Capgemini

SAP BASIS Introductory Training Program

Day 10: Agenda

Client Concept : A refresher

Break

Client Administration Tools

Lunch Break

Concept of Support Packages

Applying Support Packages

Break

Exercise Break Out Session
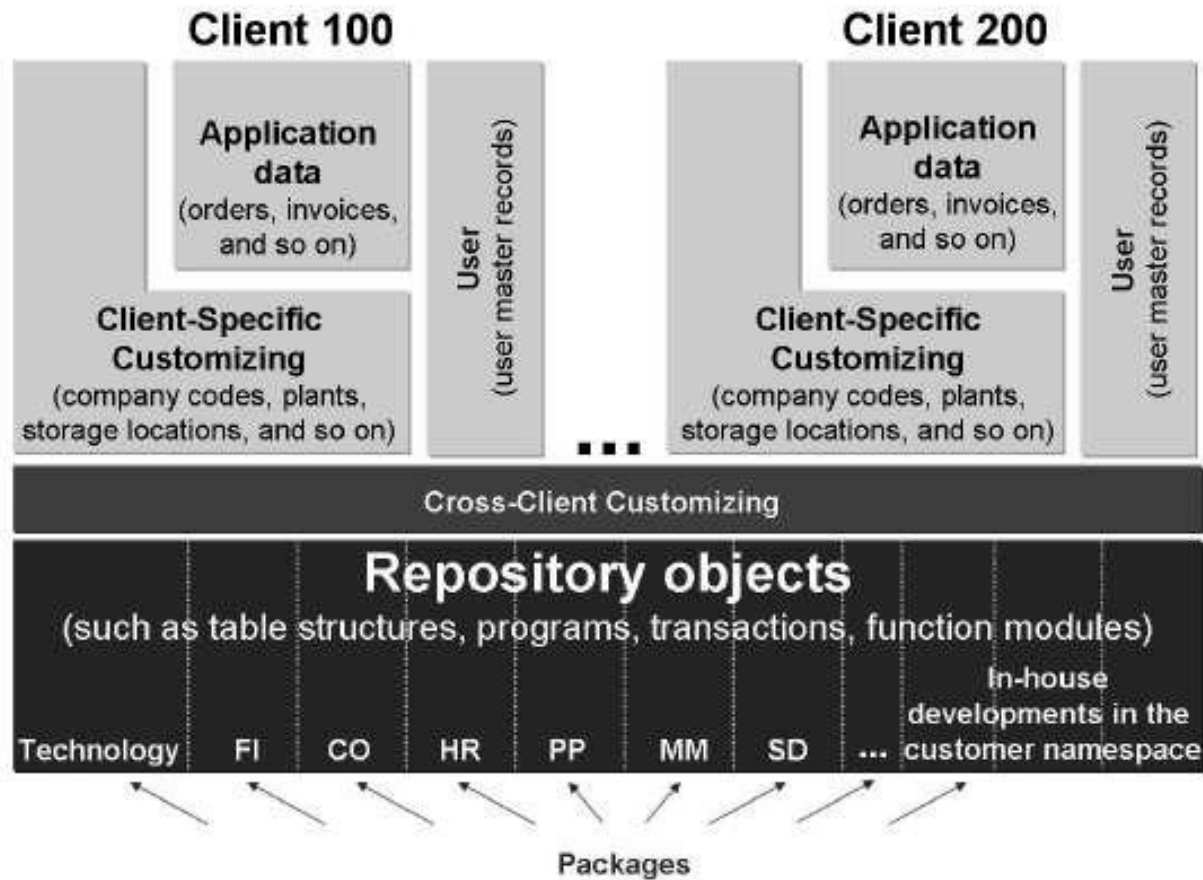
Client Concept – A refresher

What is a Client ?

A **client is a self-contained logical unit in commercial, organizational, and technical terms,**

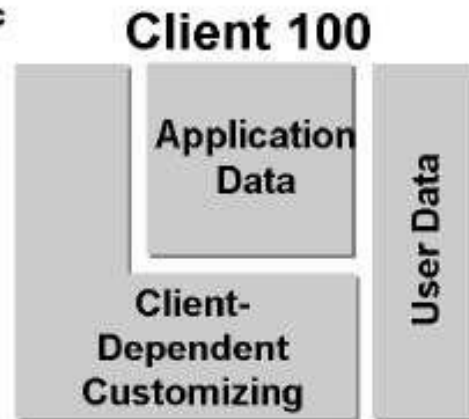with its own user master data and set of table key ranges.

