



WebSphere Application Server for iSeries
Network Deployment Installation

Version 5.0.2





@server

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Network Deployment Installation

Version 5.0.2

Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 69.

Fifth Edition (September 2004)

This edition applies to version 5.0.2 of IBM WebSphere Application Server for iSeries (product number 5733-WS5) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CISC models.

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Overview of WebSphere Application Server Network Deployment for iSeries

This topic describes the tasks and requirements for installing and starting WebSphere(R) Application Server Network Deployment. It provides step by step instructions to take you through planning, installation, configuration and startup of the Network Deployment environment. It also includes the steps for adding the newly installed WebSphere Application Server instance to the Deployment Manager's domain and verifying installation and configuration of both products. It is assumed that both products are being installed on a single iSeries server.

Note: For a complete checklist of the steps below, see the "Checklist: WebSphere Application Server Network Deployment installation" on page 2.

For a brief description of WebSphere Application Server Network Deployment for iSeries, see "**Overview of WebSphere Application Server Network Deployment for iSeries**" on page 3.

Follow these steps to install Network Deployment, install WebSphere Application Server and configure a Deployment Manager domain:

1. PLANNING

"Step 1: Plan the installation" on page 4

This step describes a series of tasks that you should complete before you install Network Deployment to ensure that all the prerequisites are met.

2. INSTALLING

"Step 2: Install" on page 10

This step describes how to install the WebSphere Application Server product, the Network Deployment product and all associated PTFs.

3. CONFIGURING WEBSHERE APPLICATION SERVER

"Step 3: Configure a WebSphere Application Server instance" on page 44

This step describes how to configure the WebSphere Application Server product for use with Network Deployment.



4. CONFIGURING NETWORK DEPLOYMENT

“Step 4: Configure and start the Network Deployment domain” on page 54

This step describes how to configure Network Deployment, including how to start the Deployment Manager, add a node and configure a node.



5. VERIFYING INSTALLATION

“Step 5: Verify the installation” on page 64

This step describes how to verify that Network Deployment is correctly installed and configured.



TROUBLESHOOTING

“Troubleshoot the installation” on page 68

This topic provides links to resources that you can use to diagnose and correct problems that may occur while installing, configuring, and starting Network Deployment.




UNINSTALLING

“Uninstall Network Deployment” on page 66

This topic describes how to uninstall Network Deployment.

Checklist: WebSphere Application Server Network Deployment installation

Step 1: Plan the installation

1. ___ Read the product Release Notes for Network Deployment. See (<http://publib.boulder.ibm.com/was400/docs/relnotes502.html>) 
2. ___ Evaluate time considerations and schedule enough time for each step of the process. For more information, see “Time considerations for installing Network Deployment” on page 5
3. ___ Evaluate the available installation options and determine which options you require. For more information on the available options, see “Network Deployment installation options” on page 6.
4. ___ Determine if WebSphere Application Server is already installed on your server. For more information, see Plan the installation (page 4).

5. ___ Determine if WebSphere MQ classes for Java and JMS is already installed on your server. For more information, see *Plan the installation* (page 4).
6. ___ Verify that all hardware and software prerequisites have been satisfied. For more information, see *Prerequisites for installing and running WebSphere Application Server Network Deployment* on page 7.
7. ___ Obtain WebSphere Application Server Network Deployment and current fixes. For more information, see *Obtain WebSphere Application Server Network Deployment and current fixes* on page 9.
 - ___ WebSphere Application Server Network Deployment
 - ___ OS/400 cumulative PTFs
 - ___ WebSphere Application Server Network Deployment Group PTF

Step 2: Install

1. ___ Install the cumulative PTF package. For more information, see *Install the correct cumulative PTF package* on page 11.
2. ___ Install WebSphere Application Server. For more information, see *Install WebSphere Application Server* on page 11.
3. ___ Install Network Deployment. For more information, see *Install Network Deployment on iSeries* on page 29.
4. ___ Install PTFs. For more information, see *Install PTFs* on page 42.

Step 3: Step 3: Configure WebSphere Application Server instance

1. ___ Configure software license information. For more information, see *Configure software license information* on page 44.
2. ___ Set SQL server jobs. For more information, see *Set SQL server jobs* on page 45.
3. ___ Configure TCP/IP. For more information, see *Verify and configure TCP/IP* on page 45.
4. ___ Configure an HTTP server instance. For more information, see *Configure an HTTP server instance* on page 47.

Step 4: Configure and start the Network Deployment domain

1. ___ Start the Deployment Manager. For more information, see *Start Deployment Manager* on page 55.
2. ___ Add a node to the Network Deployment instance. For more information, see *Add a node to the network deployment instance* on page 56.
3. ___ Start the administrative console for the Deployment Manager. For more information, see *Start the deployment manager administrative console* on page 57.
4. ___ Configure virtual host. For more information, see *Configure the virtual host* on page 59.
5. ___ Start the HTTP server instance. For more information, see *Start the HTTP server instance* on page 62.
6. ___ Start the application server. For more information, see *Start the Application Server* on page 64.

Step 5: Verify the installation

___ Verify the installation. For more information, see *Step 5: Verify the installation* on page 64.

Overview of WebSphere Application Server Network Deployment for iSeries

WebSphere Application Server Network Deployment (Network Deployment) provides a distributed management environment for managing multiple WebSphere Application Server V5.0 instances (also known as nodes or base application server instances).

The Network Deployment product provides the administration deployment manager application which runs in a specialized application server also provided by the Network Deployment installation. The Network Deployment installation does not install the WebSphere Application Server product or create WebSphere Application Server instances. Also, you do not install enterprise applications into a Network Deployment instance. The only functions supported in the Network Deployment installation are the Deployment Manager and its associated administration programs, which you use to manage and configure WebSphere Application Server nodes which have been added to the Network Deployment domain (also known as a cell). Choose one computer system on which to install the Network Deployment product, and then choose the WebSphere Application Server nodes you wish to add to Network Deployment cell. The Deployment Manager and the nodes it manages comprise a cell. On iSeries, multiple Network Deployment instance are fully supported, enabling you to have multiple Deployment Managers each managing a unique set of nodes.

The administrative console is a Web-based application that runs on any of the browsers supported by WebSphere Application Server Network Deployment. For more information on supported browsers, see “Prerequisites for installing and running WebSphere Application Server Network Deployment” on page 7. The administrative console provides a graphical interface that allows you to configure and manage Network Deployment environment and its resources.

See the Introduction to WebSphere Application Server topic for more information about WebSphere Application Server for iSeries.


Step 1: Plan the installation

Before you install WebSphere Application Server Network Deployment for iSeries, complete these tasks to ensure that all the prerequisites are met.

1. Print the “Checklist: WebSphere Application Server Network Deployment installation” on page 2 to use during the installation process.
2. Plan to set aside enough time for each step of the process. For more information, see “Time considerations for installing Network Deployment” on page 5. Depending on your server, the process may take more or less time.

Note: The installation of WebSphere Application Server requires at least one initial program load (IPL or restart) of the server (to install PTFs), so plan appropriately.

3. Evaluate the available installation options and determine which you require. For more information on the available options, see “Network Deployment installation options” on page 6.
4. Read the product Release Notes for important information about the product. See the WebSphere Application Server documentation page

(<http://www.ibm.com/eserver/iseries/software/websphere/wsappserver/docs/docws50.html>)  for links to the Release Notes.

5.

If a previous version of WebSphere Application Server is installed on your server, read the coexistence instructions

(<http://www.ibm.com/eserver/iseries/software/websphere/wsappserver/product/coexist50.html>)

 before you install version 5.0 of WebSphere Application Server Network Deployment.

6. If you plan to migrate from the previous version to this version, be sure to read Migration.

7.

Determine if WebSphere MQ classes for Java and JMS V5.3 for iSeries is already installed on your server. Perform these steps:

- a. Enter the Display Software Resources (DSPSFWRSC) command on an OS/400 command line.
- b. Look for an entry with the product Resource ID 5639C34.

- c. If you do not find the product Resources ID, then this product has not been installed on your iSeries server.
 - d. If MQSeries classes for Java and JMS (5648C60) has been installed on your system, then you must uninstall it before installing WebSphere MQ classes for Java and JMS (5639C34). To uninstall MQSeries classes for Java and JMS, enter this command:
DLTLICPGM LICPGM(5648C60)
8. Verify that the “Prerequisites for installing and running WebSphere Application Server Network Deployment” on page 7 have been satisfied.
- Note:** If you are running an iSeries server that does not meet the minimum recommended requirements for WebSphere Application Server Network Deployment, you can still install and run the product. Administration functions of the Network Deployment environment may run slowly.
9. Before you install Network Deployment, you need to obtain the base product and current fixes. This can take up to two weeks. For more information, see “Obtain WebSphere Application Server Network Deployment and current fixes” on page 9.



“Time considerations for installing Network Deployment”

Time considerations for installing Network Deployment

Before you install WebSphere Application Server for iSeries, use this time table to plan enough time for each step of the process. These times are approximate. Depending on your server, the process may take more or less time.

Note: The installation of WebSphere Application Server requires at least one initial program load (IPL or restart) of the server (to install PTFs), so plan appropriately.

Task	Estimated time
Planning the installation	
Reading Release Notes and migration instructions, and verifying hardware and software prerequisites.	1-2 hours
Obtaining the product and current fixes.	up to 2 weeks
Installing Network Deployment.	
Installing the OS/400 cumulative PTF package.	1-2 hours
Installing WebSphere Application Server on your iSeries server. Dependent on the method used. Installing the product from the CD-ROM drive of your iSeries server takes less time than installing it from a remote workstation.	45-120 minutes
Installing Network Deployment on your iSeries server. Dependent on the method used. Installing the product from the CD-ROM drive of your iSeries server takes less time than installing it from a remote workstation.	45-120 minutes
Installing WebSphere Application Server Group PTF. Dependent on your system.	Up to 2 hours
Configuring WebSphere Application Server instance.	30-60 minutes
Configuring and starting the Network Deployment domain.	30 minutes

Task	Estimated time
Verifying the installation.	10 minutes



“Network Deployment installation options”

Network Deployment installation options

Before you install WebSphere Application Server Network Deployment, decide which options you require. By default, all products and all options are installed. You can install a subset of products and options.

