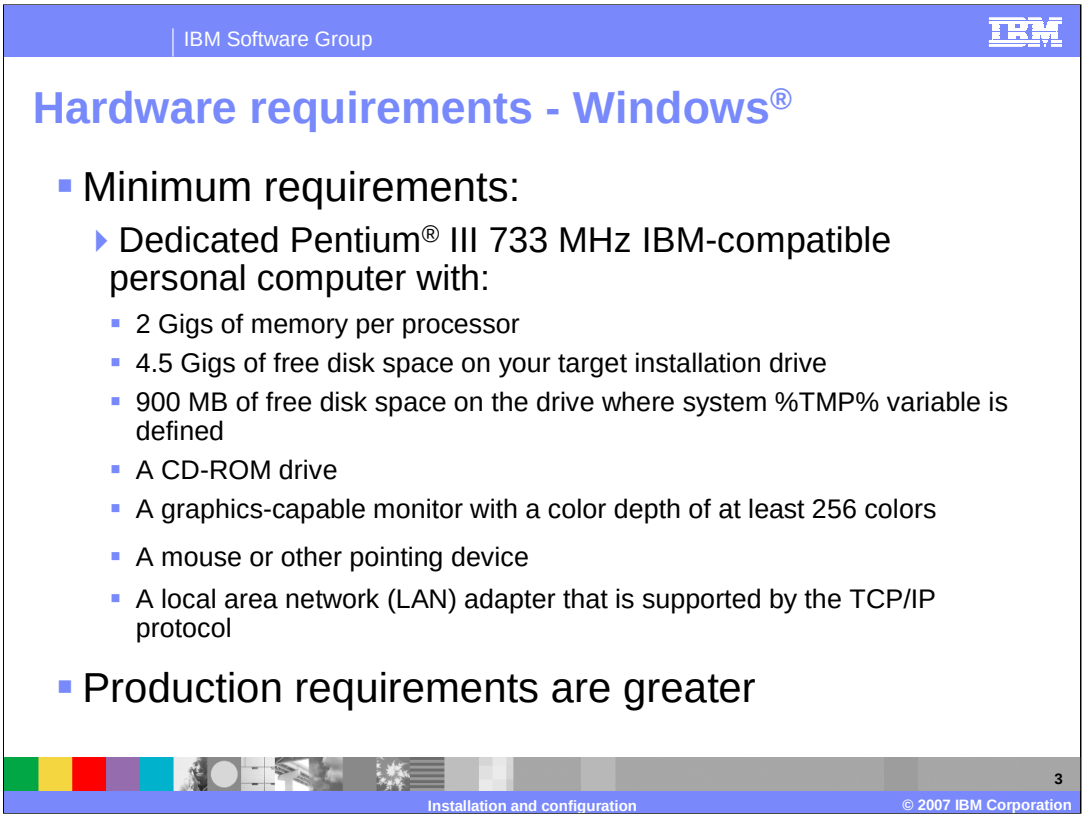

Welcome to this presentation on WebSphere Commerce. This presentation discusses the steps to install and configure the product.

## Unit objectives

- Installation requirements
- Install and configure the required components of WebSphere Commerce V6
- Start and use the configuration manager client user interface

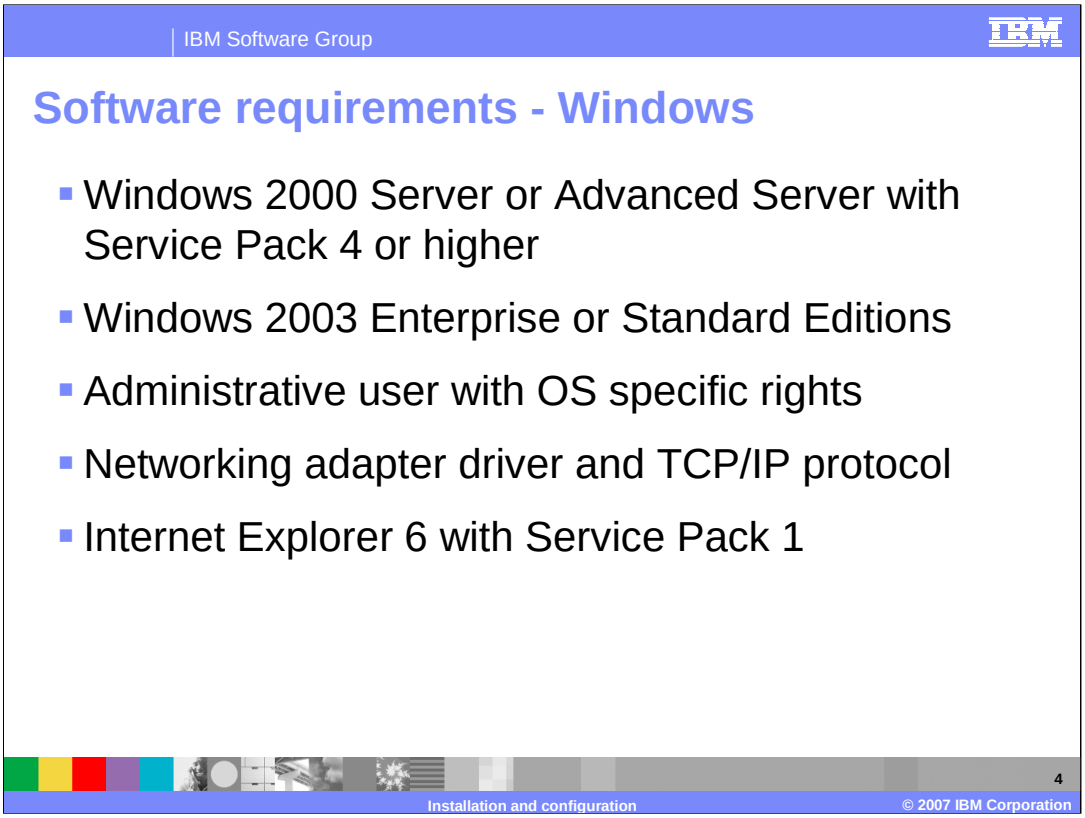

© 2007 IBM Corporation

This presentation discusses what the installation requirements are, how to install and configure the required components of WebSphere Commerce V6.0, and how to start and use the Configuration Manager client user interface




The minimum requirements are sufficient to run a minimal configuration, with no optional components installed or enabled. The minimal configuration is typically for development or demonstration purposes. As additional components are configured, the memory and processor resources will need to be increased.

