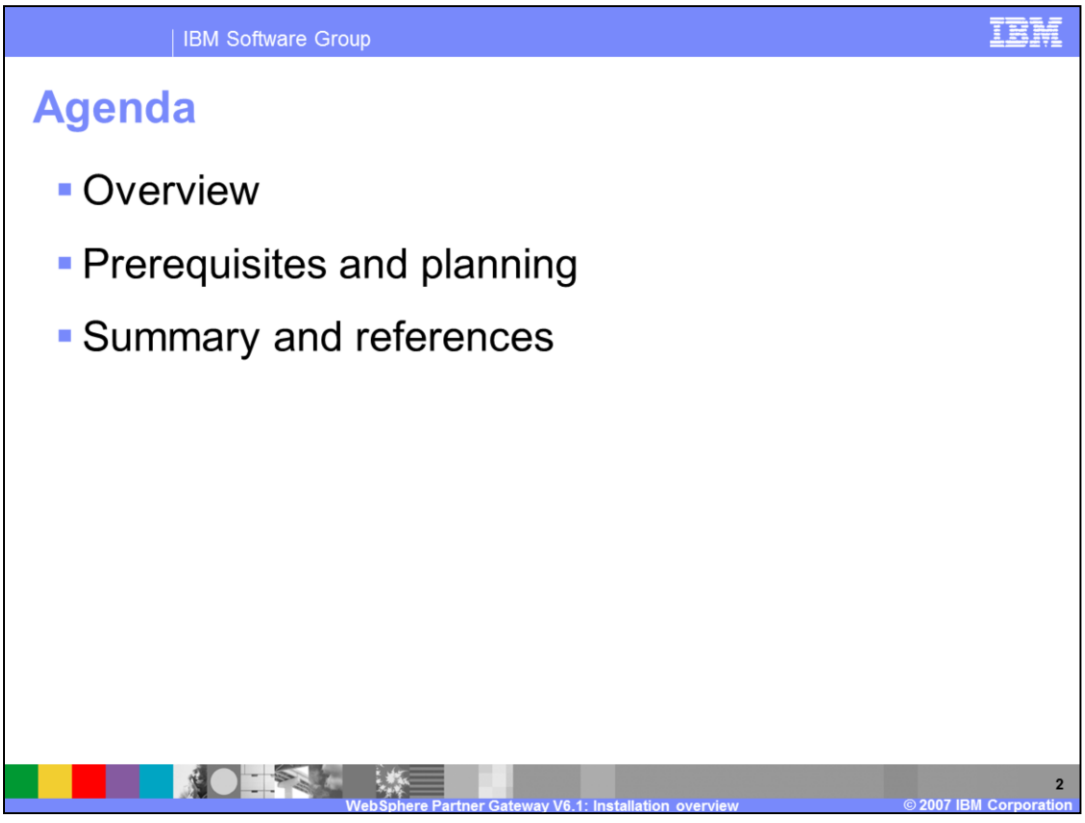
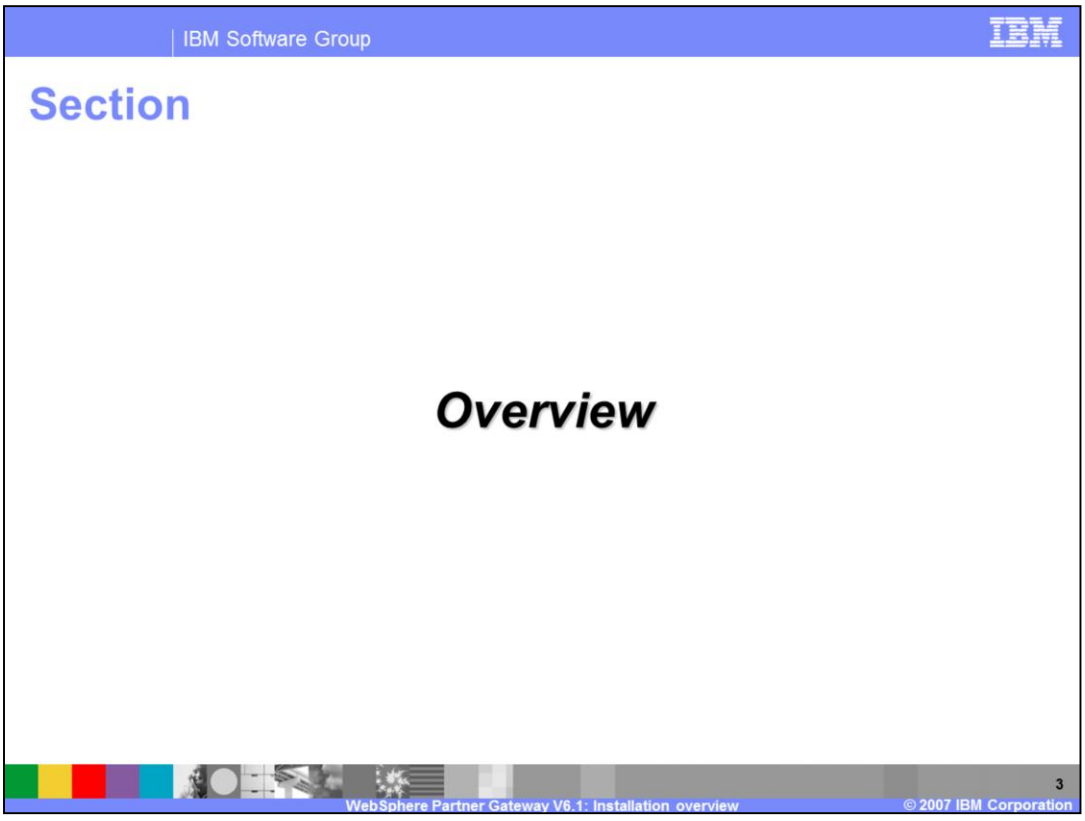
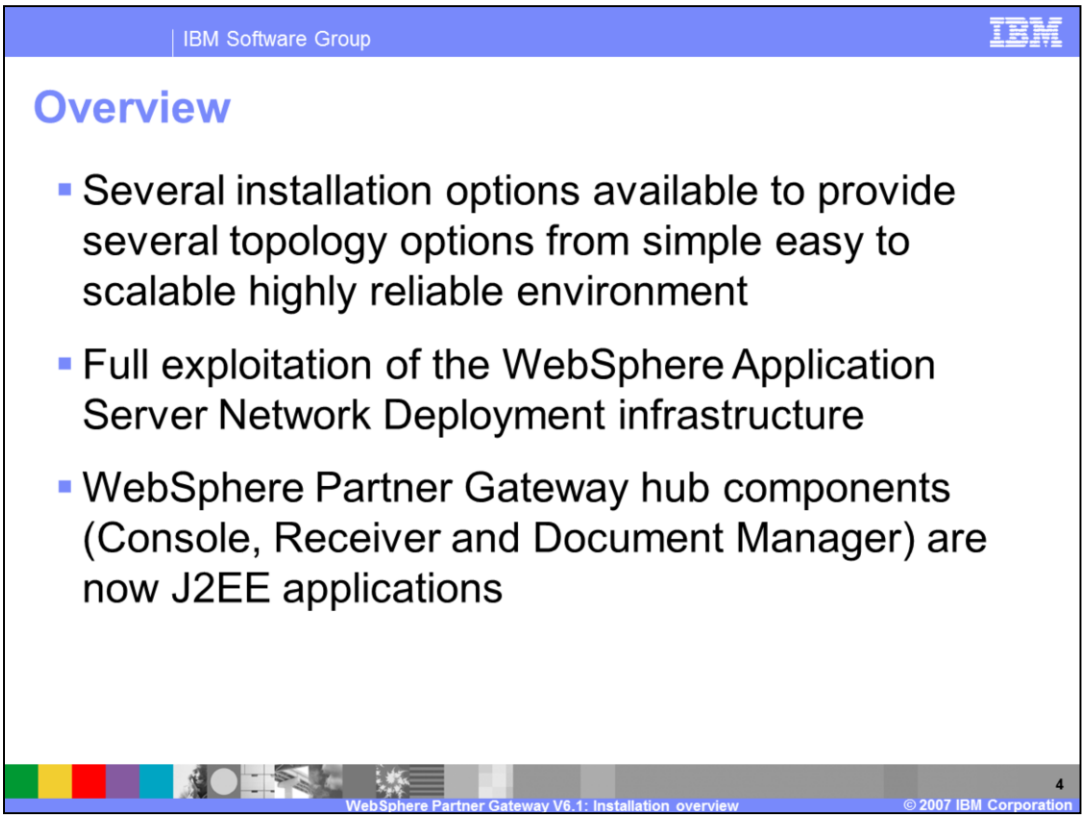
This presentation provides overview and details of WebSphere® Partner Gateway V6.1 installation and the different topologies that can be created through the installation options. Once installed, the details of getting the servers started and logging into the console is shown in a separate presentation.