- **WebSphere Application Server V5.0, Network Deployment for iSeries (5733WS5):**
 - (Option Base) WebSphere Application Server
This option is required. It contains the Readme file and other common files for the product.
 - (Option 5) Network Deployment
This option is required. It contains the Network Deployment runtime.
 - Language option
The language option denotes the National Language Support (NLS) option for the product. These languages are available:
 - 2980 - Brazilian Portuguese
 - 2950 - English Uppercase only
 - 2924 - English
 - 2938 - English Uppercase only DBCS
 - 2894 - English DBCS
 - 2928 - French
 - 2940 - French MNCS
 - 2929 - German
 - 2939 - German MNCS
 - 2932 - Italian
 - 2942 - Italian MNCS
 - 2962 - Japanese DBCS
 - 2986 - Korean DBCS
 - 2989 - Simplified Chinese DBCS
 - 2931 - Spanish
 - 2987 - Traditional Chinese DBCS
- **WebSphere MQ classes for Java and JMS V5.3 for iSeries (5639C34)**
This product is included with the Network Deployment product. It is not required to run Network Deployment. Install this product if you want to use JMS from your applications or the embedded JMS server.
 - (Option Base) WebSphere MQ classes for Java and JMS
Install this product if you want to use JMS from your applications or the embedded JMS server.
 - (Option 1) WebSphere MQ classes for Java and JMS - samples
Option 1 provides the samples for WebSphere MQ classes for Java and JMS.

Continue



“Prerequisites for installing and running WebSphere Application Server Network Deployment”

Prerequisites for installing and running WebSphere Application Server Network Deployment

Before you install WebSphere Application Server Network Deployment, verify that your hardware and software meet the minimum requirements.

- iSeries and AS/400 hardware requirements (page 7)
- iSeries and AS/400 required software (page 8)
- iSeries and AS/400 optional software (page 8)

For information about the prerequisites for the workstation components of WebSphere Application Server Network Deployment, see Workstation prerequisites for installing WebSphere Application Server.

iSeries and AS/400 hardware requirements

Use the IBM Workload Estimator for iSeries  for help with estimating all system configurations.

Systems that do not meet the recommended minimums may be used in environments that support a limited number of users and where longer server initialization times are acceptable.

• WebSphere Application Server Network Deployment

- Recommended minimum server models:
 - iSeries Model 270 with processor feature 2250
 - iSeries Model 820 with processor feature 2395
- 750 MB of memory (recommended minimum)

Notes:

1. These requirements are based on a single WebSphere Application Server Network Deployment instance. Additional WebSphere Application Server instances or WebSphere Application Server Network Deployment instances running concurrently will require additional resources.
2. These requirements represent the recommended minimum requirements. Large deployments or those which must support many users or require shorter response times may require additional resources.

• WebSphere Application Server

- If your applications consist only of servlets and JavaServer(TM) Pages (JSP) files, your server should meet these requirements:
 - Recommended minimum server models:
 - iSeries Model 270 with processor feature 2250
 - iSeries Model 820 with processor feature 2395
 - 750 MB of memory (recommended minimum)

Notes:

1. These requirements are based on a single WebSphere Application Server instance. Additional instances running concurrently will require additional resources.
 2. These requirements represent the recommended minimum requirements. Deployments which must support many users or require shorter response times may require additional resources.
- If your applications contain enterprise beans, your server should meet these requirements:

- Recommended minimum server models:
 - AS/400e server 170 with processor feature 2385
 - AS/400e server 720 with processor feature 2062
 - iSeries Model 270 with processor feature 2252
 - iSeries Model 820 with processor feature 2396
- 1 GB of memory (recommended minimum)

Notes:

1. These requirements are based on a single WebSphere Application Server instance. Additional instances running concurrently will require additional resources.
2. These requirements represent the recommended minimum requirements. Deployments which must support many users or require shorter response times may require additional resources.

- Disk requirements:

WebSphere Application Server for iSeries		
Installation option	Description	After installation
*BASE	WebSphere Application Server	15 MB
Option 5	Network Deployment	350 MB
WebSphere MQ classes for Java and JMS V5.3 for iSeries		
Installation option	Description	Disk space after installation
*BASE	WebSphere MQ classes for Java and JMS	15 MB
Option 1	WebSphere MQ classes for Java and JMS - Samples	1 MB

Note: If you are also installing WebSphere Application Server, see iSeries prerequisites for installing WebSphere Application Server for additional disk requirements.

- Communications adapter that supports TCP/IP

iSeries and AS/400 required software

- **OS/400 Version 5 Release 1 (V5R1) or Version 5 Release 2 (V5R2)**
The iSeries server must be in an unrestricted state, and your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
- **IBM Developer Kit for Java(TM) (5722-JV1), Version 1.3 (option 5)**
- **OS/400 Qshell (5722-SS1 option 30)**
Required for local installation and to use scripts in Network Deployment.
- **OS/400 Host Servers (5722-SS1 option 12)**
Required for remote installation.
- All necessary fixes. For a current list of fixes, see <http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/services/service.htm> and click PTFs.

iSeries and AS/400 optional software

- **OS/400 Digital Certificate Manager (5722-SS1 option 34)**
Not required for installation, but required if you plan to use Secure Sockets Layer (SSL) protocol.
- **A Cryptographic Access Provider**
Not needed for installation, but required if you plan to use SSL. You can choose one of these options: 5722-AC2 (56-bit), 5722-AC3 (128-bit).

- **DB2(R) Query Manager and SQL Development Kit for iSeries (5722-ST1)**
Can be helpful in developing client applications.

Obtain WebSphere Application Server Network Deployment and current fixes

Before you install WebSphere Application Server Network Deployment for iSeries, you need to obtain the Network Deployment product. The list below provides information about how to obtain the necessary products and fixes.


- **WebSphere Application Server for iSeries**

For information on how to order WebSphere Application Server for iSeries, see the **Ordering information** section of the WebSphere Application Server packaging information page

(<http://www.ibm.com/eserver/series/software/websphere/wsappserver/news/package.htm>) .


- **Cumulative PTFs**

WebSphere Application Server Network Deployment for iSeries was tested on a specific OS/400 cumulative PTF package level. To view the cumulative PTF package tested, see WebSphere Application

Server PTFs . From the PTFs page select the link for your OS/400 release level. On the resulting page, click the **Cumulative Package** link. You may be able to install and run WebSphere Application Server for iSeries successfully on earlier or later cumulative PTF packages. For more information about determining your server's cumulative PTF package level, see "Verify that the correct cumulative PTF package is installed."

- **PTFs**

The WebSphere Application Server Network Deployment group PTF includes fixes for WebSphere Application Server and other OS/400 products such as WebSphere MQ, WebSphere MQ classes for Java and JMS V5.3, IBM DB2 Universal Database, IBM Developer Kit for Java, and the IBM HTTP Server. Installing the group PTF requires an IPL of your server, so plan accordingly. To determine which group PTF you must order and install, see WebSphere Application Server Network Deployment for iSeries PTFs

(<http://www.ibm.com/eserver/series/software/websphere/wsappserver/services/service.htm>) . Note that the group PTF numbers differ by WebSphere Application Server product and OS/400 release level.

**You have completed step 1 of 5.
Continue on to step 2.**



"Step 2: Install" on page 10

Verify that the correct cumulative PTF package is installed

To determine the prerequisite cumulative PTF package level for the version of WebSphere Application Server Network Deployment you plan to install, see the PTF pages

(<http://www.ibm.com/eserver/series/software/websphere/wsappserver/services/service.htm>)  of the WebSphere product Web site.

From the PTF page, follow these steps:

1. In the Network Deployment row, click the link for your OS/400 release level.
2. Click the Cumulative PTF Package link to see the minimum cumulative PTF package that is required.

To determine if the correct OS/400 cumulative PTF package is installed on your server, perform the these steps:

1. Sign onto your server.

2. Enter the Display PTF Status (DSPPTF) command on an OS/400 command line. The Display PTF Status screen is displayed. This screen lists the PTFs that have been applied to your server.

Here is an example of the Display PTF status screen:

```

Display PTF Status
System: your.server
Product ID . . . . . : 5722999
IPL source . . . . . : ##MACH#B
Release of base option . . . . . : V5R1M0 L00

Type options, press Enter.
 5=Display PTF details  6=Print cover letter  8=Display cover letter


PTF
Opt ID      Status          IPL
TL02036    Temporarily applied  None
TL01302    Superseded           None
TL01254    Superseded           None
TL01226    Superseded           None
TL01163    Superseded           None
TL01114    Superseded           None
TL01086    Superseded           None
RE01148    Permanently applied  None
RE01089    Permanently applied  None

More...
F3=Exit  F11=Display alternate view  F17=Position to  F12=Cancel

```

In the example, the first PTF that is listed, TL02036 (with a status of **Temporarily applied**), correlates to the cumulative PTF that is installed on the server.

You must order and install the prerequisite OS/400 cumulative PTF package before proceeding to the next step in this process.

See the IBM eServer iSeries Support Fixes (<http://www-912.ibm.com/supporthome.nsf/document/17403848>)  for instructions on ordering PTFs.

Step 2: Install

To install WebSphere Application Server Network Deployment on your iSeries server, complete these steps.

1. “Install the correct cumulative PTF package” on page 11
2. “Install WebSphere Application Server” on page 11
3. “Install Network Deployment on iSeries” on page 29
4. “Install PTFs” on page 42

If you have problems with any part of the installation, see the “Troubleshoot the installation” on page 68.