In a production environment, the requirements are greater. Exact sizing requirements will depend on a number of factors. The most important factors are whether additional components or applications will be running on the same machine, multiple instances will be configured, expected number of requests, and expected size of the database

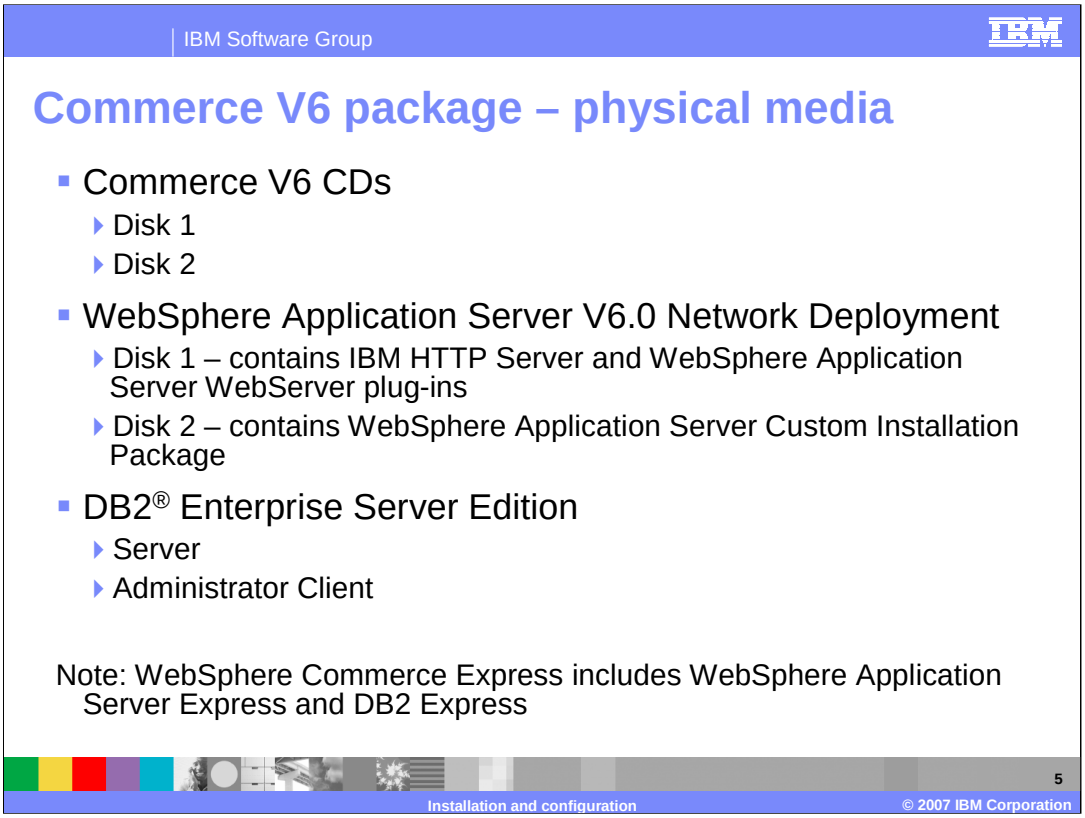



Although WebSphere Commerce will run on Windows 2000 Professional Edition and Windows XP Professional Edition, as it does in the development environment, these are not supported for a production server.

WebSphere Commerce V6.0 supports the Microsoft IIS Web server. If you choose to use a different Web server, do not install IIS because it will try to use the same ports as the Web server for WebSphere Commerce. If IIS is already on the system, then it must be stopped during the WebSphere Commerce installation.

Install networking support and the adapter driver for your LAN adapter. Configure this adapter to support the TCP/IP protocol. Server machines should always have a fixed IP address, not a dynamically assigned address. Also define the TCP/IP host name and domain.

Internet Explorer 6.0 with Service Pack 1 must be installed on any machines you will use to access WebSphere Commerce administration tools or documentation. The supported browsers for stores depend on what HTML version, JavaScript, Java applets, and other browser technologies that are used by your Web pages.




If you choose a physical media installation, you will see that the WebSphere Commerce package includes a number of CDs. Many of them are not required during installation of the WebSphere Commerce server. They include optional software that would be installed on a separate machine. The minimum requirement is to install a database, such as DB2 and Web server, such as IBM HTTP Server, plus WebSphere Application Server and WebSphere Commerce. Both DB2 and IBM HTTP Server are provided with the product.

The WebSphere Application Server install disks are not the standard WebSphere Application Server images. These are custom to WebSphere Commerce and are a Custom Installation Package (CIP) that includes Refresh Pack 2 and several required iFixes. These maintenance patches are automatically installed and applied to the application server by the Commerce installer. This reduces the time and complexity of the Commerce installation process.

## Commerce v6 package – Electronic media

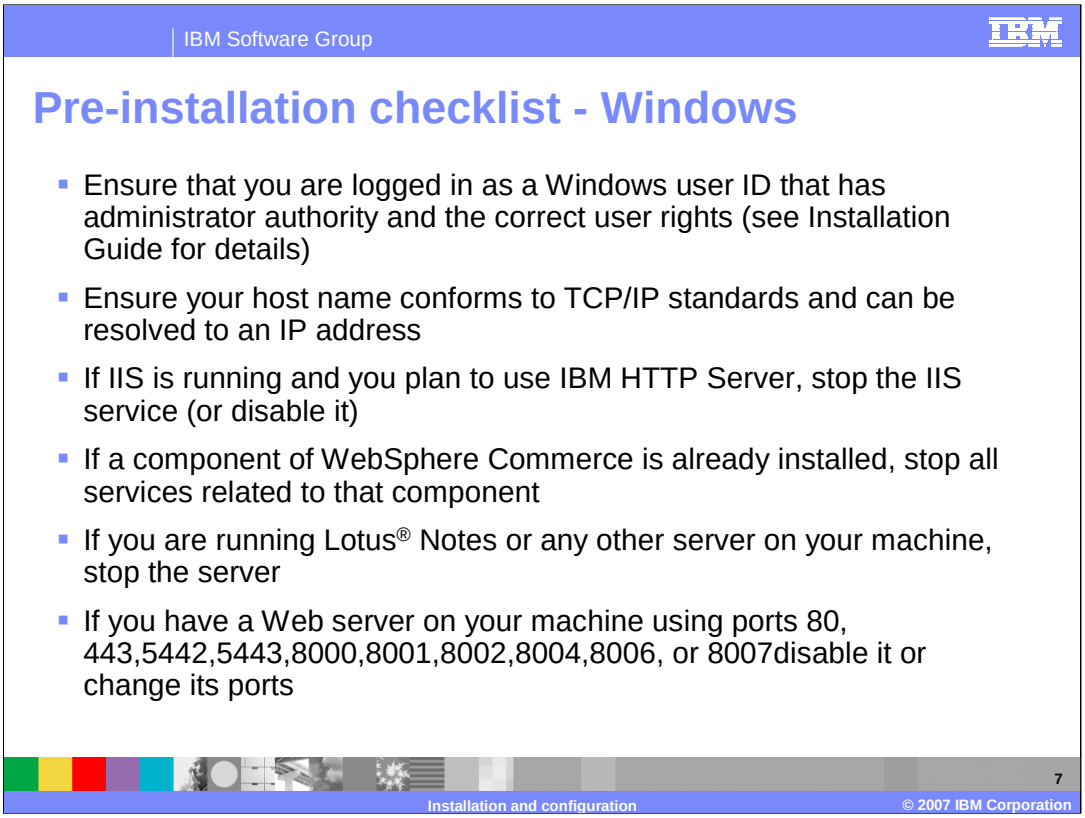
- Commerce download image
  - One download that contains disk1 and disk2
- WebSphere Application Server V6 Network Deployment image
  - One download that contains disk 1 and disk 2
- DB2 ESE image
  - One download that contains the server and administrator client

Note: WebSphere Commerce Express includes WebSphere Application Server Express and DB2 Express


© 2007 IBM Corporation

If a product comes on multiple CDs, they are bundled together into one download. You should unzip all images to one directory, then launch the installer.