- The Client concept allows an SAP system to perform multiple roles , such as a development system , an integration test system , a customizing system etc with proper table level security incorporated

- Customizing means the configuration of business processes in the system

- The configuration is achieved by updating and adding new entries in what are known as customizing tables

- These tables are specific to a client , and can be identified by the field "MANDT" , which is basically the client number

- There are certain tables where customizing is called cross-client , that means that they do not have the MANDT field.

- Development objects are also called Repository or Workbench objects. These objects are cross-client

- Development objects are typically ABAP reports , Tables structures (not table entries) , Forms , Function modules etc.

- The client number is always a three-digit numeric value. Upon system installation , 000 , 001 and 066 are automatically created by the SAP installation program

- The client concept is realized physically in the SAP database by using the MANDT field. Those entries which are client specific will ALWAYS have the MANDT field entry and this field is a primary key for such tables
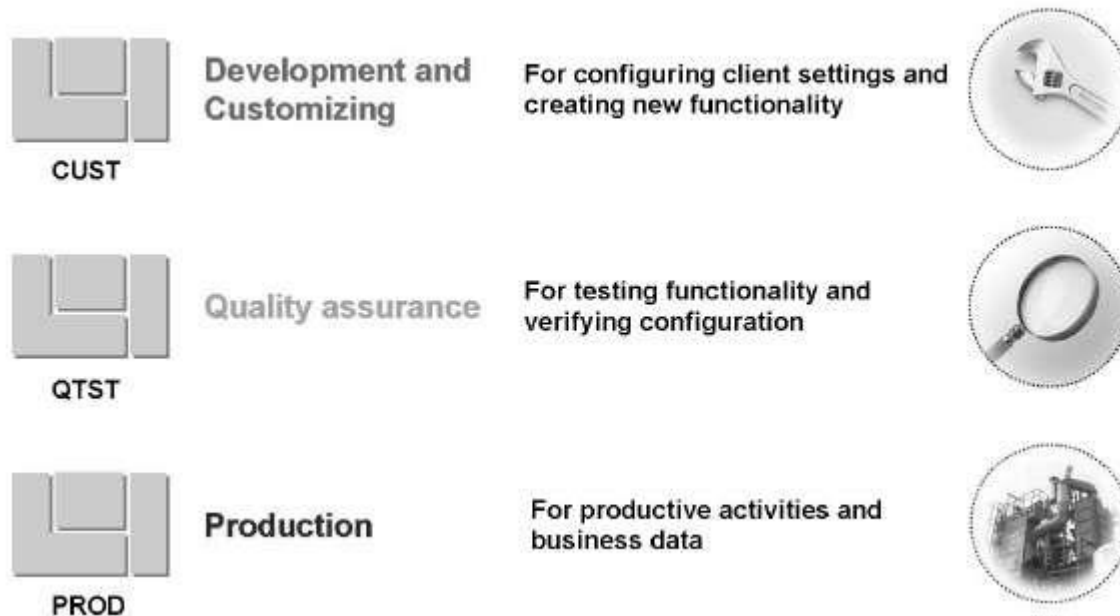
Client Architecture

Client View of Application Data

- A client:
  - Is a unit of the SAP system that is technically, organizationally, and commercially self-contained
  - Has its own set of user master data, application data, and Customizing based on table key ranges

- Technical implementation of clients:
  - All users must log on to a specific client within an SAP System
  - Application data (master and transaction data) belongs only to one specific client

Client 100

Application Data

Client-Dependent Customizing

User Data

Standard Client Roles

CUST	**Development and Customizing**	For configuring client settings and creating new functionality	
QTST	Quality assurance	For testing functionality and verifying configuration	
PROD	**Production**	For productive activities and business data	

- Client CUST, development and customizing, is the central customizing client where complete adaptation of the SAP system to customer-specific needs takes place. All changes performed in this client are recorded

- so they can be supplied to the other clients using the Transport Management System (TMS).

- Client QTST, quality assurance, is used to test and verify the new customizing settings in the application.

- Client PROD or production is the client for production activities, that is, where your company's business is

- carried out. Customizing changes imported into this client have to be first tested carefully in the QTST client in order to ensure that production operation is free of disruption.

Additional Client Roles

Sandbox — SAND

For experimenting with Customizing transactions and settings

Test — TEST

For testing configuration settings using data in a more stable environment (unit test)

Training — TRNG

For end-user training

Additional clients within a system landscape may include:

- A sandbox client to experiment with transactions and settings.

- A test client to verify customizing changes against sample data in a more stable environment. This can be done by 'copying' customizing settings from the customizing client to the sandbox client. This is called a unit test.

- An end-user training environment.

- A client that satisfies customer-specific requirements.

