IBM® WebSphere® Application Server V7

Installation

This presentation provides an overview of the installation process for WebSphere Application Server version 7.

Agenda

- Install overview and enhancements

- Runtime installation

- Uninstallation

- Problem determination

- Summary and references

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This presentation covers an installation overview, various components included with the WebSphere Application Server Network Deployment package, and WebSphere Application Server runtime installation enhancements. It also covers uninstallation and details on problem determination.

Section

Installation overview

This section provides an installation overview, including enhancements new to WebSphere Application Server version 7.

Installation overview

- WebSphere Application Server V7 is a full installation

- Installer uses InstallShield Multi-platform technology

- All packages support graphical and silent installation
  - Can be invoked from the Launchpad or from the *install.bin/.sh* in the <install_image>/WAS directory
  - Silent installation uses a response file as input
  - Checks for other local V7 runtime installations

- Common logging and tracing strategy is used across all installers

Installation

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The installation process for WebSphere Application Server version 7 uses InstallShield Multi-platform. It is a full installation and not an upgrade-style installation from previous versions of the product. All packages in WebSphere Application Server version 7 continue to offer graphical and silent installation options, and use common logging and tracing for consistency across packages.

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Installation enhancements

- Installation with previous installed version running

- Enhanced support for non-root installation
  - ▶ Global Security Kit (GSKit) can be installed by a non-root user
  - ▶ Verify and set permissions options

- Optional language pack installation
  - ▶ Shrinks install foot print

- Incremental update support for language packs and samples

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The WebSphere Application Server version 7 installer can be run with a previous installed version of the product running; previous versions report this as a conflict. Non-root installation has also been enhanced to allow installation of the global security kit, and to verify the ID used to install the product. You can choose to optionally install the language pack for WebSphere Application Server version 7, if the extra language support is not needed this can significantly reduce the foot print of the installation. Incremental update can be used after installation to optionally add the language packs or sample applications to an existing install.
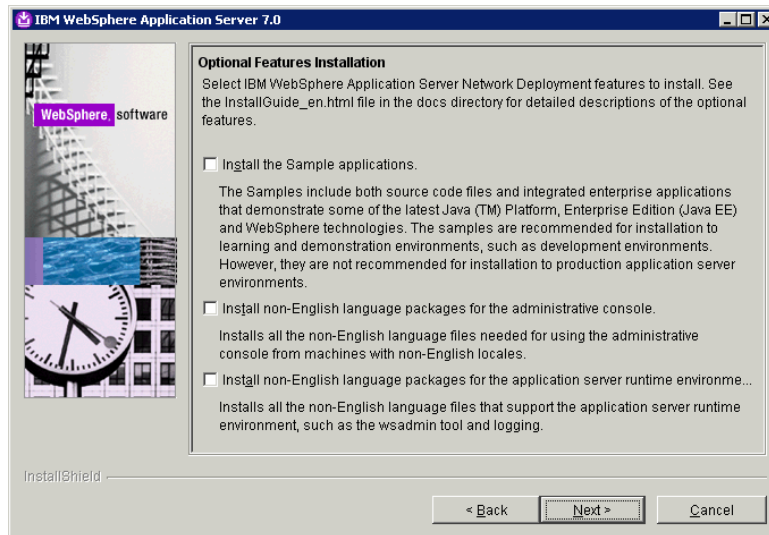
During installation, new choices have been added to the optional features installation panel. Along with the sample applications, you can also choose whether to install non-English language packages for WebSphere Application Server version 7.

IBM

Profile creation enhancements

- New management profile type
  - ▸ Administrative agent, job manager or deployment manager (available in network deployment)

- Set server name during profile creation

- Secure Proxy profile
  - ▸ For nodes that are placed in a DMZ

- Certificate creation or import options are available in Profile Management Tool (PMT)
  - ▸ Under "Advanced profile creation" option

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Profile creation has also seen several enhancements in WebSphere Application Server version 7. A new management profile has been added, and you can choose the server name during profile creation. The management profile can be three different server types, an administrative agent, job manager or deployment manager in a network deployment environment. The administrative agent and job manager are used to create flexible management environments which are also new to this release and explained in greater detail in separate presentations. A new profile type has been added for creating secure proxy profiles, a type of server specialized for placement within a DMZ. You also have several new options for certification when creating a profile using the advanced profile creation path. Various certificates used by WebSphere Application Server, including the default certificate and personal signing certificate can be imported during profile creation, instead of creating new certificates. This can reduce the amount of administrative steps needed after profile creation.

The option to import certificates during the advanced path profile creation has been added. The default behavior is still to create new certificates as has been done in the past.

Security certificate

| IBM Software Group

Profile Management Tool 7.0

Security Certificate (Part 2)

Modify the certificate information to create new certificates during profile creation. If importing existing certificates from keystores, use the information to verify whether the selected certificates contain the appropriate information. If not, click **Back** to import different certificates.