The images are packaged with a special directory structure. The installer understands this directory structure and will not prompt for the various CDs.




DB2 requires user IDs that will manage or connect to a database, and conform to certain naming requirements, including a length restriction (for some platforms) and not beginning with certain combinations of characters.

TCP/IP standards require host names and domains to begin with a letter and only contain letters, digits or hyphens. Host names should not be case sensitive. Some operating systems and applications do not honor or enforce these rules and allow you to include other characters in host names (for example, an underscore). If a machine's host name does not comply with TCP/IP standards, IBM HTTP Server will not accept connections from that machine.

Stop and disable any programs that could conflict with any of the WebSphere Commerce components such as antivirus software or VPN clients.


There are some changes to the WebSphere Commerce V6 installer.

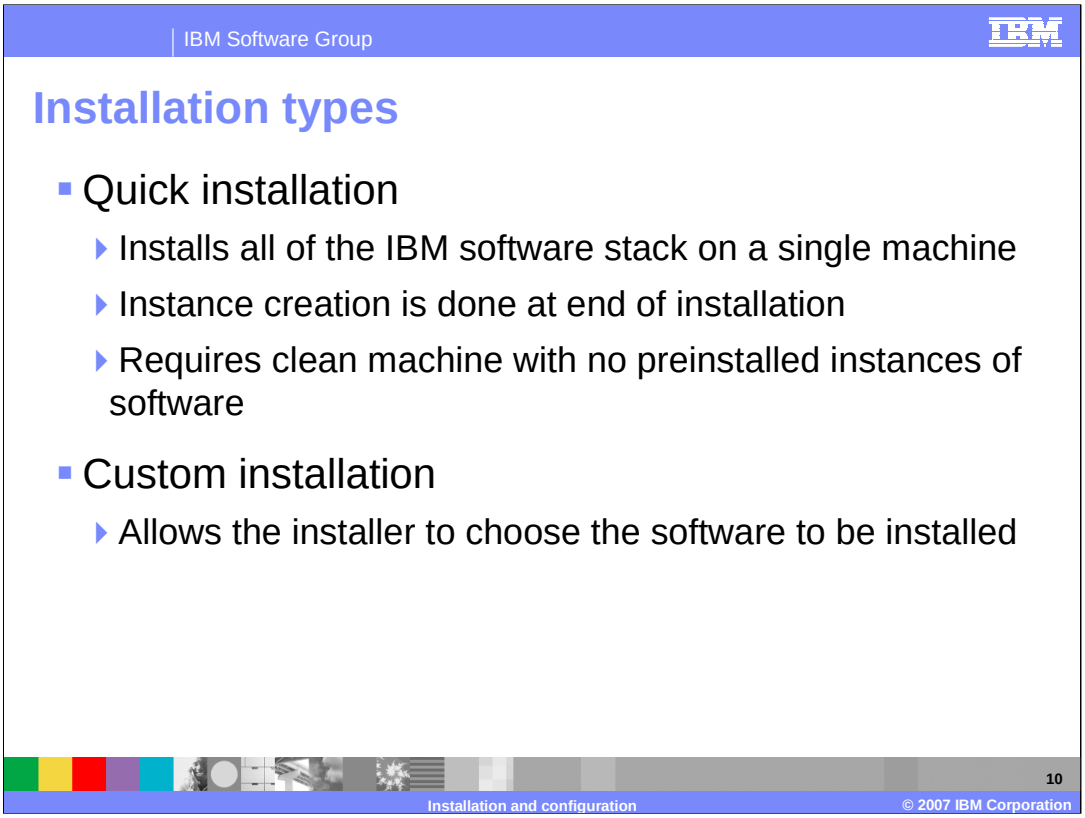
The quick install no longer provides an option to create Commerce Payment instance. The Windows user rights for the installer user are simplified. For example, there are no additional user rights needed for the quick install. Custom install only requires the “act as part of the operating system” user right to be set. The installer provides a soft stop warning if pre-installed software is not at the supported level.

## Installation process - Windows

- Insert WebSphere Commerce V6.0 Disk 1
- Run setup.bat in the root of the CD (if autorun is enabled,it should start automatically)
- InstallShield wizard steps through the installation
  - Verify prerequisites
  - Select installation type and components to install
  - Select database and Web server products
  - View installation steps and begin installation
  - Install DB2, HTTP Server, WebSphere Application Server
  - Install WebSphere Commerce
  - Perform post-installation setup tasks
- After installation of all components, restart if installed by custom installation


© 2007 IBM Corporation

Installation on Windows is a relatively easy process because the InstallShield Wizard steps you through the process and offers choices to specify the configuration required. Run the setup.bat program in the root of the WebSphere Commerce install disk 1 and follow the prompts to perform the installation. Installation on UNIX platforms and iSeries is similar because the InstallShield for Multi-platforms wizard has the same interface on all platforms.




There are two types of installation.

Quick Installation, installs all of the IBM software stack ( DB2, IBM HTTP Server, WebSphere Application Server, and WebSphere Commerce) on a single machine. Instance creation is done at the end of installation. Quick installation requires a clean machine with no versions of the software pre-installed. Depending on machine specifications, typically the total time required to complete quick installation is under 2 hours.

Custom Installation allows the installer to choose the software to be installed.

# Installation directories

## Default installation directories on Windows 2000 and Windows 2003

| | |
|---|---|
| DB2 | C:\Program Files\IBM\SQLLIB |
| HTTP Server | C:\Program Files\IBM HTTP Server |
| WebSphere Application Server | C:\Program Files\WebSphere\AppServer |
| WebSphere Commerce | C:\Program Files\WebSphere\CommerceServer60 |


© 2007 IBM Corporation

After installation, you should familiarize yourself with the installation directories for the different products.

It is useful to know where samples and documentation files are found, where useful utilities are located, and where log and data files will be stored.

## Verify installation

- Check the installation log files:
  - <WC_HOME>\logs\db2.log
  - <WebSphere Application Server_HOME>\logs*
  - <WC_HOME>\logs\install.log
  - <WC_HOME>\instances\<instance_name>\logs\
  - <WC_HOME>\logs\wctrace*.log
  - <WC_HOME>\logs\depcheck*.log
  - <WC_HOME>\logs\wcinstall.log
- Check that DB2 starts correctly


© 2007 IBM Corporation

If logs do not appear in the <WC_HOME>/logs directory, they may be found in the %TMP% directory. The logs in the <WC_HOME\instances directory will not exist in a custom installation until you have created an instance of WebSphere Commerce.

After installation, there is no WebSphere Commerce instance so you cannot verify if WebSphere Commerce will actually work correctly, but you should check the installation logs and ensure the related products are installed and can start correctly.