“Install the correct cumulative PTF package” on page 11

Install the correct cumulative PTF package

WebSphere Application Server, Network Deployment for iSeries requires a minimum OS/400 cumulative PTF package level. If the correct cumulative PTF package is not installed on your iSeries server, you must install it before you install Network Deployment.

Note: The cumulative PTF package requires a restart of your iSeries server. If it is not convenient to restart your server, you can simply load and apply the PTFs specifying that the PTF requiring an IPL be applied at the next normal IPL of the server. However, you should not install the Network Deployment product until all of the PTFs have been successfully applied.

For information on verifying your cumulative PTF level, see “Verify that the correct cumulative PTF package is installed” on page 9.

If the correct cumulative PTF is installed, skip this step and continue to “Install WebSphere Application Server.”

To install the cumulative PTF, follow your normal PTF installation procedures. For more information on installing cumulative PTFs, see Install cumulative PTF packages.



“Install WebSphere Application Server”

Install WebSphere Application Server

You can use one of these installation methods to install WebSphere Application Server on your iSeries server:

- From the CD-ROM drive of your iSeries server. Installing the product from the CD-ROM drive of your iSeries server requires direct physical access to the server. The local installation requires less time to complete than a remote installation. You start the local installation with either the Qshell SETUP script or the Run Java (RUNJVA) command.
- From the CD-ROM drive of a workstation with a Microsoft Windows 32-bit operating system. Installing the product from the CD-ROM drive of a workstation does not require direct physical access to the iSeries server. The remote installation requires more time to complete than a local installation.

Select the appropriate option below for instructions on your chosen method of installation:

“Install WebSphere Application Server from the CD-ROM drive of your iSeries server” on page 12

This topic describes how to install WebSphere Application Server on your iSeries server from the CD-ROM drive of your iSeries server.

“Install WebSphere Application Server for iSeries from a workstation” on page 19

This topic describes how to install WebSphere Application Server on your iSeries server from a Windows 32-bit operating system workstation.

Note: The total installation may take up to 120 minutes to complete.

Continue



“Install WebSphere Application Server from the CD-ROM drive of your iSeries server”
or

Continue



“Install WebSphere Application Server for iSeries from a workstation” on page 19

Install WebSphere Application Server from the CD-ROM drive of your iSeries server

You can perform a local installation of WebSphere Application Server with the SETUP script in Qshell or with the Run Java (RUNJVA) command on an OS/400 command line.

To install WebSphere Application Server from the CD-ROM drive of your iSeries server, follow these steps:

1. Signon the iSeries system with a user profile that is user type (user class) *SECOFR and has a value of *USRCLS for special authority.
2. Run either the script or the command:

“Use the SETUP script in Qshell”

Use this option if you prefer a shorter command.

“Use the Run Java (RUNJVA) command from an OS/400 command line” on page 14

Use this command if you prefer control language (CL) commands.

Continue



“Use the SETUP script in Qshell”
or

Continue



“Use the Run Java (RUNJVA) command from an OS/400 command line” on page 14

Use the SETUP script in Qshell: Perform these steps to install WebSphere Application Server from Qshell using the SETUP script.

1. Place the *WebSphere Application Server 5.0 for iSeries* CD-ROM in the CD-ROM drive of your iSeries server. **Notes:**

- a. Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.
 - b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
2. Enter STRQSH on an OS/400 command line to start the Qshell.
 3. Enter cd /QOPT/WEBSPHERE to change directories to the root installation directory on the CD-ROM.
 4. Run the SETUP script to start the installation program. The default is to install all products (WebSphere Application Server, WebSphere MQ V5.3 for iSeries, and WebSphere MQ classes for Java and JMS V5.3 for iSeries) with all supported code options, and the primary language of the iSeries server if supported by the corresponding products or English 2924 if the primary language is not supported by the product. If you do not want to install all of the products, or you want to install a different language, you can specify optional parameters on the command. For a list of the available parameters, see Parameters for local installations of WebSphere Application Server. To accept the default settings for the installation program, enter this command:
SETUP
The default is to install all products (WebSphere Application Server, WebSphere MQ V5.3 for iSeries, and WebSphere MQ classes for Java and JMS V5.3 for iSeries) with all supported code options, and the primary language of the iSeries server if supported by the corresponding products or English 2924 if the primary language is not supported by the product.
Note: Do not issue any other commands, unless prompted, until the installation is completed. Doing so may cause the installation to stop prematurely.
 5. After you enter the SETUP command, messages are displayed that indicate the progress of the installation process. When the setup program has completed, press **F3** to exit.

Here is a partial sample of output from the installation process:

```

> cd /QOPT/WEBSPPHERE
$
> SETUP
Loading installation program. Please wait.
Checking current configuration. Please wait.
Installing selected options. Please wait.
Note: This may take up to 120 minutes to complete.
Product 5724B41: WebSphere MQ V5.3 for iSeries
(Code: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying stream file to save file.
  Restoring licensed program.
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries
(Code: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying stream file to save file.
  Restoring licensed program.
Product 5733WS5: WebSphere Application Server V5.0 for iSeries
(Code: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying stream file to save file.

```



“Install Network Deployment on iSeries” on page 29

Use the Run Java (RUNJVA) command from an OS/400 command line: To install WebSphere Application Server to your iSeries using RUNJVA, perform these steps:

1. Place the *WebSphere Application Server 5.0 for iSeries* CD-ROM in the CD-ROM drive of your iSeries server.

Notes:

- a. Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.
 - b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
2. Enter this command to start the installation program. The default is to install all products (WebSphere Application Server, WebSphere MQ V5.3 for iSeries, and WebSphere MQ classes for Java and JMS V5.3 for iSeries) with all supported code options, and the primary language of the iSeries server if supported by the corresponding products or English 2924 if the primary language is not supported by the product. If you do not want to install all of the products, or you want to install a different language, you can specify optional parameters on the command. For a list of the available parameters,

see Parameters for local installations of WebSphere Application Server. To accept the default settings for the installation program, enter this command, using the same capitalization as shown:

```
RUNJAVA CLASS(SETUP) CLASSPATH('/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar:  
/QOPT/WEBSPPHERE/OS400:/tmp/WebSphere/WS5INSTALL.JAR') PROP((os400.runtime.exec QSHELL)  
(java.version 1.3))
```

Note: This command has been wrapped for display purposes. Enter it as one command.

After you enter the RUNJAVA command, messages are displayed that indicate the progress of the installation process. Here is a partial sample of output from the installation process:

```
Loading installation program. Please wait.  
Checking current configuration. Please wait.  
Installing selected options. Please wait.  
Note: This may take up to 120 minutes to complete.  
Product 5724B41: WebSphere MQ V5.3 for iSeries  
(Code: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Language: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Code: Option 1)  
  Copying stream file to save file.  
  Restoring licensed program.  
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries  
(Code: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Code: Option 1)  
  Copying stream file to save file.  
  Restoring licensed program.  
Product 5733WS5: WebSphere Application Server V5.0 for iSeries  
(Code: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Language: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Code: Option 1)  
  Copying stream file to save file.
```



“Install Network Deployment on iSeries” on page 29

Parameters for local installations of WebSphere Application Server: The SETUP script in Qshell and the Run Java (RUNJAVA) command include several optional parameters that you can use to customize your installation. If a parameter is not specified, the installation program uses the default value for that parameter. If no parameters are specified, WebSphere Application Server V5.0 for iSeries, WebSphere MQ V5.3 for iSeries, and WebSphere MQ classes for Java and JMS V5.3 for iSeries is installed with their default options.

For example, you can use parameters to install only the WebSphere Application Server product and not WebSphere MQ V5.3 for iSeries and WebSphere MQ classes for Java and JMS V5.3 for iSeries. To do this, you would enter one of these commands to start the installation program:

- **From Qshell:**

```
SETUP -wmmq -skip true -wmmqjava -skip true
```

• **From an OS/400 command line:**

```
RUNJAVA CLASS(SETUP) PARM('-wmq' '-skip' 'true' '-wmqjava' '-skip' 'true') CLASSPATH
('/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar:/QOPT/WEBSHERE/OS400:
/tmp/WebSphere/WS5INSTALL.JAR') PROP((os400.runtime.exec QSHELL) (java.version 1.3))
```

where the options specified within PARM() are the installation options. The other parameters are required.

Note: This command has been wrapped for display purposes. Enter it as one command.

This table describes all of the configurable parameters for the WebSphere Application Server, WebSphere MQ V5.3 for iSeries, and the WebSphere MQ classes for Java and JMS V5.3 for iSeries installation. Each product is represented by its product parameter name and its possible parameter values are represented by product assigned parameters. Use the -help parameter to display a list of possible parameters and their usage. The table lists the supported national language options, including double-byte character sets (DBCS) and multi-national character sets (MNCS).

Note: If you want the default value, you do not need to specify it.

Product parameter name	Product assigned parameters	Possible values	Default	Description
-was	-skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, the WebSphere Application Server product is not installed.
-was	-language	<ul style="list-style-type: none"> • 2980 - Brazilian Portuguese • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only • 2984 - English DBCS • 2928 - French • 2940 - French MNCS • 2929 - German • 2939 - German MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish • 2987 - Traditional Chinese DBCS 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by the WebSphere Application Server product, the program installs it. If the primary language is not supported, the installation program installs 2924 (English).

