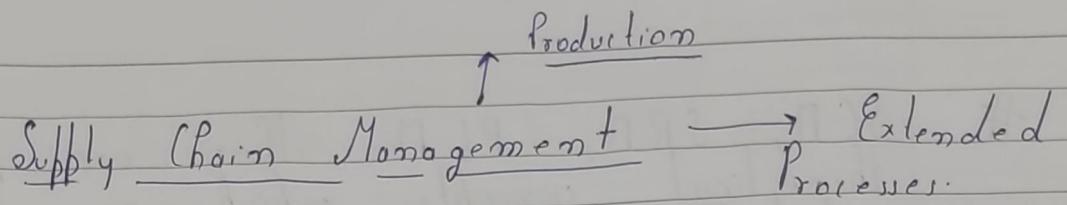
Main Repositories where data is placed which
is used in different concepts.

Different Organisation to different Data.
(Chahiye)

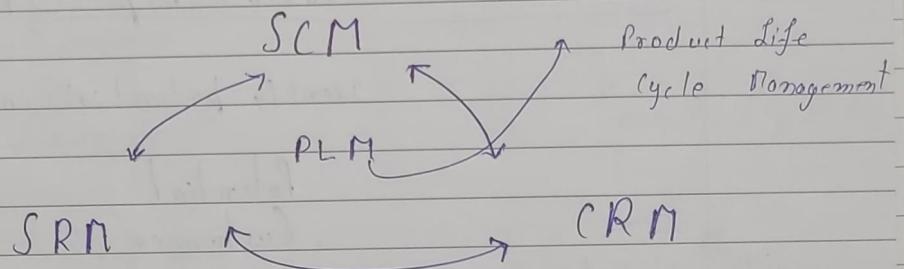
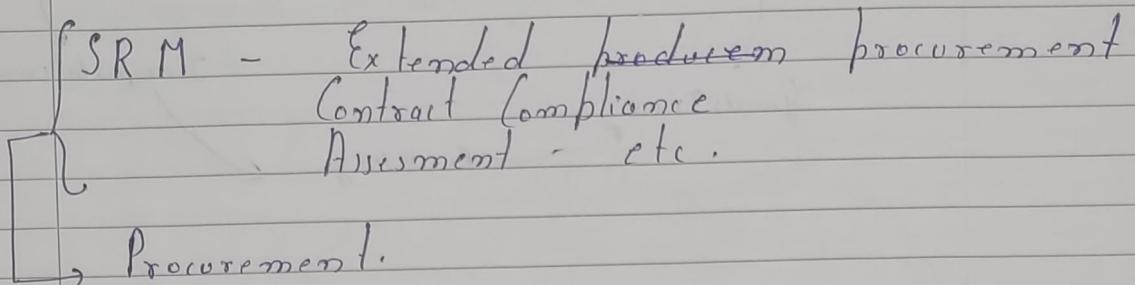
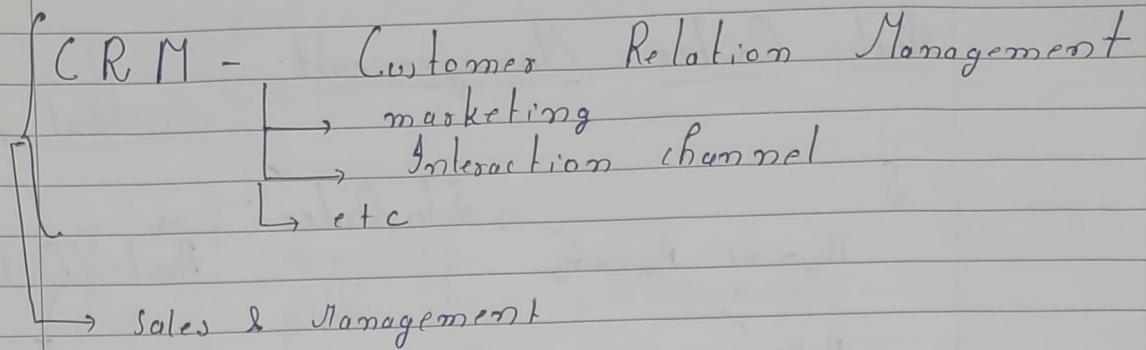
Material No., Tax, Salaries, Unit of Measure
Delivering plant, Tax Categories, Sales Unit

client

sale org &
distribution chan

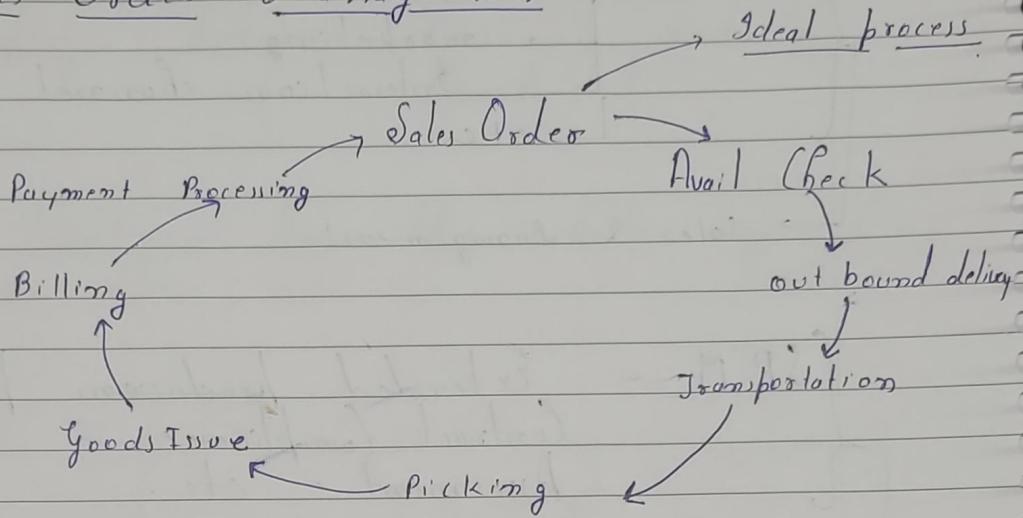


Extended process : Advance Planning Sales,
Sales planning. Advance feature



SCN, SRN, PLM these are just theoretical concepts, which are implemented by modules like MM;

Sales Order Management



Customer Relationship Management

Identify potential customer

Potential
Customer

customer
Retention

Acquisition } gain
customer

Services

— / —

Main Capabilities:

Analytics → Marketing
Sales
Service.

Financials:

Financial Accounting
Financial Supply Chain Management
Corporate Governance
Management Accounting

Credit Management

Electronic Bill Presentation
& payment

Treasury & Risk

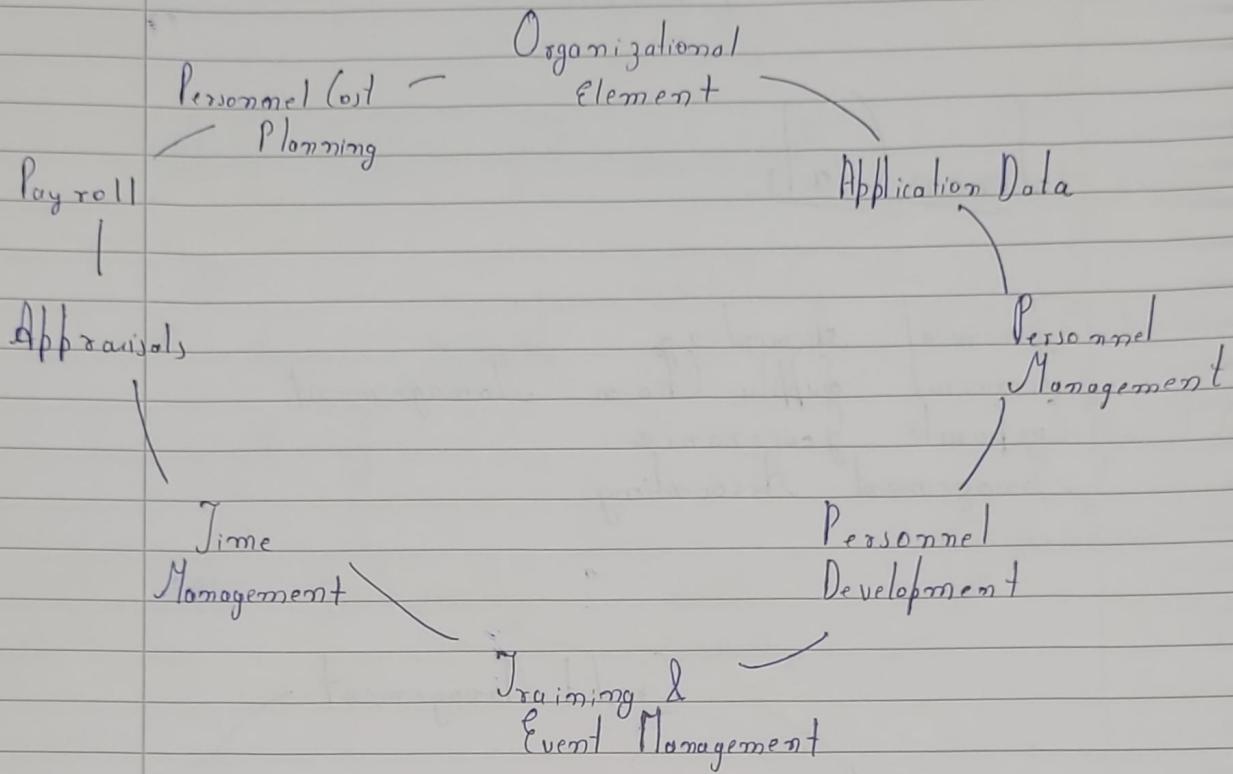
Collections Management

Cash & Liquidity

Duplicate Management

Inhouse Cash

Human Capital Management



Analytics & Strategic Planning

We have data stored in tables so compare data gather valuable insight.

— / —

Analytics

Business
Intelligence

Analytics
Applications

Enterprise Information
Management

Data
Warehousing

Enterprise Performance
Management

Governance,
Risk and
Compliance

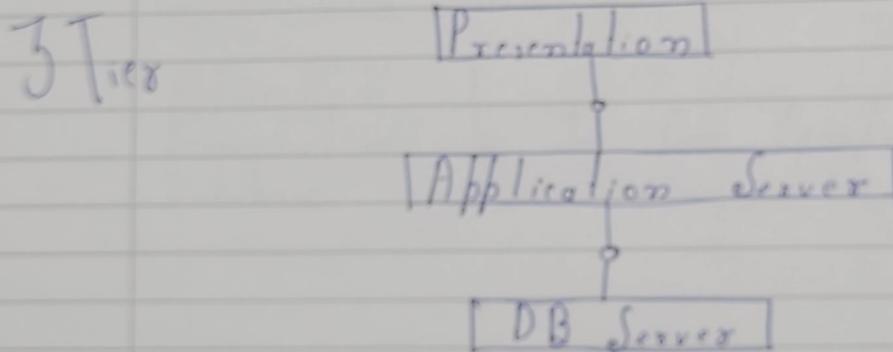
Netweaver - Platform or Technological Infra
Structure for all solution.
You can customize SAP.