## Installing optional components

- All optional software must be installed separately
- Refer to the Additional Software Guide for instructions on:
  - WebSphere Commerce Analyzer
  - IBM Tivoli Directory Server (or other LDAP server)
  - WebSphere Commerce Recommendation Engine
- Also includes instructions for configuring WebSphere MQ 5.3 and CrossWorlds® InterChange Server 4.2.0


© 2007 IBM Corporation

There are several optional products bundled with WebSphere Commerce. These can be installed anytime after WebSphere Commerce has been installed and should normally be installed on separate dedicated machines. Most cannot be installed on the WebSphere Commerce machine due to prerequisite software conflicts.

WebSphere MQ and WebSphere InterChange Server are not included with WebSphere Commerce V6 but can be used for business integration. Lotus Sametime and Lotus Quickplace are no longer bundled with WebSphere Commerce but can be integrated to provide real-time chat support and collaborative workspaces. DB2 Extenders are also no longer bundled with the product but WebSphere Content Discovery can be integrated to provide advanced search capabilities.

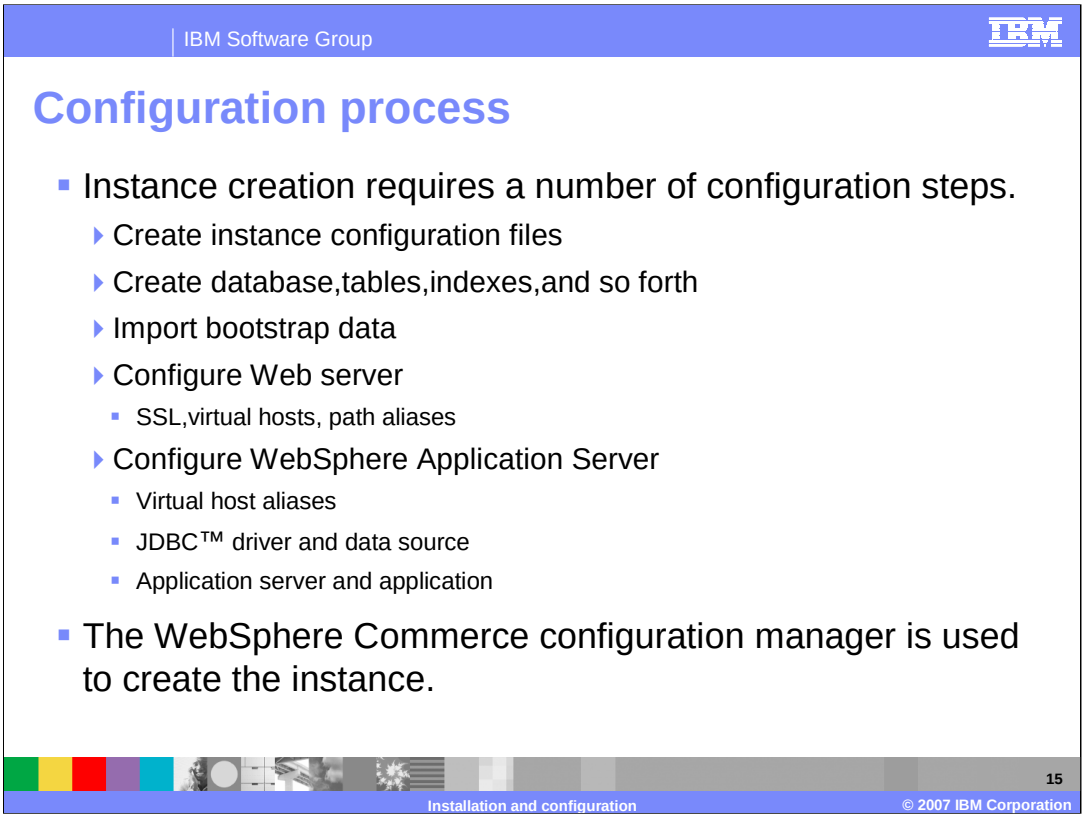
## The WebSphere Commerce instance

Each WebSphere Commerce Instance has:

- WebSphere Application Server Profile (created by Configuration Manager)
- WebSphere Application Server administrator console
- IBM HTTP Server httpd.conf in <WC_Home>/instances/<instance_name>/httpconf
- IBM HTTP Server logs in <WC_Home>/instances/<instance_name>/httplogs
- IBM HTTP Server process
- IBM HTTP Server service on Windows
- Database


© 2007 IBM Corporation

Each instance of WebSphere Commerce is associated with a unique WebSphere Application Server profile, has a unique configuration file, host name, and IP address and connects to a unique database. If you are using IBM HTTP Server, you also have a separate IBM HTTP Server configuration file and process.




There are four basic components of WebSphere Commerce. Each component needs to be configured correctly during instance configurations. The WebSphere Commerce Configuration Manager is used to configure most of the components automatically. However, some manual steps may be necessary if a non-IBM database or Web server is used.

For the WebSphere Commerce Server, the instance configuration file needs to be created with the appropriate instance specific values. The plug-ins for integrating with Commerce Payments also need to be created

The Web Server must be updated to enable SSL, virtual hosts for secure and non-secure access. You also need to define aliases for accessing WebSphere Commerce Web content and access to the content needs to be restricted.

The WebSphere Commerce database needs to be created and the tables, views, indexes, stored procedures, and other objects must be created. Then the default bootstrap data is loaded into the database.

The WebSphere Application Server, Virtual Hosts, JDBC™ driver, and data source must be created and the Enterprise Application must be deployed.

The most complex and time consuming steps of the process are creating the database and configuring the WebSphere Application Server.

## Start the configuration manager

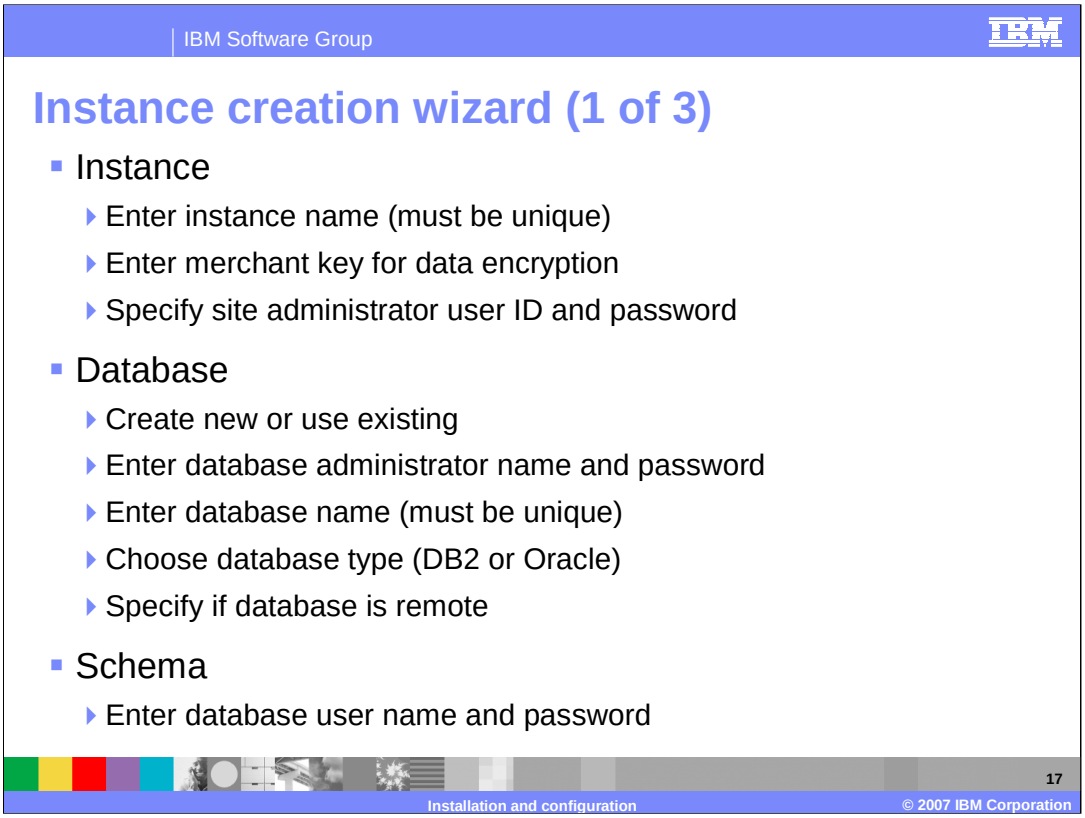
- Ensure necessary services are started on server
  - Database server
  - IBM WebSphere Commerce V6.0 configuration manager
- Start configuration manager client
  - Start -> Programs -> IBM WebSphere -> WebSphere Commerce Server V6.0 -> Configuration Manager
- Log in to Configuration Manager using user ID **configadmin** and password specified during installation