Break

Client Administration Tools

Client Administration Tools

- System Change Options (SE06)
  - Set restrictions for individual components
- Client Maintenance (SCC4)
  - Maintaining system clients
  - Creating new client
  - Modifying attributes
- Client Copy
  - Local client copy (SCCL)
  - Remote client copy (SCC9)
- Special Functions
  - Special functions (SCC1)
  - Delete client (SCC5)
  - Table Analysis (SCU0)
- Client Transport
  - Client export (SCC8)
  - Post-process import (SCC7)
- Client Copy Logs (SCC3)

Setting System Change Options
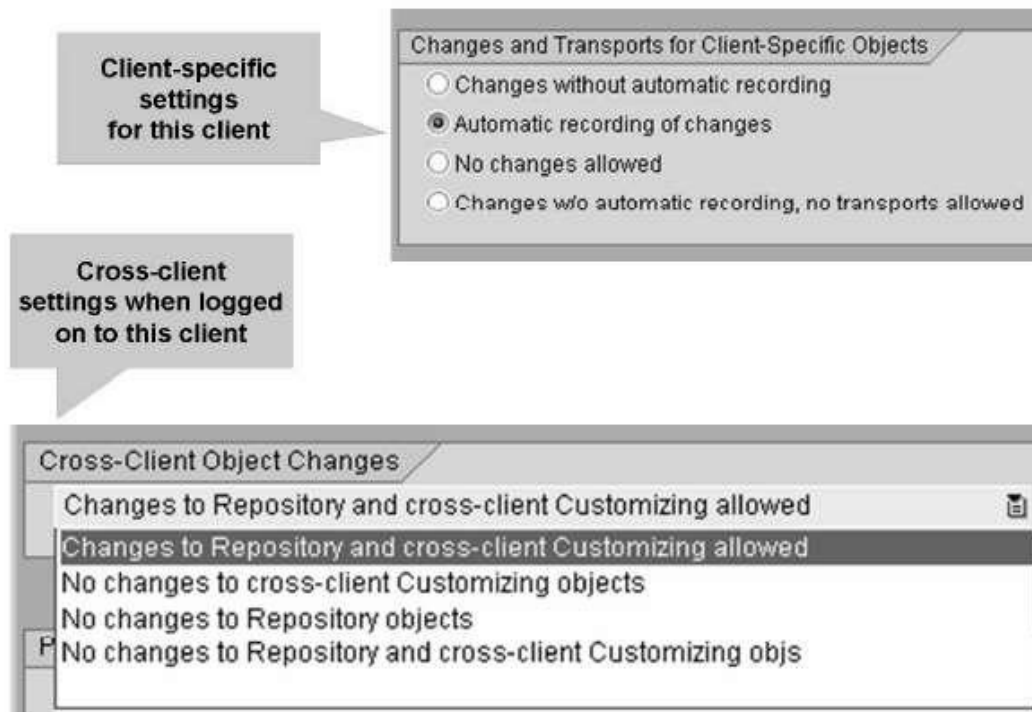
System Change Options

Global Setting		Modifiable	

Software Component	Technical Name	Modifiable	
Cross-Application Component	SAP_ABA	Restricted Modifiability	
SAP Application Platform	SAP_AP	Modifiable	
Logistics and Accounting	SAP_APPL	Restricted Modifiability	
SAP Basis Component	SAP_BASIS	Restricted Modifiability	
SAP NetWeaver BI 7.0	SAP_BW	Modifiable	
Human Resources	SAP_HR	Restricted Modifiability	
SEM-BW: Strategic Enterprise Management	SEM-BW	Modifiable	