The agenda of this presentation is starting with the installation overview followed by prerequisites and planning.



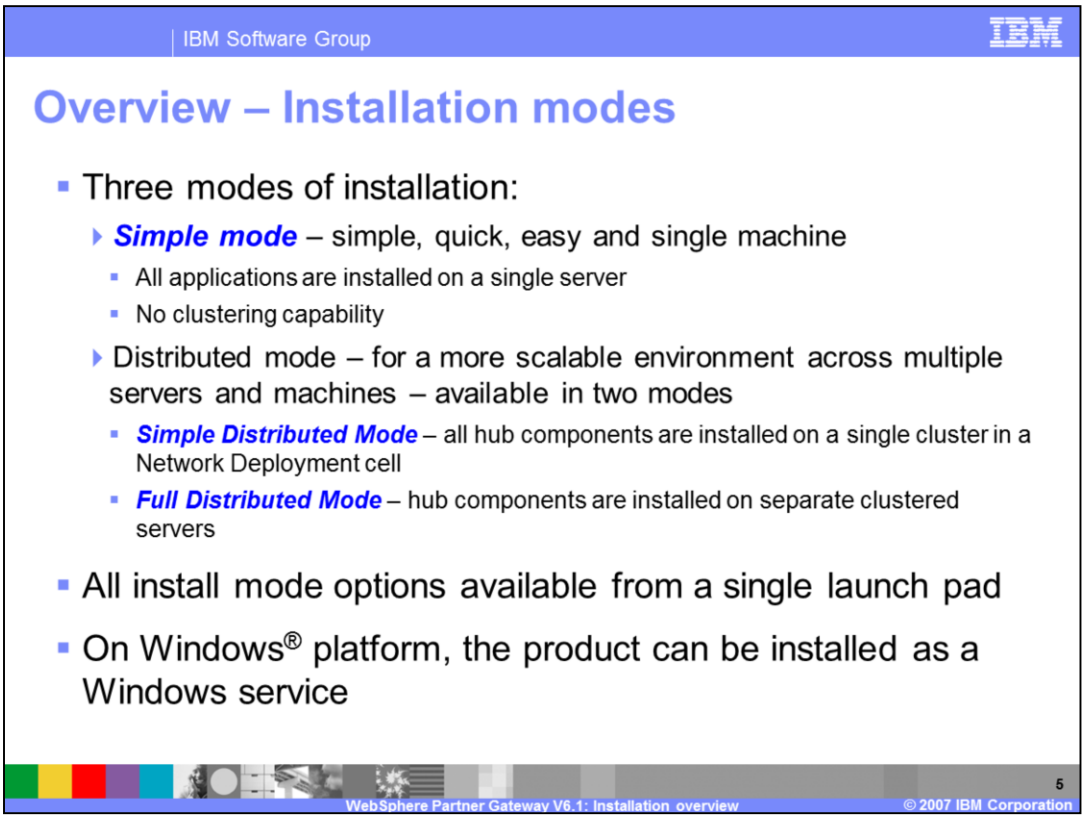
The first section covers the overview of the installation process, and the improvements and changes from V6.0.



The WebSphere Partner Gateway V6.1 installation has been enhanced significantly compared to V6.0.