Elements:

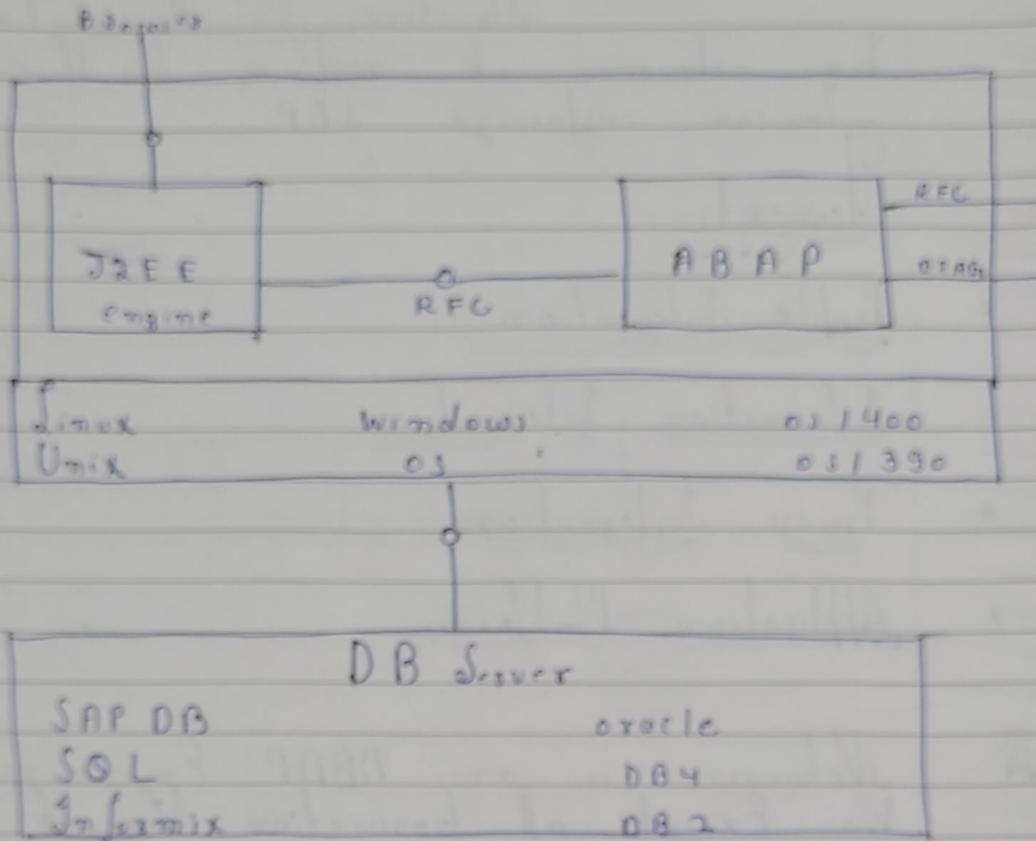
- * People Integration
- * Information Integration
- * Process Integration
- * Application Platform

★ Netweaver is an ABAP Environment
We Execute all transaction through ABAP

★ Runtime Env = J2EE Engine



RFC → Remote Function Calls.



High level View

Presentation

SAP GUI

for
Windows

for
Java

for
HTML

Application

ABAP Dispatcher

TICM

Work Process

Database

A BAP

SAP Architecture (Client / Server Architecture)

Single Tier

Application
Presentation
Database } In One Computer.

Two Jier

Presentation } 1
Application }

Database } 2

for security, Risk
Management

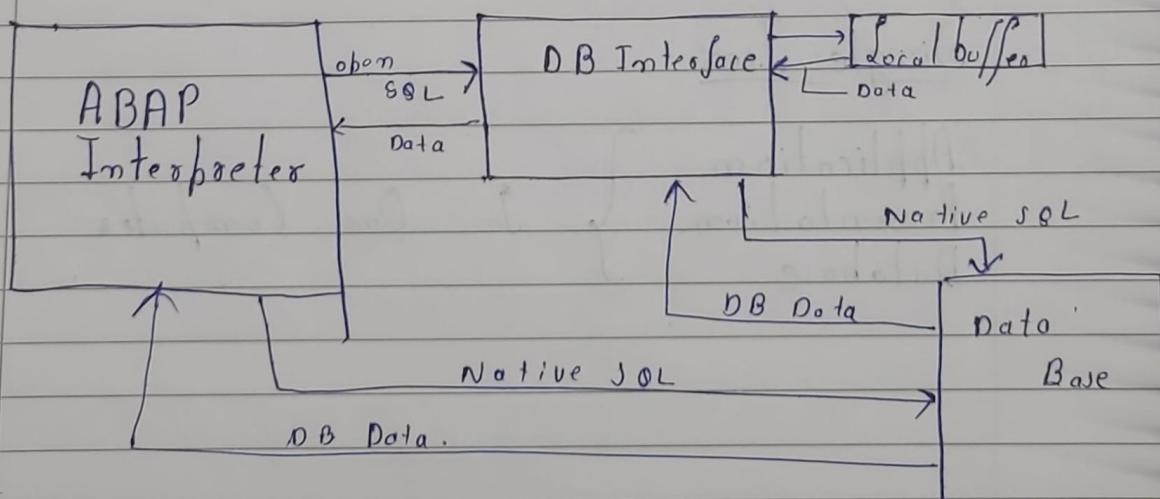
Three Jier

Presentation } 1

Application } 2

Database } 3

DB Query



Work Process

minimum 2

D

Dialog - Jo User ki request hai wko manage Karna.

B

Background - Background process jo interact kare bina user ke saath execute ho
(minimum - 1)

E
F

Lock Management - DB mein shared data ko manage kare
(minimum - 1)
only one

V

Update - Jo Update in DB ki reg unkao handle kare

S

Spool - Data flow from server to printer.
minimum - 1

Ext. Server

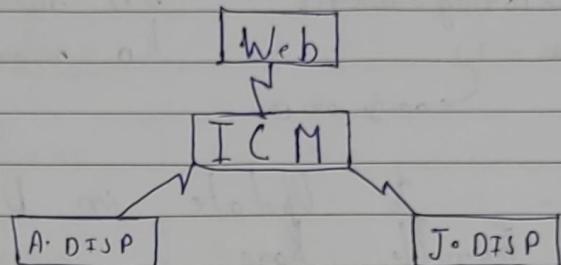
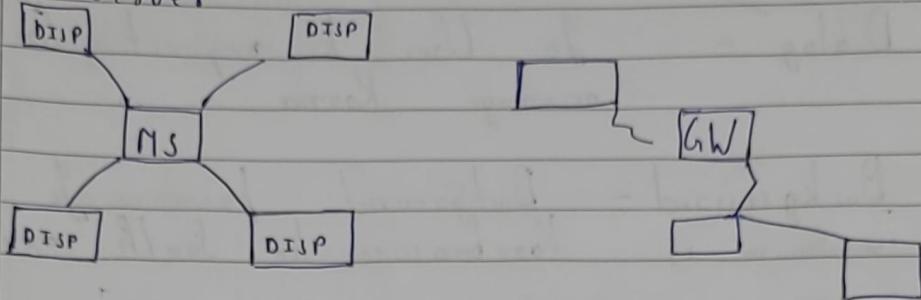
Message Server - Communication b/w Dispatcher

Gateway - Connection b/w SAP & Non SAP System

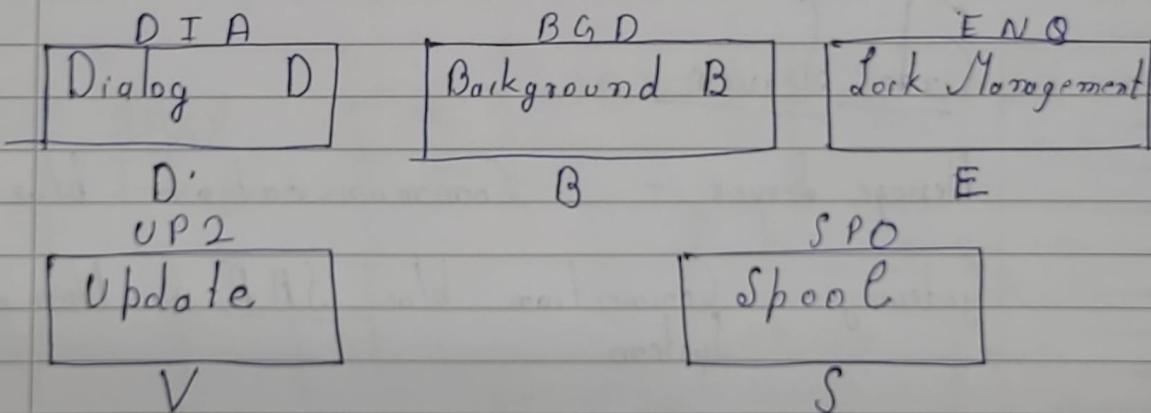
Internet Communication - Internet Manager

Web → Access through dispatcher

ABAP Message
Server



ABAP DISPATCHER





Dialog Processing

#

Each Application Server has ABAP Dispatcher

Dialog
WP-0

Ab Ye free hai ABAP Dispatcher Assign
Karega

↓ Input → VO Process or User Direct

PAI (Program After Input) → Process

Karega → time laggya

PBO — Process Before output

→ Send back to dispatcher → Screen
WP process free ho jata hai.

This is Kind of Multiplexing.

Work Process

Memory	Screen Processor	Memory
ABAP Interpreter		ABAP
Database Interface		Database

Database & SAP Transactions

We know

- A - Atomic
- C - Consistent
- I - Isolated
- D - Durable

Different Work Process may access the DB at same time You need to take care.

Enqueue Process

Locking process Management for SAP

Concept is similar If You want to read do it.

Any Change in DB is Lock Assisted.

There is a lock table which see that if lock is there

Communication b/w Dispatcher is through MS.

* If maintaining system it is possible
that unnecessary lock are there so,
BASIS Administrator will Delete Lock
Carefully

Update

During Commit Data is transferred to DB
through Update work process.

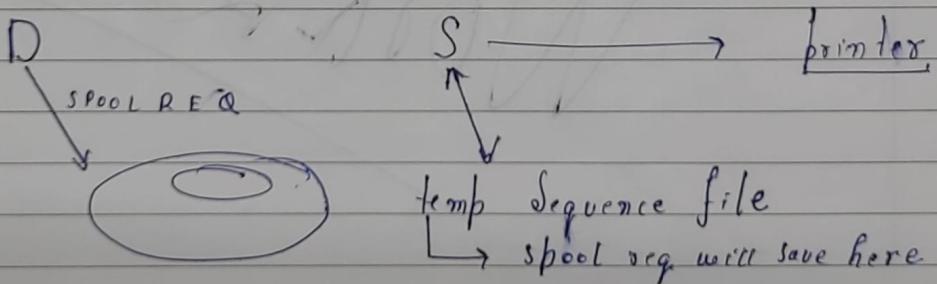
PBO → UP

D-I Asynchronous update only this will do

* Some funda behle lock assign hogu then
jis ko data odd Karne ho; tho data is
stored in temp table VB* table.