Product parameter name	Product assigned parameters	Possible values	Default	Description
-was	-component	<ul style="list-style-type: none"> • all • code • language 	all	<p>Selects which components to install. The code component installs only the code. The language component installs only the language options (29m). The value all includes both the code and language components.</p>
-was	-option	<ul style="list-style-type: none"> • all • base • 1 • 2 • 3 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the common code. • Option 1 installs the client code. • Option 2 installs the server code. • Option 3 installs the samples. • The value all includes the options base, 1, 2, and 3. <p>Installation of options 1, 2, and 3 requires that the base option is also selected or already installed.</p> <p>Note: You may specify the option parameter multiple times for more advanced configurations (for example, -option base -option 1 -option 3).</p>
-wmq	-skip	<ul style="list-style-type: none"> • false • true 	false	<p>If set to true, the WebSphere MQ product is not installed.</p>

Product parameter name	Product assigned parameters	Possible values	Default	Description
-wmq	-language	<ul style="list-style-type: none"> • 2909 - Belgium English • 2966 - Belgium French • 2981 - Canadian French MNCS • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only DBCS • 2984 - English DBCS • 2928 - French • 2940 - French MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by WebSphere MQ, the program installs it. If the primary language is not supported, the installation program installs 2924 (English). Note: The language parameter only applies to the base option of WebSphere MQ. The other options are in English only.
-wmq	-component	<ul style="list-style-type: none"> • all • code • language 	all	Selects which components to install. The code component installs only code component. The language component installs only language options (29mm). The value all includes both the code and language components.

Product parameter name	Product assigned parameters	Possible values	Default	Description
-wmq	-option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code • Option 1 installs the samples code. • The value all includes the options base and 1. <p>Installation of option 1 requires that the base option is also selected or already installed.</p>
-wmqjava	-skip	<ul style="list-style-type: none"> • false • true 	false	<p>If set to true, the WebSphere MQ classes for Java and JMS product is not installed.</p>
-wmqjava	-option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code • Option 1 installs the samples code. • The value all includes the options base and 1. <p>Installation of option 1 requires that the base option is also selected or already installed.</p>

Install WebSphere Application Server for iSeries from a workstation

You can perform a remote installation of WebSphere Application Server from a Windows 32-bit operating system workstation. You can choose to install through one of these options:

“Install WebSphere Application Server from a workstation using AWT mode” on page 20

The AWT mode uses a graphical user interface (GUI) to complete the installation. The AWT mode is the default mode when you install WebSphere Application Server from a workstation.

“Install WebSphere Application Server from a workstation using silent mode” on page 22

The silent mode allows you to enter a single command to start the installation. The silent mode allows you to specify a file which contains the installation option values you want to use. For any option not specified or commented out within the response file, the installer uses the default values.

Continue



“Install WebSphere Application Server from a workstation using AWT mode”
or

Continue



“Install WebSphere Application Server from a workstation using silent mode” on page 22

Install WebSphere Application Server from a workstation using AWT mode: To use the abstract windowing toolkit (AWT) mode to install WebSphere Application Server for iSeries from a Windows 32-bit workstation, perform these steps:

1. Verify that the host server jobs have been started on your iSeries server. The host server jobs allow the installation code to run on iSeries.

Enter this command on an OS/400 command line:

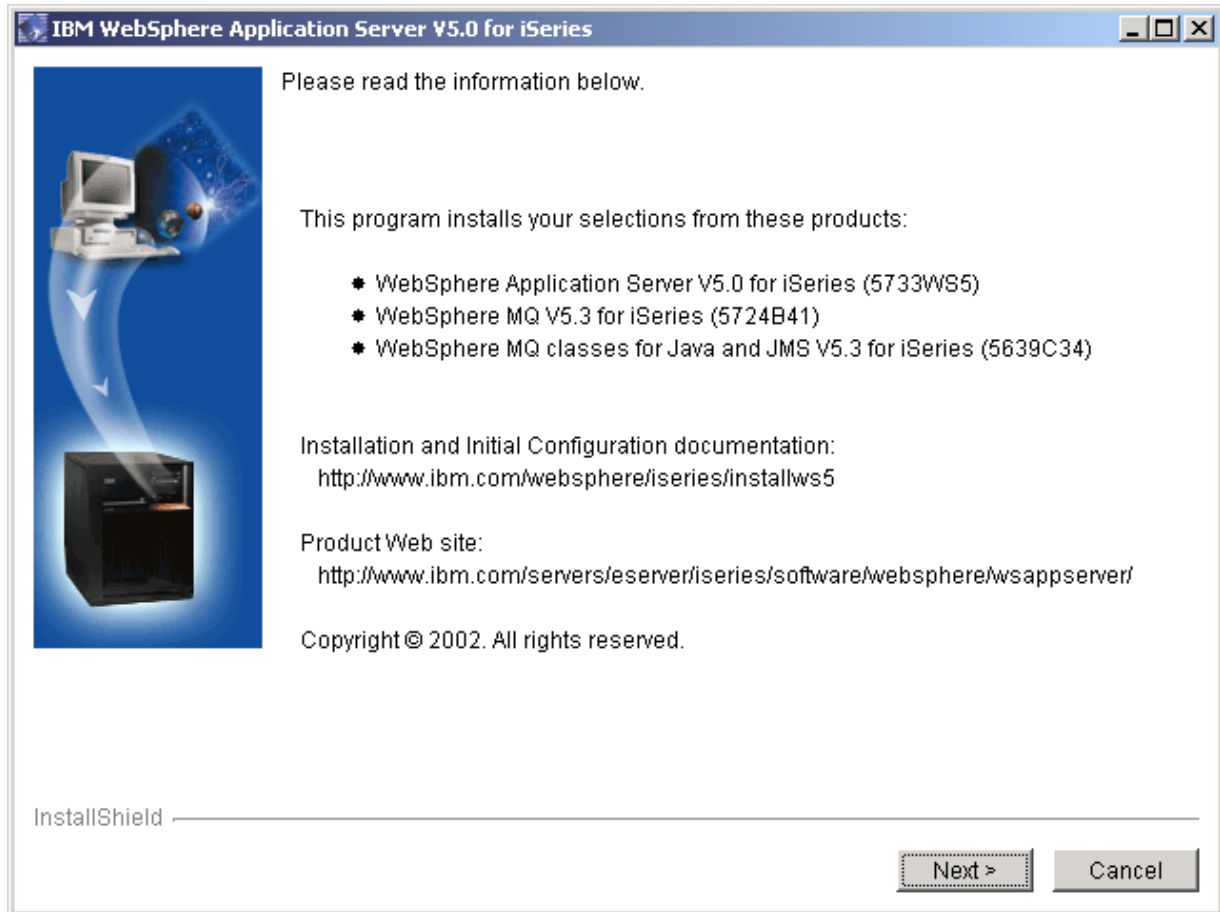
```
STRHOSTSVR SERVER(*ALL)
```

2. If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on an OS/400 command line.
3. Place the *WebSphere Application Server 5.0 for iSeries* CD-ROM in the CD-ROM drive on the workstation.

Note: Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.

The InstallShield program should automatically start. If it does not, open Windows Explorer and select your CD-ROM drive. Double-click the SETUP.EXE file to start the InstallShield program.

4. At the first panel, read the information and click **Next**.



5. Enter the name of the iSeries server where you are installing WebSphere Application Server. You also must enter a valid user ID and password for the server. This user ID must be user type (user class) *SECOFR and have a value of *USRCLS for special authority. Click **Next**.
6. On the next panel, select the options to install for WebSphere Application Server. Click **Next**.

WebSphere Application Server v5.0 for iSeries (5733WS5) options:

- (Option Base) WebSphere Application Server
 This option is required for any other option to be installed. It contains the Readme file and other common files for the product.
- (Option 1) Client development and run time
 Option 1 provides the client application development and run time portion of the WebSphere Application Server V5.0 product. This option allows you to compile your client application code and run both Java 2 Enterprise Edition (J2EE) client applications and Java thin applications. It also provides the necessary scripts and runtime for running remote HTTP, which is used in multiple-machine topologies. For more information, see the Remote HTTP topic in *Administration*.
- (Option 2) Application server run time
 Option 2 provides the application server run time for WebSphere Application Server. It allows you to deploy and run J2EE 1.3 compliant enterprise applications. This option requires option 1 to be installed also.
- (Option 3) Samples
 Option 3 provides the samples for WebSphere Application Server.
- Language option
 The language option denotes the National Language Support (NLS) option for the product. The language option is installed only for Option *Base.

7. On the next panel, select the options to install for WebSphere MQ V5.3 for iSeries. Click **Next**.
WebSphere MQ V5.3 for iSeries (5724B41) options:
 - (Option Base) WebSphere MQ
Install this product if you want to use the embedded JMS server component of WebSphere Application Server V5.0. This option is required for any other option to be installed.
 - (Option 1) WebSphere MQ - Samples
Option 1 provides the samples for WebSphere MQ.
 - Language option
The language option denotes the (NLS) option for the product. The language option is installed only for Option *Base.
8. On the next panel, select the options to install for WebSphere MQ classes for Java and JMS V5.3 for iSeries. Click **Next**.
WebSphere MQ classes for Java and JMS V5.3 for iSeries (5639C34) options:
 - (Option Base) WebSphere MQ classes for Java and JMS
Install this product if you want to use JMS from your applications or the embedded JMS server.
 - (Option 1) WebSphere MQ classes for Java and JMS - Samples
Option 1 provides the samples for WebSphere MQ classes for Java and JMS.
9. The options that you specified are displayed. Verify that they are correct. If they are not, click **Back** to change your installation options. If they are correct, click **Next**.
10. The InstallShield program displays messages that indicate the status of the installation and a status bar to show the progress of the installation.
11. After the installation is complete, the summary panel is displayed showing the options that were installed. Click **Finish** to close the InstallShield program.
12. For security purposes, if the host servers were not running, you should return your iSeries server to its original state with the End Host Server (ENDHOSTSVR) command after the install is complete.



“Install Network Deployment on iSeries” on page 29

Install WebSphere Application Server from a workstation using silent mode: The silent mode allows you to install the product with a single command. Installation options must be specified in a response file. During the installation, you are unable to change the installation options. The parameters and default values are discussed in Parameters for remote silent installations of WebSphere Application Server.