The key enhancements in V6.1 are that WebSphere Partner Gateway hub components, Receiver, Console and the Document Manager, are packaged as J2EE applications. In V6.0, only the console was packaged as J2EE application, whereas the Receiver and the Document Manager were packages as jar files.

The second key enhancement is that V6,1 exploits the Network Deployment features namely clustering for scalability and high availability. These two enhancements provide more flexible topology options than previously available in V6.0.



The available modes of installation are simple mode and distributed mode. Simple mode installs all hub components in a single server and does not exploit any Network Deployment features. Its used for simple quick installations.

The distributed mode exploits the Network Deployment features. It has two different modes, simple distributed and full distributed.

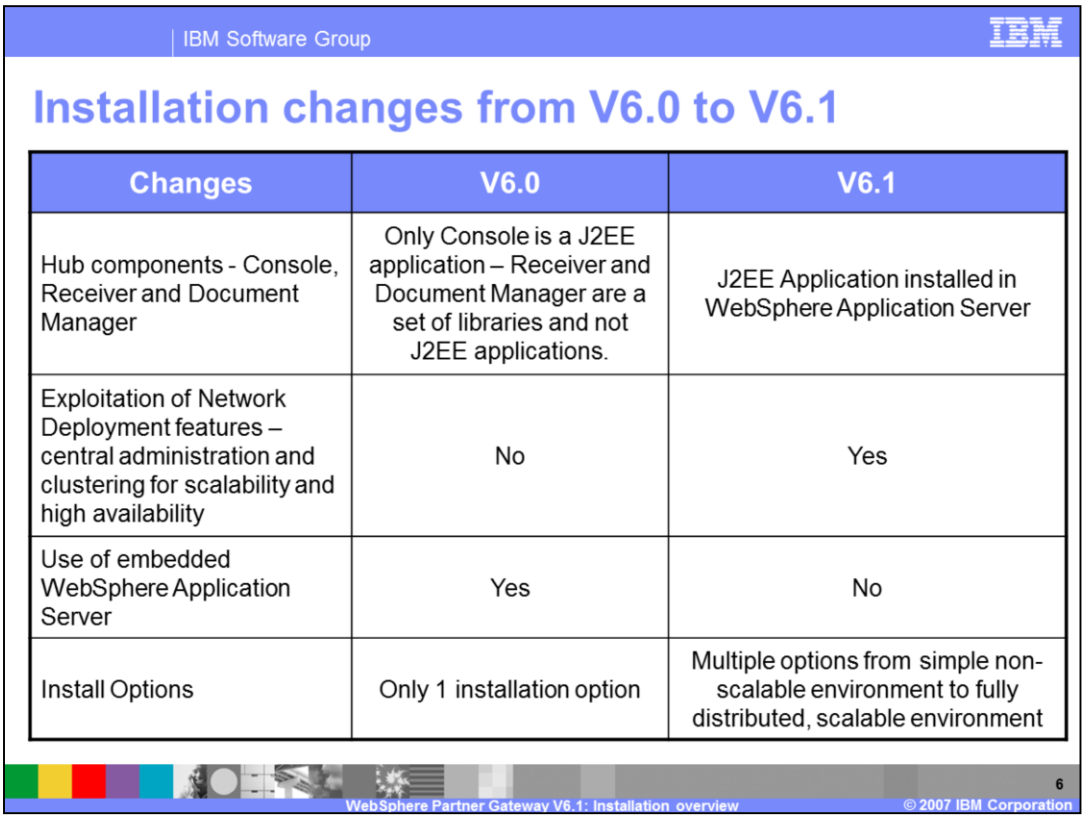
In the simple distributed mode, all applications are installed in a single clustered server allowing better computer memory usage.

In the full distributed mode, the you have the option to install each hub component in its own clustered server, providing more scalability flexibility at the hub component level.

All the installation modes can be launched from a single launch pad utility.

Similar to V6.0, WebSphere Partner Gateway V6.1 can be installed as a Windows Service on the Windows platform

The rest of this presentation will go into the details of the different modes of installation and the flexible topologies that can be created.