Spool

A) Enables output from SAP



Background Process.

Scheduling Background Jobs.

For a long time we cannot busy the Dialog process cause this is not good so for us so for a long process it is shifted to BP.

There is a parameter so that user may not take much of Dialog we can set

ABAP

WorkBench



SAP Systems Data Structure

Client is a self contained Unit in an SAP system.

Client 100

Application data (Orders, Invoices & So On)

Client Specific Customizing (Company Code, plants, storage locations)

User (Authorizations, master data So-on)

Cross Client Customizing

Repository Objects -

→ Table definitions, Programs, Transaction, Functional Modules)

System Landscape & Transport

* Three System

→ Transport Group

Development - SAND, TEST, COST

Quality Assurance - QTEST, FRNGI

Production - PROD

* * As a BASIS Consultant You will also
be responsible to transfer the System
from different Landscape

Transport Req is Generated will
contain all objects Req basically

Project Manager - Create Transport Request.

Where they are different task assigned to different peoples.

Once it all the task are completed it will be released.

R / Repository Objects.

Different objects like lists, data - these are ABAP files that can be executed.

* Developer key is required to do any ABAP Related task and that key is provided by BASIS Consultant

ABAP Workbench Tool

- ABAP Editor
- ABAP Dictionary
- Object Navigator
- Screen Painter
- Function Builder

How we can see code which code is currently Executing

At a transaction.

System → status → see Repository data

ABAP Dictionary

ABAP Dictionary does not hold an actual data it holds the data definition

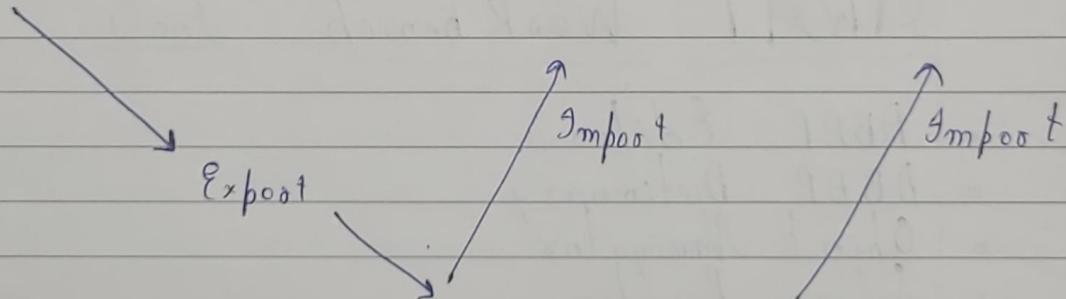
View's you can use to definition creation.

Export & Import Into Systems

DEV

OAS

PRD



Importing depends upon how System is configured → by Transfer Admin

Software Dev Cycle:

Analysis / Design → Implementation →
Testing → Administration.

(Communication & Integration)

* Cross System Business Process.

↳ Different Systems have different You want to combine info of systems.

HR Data in One platform
FI Data in ERP

You want to tally same Com happen b/w Companies in collaboration

1. ALE - Application level Interface
↳ Application Link Enable.

Whenever we are transferring data we need to define ALE characteristics means characteristics of what it is carrying

Data Elements

Process - Internet Sales with mySAP CRM

Identify the info to be transmitted - which data from where to where

Format of Data

Transfer Technology

Transfer Type - asynchronously every 60 sec.

Objective

Remote function Calls and BAPI.

Basically through RFC, we can use function modules in other system. or Ext System will create an Interface.

RFC can be internal too.

BOR & BAPI

Business Object Repository & Business Application Program Interface

BO



has method



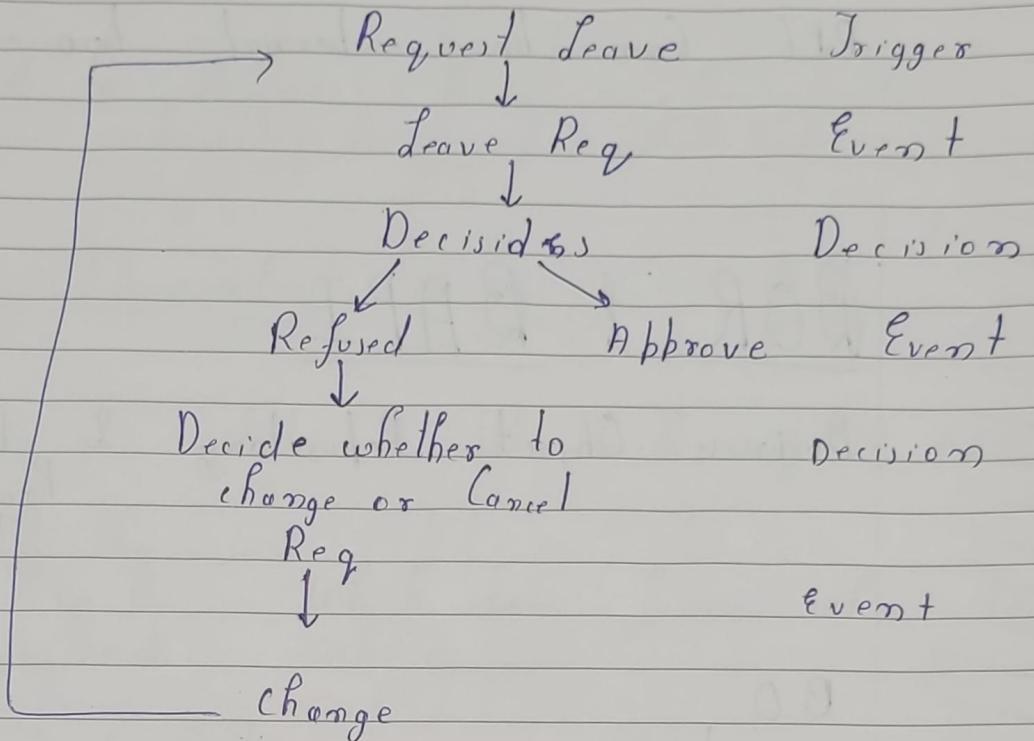
BAPI

also be executed as RFC.

Business Workflow

Break Business process
Tracking
Improve Efficiency.

Ex



Designing a Workflow is Designed
by ABAP Consultant.



Three Steps of Data Migration

- Extract Data from Legacy System
- Convert the Extracted data
- Import the Converted data in Legacy System

System Administration Tools

User Administration - You can Create Role. We can also have authorizations.

→ Security

Daily Tasks in System Management

★ Imp Transactions:

- SM04 - User List Logged in System
- SM51 - Display Application Servers
- SM37 - Background Job Overview
- SM50 - Manage Work Processes
- SM12 - Administer Lock Entries
- SM13 - Manage Updated Records
- SM21 - Analyze System Log
- RZ20 - Cross-System Monitoring

You can use Solution Manager for SAP we have so much in Landscape so we do it.

→ See You Can download it from SAP Market Place.

UDEMY

SAP

Basis

SAP R3

R3 means it has 3 different layers. -

- * Presentation - GUI, RFC, HTML, Web services
- * Application - Application Server 1, 2, --- n
- * Database - Database Tier.

Different SAP Instance Different Architecture style.

STD - ECC

Presentation

SAP GUI | Web GUI

host A

host B

host C

Application

central instance 00

Dialog instance 02

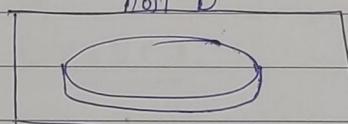
Dialog instance 03

Dialog instance 01

Dialog instance 04

Database

host D



This whole is on SAP Instance of ECC we can copy it -

Each host is Application Server

Central Instance - They have message server which communicates b/w different dispatchers in Application Layer

Dialog Instance - You know what it does takes Input from user & do the task.

Each Instance has its own dispatcher

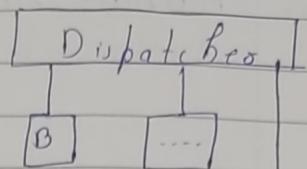
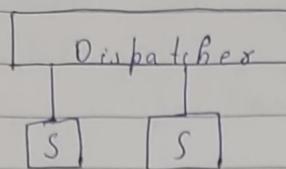
Application Server → 2 Instances means it has 2 Dispatcher

Message Server Communicates b/w all the dispatchers.

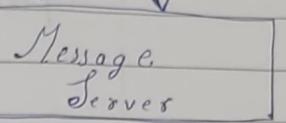
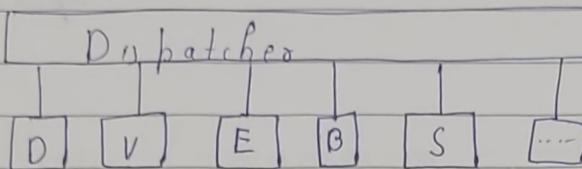
SAP Instance

Instance A

Instance B



Central Instance C



Enqueue Work Process is
also there in Central only

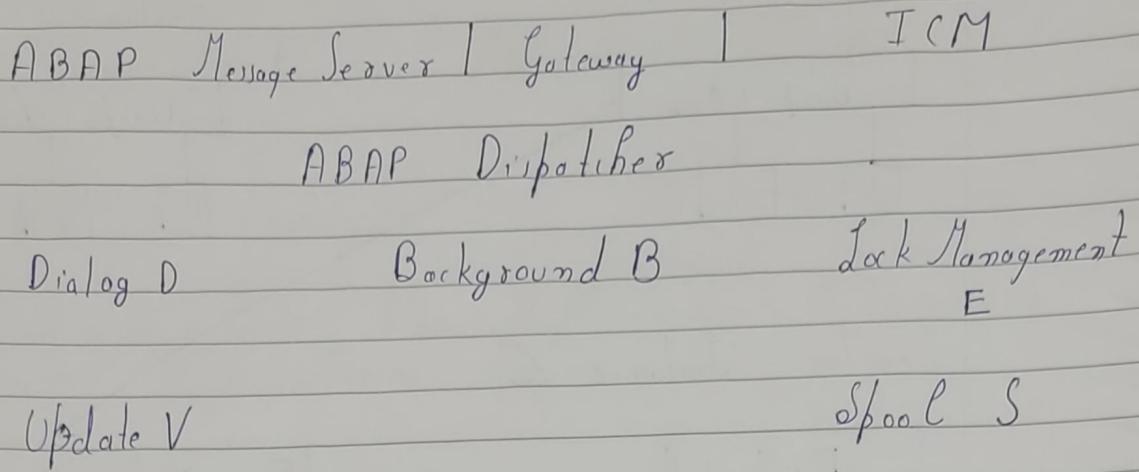
Message Server

Gateway - Connect SAP System

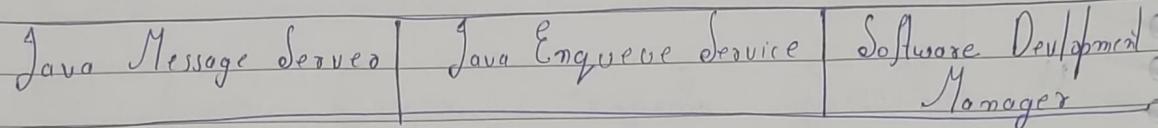
Internet Communication Manager - You know.