To use the silent mode to install WebSphere Application Server from a workstation, follow these steps:

1. Verify that the host server jobs have been started on your iSeries server. The host server jobs allow the installation code to run on iSeries.
Enter this command on an OS/400 command line:
STRHOSTSVR SERVER(*ALL)
2. If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on an OS/400 command line.
3. Place the *WebSphere Application Server 5.0 for iSeries* CD-ROM in the CD-ROM drive of your workstation. The autorun feature brings up the GUI, click **Cancel** to exit the GUI.

Notes:

- a. Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.
 - b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
4. On your workstation, open a command prompt.
 5. Access the CD-ROM drive of your workstation by switching to the CD-ROM drive. For example, enter *e:* where *e:* is the letter assigned to your CD-ROM drive.
 6. Copy the RESPONSEFILE file from the CD-ROM directory to a directory on your workstation such as *c:\temp*. For example:

```
copy RESPONSEFILE c:\temp\RESPONSEFILE
```
 7. Edit the file using an editor of your choice and modify the installation options to suit your installation requirements. You must enter your system name in the DestinationBean.system = "YOURSYSTEM" field. If you do not enter a valid value for the DestinationBean.username and DestinationBean.password fields, a dialog box prompts you for valid signon information. Note that the user profile must be user type (user class) *SECOFR and have a value of *USRCLS for special authority. For information on the installation options and values, see Parameters for remote silent installations of WebSphere Application Server.
 8. Enter the SETUP command, specifying the response file to be used during the installation

```
SETUP -options responsefile
```

where *responsefile* is the name of your modified file.
For example:

```
SETUP -options c:\temp\RESPONSEFILE
```

This text illustrates a partial display of the output of this process:

```
Checking current configuration. Please wait.
Installing selected options. Please wait.
Note: This may take up to 120 minutes to complete.
Product 5724B41: WebSphere MQ V5.3 for iSeries
(Code: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries
(Code: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
Product 5733WS5: WebSphere Application Server V5.0 for iSeries
(Code: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying file to the iSeries.
```

9. When the installation is complete, press any key to exit the installation program.
10. For security purposes, if the host servers were not running, you should return your iSeries server to its original state with the End Host Server (ENDHOSTSVR) command after the install is complete.



“Install Network Deployment on iSeries” on page 29

Parameters for remote silent installations of WebSphere Application Server: When you install WebSphere Application Server to your iSeries server from a workstation using the silent mode, you refer to a response file that specifies a silent install. To configure the installation, change the options in this file before you enter the installation command (SETUP). The silent installation mode does not accept interactive installation options. If you want to specify non-default installation options, you must use the response file.

Here is the format of the response file that is shipped on the CD-ROM:

```
#####
#
# ABOUT:           WebSphere Application Server V5.0 for iSeries      #
#                                                         #
# INSTALL TYPE:   Remote workstation silent installation             #
#                                                         #
# DOCUMENTATION:  Please see the WebSphere Application Server        #
#                 for iSeries Installation and Initial Configuration  #
#                 web site for the most up-to-date information:      #
#                                                         #
#                 http://www.ibm.com/websphere/iseries/installws5    #
#                                                         #
# USAGE:         SETUP -options <path>\<responsefile>              #
#                                                         #
# IMPORTANT:     All values must be enclosed in double quotes.      #
#                                                         #
#####

# Specify silent install
-silent

# Bean property assignments for target iSeries system
-W DestinationBean.system = "YOURSYSTEM"
-W DestinationBean.username = "YOURUSER"
-W DestinationBean.password = "YOURPSSWD"

# Bean property assignments for WAS
# Note: Option property can be specified more than once
-W WASSelectBean.skip = "false"
# -W WASSelectBean.language = "29XX"
-W WASSelectBean.component = "all"
-W WASSelectBean.option = "all"

# Bean property assignments for WebSphere MQ
# Note: Option property can be specified more than once
-W WMQSelectBean.skip = "false"
# -W WMQSelectBean.language = "29XX"
-W WMQSelectBean.component = "all"
-W WMQSelectBean.option = "all"

# Bean property assignments for WebSphere MQ Java
-W WMQJavaSelectBean.skip = "false"
-W WMQJavaSelectBean.option="all"
```

Notes:

1. The response file is in English only.
2. Install options preceded by # are commented out. To enable these options, remove the # and the space.

This table describes all of the possible parameters for the WebSphere Application Server remote silent install response file. The table lists the supported national language options, including double-byte character sets (DBCS) and multi-national character sets (MNCS).

Notes:

1. If you want the default value, you do not need to specify it.
2. The DestinationBean property must be edited.

Bean ID	Bean property	Possible values	Default	Description
DestinationBean	system			Determines the destination iSeries server upon which the installation is to be performed.
DestinationBean	username			Determines the user name to be used on the destination iSeries server.
DestinationBean	password			Determines the password to be used on the destination iSeries server.
WASSelectBean	skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, the WebSphere Application Server product is not installed.
WASSelectBean	language	<ul style="list-style-type: none"> • 2980 - Brazilian Portuguese • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only DBCS • 2894 - English DBCS • 2928 - French • 2940 - French MNCS • 2929 - German • 2939 - German MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish • 2987 - Traditional Chinese DBCS 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by the WebSphere Application Server product, the program installs it. If the primary language is not supported, the installation program installs 2924 (English).

Bean ID	Bean property	Possible values	Default	Description
WASSelectBean	component	<ul style="list-style-type: none"> • all • code • language 	all	Selects which components to install. The code component installs only the code. The language component installs only the language options (29nn). The value all includes both the code and language components.
WASSelectBean	option	<ul style="list-style-type: none"> • all • base • 1 • 2 • 3 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the common code. • Option 1 installs the client code. • Option 2 installs the server code. • Option 3 installs the samples. • The value all includes the options base, 1, 2, and 3. <p>Installation of options 1, 2, and 3 requires that the base option is also selected or already installed.</p> <p>Note: You may specify the option parameter multiple times for more advanced configurations (for example -W WASSelectBean.option = "base" -W WASSelectBean.option = "1" -W WASSelectBean.option = "3").</p>
WMQSelectBean	skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, the WebSphere MQ product is not installed.

Bean ID	Bean property	Possible values	Default	Description
WMQSelectBean	language	<ul style="list-style-type: none"> • 2909 - Belgium English • 2966 - Belgium French • 2981 - Canadian French MNCS • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only DBCS • 2984 - English DBCS • 2928 - French • 2940 - French MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by WebSphere MQ V5.3 for iSeries, the program installs it. If the primary language is not supported, the installation program installs 2924 (English). Note: The language parameter only applies to the base option of WebSphere MQ V5.3 for iSeries. The other options are in English only.
WMQSelectBean	component	<ul style="list-style-type: none"> • all • code • language 	all	Selects which components to install. The code component installs only the code. The language component installs only the language options (29nn). The value all includes both the code and language components.

Bean ID	Bean property	Possible values	Default	Description
WMQSelectBean	option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code. • Option 1 installs the samples code. • The value all includes the options base and 1. <p>Installation of option 1 requires that the base option is also selected or already installed.</p>
WMQJavaSelectBean	skip	<ul style="list-style-type: none"> • false • true 	false	<p>If set to true, the WebSphere MQ classes for Java and JMS product is not installed.</p>
WMQJavaSelectBean	option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code. • Option 1 installs the samples code. • The value all includes the options base and 1.

Install Network Deployment on iSeries

You can use one of these methods to install Network Deployment on your iSeries server:

- From the CD-ROM drive of your iSeries server. Installing the product from the CD-ROM drive of your iSeries server requires direct physical access to the server. The local installation requires less time to complete than a remote installation. You start the local installation with either the Qshell SETUP script or the Run Java (RUNJAVA) command.
- From the CD-ROM drive of a workstation with a Microsoft Windows 32-bit operating system. Installing the product from the CD-ROM drive of a workstation does not require direct physical access to the iSeries server. The remote installation requires more time to complete than a local installation.

Select the appropriate option below for instructions on your chosen method of installation:

“Install Network Deployment from the CD-ROM drive of your iSeries server” on page 30

This topic describes how to install Network Deployment on your iSeries server from the CD-ROM drive of your iSeries server.

“Install WebSphere Application Server Network Deployment for iSeries from a workstation” on page 35

This topic describes how to install Network Deployment on your iSeries server from a Windows 32-bit operating system workstation.

Note: The total installation may take up to 120 minutes to complete.



“Install Network Deployment from the CD-ROM drive of your iSeries server”
or



“Install WebSphere Application Server Network Deployment for iSeries from a workstation” on page 35

Install Network Deployment from the CD-ROM drive of your iSeries server

You can perform a local installation of Network Deployment with the SETUP script in Qshell or with the Run Java (RUNJVA) command on an OS/400 command line.

To install Network Deployment from the CD-ROM drive of your iSeries server, follow these steps:

1. Signon the iSeries system with a user profile that is user type (user class) *SECOFR and has a value of *USRCLS for special authority.
2. Run either the script or the command:

“Use the SETUP script in Qshell”

Use this option if you prefer a shorter command.

“Use the Run Java (RUNJVA) command from an OS/400 command line” on page 31

Use this command if you prefer control language (CL) commands.



“Use the SETUP script in Qshell”
or



“Use the Run Java (RUNJVA) command from an OS/400 command line” on page 31

Use the SETUP script in Qshell: Perform these steps to install WebSphere Application Server Network Deployment from Qshell using the SETUP script.