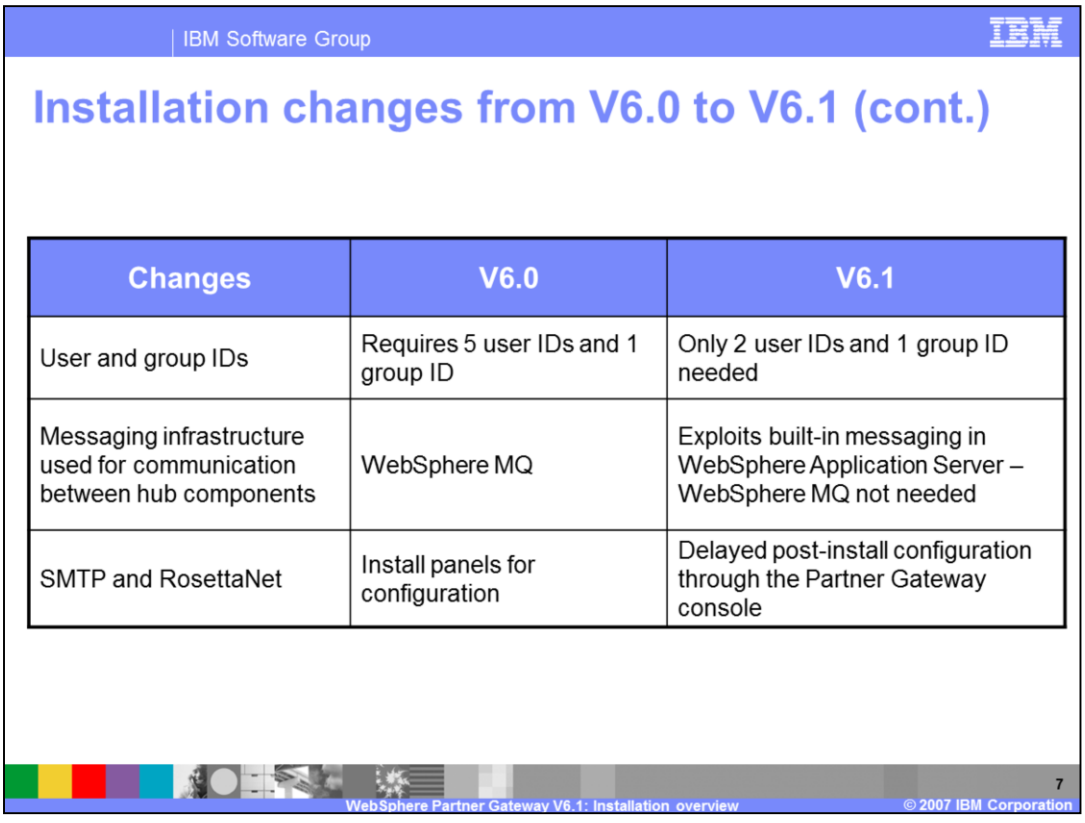


The table here gives a brief comparison of the installation changes from V6.0 to V6.1.

In V6.1, WebSphere Partner Gateway hub components are J2EE applications and installed in WebSphere Application Server like any other J2EE application. In V6.0 only the Console was a J2EE application; the other components were libraries added to the Application Server.

The other key highlight in V6.1 is the exploitation of the WebSphere Network Deployment features, namely the clustering feature. This makes hub components more scalable and highly available. More details on clustering and exploitation of cluster is discussed later. Network Deployment also provides a central application management from the Deployment Manager for stopping and starting servers and adding new servers. The embedded WebSphere Application Server is no longer supported in V6.1.

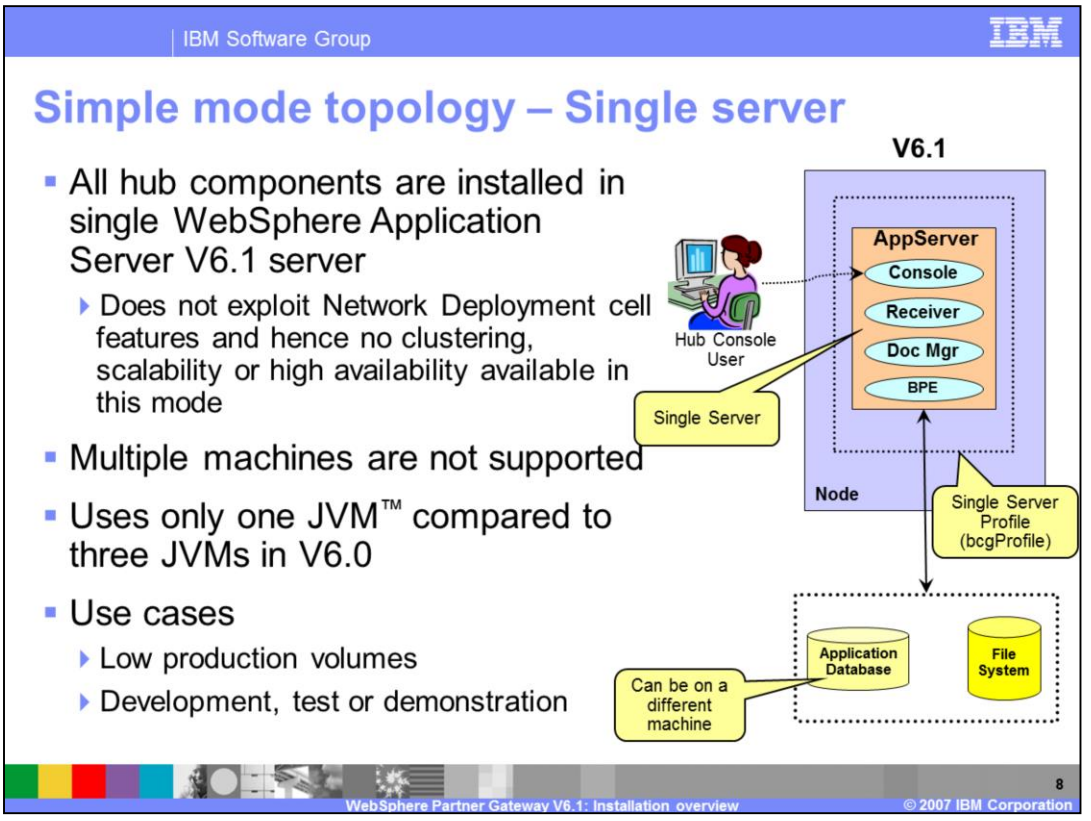
The installation option ranges from simplified single machine installation for low volume, development, and demonstrations to simple distributed for simplified scalable option to full distributed fully scalable option. The full distributed mode is similar installation to V6.0, and fully cluster capable.



Continuing on the changes, there are fewer user IDs needed in V6.1 than in V6.0

From a Messaging infrastructure standpoint, V6.1 eliminates the separate WebSphere MQ product prerequisite requirement. It allows for multiple messaging servers to be easily added to provide messaging high availability. Messaging servers can be managed from the deployment manager.

Another change is for SMTP and Rosetta Net configuration. In V6.0, configuration information was collected on additional panels during the installation phase, but in most cases is not immediately required. Configuration could still be performed after installation by modifying property files. In V6.1, configuration is done after installation through the WebSphere Partner Gateway Console.