Application Server

* ABAP Processes



* Java Process



Java Dispatcher

Server Process S

→ Can Execute Large no^o of request
in parallel.

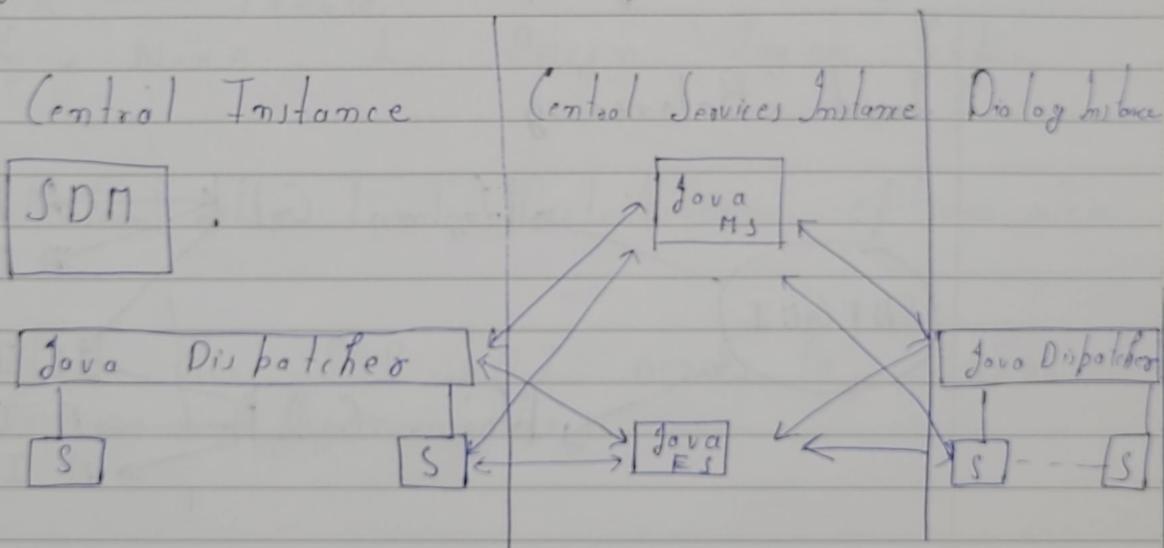
Maximum = 16 S per Dispatcher

Minimum - 1

- * When You log on to SAP Instance using SAP GUI then MS will allot you a dispatcher acc to load.
- * But You can also directly access the particular instance without MS. That is also possible.

New Connection → {Custom Application Server
→ Direct Connection
Group / Server → Message Server ke through

Java Architecture



* So Conclusion

You can have only ABAP Architecture

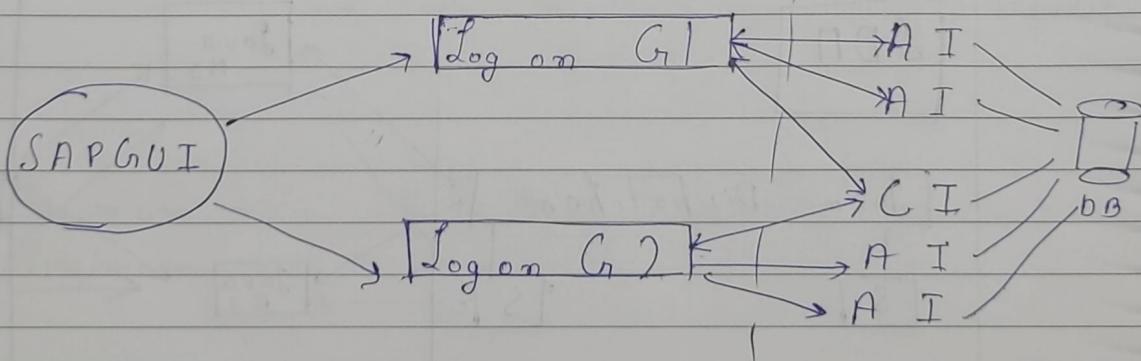
Java Architecture

ABAP + Java Architecture

→ Agar Ye hai toh we have connection like RFC JCo.

Log On Group

Load Balancing



Companies may also divide the Group on modules Basis.

If we have many RFC calls we can create a separate system Log on to this.

Configuration - Easy.

* Create a Group - SMLG

→ SM51 → Instance Check.

F8 - create.
Give Name & Assign Logon Job.

We have also Load Distribution option also.

Now this SAP GUI need to configured to use a logon Job.

- # Remember we need to update port
drivers with message server → windows
→ So that windows know where message server
is working

SAP-GUI → Grp Server

Description -

System Id - ECC

MessageServer - Either name or IP of central instance
(choose Grp) -

For specifying which user can logon
to which grp we can update
that data in user master profile
to authorize them.

Each for WP will have P.I.D.
we know Process Id.

ABAP - Lock Management

You know abt Lock Management.

Lock table in main memory

We know - ?

* One Enqueue WP is there only for one SAP System.

= It is also possible that we can also create a lock on specific field of a table not whole data

803 → My own personal Info I can Edit in master.

[S001 → create or modify User]

[SM-12 - Lock Entries]

[SM-04 - User List]

* Same as update — Net fundamentals

V1 — critical update

V2 - Non Critical update

= SM13 — Monitor updates.

SPO2 — See Spool Reg Your own.

SPO1 — Entire SAP System
Spool by BASIS.

Background Job

You know

[SM 36] — create

[SM 37] — View.

Gateway

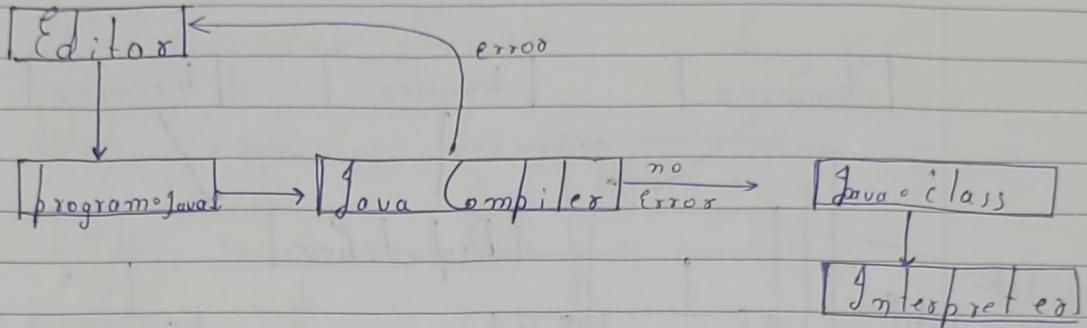
- # We use to communicate one SAP system to others.
- # Also we can configure b/w Instance.
- # We can also add Gateway as an instance.
- Will be using gateway for RFC & CPIC.

Web Request - using FCM

You know covered in fundamental

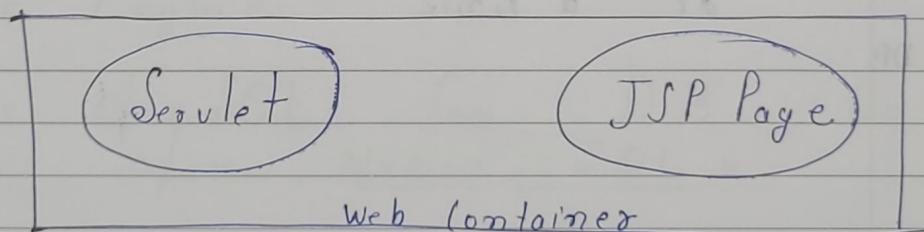
SAP JAVA

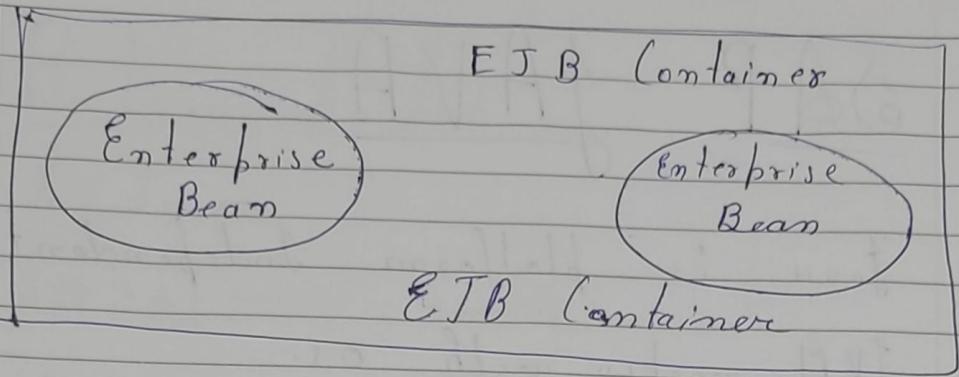
- * Java is platform Independent
- * JVM works with os.
- * Compiler & Interpreter