1. Place the *WebSphere Application Server V5.0, Network Deployment for iSeries* CD-ROM in the CD-ROM drive of your iSeries server. **Notes:**

- a. Do not use the *IBM WebSphere Application Server Network Deployment Version 5 For Windows NT and Windows 2000* CD-ROM, the *WebSphere Application Server 5.0 for iSeries* CD-ROM, or any other CD-ROM (which was shipped with your WebSphere Application Server Network Deployment for iSeries package) for this set of steps.
 - b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
2. Enter STRQSH on an OS/400 command line to start the Qshell Interpreter.
 3. Enter `cd /QOPT/WEBSPPHERE` to change directories to the root installation directory on the CD-ROM.
 4. Run the SETUP script to start the installation program. The default is to install all products (WebSphere Application Server Network Deployment for iSeries and WebSphere MQ classes for Java and JMS V5.3 for iSeries) with all supported code options, and the primary language of the iSeries server if supported by the corresponding products or English 2924 if the primary language is not supported by the product. If you do not want to install all of the products, or you want to install a different language, you can specify optional parameters on the command. For a list of the available parameters, see Parameters for local installations of Network Deployment. To accept the default settings for the installation program, enter this command:
 SETUP
Note: Do not issue any other commands, unless prompted, until the installation is completed. Doing so may cause the installation to stop prematurely.
 5. After you enter the SETUP command, messages are displayed that indicate the progress of the installation process. When the setup program has completed, press **F3** to exit.

Here is a partial sample of output from the installation process:

```

> cd /QOPT/WEBSPPHERE
$
> SETUP
Loading installation program. Please wait.
Checking current configuration. Please wait.
Installing selected options. Please wait.
Note: This may take up to 120 minutes to complete.
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries
(Code: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying stream file to save file.
  Restoring licensed program.
Product 5733WS5: WebSphere Application Server V5.0, Network Deployment for iSeries
(Code: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 5)
  Copying stream file to save file.

```



“Install PTFs” on page 42

Use the Run Java (RUNJVA) command from an OS/400 command line: To install Network Deployment to your iSeries using RUNJVA, perform these steps:

1. Place the *WebSphere Application Server Network Deployment, V5.0 for iSeries* CD-ROM in the CD-ROM drive of your iSeries server.

Notes:

- a. Do not use the *IBM WebSphere Application Server Network Deployment Version 5 For Windows NT and Windows 2000* CD-ROM, the *WebSphere Application Server 5.0 for iSeries* CD-ROM, or any other CD-ROM (which was shipped with your WebSphere Application Server Network Deployment for iSeries package) for this set of steps.
 - b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
2. Enter this command to start the installation program. The default is to install all products (WebSphere Application Server Network Deployment and WebSphere MQ classes for Java and JMS V5.3) with all supported code options, and the primary language of the iSeries server if supported by the corresponding products or English 2924 if the primary language is not supported by the product. If you do not want to install all of the products, or you want to install a different language, you can specify optional parameters on the command. For a list of the available parameters, see Parameters for local installations of Network Deployment. To accept the default settings for the installation program, enter this command, using the same capitalization as shown:

```
RUNJAVA CLASS(SETUP) CLASSPATH('/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar:  
/QOPT/WEBSHERE/OS400:/tmp/WebSphere/WS5INSTALL.JAR') PROP((os400.runtime.exec QSHELL)  
(java.version 1.3))
```

Note: This command has been wrapped for display purposes. Enter it as one command.

After you enter the RUNJAVA command, messages are displayed that indicate the progress of the installation process. Here is a partial sample of output from the installation process:

```
Loading installation program. Please wait.  
Checking current configuration. Please wait.  
Installing selected options. Please wait.  
Note: This may take up to 120 minutes to complete.  
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries  
(Code: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Language: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Code: Option 1)  
  Copying stream file to save file.  
  Restoring licensed program.  
Product 5733WS5: WebSphere Application Server V5.0, Network Deployment for iSeries  
(Code: Option Base)  
  Copying stream file to save file.  
  Restoring licensed program.  
(Code: Option 5)  
  Copying stream file to save file.
```



“Install PTFs” on page 42

Parameters for local installations of Network Deployment: The SETUP script in Qshell and the Run Java (RUNJAVA) command include several optional parameters that you can use to customize your installation. If a parameter is not specified, the installation program uses the default value for that

parameter. If no parameters are specified, WebSphere Application Server Network Deployment for iSeries and WebSphere MQ classes for Java and JMS V5.3 for iSeries is installed with their default options.

For example, you can use parameters to install only the Network Deployment product and not to install WebSphere MQ classes for Java and JMS for iSeries. To do this, you would enter one of these commands to start the installation program:

- **From Qshell Interpreter:**

```
SETUP -wmqjava -skip true
```

- **From an OS/400 command line:**

```
RUNJAVA CLASS(SETUP) PARM('-wmqjava' '-skip' 'true') CLASSPATH  
('/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar:/QOPT/WEBSPPHERE/OS400:  
/tmp/WebSphere/WS5INSTALL.JAR') PROP((os400.runtime.exec QSHELL) (java.version 1.3))
```

where the options specified within PARM() are the installation options. The other parameters are required.

Note: This command has been wrapped for display purposes. Enter it as one command.

This table describes all of the configurable parameters for the WebSphere Application Server Network Deployment and the WebSphere MQ classes for Java and JMS V5.3 for iSeries installation. Each product is represented by its product parameter name and its possible parameter values are represented by product assigned parameters. Use the -help parameter to display a list of possible parameters and their usage. The table lists the supported national language options, including double-byte character sets (DBCS) and multi-national character sets (MNCS).

Note: If you want the default value, you do not need to specify it.

Product parameter name	Product assigned parameters	Possible values	Default	Description
-was	-skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, this product is not installed.

Product parameter name	Product assigned parameters	Possible values	Default	Description
-was	-language	<ul style="list-style-type: none"> • 2980 - Brazilian Portuguese • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only DBCS • 2984 - English DBCS • 2928 - French • 2940 - French MNCS • 2929 - German • 2939 - German MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish • 2987 - Traditional Chinese DBCS 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by the WebSphere Application Server Network Deployment product, the program installs it. If the primary language is not supported, the installation program installs 2924 (English).
-was	-component	<ul style="list-style-type: none"> • all • code • language 	all	Selects which components to install. The code component installs only the code. The language component installs only the language options (29m). The value all includes both the code and language components.

Product parameter name	Product assigned parameters	Possible values	Default	Description
-was	-option	<ul style="list-style-type: none"> • all • base • 5 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the common code. • Option 5 installs the Network Deployment code. • The value all includes the options base and 5. <p>Installation of option 5 requires that the base option is also selected or already installed.</p>
-wmqjava	-skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, this product is not installed.
-wmqjava	-option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code • Option 1 installs the samples code. • The value all includes the options base and 1. <p>Installation of option 1 requires that the base option is also selected or already installed.</p>

Install WebSphere Application Server Network Deployment for iSeries from a workstation

You can perform a remote installation of Network Deployment from a Windows 32-bit operating system workstation. You can choose to install through one of these options:

“Install Network Deployment from a workstation using AWT mode” on page 36

The AWT mode uses a graphical user interface (GUI) to complete the installation. The AWT mode is the default mode when you install Network Deployment from a workstation.

“Install WebSphere Application Server Network Deployment from a workstation using silent mode” on page 38

The silent mode allows you to enter a single command to start the installation. The silent mode allows you to specify a file which contains the installation option values you want to use. For any option not specified or commented out within the response file, the installer uses the default values.

Continue



“Install Network Deployment from a workstation using AWT mode”
or

Continue



“Install WebSphere Application Server Network Deployment from a workstation using silent mode” on page 38

Install Network Deployment from a workstation using AWT mode: To use the abstract windowing toolkit (AWT) mode to install Network Deployment from a Windows 32-bit workstation, perform these steps:

1. Verify that the host server jobs have been started on your iSeries server. The host server jobs allow the installation code to run on iSeries.

Enter this command on an OS/400 command line:

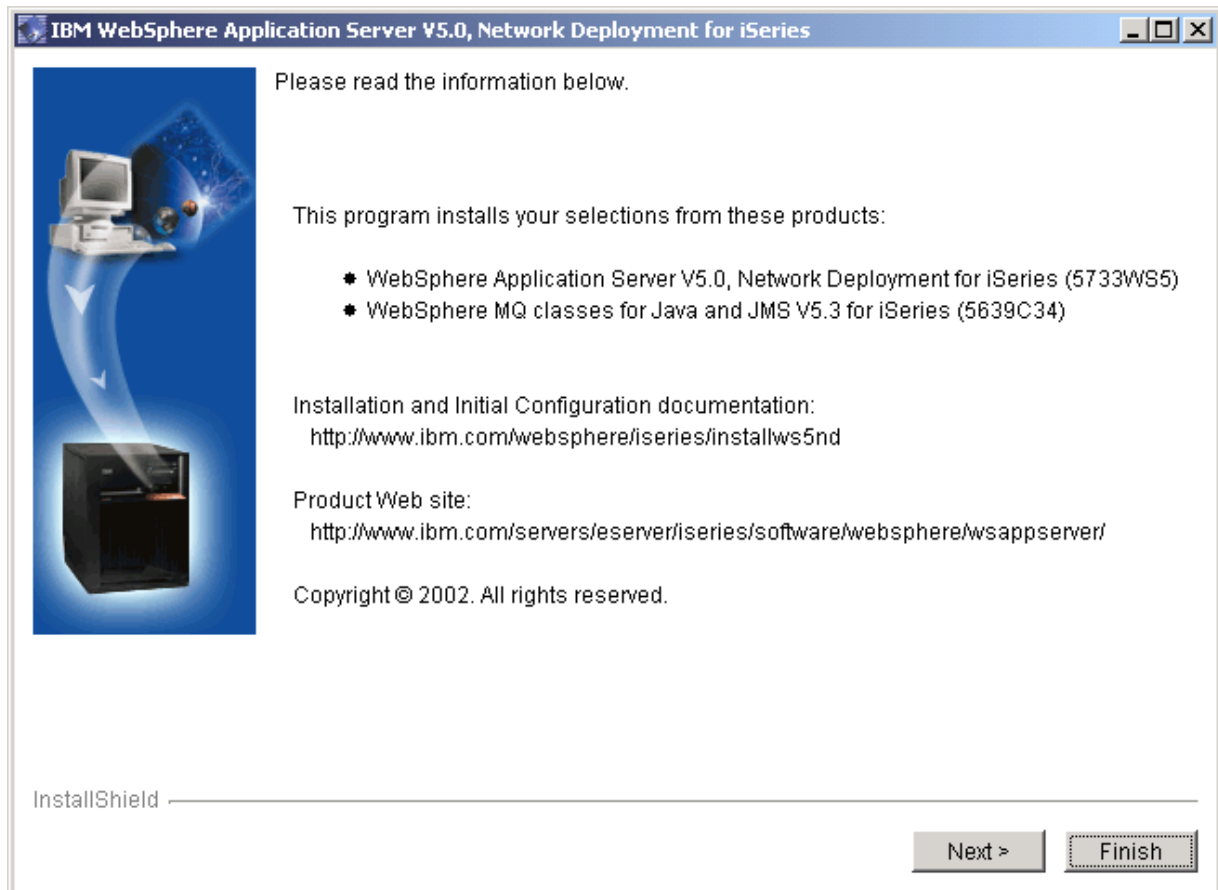
```
STRHOSTSVR SERVER(*ALL)
```

2. If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on an OS/400 command line.
3. Place the *WebSphere Application Server Network Deployment, V5.0 for iSeries* CD-ROM in the CD-ROM drive on the workstation.

