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Chapter 1: What is SAP BASIS?

What is BASIS?

Basis is a set of programs and tools that act as an interface with Database, Operating system, Communication protocols and business applications (such as FI, CO, MM, etc). Full form of BASIS is "Business Application Software Integrated solution"

SAP applications such as FI, CO, PP etc. can run and communicate with each other across different Operating systems and Databases with the help of BASIS.

Nowadays Basis is known as Netweaver.

Alias of BASIS is SAP Application Server Technology and alias of NetWeaver is SAP Web Application Server.

After adding java stack (the applications which are developed in J2EE, BSP, JSP, etc..) enhanced security standard for business process. Both ABAP and Java stack can be monitored from one platform. Netweaver supports standard protocols such as HTTP, SMTP, XML, SOAP, SSO, WEBDAV, WSDL, WMLSSO, SSL, X.509 and Unicode format (representation of handling text).

We can say Basis is the operating system for SAP applications and ABAP. Basis provides services like communication with the
operating system, database communication, memory management, runtime
collection of application data, web requests, exchanging business data etc...

Basis supports a number of known operating systems
(Unix flavors, Microsoft windows server edition, AS400, z/OS, etc) and
databases (Oracle, DB2, Informix, Maxdb, Microsoft SQL Server, etc).

As we know BASIS is a set of tools. This tool has the following different
functionalities:-

- System monitoring and administration tools
- Common monitoring tool CCMS (Computing Centre Management
  System) to monitor alerts of R/3 system from one place.
- Server side scripting in ABAP and Javascript.
• Use of Business server pages to build online stores and portals.
• Database monitoring and administration utilities
• Resource management like memory, buffer, etc. Authorization
• and profile management tools for user management.
• Internet access control to the system and business objects. Transfer
• modifications in a screen, program, layout from the development to a
  production system for accuracy purpose by Transport Management
  System.
• Client-server architecture and configuration.
• Graphical User Interface designing for the presentation layer.

SAP Basis consultant’s responsibilities:-

SAP Basis is a middleware tool for applications, operating system, and
database. SAP Basis consultant should able to do the following tasks:-

• SAP application server monitoring, ABAP dump, and system log analysis.
• Performance tuning
• Database maintenance, Database backup schedule and restore R/3,
• NetWeaver, solution manager installation, etc.
• SAP license maintenance.
• SAP landscape, transport management system installations, etc Client
• creating, client copying, client deletion, etc
• Creating user, assigning roles, locking and unlocking users, etc
• Background jobs scheduling, job monitoring, job deletion, etc
• Profile and operation mode maintenance
• Applying support patches, upgrading and installing add-ons
• SNOTE applying and removing errors.
• System copy, System refresh, etc
This a generic list. There are many other responsibilities that a Basis consultant shoulders. Every day you learn something new!
Chapter 2: How to Download & Install SAP GUI (FrontEnd) for Windows

Before you can configure and use the SAP GUI, you need to download the software from the SAP Marketplace as per steps below -

**Step 1)** Goto service.sap.com to Download SAP GUI 7.40 for Windows

![SAP Support Portal](Service_url.jpg)

**Step 2)** Enter S-user and password as provided by SAP.
Step 3) Goto "Software Downloads."

Step 4) Choose "Browse our Download Catalog."

Step 5) Choose SAP Frontend components
**Step 6)** Choose SAP GUI for your OS. In this demo, we will select Windows-

![SAP Frontend Components](image)

**Step 7)** Choose SAP GUI 7.30 Core which is the latest one.

![SAP GUI for Windows](image)

**Step 8)** Choose installation

![SAP GUI for Windows 7.30 Core](image)

**Step 9)** Choose Add to download Basket
Step 10) Choose the Download Basket

Step 11) Choose Your download and it will begin.

Time to configure your GUI

Once the download is complete and you have installed the software, it's time to configure it -

Step 1) Click on create the button as shown below.
Step 2) Click next button
Step 3) Fill the Server details

1. **Connection Type**: - Custom Application Server (Particular one host)
2. **Description**: - Name of instance
3. **Application Server**: - IP address of remote application server
4. **Instance number** which you can find from os level (Unix) Goto 
   /usr/sap/sid/DVEBGMS00 Here instance number = 00
5. **System ID**: - As per you setting which you have specified during installation time.

Step 4) Created system will be there in the list as per shown below.

Double Click on the instance to log-in to a SAP Server.
Chapter 3: What is SAP Instance & SAP SID?

What is an Instance?

Sap Instance is a group of resources such as

- Memory
- Work Processes
- Dispatcher
- Gateway

usually for a single application or database server within a SAP R/3 client-server environment.

There are three types of instances:-

1. Dialog instance
2. Central Instance
3. Database Instance

SAP System= Dialog Instance + Central Instance + Database Instance.

For one SAP system, all three instances share the same directory.

- **Dialog Instance**: - Dialog instance exists in the application layer. Its purpose is to maintain the load on the server. Dialog instance exists on the different host. If a number of dialog instance increases hardware resources, dispatcher, workprocesses
also increases so that more number of users can login at a time.

- **Central Instance**: - Central instance can also work as dialog instance. But the main thing is that it contains Enqueue and message servers. All dialog instances communicate with central instance before requesting database with message server. When an instance is started, the dispatcher process attempts to establish a connection to the message server so that it can announce the services it provides (DIA, BTC, SPO, UPD, etc.). Lock table is managed in central instance by enqueue service.

- **Database Instance**: - As normal database instance accepts requests from central instance to fulfill the user's requests. As lock management system provided by enqueue server, it will provide service to users.

**What is SID?**

SID is a unique identification code for every R/3 installation (SAP system) consisting of a database server & several application servers. SID stands for SAP System Identification. SAPSID — a three-character code such as C11, PRD, E56, etc.)

**Logical System Names**: -

When data is distributed between different systems, each system within a network has to be clearly identifiable. The "logical system" deals with this issue.

A logical system is an application system in which the applications work together on a common database. In SAP terms, the logical
system is a client.

Since the logical system name is used to identify a system uniquely within the network, two systems cannot have the same name if they are connected to each other as BW systems or as source systems, or if there are plans to connect them in any way.

**Example for production system logical system name might be:**

SID – PBG

SID Description - P=Production(type), B=BW(component), G=Germany.(plant name)

**Logical System name**-

PBGCLNT100. This form is easy to understand.