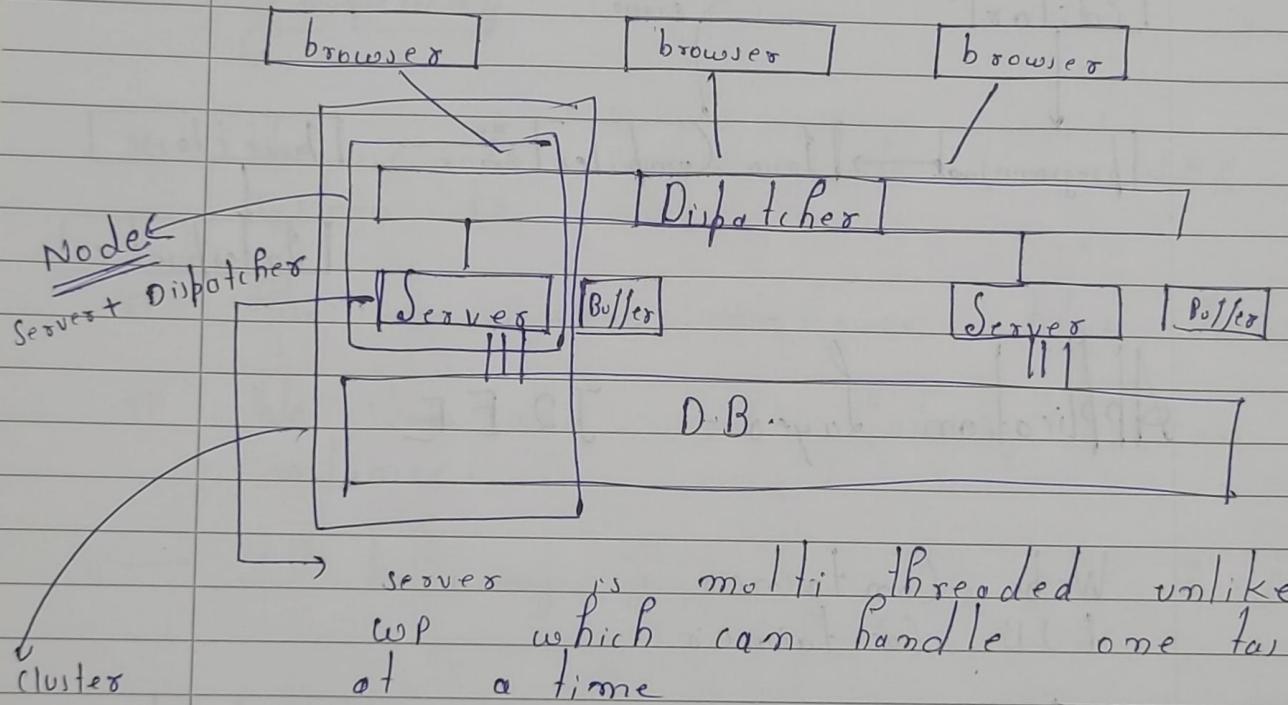
Application layer - J2EE

Web Container
EJB Container

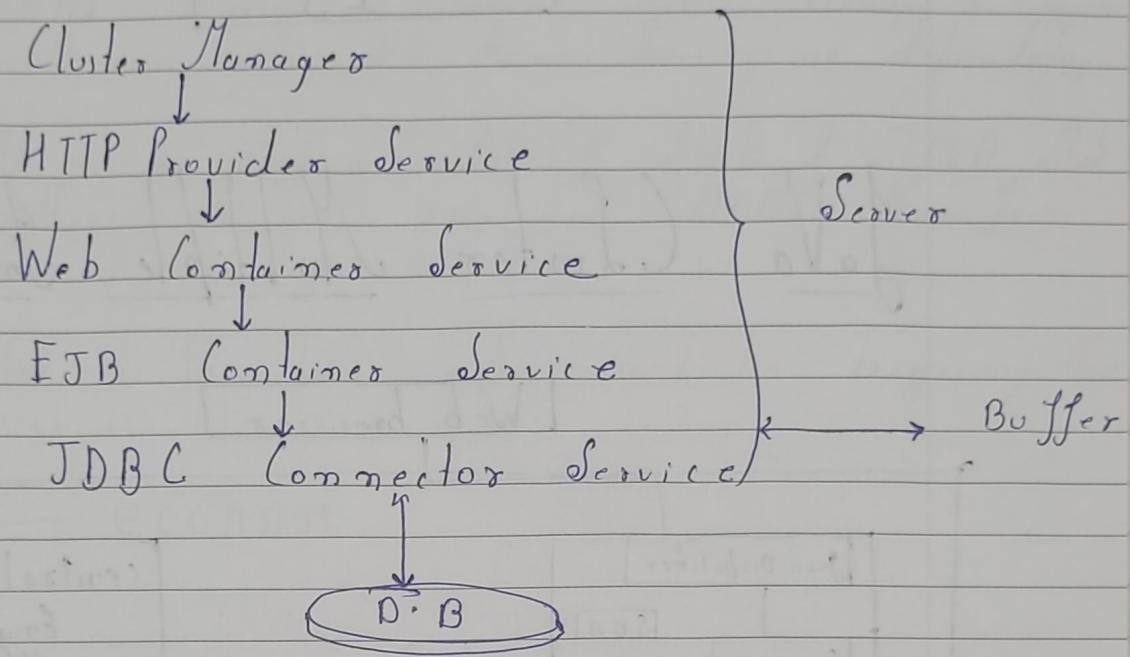
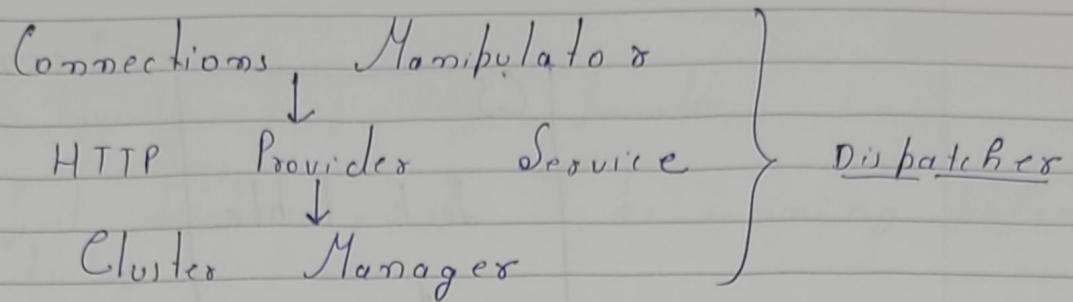




Java processes



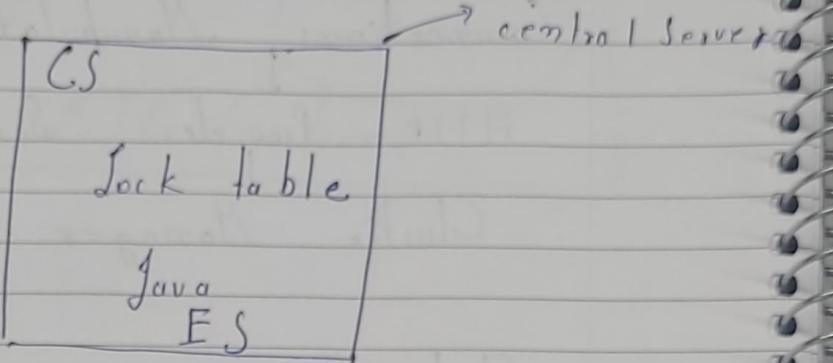
Processing



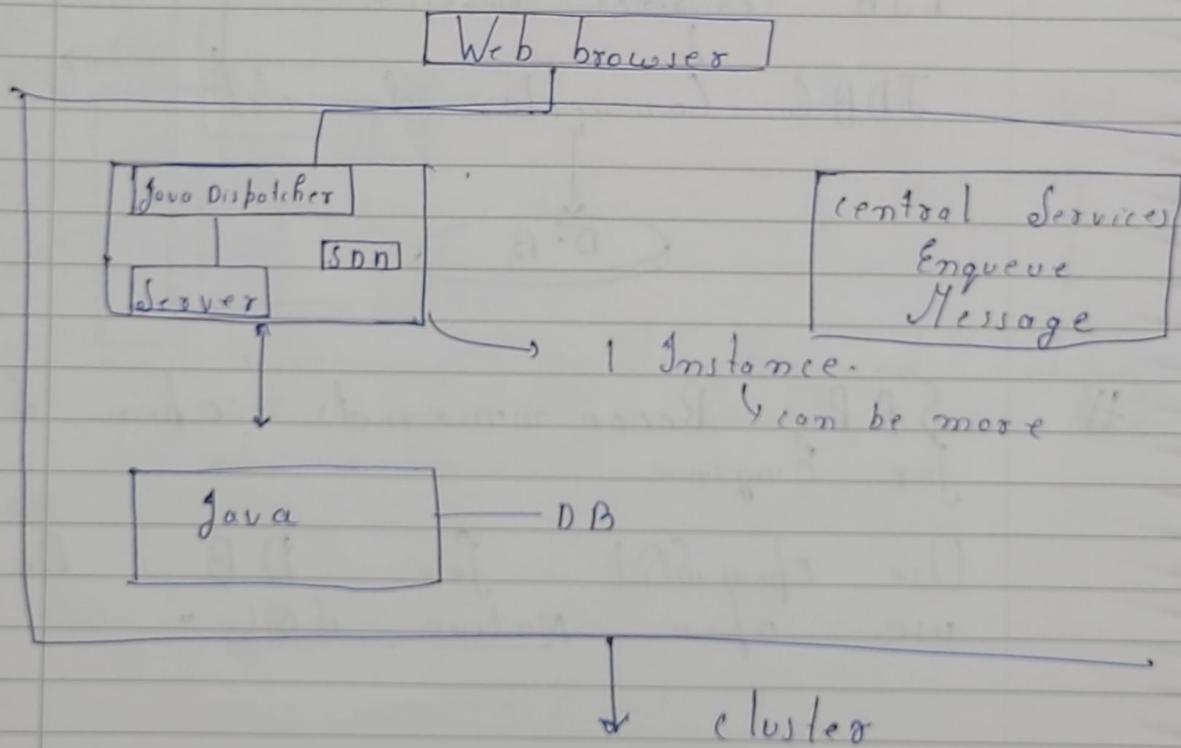
SAP recommends open SQL
for Engine

Use openSQL for DB Do Not
use open Native SQL.

Java Lock Management



Java Cluster Multiple Instance



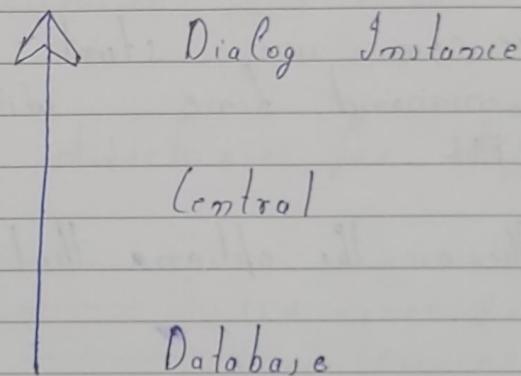
SAP Stack

So basically keep these points -:

- > first database needs to be running before dialog Instances.
- > ABAP Central Instance like Message & Engine will run before DB because there is no dependency.
- > If in a System ABAP Stack & JAVA Stack is there You will run first ABAP then Java.

Who is the one who will be Triggering these services.

→ ECCADM



We Can also Configure http

Http://<hostname>:5<instance_no>13

Https://<hostname>:5<instance_no>14

To Manage Your System we have installed in our system.

Access of MMC through Web

UNIX

We can use start sap & stop sap in command line with DB, R3, J2EE, ALL

These are the options, that we can use.

Tasks before Stopping SAP

ALO 8

- > Logged on users — SM04; ~~ALO 8~~
- > Background Jobs — SM37
- > Batch Input — SM35
- > An Active or Planned Jobs
- > Any Jobs triggered by Ext system
- > SM13 Updates

* Send System Messages — SM02

↳ You can send this to Everyone who will log into system will see popup.

SAP Start logs

So In an instance we have directory work we - :

have different directories for different Errors.

stderr — std error file

sabstxtsm01rc — trace files of program

dev-ms — Trace file of message server

dev-disp — Trace file of disp.



odisp / trace = 0	No Trace
= 1	Trace Error
= 2	Full Trace
= 3	Data Blocks

Profile Parameters.

System Log → SM21

System Parameters

- * Profile → It is a file that keeps all the info about system configuration to set a system.
- * When we install SAP system we are having

Start bootstrap
Default //
Instance //

- > Start - All the info req to start SAP
 - > Default - Info which will be common to all Instances. Global Parameters
 - > Instance - Specific to One Instance.
- # It is also possible You can overwrite the profile value.

View Profile Param - in SAP System

Program - RS PARAM

RZ11 — T code for a specific param

Run a Program T Code - SE38 or SA38

Program - RS PARAM

Maintain Profile Parameter

S-1

Import profile parameter from os level
to SAP Level

S-2

Use RZ10 Edit profile

S-3

Save profile — in database.

S-4

Active that profile

~~X~~

You can see the change once you restart system.

Operation Modes-

In day → More Dialog Process

Night → More Background Process.