© 2007 IBM Corporation

The Configuration Manager is a client-server Java application. The server component should be running when you want to perform configuration tasks, but you should stop it when it is not needed to save resources and enhance security. When you start the Configuration Manager server as a service, it listens on port 1099 for a connection. The client component is a password-protected graphical user interface that allows you to create instances and edit configuration settings. It can run on a different machine from the server.

A configuration user, ***configadmin***, is predefined but must be manually entered. There is no pre-defined password. A password for the *configadmin* user ID is specified during WebSphere Commerce installation. Password restrictions apply so you must set a password of at least 8 characters that includes at least one digit.



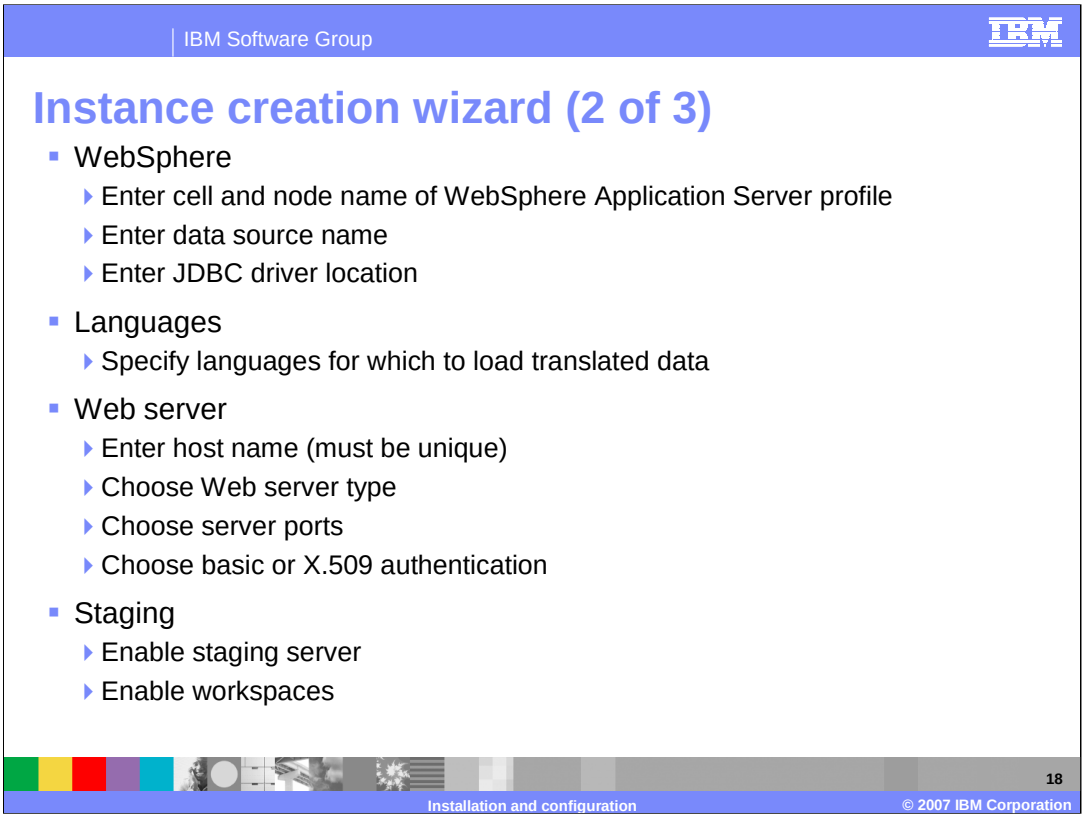

Configuration Manager is used to create and configure instances. Like many user interfaces, Configuration Manager uses an Explorer like tree structure to show the configuration resources. When an entry is selected, actions can be selected from the Action menu or the right-button context menu.

The wizard has seven pages that must be completed in sequence. Most pages have adequate default values for a single machine configuration.

The **Instance page** defines general instance settings. The Commerce Instance name must be unique and is used in the WebSphere Commerce and WebSphere Application Server configuration settings to identify the instance. The Merchant Key, which is a 16-byte hexadecimal number is used as the encryption key for the instance. The Site Administrator ID for the WebSphere Commerce instance has the highest level of authoirty within the system and can access all of the functions in every Commerce tool.

The ***Database page*** configures the database creation. You must first select whether to create a new or use an existing database and specify the database administrator ID and password. The database name must be unique for each instance. The default name is *mall*. If you select *Use Remote Database*, you must enter the information needed to connect to the remote database server, such as the node name and port. During development, multiple databases can be created for an instance to provide different data sets for testing. The Database type must be selected.

The **Schema page** configures the database content. You can set one database as active for each instance.