Note: Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM, the *WebSphere Application Server 5.0 for iSeries* CD-ROM, or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.

The InstallShield program should automatically start. If it does not, open Windows Explorer and select your CD-ROM drive. Double-click the SETUP.EXE file to start the InstallShield program.

4. At the first panel, read the information, and then click **Next**.



5. Enter the name of the iSeries server where you are installing Network Deployment. You also must enter a valid user ID and password for the server. This user ID must be user type (user class) *SECOFR and have a value of *USRCLS for special authority. Click **Next**.
6. On the next panels, select the options to install for Network Deployment. Click **Next**.

WebSphere Application Server Network Deployment v5.0 for iSeries (5733WS5) options:

 - (Option Base) WebSphere Application Server
This option is required for any other option to be installed. It contains the Readme file and other common files for the product.
 - (Option 5) Network Deployment
Option 5 provides the Network Deployment runtime. Option 5 is required to use Network Deployment.
7. On the next panel, select the options to install for WebSphere MQ classes for Java and JMS V5.3 for iSeries.

WebSphere MQ classes for Java and JMS V5.3 for iSeries (5639C34) options:

 - (Option Base) WebSphere MQ classes for Java and JMS
If you want to use JMS from your applications or the embedded JMS server install this option.
 - (Option 1) WebSphere MQ classes for Java and JMS - Samples
Option 1 provides the samples for WebSphere MQ classes for Java and JMS.
8. The options that you specified are displayed. Verify that they are correct. If they are not, click **Back** to change your installation options. If they are correct, click **Next**.
9. The InstallShield program displays messages that indicate the status of the installation and a status bar to show the progress of the installation.

10. After the installation is complete, the summary panel is displayed showing the options that were installed. Click **Finish** to close the InstallShield program.
11. For security purposes, if the host servers were not running, you should return your iSeries server to its original state with the End Host Server (ENDHOSTSVR) command after the install is complete.



“Install PTFs” on page 42

Install WebSphere Application Server Network Deployment from a workstation using silent mode:

The silent mode allows you to install the product with a single command. Non-default installation options must be specified in a response file. During the installation, you are unable to change the installation options. The parameters and default values are discussed in Parameters for remote silent installations of Network Deployment.

To use the silent mode to install WebSphere Application Server Network Deployment from a workstation, follow these steps:

1. Verify that the host server jobs have been started on your iSeries server. The host server jobs allow the installation code to run on iSeries.
Enter this command on an OS/400 command line:
`STRHOSTSVR SERVER(*ALL)`
2. If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on an OS/400 command line.
3. Place the *WebSphere Application Server V5.0, Network Deployment for iSeries* CD-ROM in the CD-ROM drive of your workstation. The autorun feature brings up the GUI, click **Cancel** to exit the GUI.

Notes:

- a. Do not use the *IBM WebSphere Application Server Version 5 For Windows NT and Windows 2000* CD-ROM, the *WebSphere Application Server 5.0 for iSeries* CD-ROM, or any other CD-ROM (which was shipped with your WebSphere Application Server for iSeries package) for this set of steps.
- b. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
4. On your workstation, open a command prompt.
5. Access the CD-ROM drive of your workstation by switching to the CD-ROM drive. For example, enter `e:` where `e:` is the letter assigned to your CD-ROM drive.
6. Copy the RESPONSEFILE file from the CD-ROM directory to a directory on your workstation such as `c:\temp`. For example:
`copy RESPONSEFILE c:\temp\RESPONSEFILE`
7. Edit the file using an editor of your choice and modify the installation options to suit your installation requirements. You must enter your system name in the `DestinationBean.system = "YOURSYSTEM"` field. If you do not enter a valid value for the `DestinationBean.username` and `DestinationBean.password` fields, a dialog box prompts you for valid signon information. Note that the user profile must have *ALLOBJ authority. For information on the installation options and values, see Parameters for remote silent installations of Network Deployment.
8. Enter the SETUP command, specifying the response file to be used during the installation
`SETUP -options responsefile`
where `responsefile` is the name of your modified file.
For example:

```
SETUP -options c:\temp\RESPONSEFILE
```

Below is an illustration of a partial display capture.

```
Checking current configuration. Please wait.
Installing selected options. Please wait.
Note: This may take up to 120 minutes to complete.
Product 5639C34: WebSphere MQ classes for Java and JMS V5.3 for iSeries
(Code: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 1)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
Product 5733WS5: WebSphere Application Server V5.0, Network Deployment for iSeries
(Code: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Language: Option Base)
  Copying file to the iSeries.
  Copying stream file to save file.
  Restoring licensed program.
(Code: Option 5)
  Copying file to the iSeries.
```

9. When the installation is complete, press any key to exit the installation program.
10. For security purposes, if the host servers were not running, you should return your iSeries server to its original state with the End Host Server (ENDHOSTSVR) command after the install is complete.



“Install PTFs” on page 42

Parameters for remote silent installations of Network Deployment: When you install Network Deployment to your iSeries server from a workstation using the silent mode, you refer to a response file that specifies a silent install. To configure the installation, change the options in this file before you enter the installation command (SETUP). The silent installation mode does not accept interactive installation options. If you want to specify non-default installation options, you must use the response file.

Here is the format of the response file that is shipped on the CD-ROM:

```
#####
#
# ABOUT:      WebSphere Application Server V5.0,      #
#           Network Deployment for iSeries           #
#
# INSTALL TYPE: Remote workstation silent installation #
#
# DOCUMENTATION: Please see the WebSphere Application Server V5.0, #
#           Network Deployment for iSeries Installation and #
#           Initial Configuration web site for the most #
#           up-to-date information:                 #
#
#           http://www.ibm.com/websphere/iseriess/installws5nd #
#
# USAGE:      SETUP -options <path>\<responsefile> #
#
# IMPORTANT:  All values must be enclosed in double quotes. #
#
#####

# Specify silent install
-silent

# Bean property assignments for target iSeries system
-W DestinationBean.system = "YOURSYSTEM"
-W DestinationBean.username = "YOURUSER"
-W DestinationBean.password = "YOURPSSWD"

# Bean property assignments for WAS
# Note: Option property can be specified more than once
-W WASSelectBean.skip = "false"
#-W WASSelectBean.language = "29XX"
-W WASSelectBean.component = "all"
-W WASSelectBean.option = "all"

# Bean property assignments for WebSphere MQ Java
-W WMQJavaSelectBean.skip = "false"
-W WMQJavaSelectBean.option="all"
```

Notes:

1. The response file is in English only.
2. Install options preceded by # are commented out. To enable these options, remove the # and the space.

This table describes all of the possible parameters for the Network Deployment remote silent install response file. The table lists the supported national language options, including double-byte character sets (DBCS) and multi-national character sets (MNCS).

Notes:

1. If you want the default value, you do not need to specify it.
2. The DestinationBean property must be edited.

Bean ID	Bean property	Possible values	Default	Description
DestinationBean	system			Determines the destination iSeries server on which the installation is to be performed.


Bean ID	Bean property	Possible values	Default	Description
DestinationBean	username			Determines the user name to be used on the destination iSeries server.
DestinationBean	password			Determines the password to be used on the destination iSeries server.
WASSelectBean	skip	<ul style="list-style-type: none"> • false • true 	false	If set to true, WebSphere Application Server Network Deployment is not installed.
WASSelectBean	language	<ul style="list-style-type: none"> • 2980 - Brazilian Portuguese • 2950 - English Uppercase only • 2924 - English • 2938 - English Uppercase only DBCS • 2894 - English DBCS • 2928 - French • 2940 - French MNCS • 2929 - German • 2939 - German MNCS • 2932 - Italian • 2942 - Italian MNCS • 2962 - Japanese DBCS • 2986 - Korean DBCS • 2989 - Simplified Chinese DBCS • 2931 - Spanish • 2987 - Traditional Chinese DBCS 	*PRIMARY, if available; otherwise 2924 (English)	Determines the language to install. If the language parameter is not specified, the installation program detects the primary language on the iSeries server. If that language is supported by the WebSphere Application Server Network Deployment product, the program installs it. If the primary language is not supported, the installation program installs 2924 (English).
WASSelectBean	component	<ul style="list-style-type: none"> • all • code • language 	all	Selects which components to install. The code component only the product code. The language component installs only the language options (29mm). The value all includes both the code and language components.