1/1

Op mode Day						Op mode Night				
D	D	D	D	B	B	D	D	B	B	B

Setup

S-1 Create op mode = Day , Night

S-2 Setup WP distribution = D D D B B B D D D B B D
for Instance

S-3 Adjust WP distribution = D D D D B D D B B B B

S-4 Define Schedule

~~Create~~ → 8204 → create new

Instances / operation mode — click after saving model

Generate based on current status.

settings → Based on current status > new instance > generate.

* Double Click on the opr mode & set system accordingly

* SM63 — OPY Mode
CALENDAR

Manually Switch — RZ03

Top → Control → switch opr mode
→ All Servers

→ first choose opr mode

* If a user is in a op & it's suppose to change it will wait for process to complete.

Java Tools

1 Config Tool - DB must be running
Java VM configuration
Restart NW Java
Used to execute central instance in Java

2 SAP Netweaver Administrator - DB must be running

- Display Java VM
- Manage Properties
- Starting & Stopping clusters, elements
- Starting & Stopping Application

3 Visual Administrator - P4 Port Configuration
Remote Configuration
Starting & Stopping

4 Shell Console - Telnet
Remote Configuration
Starting & Stopping Service
Stopping and As Java

X.509 Digital Certificate

See In a digital Certificate is kind of like a passport on the web;

Used to Authenticate a system

Contains Info like

Subject

Public key

Issuer

Validity

Version

Serial Number

A Portion of P. Key is also there.

Issued by Certifying Authority (CA)

Ex fcs

CA & Enrollment

- * Public & Private Key is Generated on a System
- * Public Key will be sent to CA for Certificate Signing Request
- * Send back to Requesting Device.
- * Import that Certificate into Your Server

SAP → We have additional steps of Verifying that we can do • we can find process in SAP Market Place.

SSL — You Know.

Setting up HTTPS

Generate public & private key

Generate CSR Request

Send CSR Req to CS

Import CSR Response

Assign a Key pair for the use with Specific SSL Port
Change Startup mode for SSL providers.

J2EE Visual Administrator will do this.

Data Structure

You know in a Client we have different data All the things are Separated.

Client :- Application Data
Client - Specific Customizing
User

Cross Client Customizing .

Repository Objects - Table definition, Programs
Transactions, function modules

→ Same in All Client

→ Any Change will reflect in all Client

Transport Request — Very Imp

A very imp concept in Landscape. Basically TR Tracks all the changes that you are doing in a system once you have the system we can also we to assign task. & then Project manager will release a TR.

Project Manager can assign Task with TR

How these task are built.

SEO9 — Transport Organizer

So basically for modifying object A TR needs to be released. Then only you can modify.

Work Bench Request

Repository Changes, Program Changes, Table structure New Table

Customizing Request

Customizing Req

Performing

Assignment to request

Customizing finished → Release Task

Release Request

Transport in System Landscape

Dev & Customization
DB

Export

Quality Assurance

Auto Import

Manual Imports only
to be performed by
Administrator

Prod.

ABAP - Repository

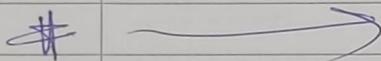
So basically ABAP Repository include:

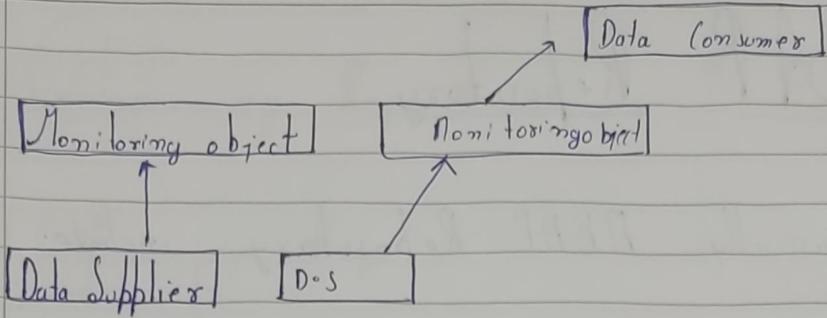
- Tables
- Programs
- Functional modules

If we modify any object we need to register with SAP and it's also a task of basic Administrator.

CCMS → Computing Centre Management System.

Basically ek aisa central system in which I can monitor, see, if an alert occurs with help that provides cross-system detailed info if an error occurs.





We have different data supplier which supply data at one place.

RZ20 → Monitor CCNS Alert

* Basically we can configure how much should be response time & then we can figure out. Improve it & then clear Alerts.

These are basics just Intro Now. You need to choose a field that you can go deep into.

Create Your own CCMS - Monitoring

RZ20

Extras → Creating new monitor

Choose → Activate maintenance function.

Create a monitor or monitor set

Select Your monitor from list & add
It will give You option to add Monitor

You need to adjust Params. - Select the monitor
& go to properties.

SAP System Trace:

Trace functions

SM21 - System Log

ST22 - Dump Analysis

ST01 - System Trace

ST05 - Performance Trace

ST11 - Developer Trace



* If you want to check where files are stored.

Environment > SAP Parameters



Different AS Lock files

System Log > remote system Log

Dump Analysis:

If error happens during execution of program then it will give you ABAP runtime shoot dump.

- * This dump is saved in a DB Not in OS as a Raw file.
- # You can see short Dumps today & Yesterday

System Trace

- To start system Trace we could go to
S T O I
- We can use to check User their T code & can find. Auth check & many things
- * For Tracing the user You must be log on to same Application server.
- * Always Switch off Trace before Analyzing
- * BASIC Mainly focus on Authorization Trace

* It is similar to ↗

Performance Trace → More detailed

See which executed command

Used by developer to Analyze in detail task.

CCMS - Remote System Integration

ECC → ECO
↓

* We need to create a user in ECC client 000 to monitor it.

RZ21

Technical Infrastructure

Configure Central System

Create ISMREG User

Remember to keep the password in hand

ECC

R221 → Same Thing.
Same Password

ECC →

R221
Technical Infra

Configure Central System → Create Remote Entry

RFC Connection - ECC

↳ MSG

A B A B connection → create

✓ RFC Destination - ECC CLNT 000

✓ Technical Settings = Target host -

Logon & Security user, password.

RFC helps us to communicate b/w different SAP System so we need to pass through Gateway

Through Gateway You Can Control RFC

Setup RFC

- > System Id (which system to log in)
- > User Id & Password

Logon from ECC → ECO

RFC → ECO CLNT 001

Server - IP : 192.168.10.53

Instance : 00

Client - 001

User Id :

Password :

ECO - we need user Id & Password

Create RFC User - SU01
Logon data - User type - Communications Data.

Now in ECC

SM 59

Destination

Connection type

Description

Target host - Server IP

Logon & security → client
User
Password

Test RFC

Job You can check.

Cross System Business System

Suppose HR System is managed separately

Suppose You want to pay employee this
is a Business work process needs to be
integrated b/w HR & SAP system

ALE - Application Link Enabling.

This allows us to do the same means
we can have a Business Process
Across System that we can Manage

SAP - Printer Configuration

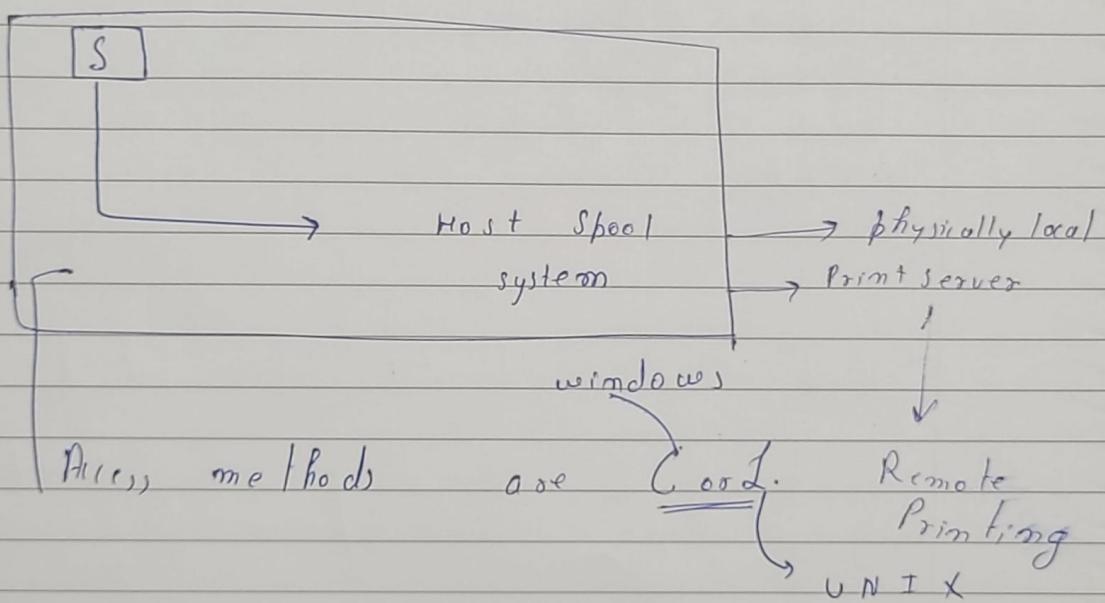
Spool Request is generated independent of printer settings

Spool Req is saved \Rightarrow TemSe

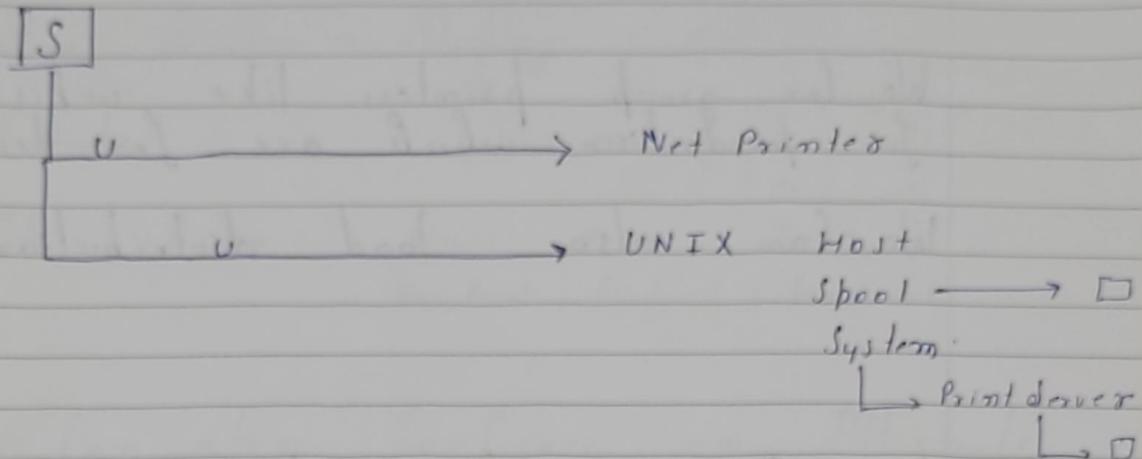
TemSe contains actual document content of spool request \Rightarrow Temporary Sequential object.