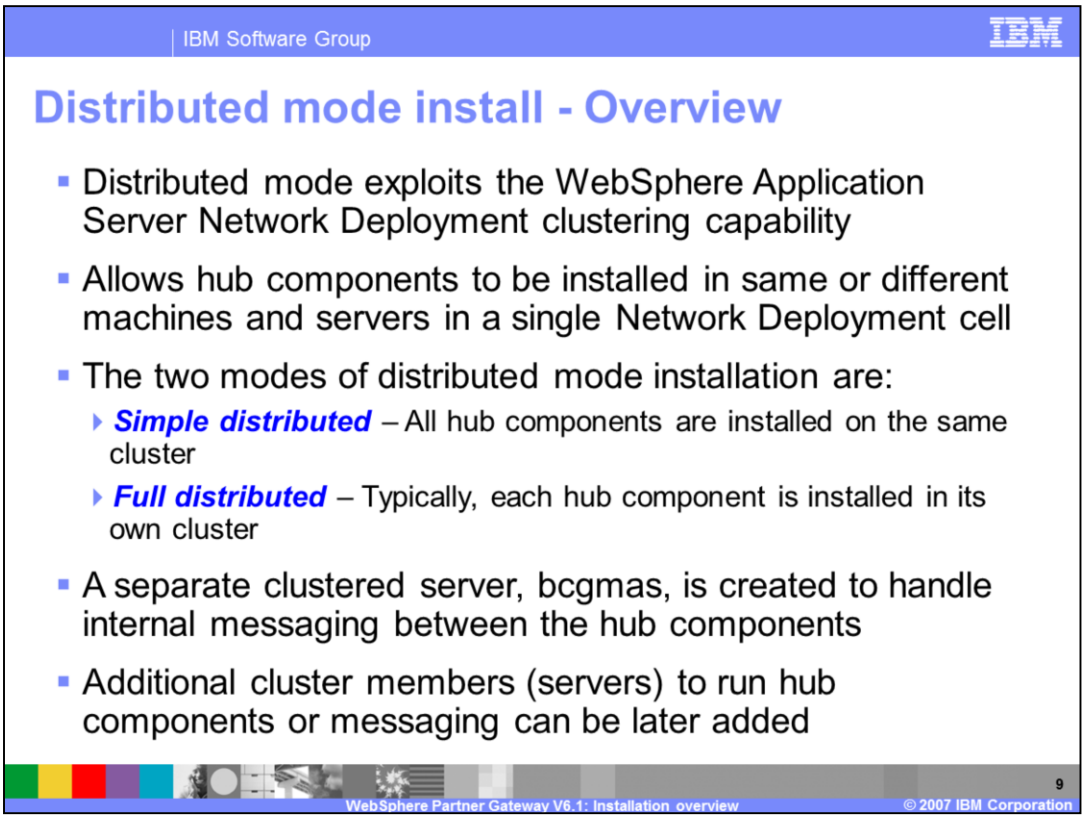


This topology is the simplest one and is referred to as a “simple mode installation”. It consists of a single server running all three of the WebSphere Partner Gateway components - Receiver, Community Console, and Document Manager. This mode is typically used in low production volumes where scalability and high availability are not required, or used in development, test, or demonstration situations. In this mode, multiple machines or instances of WebSphere Partner Gateway will not work together.

The picture on the right side shows all the hub components in the single server, with the default name “bcgServer”.

The scalability features of the Network Deployment are not exploited in simple mode. Even when using the Network Deployment package for the WebSphere Application Server, only the single server is used.

The database may be on the same server or on a separate dedicated server.



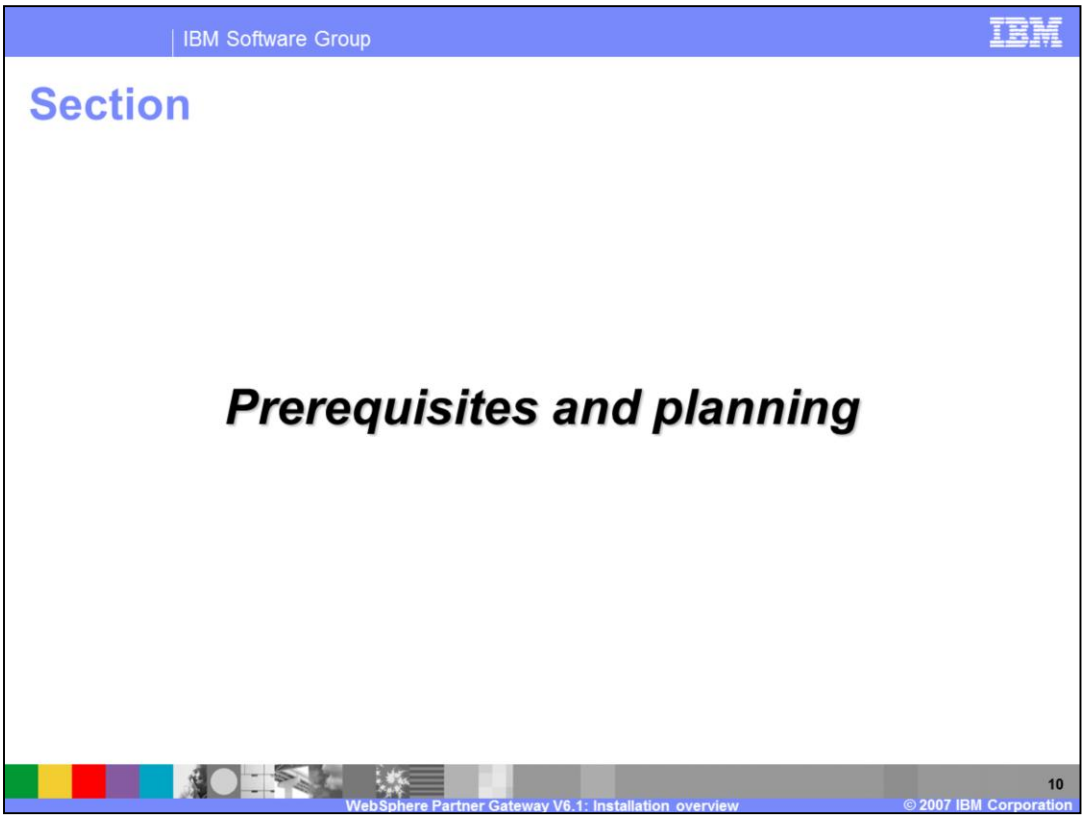
The distributed mode installation exploits the WebSphere Application Server Network Deployment features - including clustering. Clustering provides the ability to run multiple machines for the hub components, thereby providing the scalability and high availability options needed in a high volume reliable production environment.

The distributed mode creates a Network Deployment cell with a deployment manager and one or more nodes containing WebSphere Partner Gateway Servers. There are two modes of distributed installation, simple and full distributed mode.