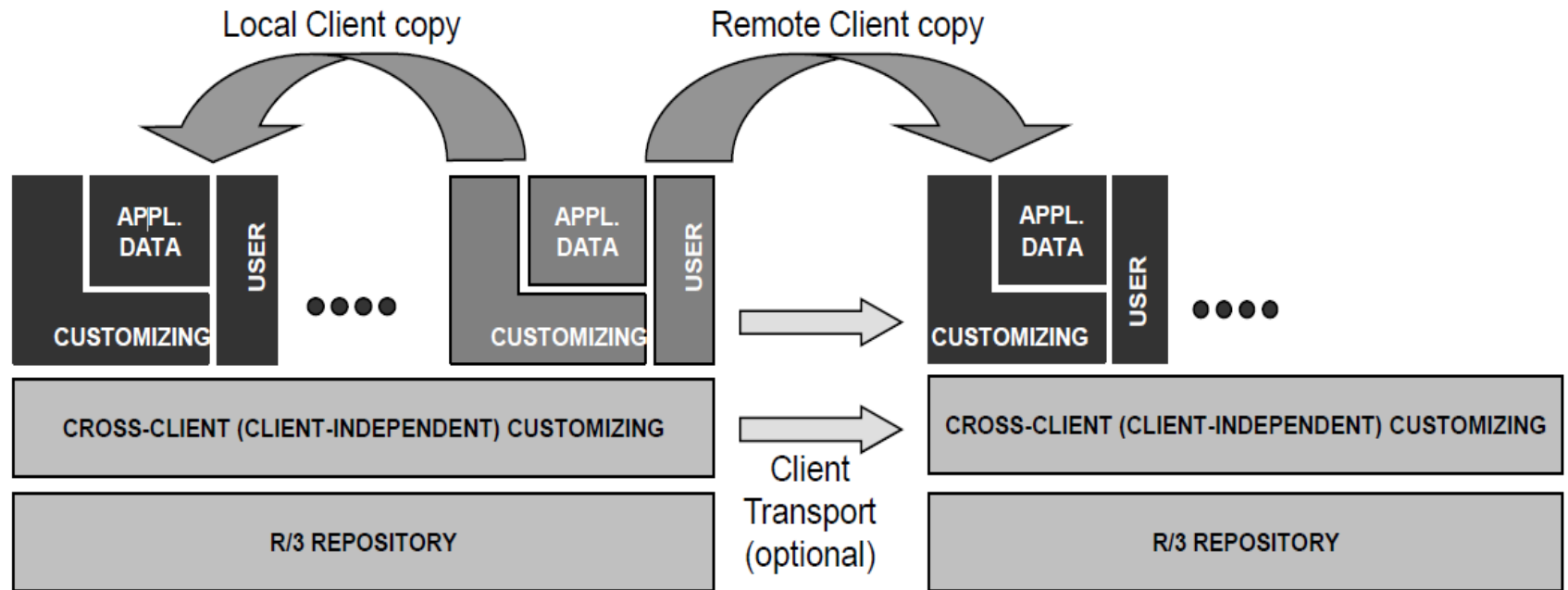| Namespace/Name Range	Prefix	Modifiable	
Customer Name Range		Modifiable	
General SAP Name Range		Modifiable	
IS-M: CH Version		Modifiable	
		Modifiable	
		Modifiable	
		Modifiable	
Financials Development, Generated Objects for e-Accounting	/1ACC/	Modifiable	
Test Generation Namespace for BW	/1APO/	Modifiable	
Bank Analyzer: Generated Objects	/1BA/	Modifiable	

Client Administration using SCC4

- Options for Creating a New Client

- Options for deleting an existing client

- Modifying client attributes and protecting a client

Client Change Options

Client-specific settings for this client

Changes and Transports for Client-Specific Objects
- ○ Changes without automatic recording
- ⦿ Automatic recording of changes
- ○ No changes allowed
- ○ Changes w/o automatic recording, no transports allowed

Cross-client settings when logged on to this client

Cross-Client Object Changes

Changes to Repository and cross-client Customizing allowed

Changes to Repository and cross-client Customizing allowed
No changes to cross-client Customizing objects
No changes to Repository objects
No changes to Repository and cross-client Customizing objs

Client Copy

Requirements for Client Copy

✓ Sufficient space in Database for Client Copy

✓ No user activity in source or target client

✓ Client Copy should be run in background

✓ Client-Independent tables should not be copied in Client copy to different SAP system

✓ Select Client Copy profile – SAP_ALL, SAP_CUST, SAP_APPL etc.

Client Copy Profiles

Copy Profiles	Description
SAP_USR	Copies user master records and profiles only.
SAP_CUST	Copies all Customizing tables, including user profiles.
SAP_UCUS	Copies all Customizing tables, including user data and user profiles.
SAP_ALL	Copies all data belonging to a client.

Copying Clients Within the Same System

- Login to Target Client

- Choose Tools → Administration → Administration → Client admin. → Client copy → Local copy

- Select a copy profile that matches your requirements. If you want to use the selected profile as a default setting, choose Profile → Save profile value.

- Enter the source client.

- Start the copy process.

- Normally, you should start this procedure as a background job. However, if you only want to copy user data and profiles, you can run it online.

Copying Clients Between Systems

- Login to Target Client

- When you copy a client from one system to another, the data is transferred directly via the RFC interface - there is no intermediate storage on hard disk:

- Choose Tools → Administration → Administration → Client admin.→ Client copy →Remote copy.

- Select a copy profile that matches your requirements.

- Enter the RFC destination.

- Start the copy process.

- Normally, you should start this procedure as a background job. However, if you only want to copy user data and profiles, you can run it online.