SPA D

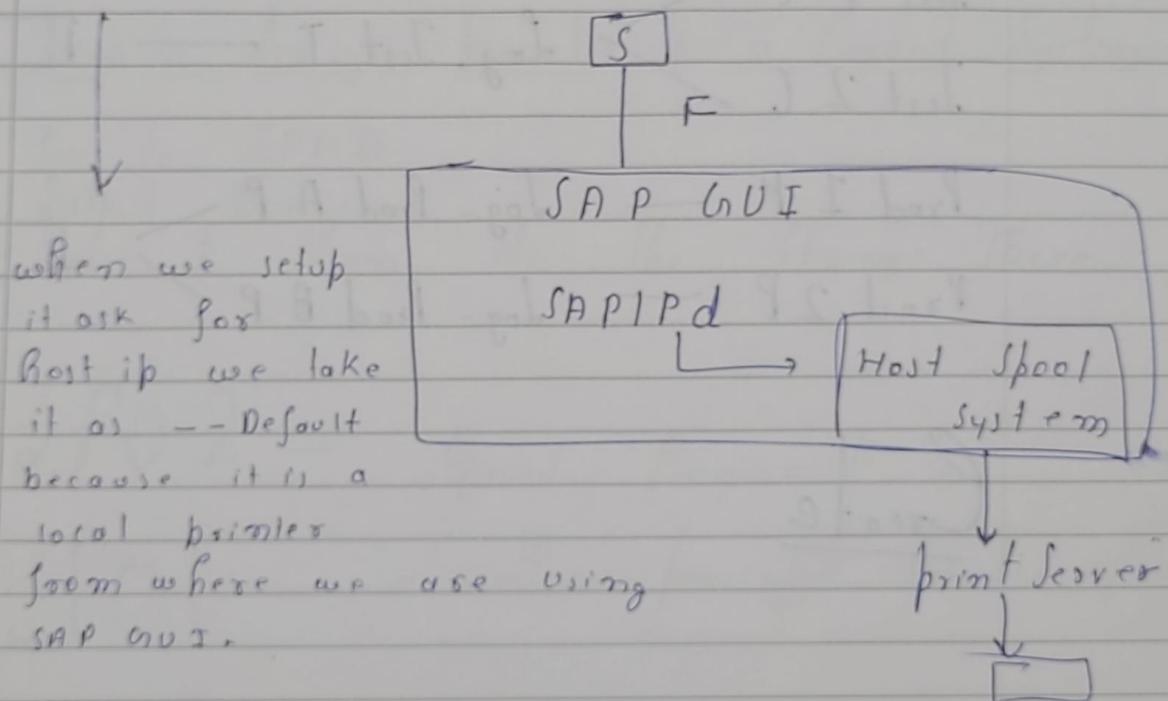
Local Printing



Remote



Front End - F Access Method



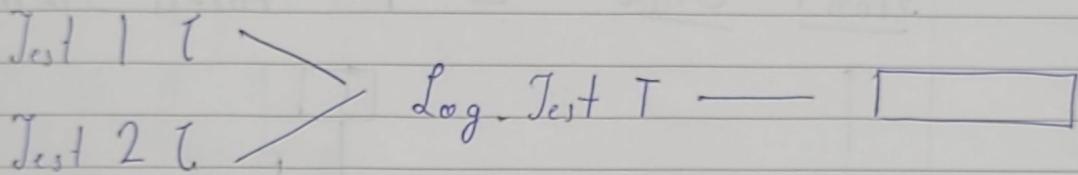
Logical Spool Server

We can group printers like which are for production which are for test right

We can also load distribution

Output Device Logical Server SpoolServer

Gullip



Prod 1 P — Log- Prod A P

Prod 2 P — Log- Prod B P

Create

SPAD

Spool servers - Display

Create

Class choice - Mail, Prod, Test
Many prints, less print, few prints

We can also Configure an Alternate Server so suppose if an AS goes down we can switch it to Alternate server

How to Assign printer to a logical system

Go to SPAD

Output Devices

Edit & then do the Change These

SP02 - Spool Request

SP01 → More powerful printer option

SPAD

Spool Servers - Display

Create

Class choose - Main, Prod, Test
Many Prints, less print, few prints

We can also Configure an Alternate Server So Suppose If an ~~is~~ goes down. we can switch it to Alternate server

How to Assign printer to a logical system

Go to SPAD

output Devices

Edit & then do the change There

SP02 - Spool Request

SP01 → More powerful printer option

Delete Old Spool Req

In Dialog using transaction SPAD

Schedule regularly in background
RSPO1041

Background WP or Job

A job that we want to run in background is

- ABAP Program with Variant
- External Command
- External Program

Agar koi aesa program hai jismein humein koi input dena padta uske liye we can create variant.

— / —

You can also have priorities with jobs

Class A

Class B

Class C

Since we can have more Application Server.
so we can also save which AS to use

Scheduling Criteria

- Time - dependent
- Event - dependent

★ Job specification
★ Job Steps
★ Start Conditions } Procedure

SM 36 — Scheduling

SM 37 — Monitoring

Status

change is possible.

Scheduled - Created a job but start condition is not defined

Released - Job condition defined then you released it.

Ready - Starting condition is met
Now its ready in Queue.
waiting for WP.

Active - Running (We cannot change job)

Finished or Canceled

Program with Variants

RSPFPAR — Program Input lets Jp
rdisp / rsc *

SE 38

Write the name of program

Display Variant

Create Variant

fill if the Parameter & It will be created.

Go to SM36 Create Job

Go to Steps & add the details.

Save it then add Start Conditions.

Save it Again

When You Copy a Job its status is released You need to define its Start Condition

Old Jobs

SM 36

Job bar > Std Jobs

Default Scheduling

Event Based

We Can Create Nested Jobs

We Need to create an Event.

↳ SM 64

We need to go to SM 36

Start Condition After an Event

★ How Can I Trigger an Event.

Predecessor Job → ??

Starting Condition — After a job.

Opr Mode ??

Starting Condition - Opr Mode.

Event Triggering - ABAP
CCMS
OS
User Event } Possibilities

From OS Level means where our OS is of Application Server is there

Command prompt

Sabevt event = NAME OF EVENT

name = STD

hostname =

mshost = HOSTNAME

com
mand

TCode for Ext Command - SM69

LandScape

SAP Recommends.

Dev → QAS → PROD

You know there are 3 Different objects
& for each system is different

Basis - As we know that changes in
this system is transported via
TR

Configuration also includes ~~Approve~~ (an
approve TR, Create it, Release it. all this
is configured.)

Client Roles

CUST Development and Customizing - Client Settings & New functionality.

QST Quality Assurance - Testing functionality & verifying configuration

PROD Production - Productive Activities & Business Data

SAND Sand box - Experimenting with customization transactions

TEST Test - Testing Configuration settings & using data in a more stable environment

TRNG Training - For End User Training

Client Change Options → You know abt

- * Client Specific Objects
- * (001) Client objects changes. } SCEY

* Changes without Automatic Recording

=> It will not automatically keep track of all changes. You need to create a TR & add the updated object & then you can transport it manually.

* Automatic Rec of Changes.

Make any change TR will be created & It needs to be released.

* No Changes - Self Expl

* Change w/o automatic Rec - No Transport

You can do changes without Automatic Rec but you cannot transport it. Not Allowed.

Cross Client object changes.

- As You know we have two things
- Cross Client Customizing objects
- Repository Objects

We have different options among these only.

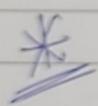
ECAIT & CATT Allowed.

→ Automated Testing using Scripts.

Restrictions.

Lock the Client due to Client copy

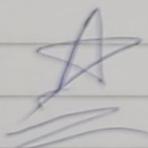
Protect Against SAP Update.



In Production System No Change is allowed

Right but there are some things,

Exchange Rate, Interest Rate which can
vary daily SAP allows to change these
objects.

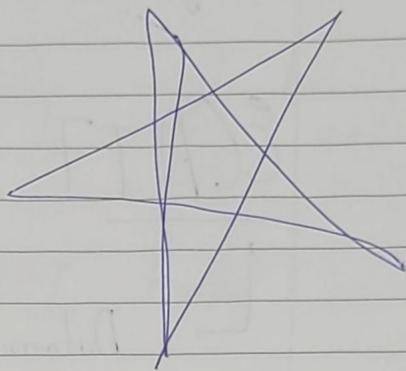


— / —

These objects are stored in table OBJH

Even though we have some of the option restricted.

Setup

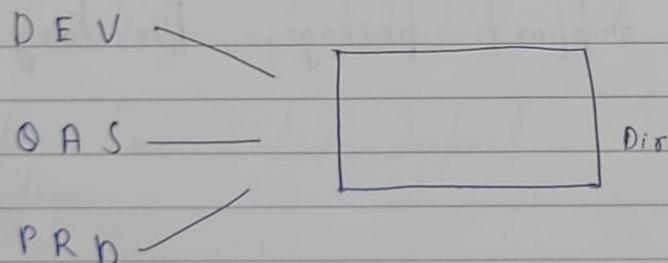


Time

Prerequisites

- * Before SAP System and DB installation
 - Define network structure for SAP System Landscap
 - Install hardware & OS for SAP System
- * During SAP System & DB Installation
 - Create one common directory for Transport which save all TR files.
- * After
 - If You have setup SAP using DB Copy. Initialize the change & TO SEO6
 - Setup TMS.

Transport Dir



This directory will be shared by Every SAP System

You can see the directory using AL11
 DIR_TRANS = /usr/sap/trans.

It is located on a Central Server where all system can access this directories.

BIN - Configuration of TMS

BUFFER - Transport Buffer means all the TR which are requested to be Imported

DATA - files of TR all parts of object related to a TR is saved here

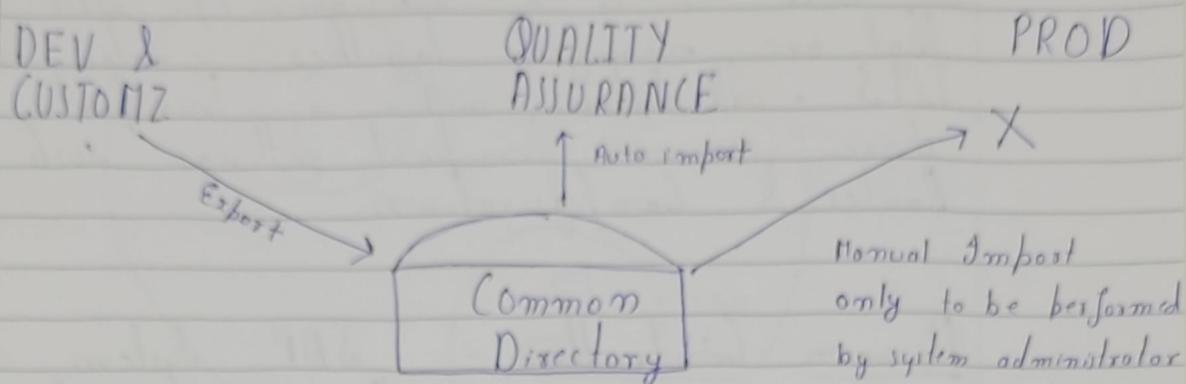
COFILE - Info ref to TR ; Type of TR, Object Class, Import Step Required.