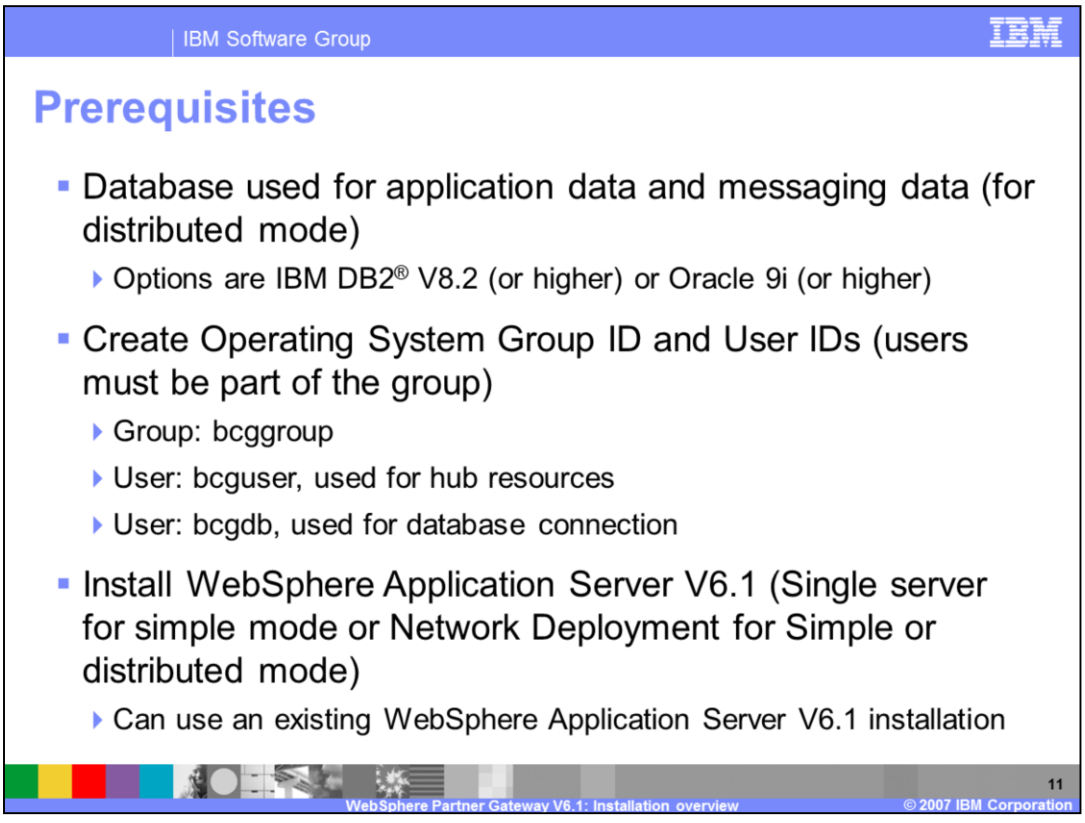
In simple distributed mode, there is only one cluster created with one server, and all the hub components are installed on that clustered server. In full distributed mode, typically, a cluster is created for each hub component. The installer has options to let you group hub components together into a cluster.

In simple mode installation, messaging is handled by the single server that runs the hub components. In distributed mode, a separate messaging application server is created for handling the messaging between the different hub components on different machines. Keeping the messaging separate in a dedicated server allows the WebSphere Partner Gateway servers to focus on running the hub components.

The installation process creates a cluster for the hub components within the Network Deployment cell. Additional cluster members can be created after the initial installation. Details of adding additional cluster members are provided later in this presentation.



The next section covers some of the prerequisite software, activities and planning.

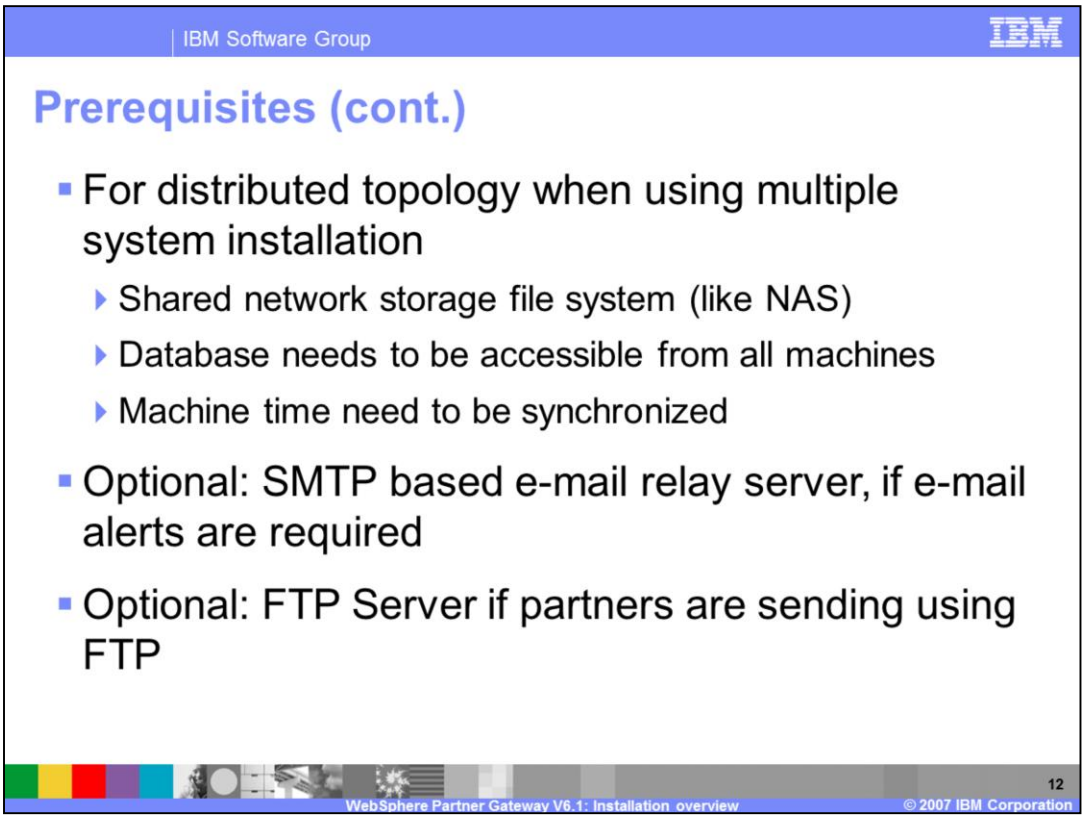


The database has been upgraded to IBM DB2 V8.2 or higher, or Oracle 9i or higher. For the latest prerequisites, visit the WebSphere Partner Gateway system requirement Web site.