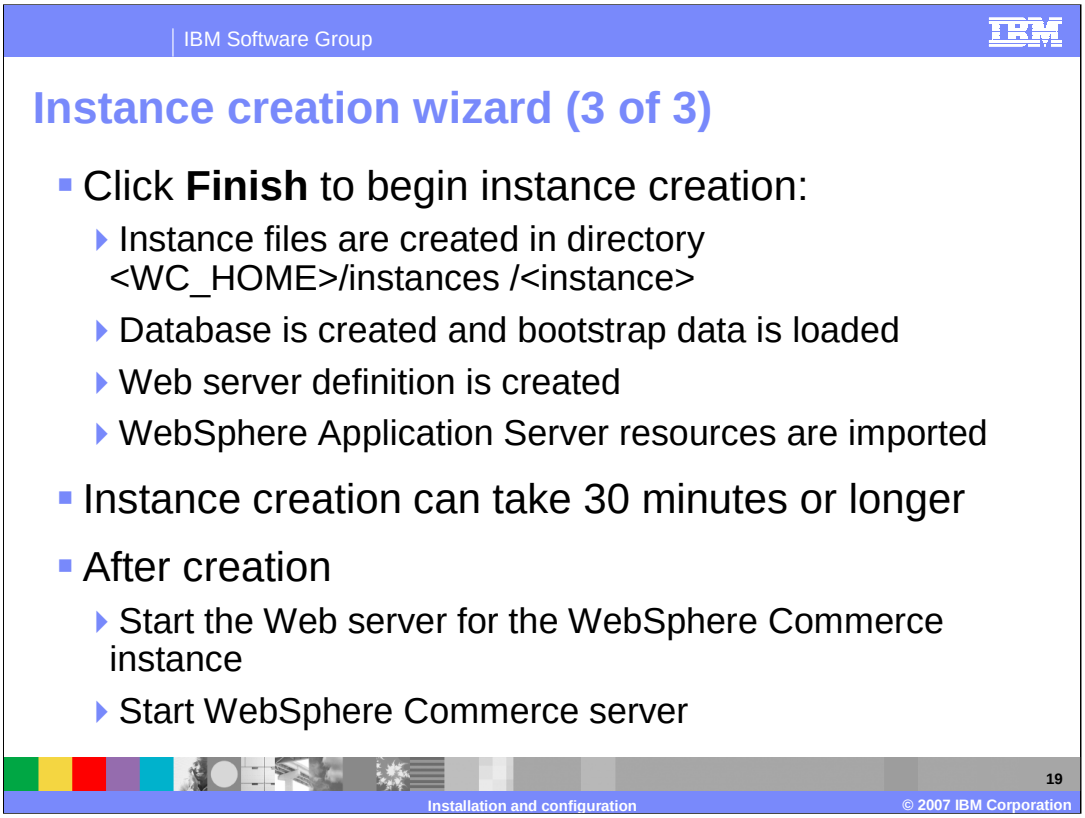



The ***WebSphere page*** allows you to specify the names for some of the WebSphere Application Server resources that will be created, such as, the cell name or node name of the WebSphere Application Server profile. You can also specify the name for the data source and the location of the JDBC driver that will be created in the WebSphere Application Server configuration.

The ***Languages page*** allows additional translated information including country, currency, quantity, and language names, to be loaded into the database when it is created.

The ***Web server page*** allows you to choose the Web server type and set the host name for WebSphere Commerce. You must select a Web server type. The host name should be the unique fully qualified name, including domain part, to be associated with the e-commerce site. If you implement a multiple machine, clustered environment, this would be the host name of the cluster. This page also allows you to modify the ports for the WebSphere Commerce administrative tools.

The ***Staging page*** allows you to create the instance as a staging server. If this option is selected, a standard WebSphere Commerce instance will be created that can be used for testing and development. The database is created with additional tables and triggers that track the changes which will need to be propagated to the production system. This is also the page where you can choose to enable the workspaces feature. You must first select the option to enable the staging server, then the option to enable workspaces will become available.

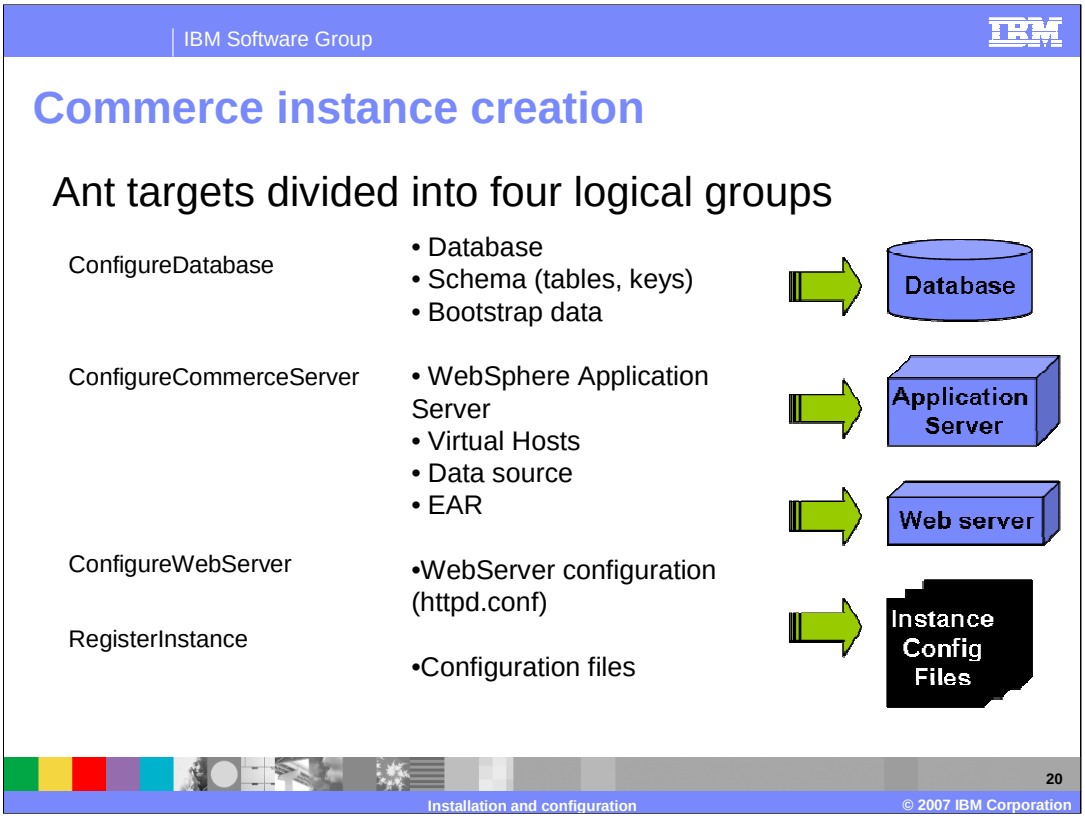



When you click Finish on the Instance Creation Wizard, it will start creating the instance.

Do the following steps to create the instance:

1. Create the instance directories and the instance configuration file (<instance_name>.xml)
2. Create the database, tables, views and other structures then load the bootstrap data into the database, including language specific descriptions.
3. Create the WebSphere Application Server profile and start the server.
4. Create and configure the HTTP server instance along with SSL settings, virtual hosts, and aliases.
5. Import the WebSphere Commerce resources into WebSphere Application Server and deploy the WebSphere Commerce Enterprise Application.

The instance creation can take 30 minutes or longer depending on the speed of your processor. The wizard will create a configuration file containing the settings and then run Ant scripts to configure the other components.




Ant targets are invoked during instance creation. The targets defined for WebSphere Commerce are divided into several high-level groups that correspond to the environment that are to be configured. The groups are Database, Application Server, Web server and WebSphere Commerce.

After instance creation, you can fully expand the tree and see all of the properties associated with the instance. When you expand the settings for an instance, you will notice many pages of settings that were not displayed by the instance wizard. There are many components that can be enabled and disabled and there are many settings associated with services such as the cache and messaging transports. In past versions, if you changed any settings, or enabled or disabled components, you needed to immediately stop and restart the WebSphere Commerce Server.