Restore defaults

Default personal certificate (a personal certificate for this profile, public and private key):

Issued to distinguished name:

cn=aimcp032.austin.ibm.com,ou=aimcp032Node01Cell,ou=aimcp032Node01,o=IBM,c=US

Issued by distinguished name:

cn=aimcp032.austin.ibm.com,ou=Root Certificate,ou=aimcp032Node01Cell,ou=aimcp032Node01,o=IBM,c=US

Expiration period:

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Root signing certificate (personal certificate for signing other certificates, public and private key):

Expiration period:

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Default keystore password:

< Back   Next >   Finish   Cancel

You can set additional information about their certificates, such as their distinguished name and expiration periods during profile creation as well.
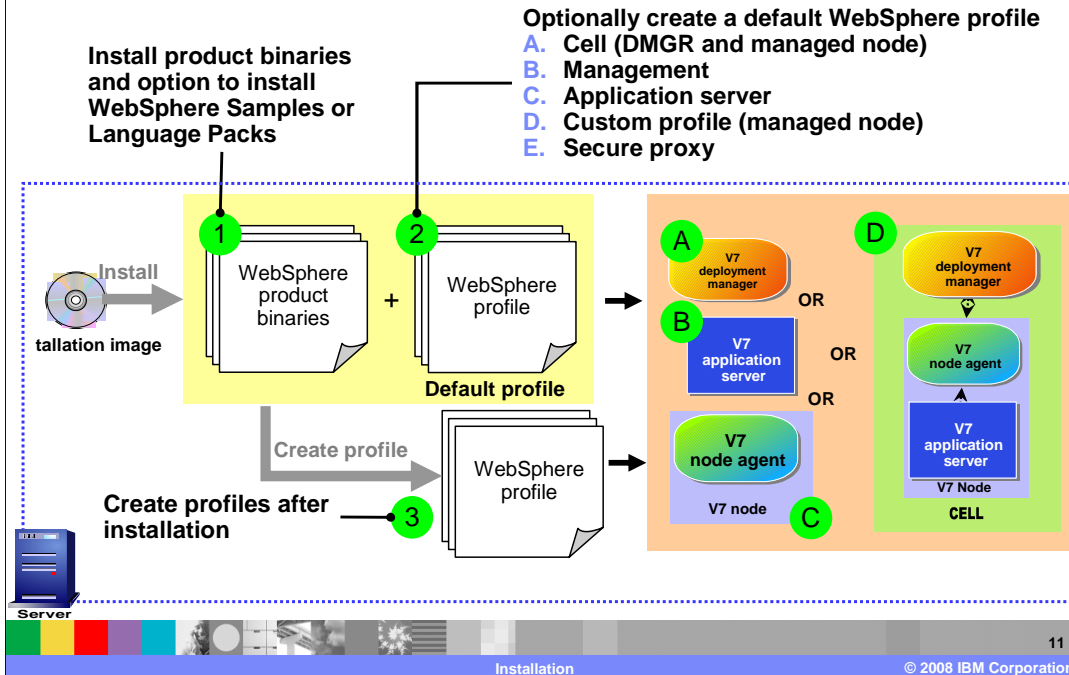
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This section covers the WebSphere Application Server installation process.

The WebSphere Application Server version 7 installer provides the capability to install the binary image and optionally create profiles. Profile creation choices are: managed node, stand-alone application server, management profile, secure proxy and cell. The management profile is used to create a deployment manager or for the new flexible management feature which is covered in more detail in a separate presentation.

The graphical installation wizard creates profiles using the most commonly selected options. If you need a more customized profile, choose the "no profile" option during WebSphere Application Server installation and use the profile management tool after installation to access the advanced profile creation options.

Command-line installation

- Installer binary location:
  - ▸ <IMAGE_DIR>\WAS\install.exe **Windows®**
  - ▸ <IMAGE_DIR>/WAS/install **Linux® / UNIX ®**

- Silent installation option uses a single file to specify various product install options and to create a profile
  - ▸ <IMAGE_DIR>/WAS/install –options "response_file_name" –silent
  - ▸ Sample file: <IMAGE_DIR>/WAS/responsefile.nd.txt
  - ▸ License acceptance must be changed to "true"

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The WebSphere Application Server version 7 installer can be directly invoked by using the "install" command from the "WAS" directory on the CD image. During a silent installation, a response file is used to obtain the input for the installation process. A sample response file is provided to help you get started and to show you the available options. An important thing to remember is that you must indicate your agreement with the license agreement by changing the silentInstallLicenseAcceptance option from "false" to "true" in the sample response file. In WebSphere Application Server version 7 this response file is used to provide options for both installation and profile creation.