Transporting Clients Between Systems

- Login to Source Client
- Choose Tools → Administration → Administration → Client admin. → Client transport → Client export.
- Select a copy profile that matches your requirements
- Up to three transports are performed:

Transport	Description
<SID>KOnnnnnn	
<SID>KRnnnnnn	
<SID>KXnnnnnn	

- The data export is performed automatically. The output of the export includes the name of the transport requests that are to be imported.
- To adapt the runtime environment to the current state of the data, you may need to perform post processing activities.
- Post processing After Client Import
  - Choose Tools → Administration → Administration → Client admin.→ Client transport → Post process import.
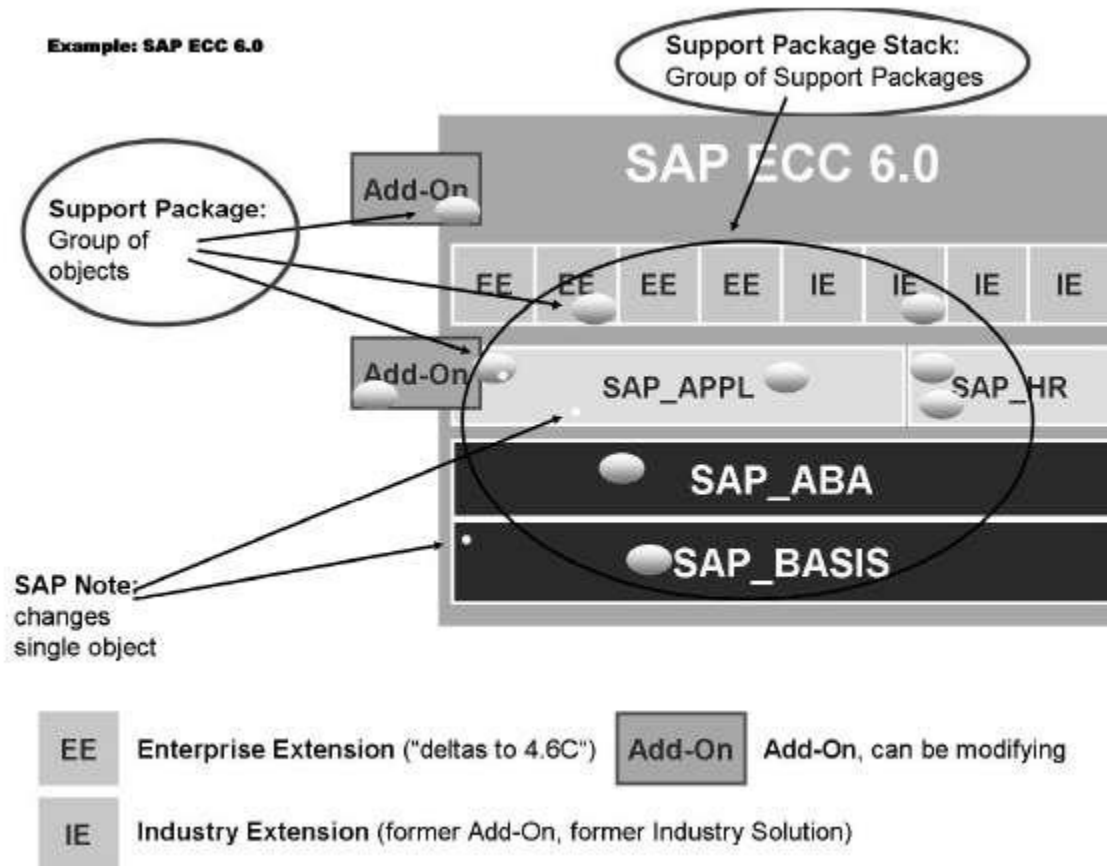
Lunch Break

Concept of Support Packages

What are Support Packages ?

- A support package is a set of programs , tables , structures etc , i.e , ABAP objects for different components of an SAP system that are corrections to the existing SAP source code

- An SAP system consists of different software components. All of these components are regularly updated using Support Packages; that is, errors are corrected and new functions are provided using Support Packages, for example, due to legal changes.

- An SAP Support Package is a quantity of corrected or new SAP objects. Support Packages are required to correct errors in various components. This is done by replacing erroneous objects with corrected versions of these objects.

- A Support Package Stack is a combination of Support Packages, recommended by SAP.