In WebSphere Commerce V6, closing the Configuration Manager invokes an ANT script called “UpdateEAR” which will deploy the changed configuration file to the Commerce application server. It is very important to close the Configuration manager tool when you are done making changes. In addition, UpdateEAR can take up to an hour to run. If changes need to be deployed sooner, this update will need to be done manually.

## Verify configuration

Check the instance creation log files to ensure successful database creation and WebSphere Application Server import

- Instance configuration file
  - <WC_HOME>\instances*instance_name*\xml*Instance_name*.xml
- Instance creation logs
  - <WC_HOME>\instances \<instance>\logs \createInstance*.log
  - <WC_HOME>\instances \<instance>\logs \createdb*.log
- WebSphere Commerce Server log
  - *WC_profiledir*\logs \server1\SystemOut.log


© 2007 IBM Corporation

You should first check to ensure that the instance configuration file was created. The default instance name is demonstration so the file would be called demo.xml.

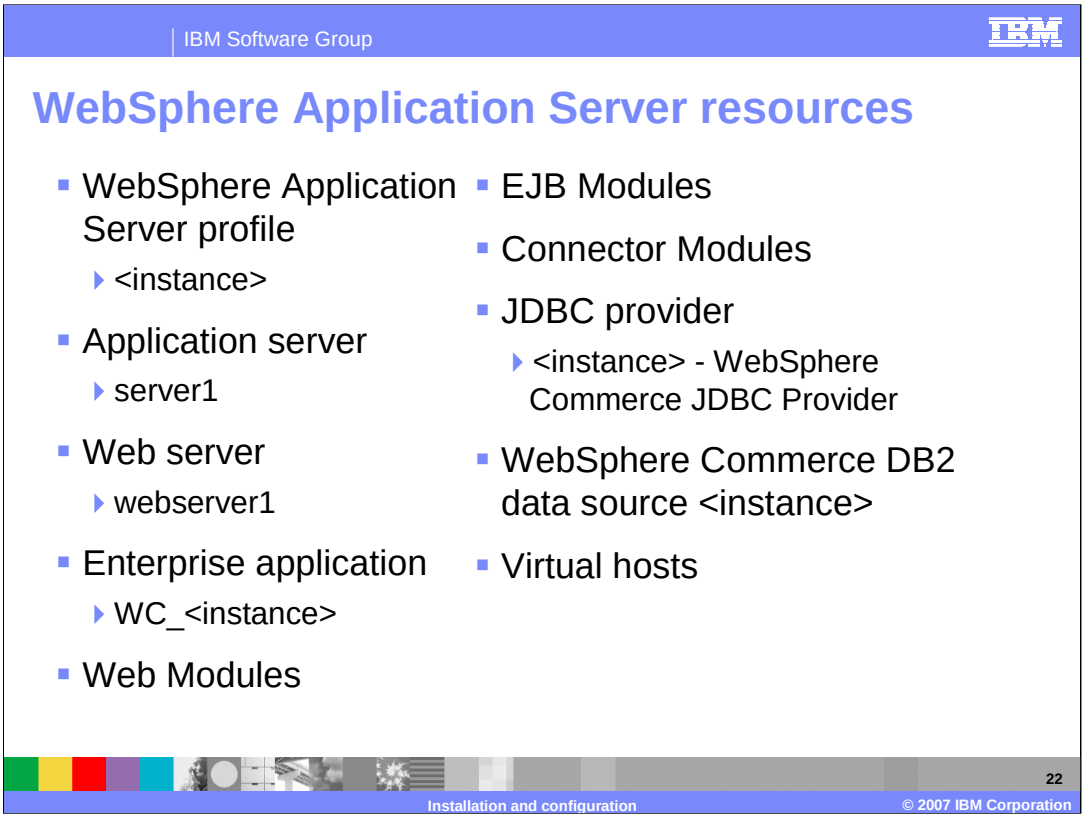
There are various log files created during the instance creation. Check the log files to ensure all steps were performed correctly. In particular, check that the database was created and populated correctly and the WebSphere Application Server resources were imported correctly.

The **createInstance*.log** files will show if the overall WebSphere Commerce configuration process was successful.

The **createdb*.log** file will show if the database creation failed. This could occur if the incorrect user name or password was entered or there was insufficient disk space to create the database.

The **SystemOut.log** file will show if the WebSphere Commerce Server application was able to start. Errors could occur if the WebSphere Commerce Enterprise Application failed during deployment.

If instance creation fails, you should examine the createInstance* logs to determine the cause. It may be possible to recover from the failure by cleaning up the failed component creation and manually running the Ant scripts from that point.




During instance creation, the resources for WebSphere Commerce are configured in the WebSphere Application Server configuration and the enterprise application is deployed. A single profile is created with the same name as the WebSphere Commerce instance. The application server associated with the profile is named *server1*. This runs the EJB modules and Web modules.

A JDBC driver and Data Source are also configured to provide database access for entity EJBs. The Data Source is configured with the WebSphere Commerce database name, user ID, and password.

A Web server is now defined in the WebSphere Application Server Administrative Console. This Web server represents an external Web server instance configured to be used with a particular WebSphere Application Server profile. This allows automatic regeneration of the plugin-cfg.xml file triggered by changes to the WebSphere Application Server configuration and automatic propagation to a remote Web server. (IBM HTTP Server only)

## WebSphere profiles

- WebSphere files are split into two components.
  - Shared static files or product binaries
  - User customizable data files (profiles)
    - User data includes WebSphere configuration, installed applications, resource adapters, properties, log files, and others



© 2007 IBM Corporation

Multiple profiles on a machine share the same underlying set of product binaries. This saves disk space and simplifies application updates. Every server node is represented by a profile. This includes node agents and Deployment Manager. Each profile has its own bin directory. When running *startserver* and *stopserver* make sure that you are running it for the correct server and profile.