IBM

Prerequisite checking

- The installer checks these prerequisites
  - ▸ Operating system level
  - ▸ Sufficient disk space
  - ▸ User authority (permissions)

- You can choose to ignore warnings and continue

- Silent installation will stop if the check fails
  - ▸ Use -OPT disableOSPrereqChecking="true" to override

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During installation, the installer automatically checks for supported Operating Systems, required disk space, and user permissions. The install wizard will allow you to continue with the installation with warnings regarding prerequisite check failures, the installation may fail depending on the nature of the warnings. The silent installer will stop the installation if the prerequisite check fails, and write an explanation to the log file. You can override this behavior by specifying "disableOSPrereqChecking=true" in the response file.

IBM

Default installation location

- Default location starts with "IBM/WebSphere/" for all installations
- Non-root installation is installed under user's home directory

Operating system	User	Default installation location
AIX®	Root	/usr/IBM/WebSphere/AppServer
	Non-Root	~/IBM/WebSphere/AppServer
Solaris/Linux	Root	/opt/IBM/WebSphere/AppServer
	Non-Root	~/IBM/WebSphere/AppServer
Windows®	Root	C:\Program Files\IBM\WebSphere\AppServer
	Non-Root	C:\IBM\WebSphere\AppServer
i5/OS®	N/A	/QIBM/IBM/WebSphere/AppServer/V7/<edition>
z/OS	N/A	/usr/lpp/zWebSphere/V7R0
		/usr/lpp/zWebSphere_OM/V7R0
		/usr/lpp/zWebSphere_SPS/V7R0

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Installation

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This table shows the default locations for root and non-root installations. On Windows, the user's "home" directory is not always an appropriate place to install software. Further, non-Admin users cannot by default write to C:\Program Files\ which is the default install location when an administrative user is running the installation. For these reasons, the default install location for non-Administrator users on Windows is C:\IBM\WebSphereAppServer.

Section

Uninstallation

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This section will discuss uninstalling WebSphere Application Server version 7.

Uninstallation overview

- Uninstallation uses InstallShield Multi Platform
  - ▸ Uninstaller is created during installation

- Located under "uninstall" directory
  - ▸ <Install_root>/uninstall/uninstall.exe

- Silent uninstallation is supported
  - ▸ <Install_root>/uninstall/uninstall –silent

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Uninstalling WebSphere Application Server version 7 is similar to past releases. The uninstall program is created during installation, and can be found under the installation's root uninstall directory. Silent uninstallation is also supported, the uninstall program can be run with the –silent option from the command line.

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Problem determination

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This section will discuss installation problem determination.

Exit codes

- All V7 installers, including IBM HTTP Server and plug-in installers use a common logging strategy, including exit codes

- Linux / UNIX Platforms echo "$?" command after installation completes will display
  - 0 – Success, 1 – Failed, 2 – Partial Success

- Exit codes are not set on Windows platforms due to an Install Shield limitation
  - Consult **log.txt** for information on success or failure
    - INSTCONFSUCCESS implies successful install and profile creation
    - INSTCONFFAILED implies a failed install
    - INSTCONFPARTIALSUCCESS typically implies a successful install, but some configuration action failed

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All of the installation packages in WebSphere Application Server version 7 will follow a common logging and tracing strategy, meaning they use a consistent location for log and trace files, and a consistent format for those files.

The installers set exit codes to indicate success or failure on all Linux and UNIX platforms. Exist codes cannot be set on Windows due to a limitation with Install Shield. A user or program can check the exit code after the installation has completed. "Partial success" means that some portion of the installation failed but the installation is still at least partially usable and the failure may be recoverable to make the installation completely usable. You will need to consult the log, to determine the exact failure and what, if any, corrective actions can be taken.

Log files

- Log files for installation and uninstallation for all packages can be found under the directory: <install_root>/logs/

- If the logs directory cannot be accesses during installation, the logs are saved under <user home>/<productID>logs
  - ▸ Application Server: <user home>/waslogs
  - ▸ IBM HTTP Server: <user home>/ihslogs
  - ▸ Plug-ins: <user home>/plglogs
  - ▸ Application client: <user home>/cltlogs

- If there is a JDK related problem and if you can not find the logs look under <OS temp directory>/niflogs
  - ▸ /tmp/niflogs on UNIX and %TEMP%/niflogs on Windows

- The error "*A suitable JVM™ could not be found*", can typically be diagnosed with:
  - ▸ install.exe -is:log catchinstallerlogs.txt

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Log files contain information about installing, configuring and updating WebSphere Application Server version 7 components. The log file will initially be created in the user's current "temp" directory and then copied into the <Install Home>/logs/install directory. If the installation is terminated before the file is copied, then it will remain in the user's "temp" directory.

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Summary

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Next is the summary for installation.

Summary

- WebSphere Application Server V7 is a full installation
  - ▶ Both wizard and command line installation options

- Installation enhancements include the ability to
  - ▶ Improved silent installation
  - ▶ Create a secure proxy profile
  - ▶ Create or import security certificates during profile creation

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WebSphere Application Server version 7 provides a full installation with either a graphical wizard or command line install option. There have been several enhancements made to installation, including improved support for silent installation, new profile types such as the secure proxy, and the ability to create or import security certificates during profile creation.

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