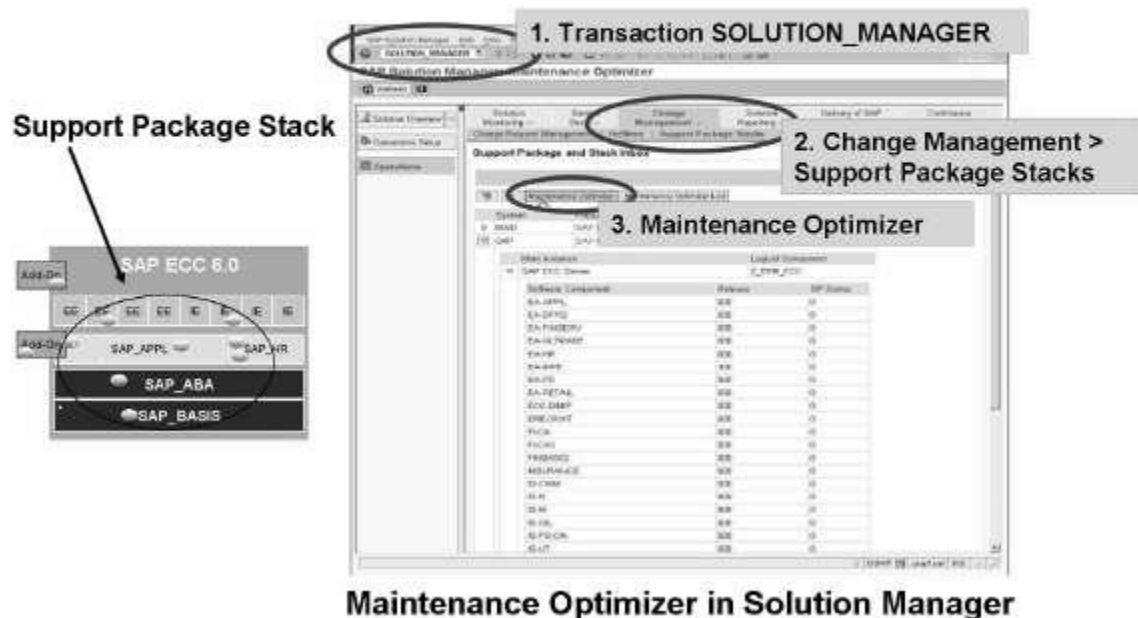- Each software component has a separate sequence of Support Packages.

Component View of Support Packages

Example: SAP ECC 6.0

Support Package Stack: Group of Support Packages

Support Package: Group of objects

SAP ECC 6.0

Add-On

EE EE EE EE IE IE IE IE

Add-On | SAP_APPL | SAP_HR

SAP_ABA

SAP_BASIS

SAP Note: changes single object

EE — Enterprise Extension ("deltas to 4.6C")

Add-On — Add-On, can be modifying

IE — Industry Extension (former Add-On, former Industry Solution)

Requesting for Support Packages

- Support packages as of ECC 6.0 have to be downloaded via the Maintenance optimizer function of Solution Manager.

- This is applicable for any SAP installation that is based on either a AS ABAP 7.0 or AS JAVA 7.0 Kernel
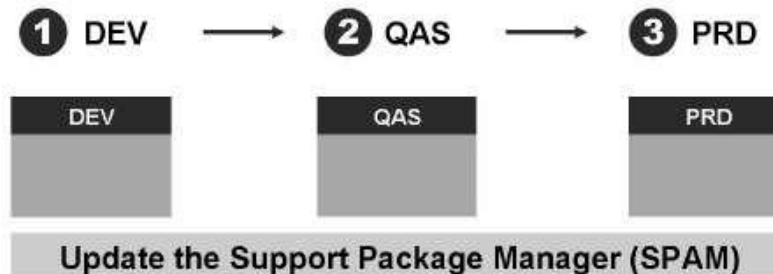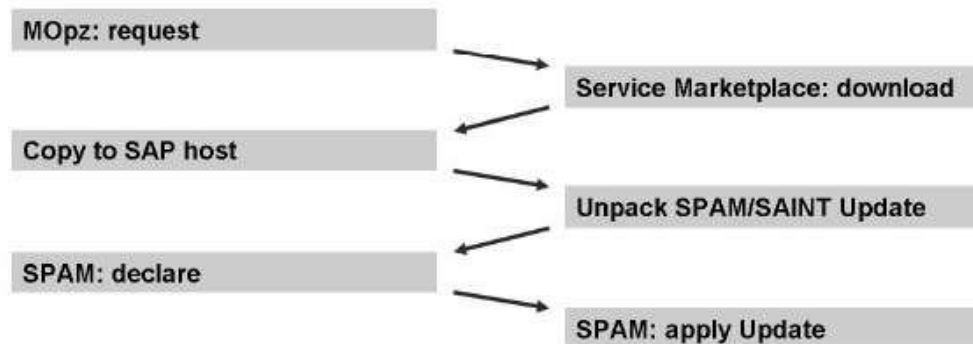