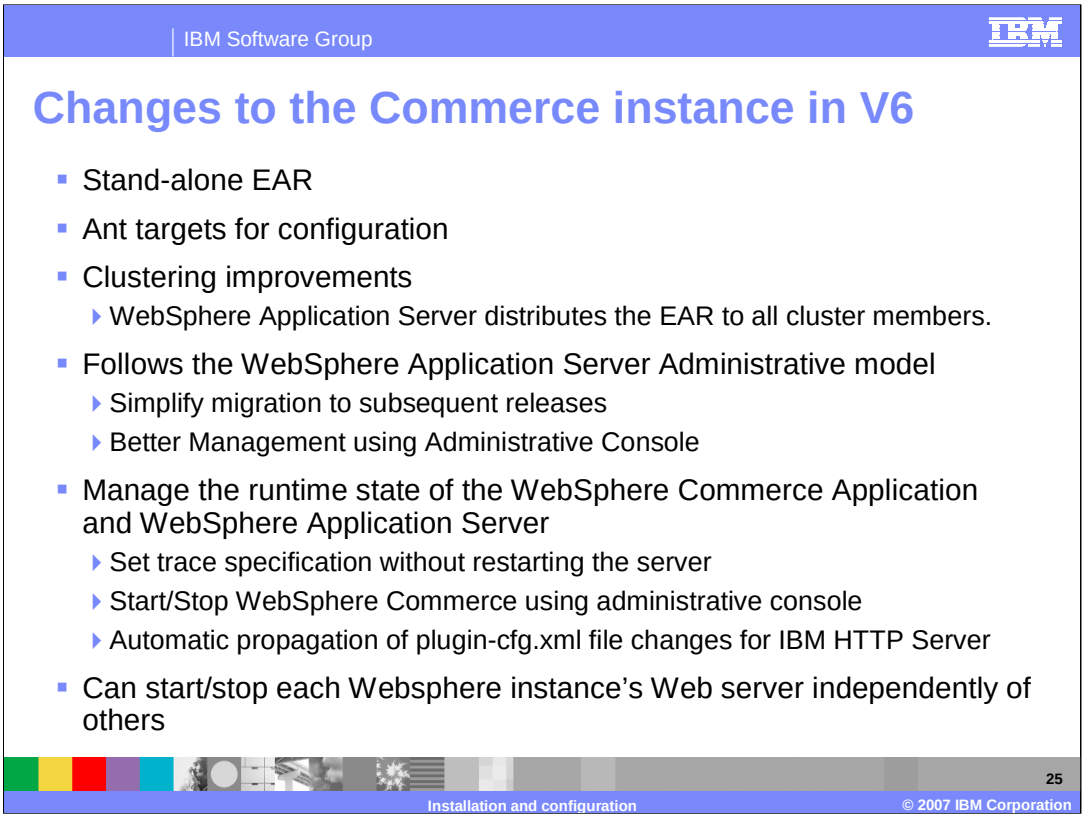
## Testing instance creation

- If you can log on to the WebSphere Commerce tools, the configuration was most likely successful.
- Do the following, before you launch the WebSphere Commerce tools
  - Make sure SSL is enabled in the Web server
  - Verify your browser settings
- Launch WebSphere Commerce administration console
  - https://<hostname>:8002/adminconsole
  - Log in as site administrator specified in instance wizard


© 2007 IBM Corporation

A good test to verify that the basic WebSphere Commerce server is functioning is to run the WebSphere Commerce administration tools. If you can successfully start the tools, log on and access some of the administration forms, then that means the basic function of the system should be working. An SSL certificate is created and enabled by default during initial instance creation. For production systems, this should be replaced with a certificate issued by a vendor Certificate Authority.

If you have any popup blockers enabled in your browser, the tools will not launch correctly. If the result of the adminconsole link is a 404 error, then check to see if the URL remains as what is shown in the slide. This means that the WebSphere Application Server plug-in of HTTP server is not configured correctly. If there is a redirection, that means that the application server has some internal configuration problems




In the past, the WebSphere Commerce EAR referenced files in the WebSphere Commerce install directory. This is not the standard J2EE packaging. In WebSphere Commerce V6, all files required at runtime are inside the WebSphere Commerce EAR except Store Archives.

WebSphere Commerce configuration is now an Ant based process. Ant targets are provided for manually creating or updating the WebSphere Commerce instance. The Configuration Manager invokes Ant tasks to create the components necessary for a Commerce instance. A WebSphere Commerce instance can also be created from the command line using provided Apache Ant and JACL scripts to create the objects required for a WebSphere Commerce instance. Ant is an open-source Java and XML based build tool. XML files define targets which run various Ant tasks. JACL is a Java implementation of TCL. The target UpdateEAR is provided for manual configuration changes. This is invoked automatically when making changes using the Configuration Manager.

In previous releases of WebSphere Commerce, if you had a clustered environment, you would need to install WebSphere Commerce on each node of your cluster. In WebSphere Commerce V6, this is no longer required. All assets required at runtime are packaged in the Websphere Commerce EAR file. WebSphere Application Server will distribute this EAR file to all cluster members. Fewer steps are required to cluster WebSphere Commerce and clustering the WebSphere Commerce Application can be automated by tools such as Tivoli Configuration Manager or Tivoli Provisioning Manager.

## Instance configuration file

- <WC_Home>/instances/inst/xml/<instance_name>.xml
  - This is the master configuration file for your instance
  - This file is deployed to the EAR when changes occur
- <WC_EAR>/xml/config/wc-server.xml
  - This file is used by the runtime


© 2007 IBM Corporation

In WebSphere Commerce V6, the instance configuration file in your WebSphere Commerce instances directory is considered to be the master configuration file. This is the file that is updated when changes are made using the Configuration Manager.

A copy of this file, called wc-server.xml, is found in the WebSphere Application Server enterprise application home directory. This file will be automatically updated when changes are made to the WebSphere Commerce configuration using Configuration Manager.

# Deleting a Websphere Commerce instance

- Run command as non-root user:
  - config_ant.sh –DinstanceName=*value* RemoveInstance
- The following configurations are removed:
  - Remove instance-related configurations from WebSphere Application Server profile
  - Remove Web server configuration
  - Unregister instance from Configuration Manager
  - Delete <WC_HOME>/instances/<instance> directory
- The following objects are not removed:
  - Database
  - WebSphere Application Server profile for the instance


© 2007 IBM Corporation

When you are deleting a Websphere Commerce instance, all configurations related to the instance are removed from the WebSphere Application Server profile. Web server configuration is removed. The instance directory is removed and the instance is unregistered from the Configuration Manager. The database and WebSphere Application Server profile for the instance are not removed.

## Uninstalling

- WebSphere Commerce components must be uninstalled before uninstalling WebSphere Application Server
  - Stop WebSphere Commerce and Payment instances
  - Stop any WebSphere Commerce, WebSphere Application Server, DB2 processes
  - Delete any existing Commerce and Payment instance
  - Start Commerce uninstall process
  - Uninstall WebSphere Application Server, then IBM HTTP Server
  - Uninstall DB2
- Cleanup of directories, configuration files and the Windows registry may be needed after uninstallation
- Follow the instructions in the appendix of the installation guide carefully


© 2007 IBM Corporation

The product components should be uninstalled in the reverse order that they were installed to ensure all components are removed correctly.

If you need to uninstall WebSphere Commerce, you should first remove the deployed application from WebSphere Application Server and drop the instance, and its database.

# Recommended courses

Formal education exists for this product and you can find information on recommended training paths and certification tests at:

- Application developer for WebSphere Commerce V6
  http://www-304.ibm.com/jct03001c/services/learning/ites.wss/us/en?pageType=page&c=a0011792
- Business user for WebSphere Commerce V6
  http://www-304.ibm.com/jct03001c/services/learning/ites.wss/us/en?pageType=page&c=a0011793
- System administrator for WebSphere Commerce V6
  http://www-304.ibm.com/jct03001c/services/learning/ites.wss/us/en?pageType=page&c=a0011794


© 2007 IBM Corporation

IBM provides the following training paths for the skill or certification you want to explore.

## Feedback

### Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send e-mail feedback:

mailto:iea@us.ibm.com?subject= Feedback about wcs60_installationandconfiguration.ppt





© 2007 IBM Corporation

You can help improve the quality of IBM Education Assistant content by providing feedback.

# Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

CrossWorlds DB2 IBM Lotus Notes Lotus WebSphere

Pentium, are trademarks of Intel Corporation in the United States, other countries, or both.

Internet Explorer, Windows, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

EJB, JDBC, and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2007. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.