The database is needed for the application database to store the hub configuration, document meta data and other data. For the distributed mode installation, a messaging database is used for persistent storage of internal messages providing persistent in case of server failure. The database may be on a dedicated machine or share the machine with the WebSphere Partner Gateway server.

The operating system group ID and user IDs that are required are listed here. The user IDs are fewer than what was needed in V6.0.

During installation, you can choose to install on top of an existing WebSphere Application Server V6.1 installation. For Distributed mode, WebSphere Application Server V6.1 Network Deployment needs to be installed. For simple mode, you can choose to use WebSphere Application Server V6.1 as the base.



When using distributed mode installation across multiple machines, there are additional requirements. A shared file system must be available for the common files that are used by all the machines in the WebSphere Partner Gateway cell, with the same mount point and directory structure on all of the machines.

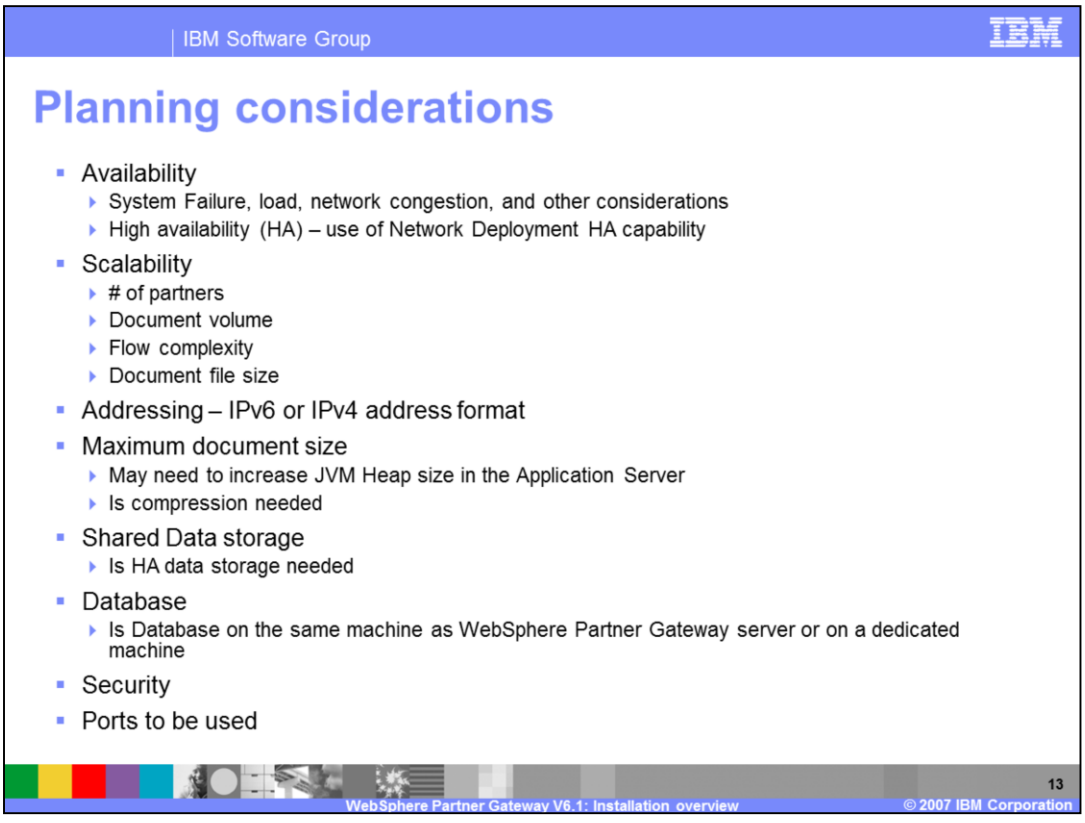
All machines running hub components need to have access to the application and messaging database.

The system time of all machines in a distributed topology should be synchronized as closely as possible.

Messages are logged for the events by the hub components. Having synchronized time across the different WebSphere Partner Gateway machines will make sure the logs appear in the correct chronological order in the viewers.

If you are using e-mail alerts, then an SMTP based e-mail relay server need to be installed. If you are using FTP to send documents to partners, then a FTP server needs to be installed.

Once all the prerequisites are satisfied, WebSphere Partner Gateway can be installed.



Some of the planning considerations are shown here so that the decision on type of installation and number of machines for scalability and high availability can be made based on the environment.

Things to consider are availability and scalability, and whether to use distributed mode installation. Volume of requests and other load should add weight to the decision of whether to use simple or full distributed mode.