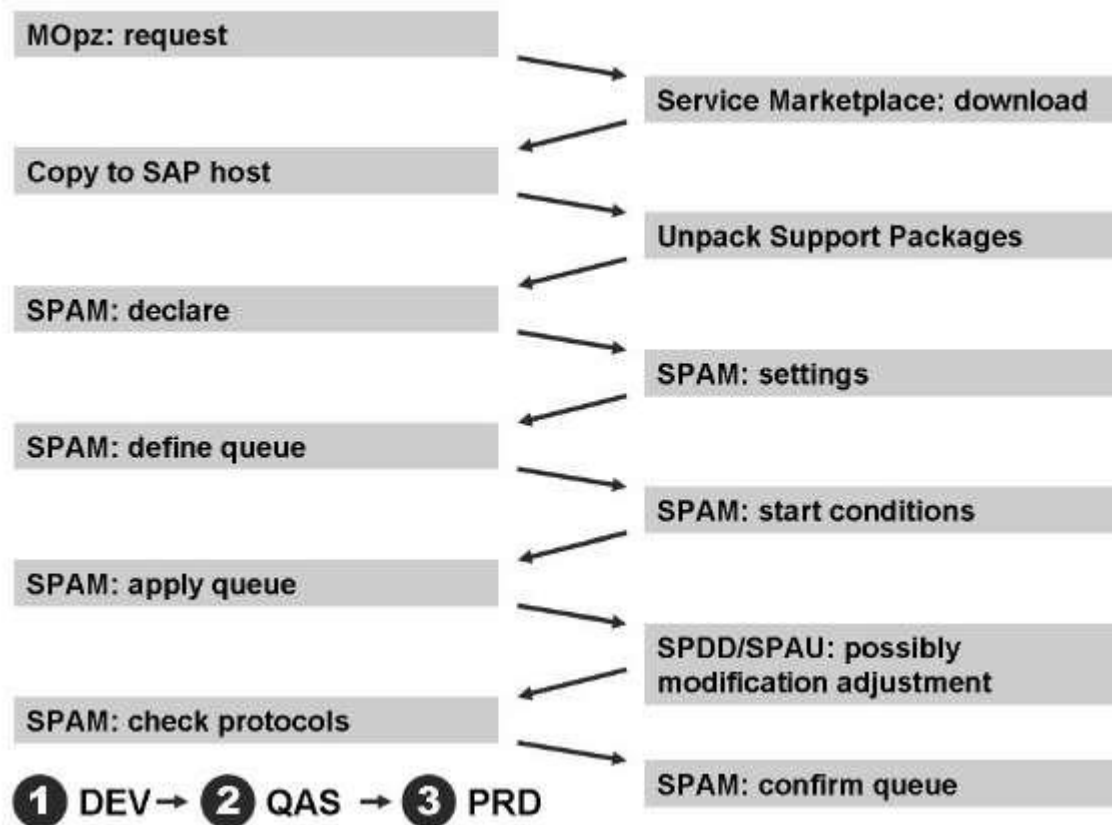Maintenance Optimizer in Solution Manager

Applying Support Packages

Support Pack & Add-On Managers – SPAM/SAINT

- The Support Package Manager (transaction SPAM) is the tool for applying Support Packages.

- Before using the Support Package Manager, you should patch the tool itself with a SPAM/SAINT update. This is a patch to enhance the functions of SPAM and SAINT, for example when dealing with new attributes from new Support Packages.

- Transaction SAINT allows you to install and upgrade an Add-Ons.
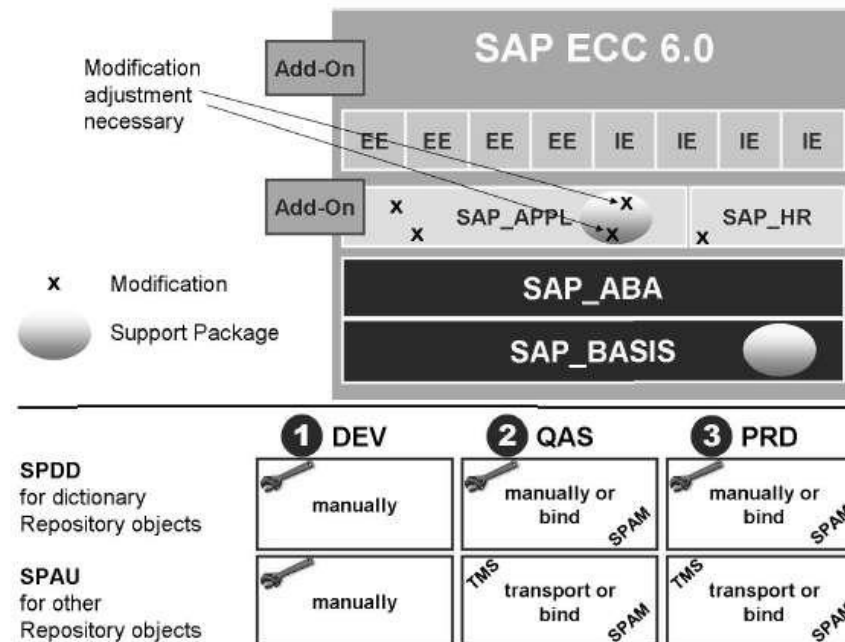
Applying the SP via SPAM