Log - Who created, Who Released

TMP - Temporary data & log files

EPS - Support packages Directory.

Transport Sequence



So basically all the systems are Controlled Centrally. If we have different landscape

→ we can have our own Landscape like we have breadth in plan. we can configure it according to.

→ Scheduling of Imports.

→ We can also Import TR from different System.

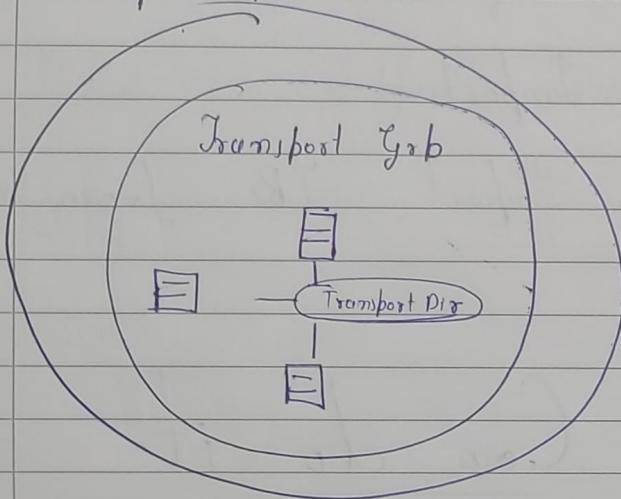
TMS Can do it

Transport Domain

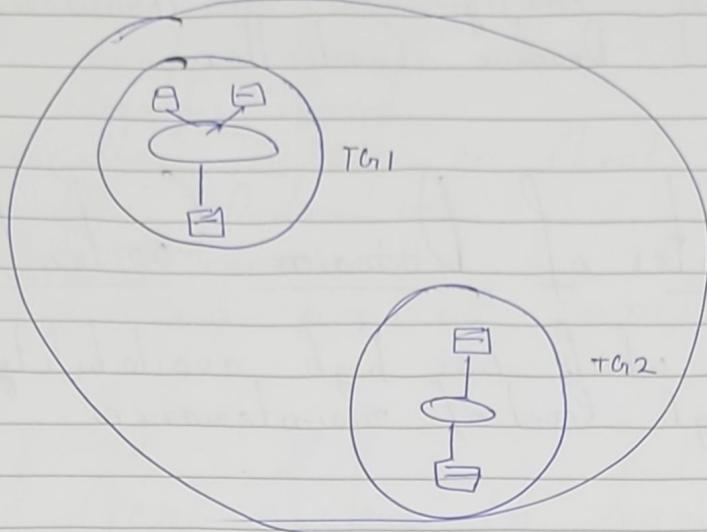
In SAP it is a collection of SAP systems that are managed together under the TMS. All systems within a transport domain share common transport settings such as Router & Configuration.

Domain Controller - SAP system where all TMS configurations are maintained & changes are distributed across all systems in landscape

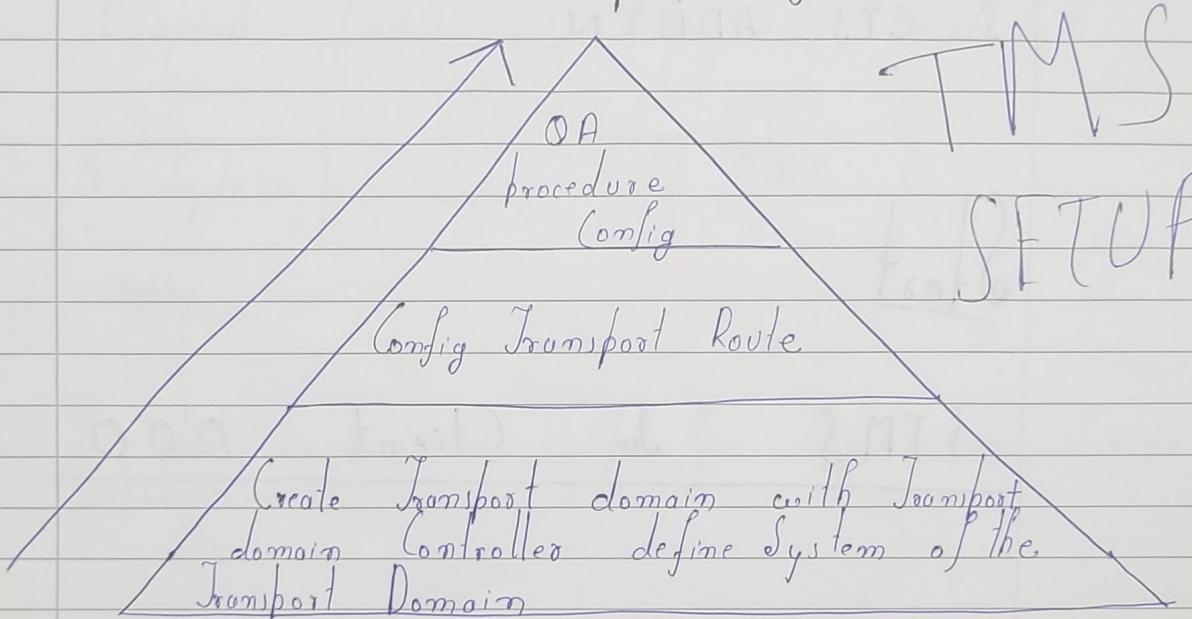
Transport Domain 1



Transport Domain 2



To figure out or set up a Transport Domain we need to add all system we need to be a part of it.



#

In General first system which we are going to start config STMS is considered as Transport Domain Controller.

Attributes of Domain Controller

System which has high availability & security & high level of maintenance



Quality System is not a good choice of Domain Controller.



For TMS Configuration we need Authorization S-CTS ADMIN

Start

STMS In Client . 000

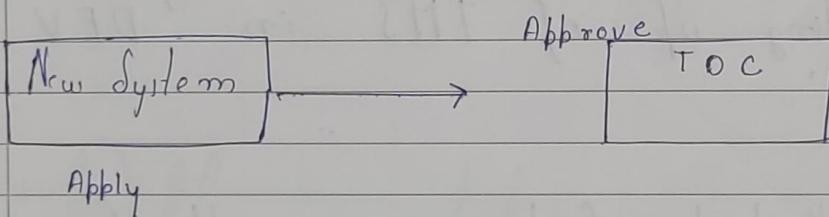
If You are using it first time then ..

- Assign the SAP System as TDC
- Create Transport Domain Name
- Create Transport Group
- System User TMSADMIN in Client 000
- Create RFC Destinations
- Setup Domain CFG & TP <domain->.PFL
in directory bin of transport directory

Add New System in Transport Domain

We need to configure both the existing & new System

* New System will send a req to Your Domain Controller to be included



You also need to specify Application Server Instance.

Entire SAP Landscape should be in same support pack level or we can say same Release.

RFC are settled up in Landscape among system so they can share configure settings as it is only controlled by domain controller.

→ TMSADD - RFC is used for uncritical act

→ TMSSUP - RFC Access Manually critical actions



At Starting we cannot have PRD system so for time being we can Create a Virtual System for Setting up of TMS in DEV & QA.



In Virtual System we will have Transport Queue which in future can be used to transfer to Prod System.



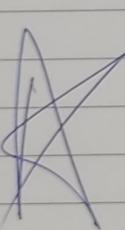
We can have a Backup Domain Controller.

Transport Route - Role of each SAP system of path & flow of Transport Request

export / import

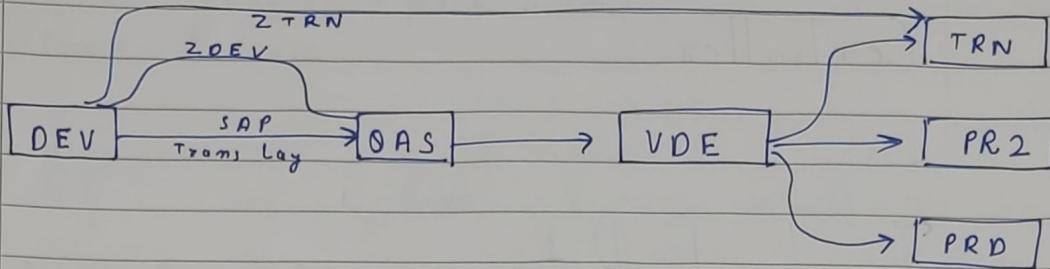
Consolidation Route = for exporting, means whose development system creates
Export → DEV to QA

Delivery Route - Import only
QA to PROD



Difference b/w Transport layer & Transport Route.

Complex SAP System Landscape



Imp points.

★ Transport Route - It's a path along which transport req blue system takes place.

Ex Railway Track blue Cities.

→ Consolidation Route - Vo Route Jismein Testing ho Yaani DEV to QA

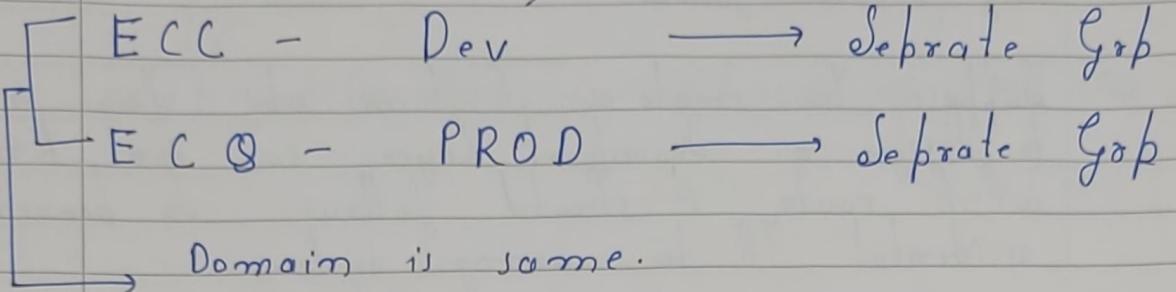
Src System - Integration System

Target System - Consolidation System

→ Delivery Route - Used to Deliver tested TR from OAS to PRD.

Setting Up

Domain Controller



Separate Grp means separate dir (Transpart)
got it.

First You need to check whether You
can reach Server across right can use
Ping to check.

Domain Controller

Client 000

User
Password

★ STMS — Pop up will confirm to
be a domain. Only comes
when it is not configured

Check on Controller Overview System You can see

- * Add ECO to this Domain

Login to ECO Client 000

Configure — Include system in domain.
— fill the details & user is TMSADM

- * DC has to accept this request. So we can see from ECO also we can see systems.

- * Now in ECC — DC

Overview in System select it & Approve it.

- * By default it will come to a separate Transport Group.

- * Once ECO is in domain You cannot change only domain Controller can do it.

- * Always Domain Configuration is stored centrally whether its Diff or Same Transport Group.
- * Grp we can change in Communication in chan
- * In STMS top You Can See Transport Request Route Make Configuration Save it distribute it
- * Lets check RFC which was Automatically Configured.

SM59 — See RFC Connections.

- * Suppose You want to manually in system Config distribute.
- * Extras — Distribute & Activate Configuration