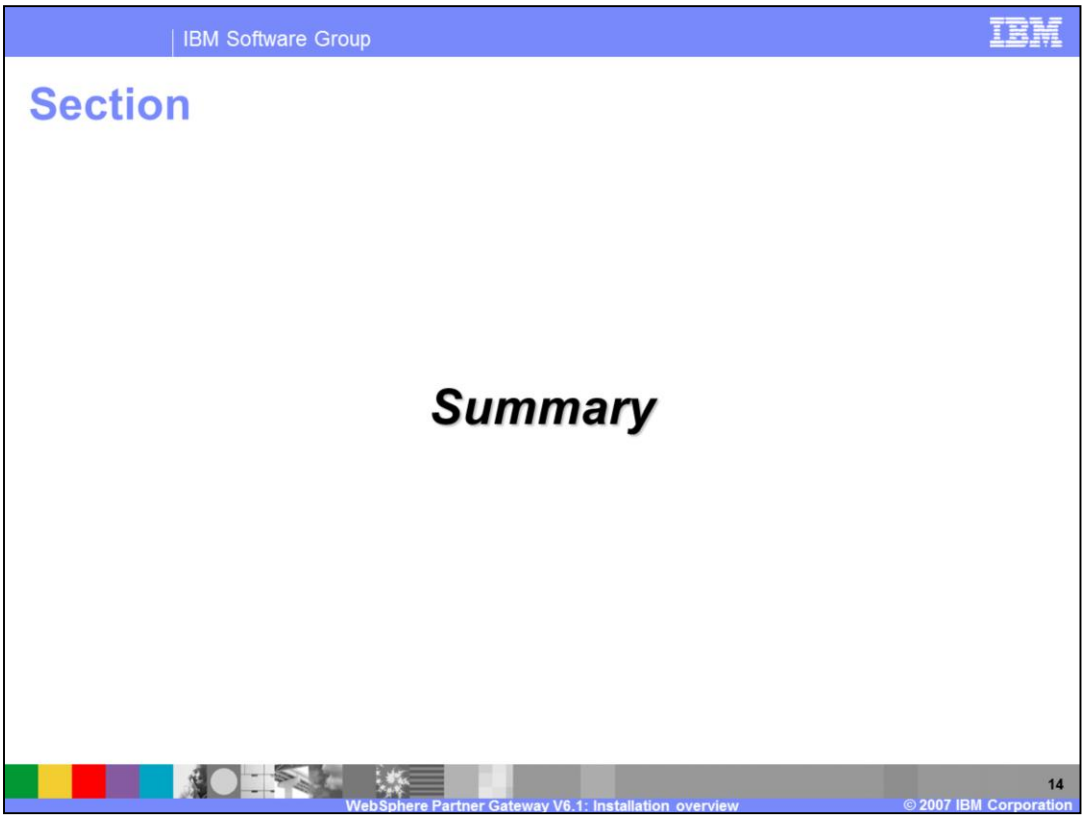
Also consider whether IPv4 or IPv6 addressing format is to be used.

Other considerations include maximum document size, for which the JVM heap should be increased.

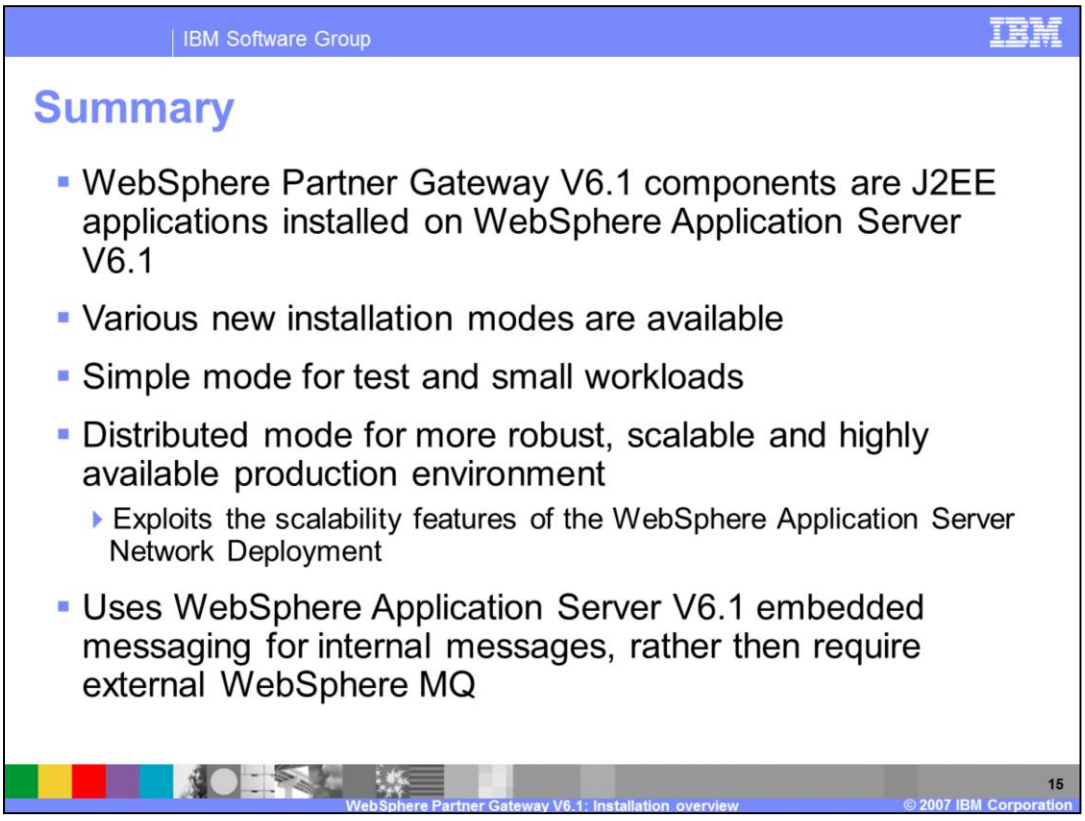
Security is always a primary concern. Consider whether the Application Server needs to be secure in addition to WebSphere Partner Gateway authentication. For example, WebSphere Partner Gateway can use the LDAP authentication provided by the Application Server or store the authentication information in the database like in V6.0.

The port numbers are affected by the topology. If multiple servers are located on the same machine, you need to make sure there are no port conflicts.

This is not an exclusive list, but these are some high level considerations.



The next section covers the summary.



WebSphere Partner Gateway V6.1 installation has several new and useful options and modes. All WebSphere Partner Gateway components are J2EE applications installed on WebSphere Application Server V6.1.

WebSphere Partner Gateway V6.1 exploits Network Deployment features, particularly clustering.

Several modes of installation are available from simple mode for development, test and small workloads to highly scalable distributed environments. This allows more flexible topologies than previously available.

Finally, embedded messaging can now be used, which eliminates the need to install WebSphere MQ.

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