MOpz: request

Service Marketplace: download

Copy to SAP host

Unpack Support Packages

SPAM: declare

SPAM: settings

SPAM: define queue

SPAM: start conditions

SPAM: apply queue

SPDD/SPAU: possibly modification adjustment

SPAM: check protocols

SPAM: confirm queue
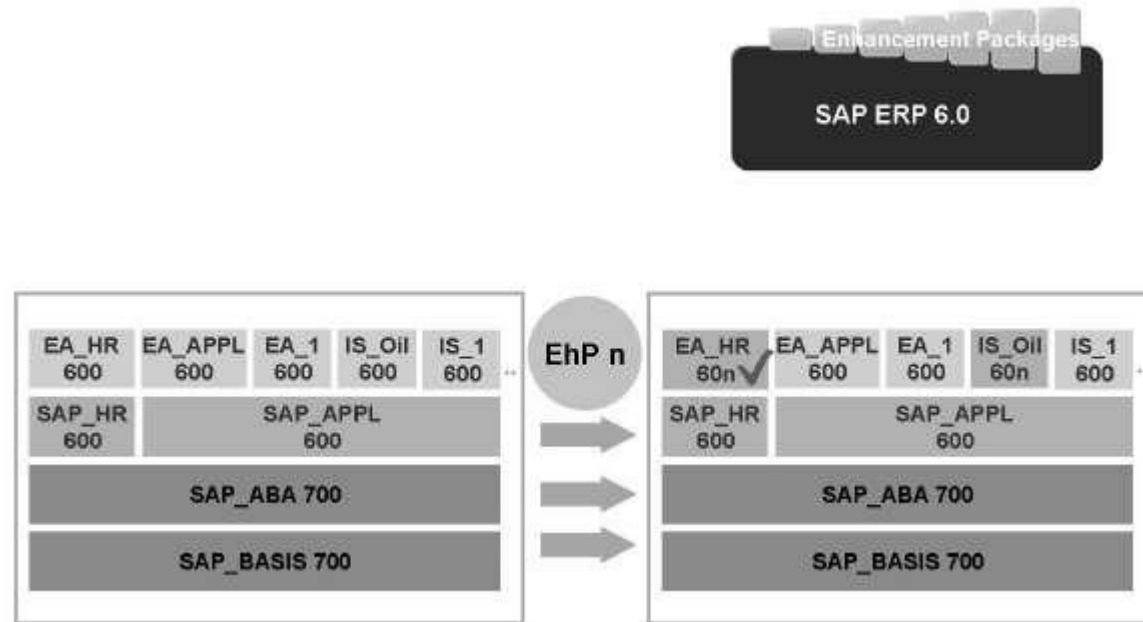
❶ DEV → ❷ QAS → ❸ PRD

Modification Adjustment using SPAU/SPDD

- On certain occasions , the customer would have made changes to some SAP standard objects , for certain bug fixes etc , which are applied through SAP OSS notes

- When the times comes to apply a SP , it is noted that the SP may contain a later version of the same object

- In such cases it becomes necessary to "ADJUST" the modification made by the customer.

Modification Adjustment

A brief introduction to Enhancement Packs

- Support Packages provide only the bug fixes for existing SAP source code

- The strategy so far from SAP has been to introduce new releases like ECC 5.0, ECC 6.0 , whenever new functionality is developed and released for customers

- Enhancement Packages now deliver bug fixes AS WELL AS new functionalities in one comprehensive set of packages

- This permits the customer to protect their investment in ECC 6.0 version and they need to go for an expensive upgrade to a higer SAP release. This is SAP"s strategy to minimize the costs associated with a functionality upgrade

Break

Exercise & Break Out Session

Exercise

- Steps for Instructor

  - Create a new client using SCC4

  - Perform a test local client copy using SCCL with SAP_UCUSV profile to the new client

  - Perform a transport of a customizing request from client 001 to the new client created.

  - Change the Client Changeability settings for the new client to "No changes permitted"

  - Login into the new client.

  - Try and make a change to the customizing entry created

  - Note the result (System prevents the change)

  - Download the SPAM update from the SAP market place

  - Unpack the SAR file using SAPCAR command

  - Demonstrate to the groups the method to import the SPAM update into the support package manager queue