Bean ID	Bean property	Possible values	Default	Description
WASSelectBean	option	<ul style="list-style-type: none"> • all • base • 5 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the common code. • Option 5 installs the Network Deployment code. • The value all includes base and Option 5. <p>Note: Installation of option 5 requires that the base option is also selected or already installed.</p>
WMQJavaSelectBean	skip	<ul style="list-style-type: none"> • false • true 	false	<p>If set to true, WebSphere MQ classes for Java and JMS is not installed.</p>
WMQJavaSelectBean	option	<ul style="list-style-type: none"> • all • base • 1 	all	<p>Selects which options to install.</p> <ul style="list-style-type: none"> • The base option installs the server code. • Option 1 installs the samples code. • The value all includes the options base and 1. <p>Note: Installation of option 1 requires that the base option is also selected or already installed.</p>

Install PTFs

Fixes for the WebSphere Application Server Network Deployment product are shipped as group PTFs for iSeries. The latest WebSphere Application Server Network Deployment for iSeries group PTF must be loaded and applied prior to starting WebSphere for the first time. This group PTF includes the latest WebSphere Application Server PTFs that bring the product up to the latest WebSphere Application Server Network Deployment for iSeries level. The group PTF also includes the latest WebSphere Application Server Network Deployment group PTF, DB2 Universal Database for iSeries, the WebSphere MQ classes for Java and JMS, IBM Developer Kit for Java group PTF and IBM HTTP Server group PTF.

See the PTFs page

(<http://www.ibm.com/eserver/iseries/software/websphere/wsappserver/services/service.htm>)  on the WebSphere Application Server Web site to determine which group PTF you must order and install for your WebSphere Application Server edition and for your OS/400 release level.

All product prerequisites must be installed before you install the group PTF package, or Network Deployment may fail when it is started. For example, the Java PTFs contained in the package are not installed if IBM Developer Kit for Java 1.3 (5722-JV1 Option 5) is not installed on the server.

These instructions describe how to install the WebSphere Application Server Network Deployment for iSeries group PTF:

Note: These instructions assume that you are ready to load and apply all PTFs included in the group PTF. Because some of these PTFs may require a restart of your iSeries server, the instructions include steps for placing the server in a restricted state and doing the IPL of the server. If it is not convenient to restart your server, you can simply load and apply the PTFs specifying that the PTFs requiring an IPL be applied at the next normal IPL of the server. However, you should not attempt to start or use the Network Deployment environment until all of the PTFs have been successfully loaded and applied.

1. Verify that all of the "Prerequisites for installing and running WebSphere Application Server Network Deployment" on page 7 is installed.
2. Place the *WebSphere for iSeries group PTF* CD-ROM into the CD-ROM drive on your iSeries server.
3. Sign on to your server. Your user profile should be user type (user class) *SECOFR and have a value of *USRCLS for special authority.
4. Enter this command to bring your system into a restricted state:
ENDSBS SBS(*ALL)
5. Enter this command from an OS/400 command line when the system is in a restricted state:
GO PTF
6. Select option 8 (Install program temporary fix package) from the menu.
7. Specify these parameter values and press **Enter**.
 - a. **Device:** (Specify the device for your CD ROM drive, for example, OPT01.)
 - b. **Automatic IPL:** Y
 - c. **PTF type:** 1 (All PTFs)

```

Install Options for Program Temporary Fixes
System: your.server
Type choices, press Enter.
Device . . . . . OPT01 Name, *SERVICE
Automatic IPL . . . . . Y Y=Yes
                                     N=No
Restart type . . . . . *SYS *SYS, *FULL
PTF type . . . . . 1 1=All PTFs
                                     2=HIPER PTFs and HIPER
                                     LIC fixes only
                                     3=HIPER LIC fixes only
                                     4=Refreshed Licensed Internal Code
Other options . . . . . N Y=Yes
                                     N=No
F3=Exit F12=Cancel
  
```

After all of the PTFs have been installed, your iSeries server restarts.

8. After you have installed the group PTF, see the product release notes for information about the release, including a description of known problems and workarounds. The release notes are available on the Network Deployment Release Notes

(<http://publib.boulder.ibm.com/was400/docs/relnotes502nd.html>)  .

**You have completed step 2 of 5.
Continue on to step 3.**



“Step 3: Configure a WebSphere Application Server instance”

Step 3: Configure a WebSphere Application Server instance

This topic describes how to configure your iSeries server, the WebSphere Application Server environment, and your HTTP server so that WebSphere Application Server runs correctly.

Note: These steps are for configuring the WebSphere Application Server instance, not the Network Deployment instance. If you have installed WebSphere Application Server on a different iSeries server, these steps should be executed on that server, if they have not been already.

To create an initial configuration for WebSphere Application Server for iSeries, perform these steps:

1. “Configure software license information”
This step describes how to configure software license information for WebSphere Application Server.
2. “Set SQL server jobs” on page 45
This step describes how to set the maximum number of jobs that are allowed for the SQL server jobs.
3. “Verify and configure TCP/IP” on page 45
This step describes how to configure TCP/IP for WebSphere Application Server.
4. “Configure an HTTP server instance” on page 47
This step describes how to create an HTTP server instance and configure it to use a WebSphere Application Server instance to serve JavaServer Pages (JSP) files and servlets.

Continue



“Configure software license information”

Configure software license information

After you complete the installation process and before you start the WebSphere Application Server environment, you must set the usage limit from the Proof of Entitlement (POE) or invoice.

To set the usage limit, enter the Work with License Information (WRKLCINF) command on an OS/400 command line, and then follow these steps:

1. On the Work with License Information menu, press **F11** (Display Usage Information).
2. Move the cursor to the line that contains the product 5733WS5, Feature 5050.
3. Select option 2 (Change), and press **Enter**. When the Change License Information display is shown, update the Usage limit prompt (USGLMT) with the usage limit shown on the POE or invoice. Entering any number that exceeds the purchased limit violates the IBM purchase agreement.
4. On the Work with License Information display, press **F9** (All parameters). Update the Threshold (THRESHOLD) prompt with *USGLMT, and press **Enter**. Do not leave the threshold set to zero.

Note: If this message is sent, respond by typing G. CPA9E1B: Usage limit increase must be authorized. Press help before replying (C G).

Continue



“Set SQL server jobs”

Set SQL server jobs

If you are using the IBM Developer Kit for Java JDBC driver to access the OS/400 database from your applications, you may need to change the maximum number of jobs allowed for the SQL server jobs. Each JDBC connection object requires an SQL server job. Generally, it is easiest to account for the number of jobs you need by setting the maximum number of jobs to *NOMAX. Use the Change Prestart Job Entry (CHGPJE) command to change the prestart job entry for the SQL server jobs. For example:

```
CHGPJE SBSDB(QSYSWRK) PGM(QSQSRVR) MAXJOBS(*NOMAX)
```

If *NOMAX is not an appropriate setting for your iSeries environment, specify an integer value for the MAXJOBS parameter which allows your applications to have enough SQL server jobs to handle the maximum number of JDBC connections required at any given time by your applications.

This message is displayed when the maximum number of jobs is successfully changed:

```
Program QSQSRVR found in library QSYS.  
Active subsystem description QSYSWRK in QSYS changed.
```

Continue



“Verify and configure TCP/IP”

Verify and configure TCP/IP

To configure and run WebSphere Application Server or WebSphere Application Server Network Deployment on the iSeries, TCP/IP must be configured properly and must be started before you start the WebSphere Application Server environment.

To verify that TCP/IP is configured correctly, enter the Configure TCP/IP (CFGTCP) command on an OS/400 command line, and then follow these steps:

1. Verify that your TCP/IP address and LOOPBACK interface are active:

- a. On the Configure TCP/IP menu, select option 1 (Work with TCP/IP interfaces).
- b. Press **F11** to display the interface status.
- c. Verify that the TCP/IP address is active. If it is not active, specify option 9 (Start).
- d. Verify that the LOOPBACK interface with IP address 127.0.0.1 is active. If it is not active, specify option 9 (Start) next to the entry with IP address **127.0.0.1** and press **Enter**.
- e. Press **F3** to return to the Configure TCP/IP menu.

2. Verify your TCP/IP host name:

- a. On the Configure TCP/IP menu, select option 12 (Change TCP/IP domain information).
- b. Verify that the TCP/IP host name is correct. If the host name is not correct, type the correct host name in the **Host name** field and press **Enter**. If the host name is correct, press **F3** to return to the Configure TCP/IP menu.

Note: The host name cannot be *NONE.

- c. Press **F3** to return to the command line.

3. Start TCP/IP:

If TCP/IP is not started or if you don't know if TCP/IP is started, enter the Start TCP/IP (STRTCP) command on an OS/400 command line.

4. Verify that the server's IP address is associated with the host name:

Enter this command on an OS/400 command line:

```
ping hostname
```

where *hostname* is the host name displayed in **Verify a TCP/IP host name**. Verify that the ping is successful and the resulting IP address is correct.

Here is sample output from a successful ping command:

```
Verifying connection to host system MYSYSTEM.MYCOMPANY.COM at address
1.2.3.4.
PING reply 1 from 1.2.3.4 took 0 ms. 256 bytes. TTL 64.
PING reply 2 from 1.2.3.4 took 0 ms. 256 bytes. TTL 64.
PING reply 3 from 1.2.3.4 took 0 ms. 256 bytes. TTL 64.
PING reply 4 from 1.2.3.4 took 0 ms. 256 bytes. TTL 64.
PING reply 5 from 1.2.3.4 took 0 ms. 256 bytes. TTL 64.
Round-trip (in milliseconds) min/avg/max = 0/0/0
Connection verification statistics: 5 of 5 successful (100 %).
```

If the ping fails, follow these steps:

- a. Enter the Configure TCP/IP (CFGTCP) command on an OS/400 command line.
- b. On the Configure TCP/IP menu, select Option 10 (Work with TCP/IP host table entries).
- c. Configure the iSeries system short name to the active IP address that was listed in the first step ("Verify that your TCP/IP address and LOOPBACK interface are active"):
 - 1) Select Option 2 (Change), and type your IP address in the **Internet address** field. Press **Enter**.
 - 2) In the Change TCP/IP Host Table Entry (CHGTCPHTE) menu, edit the **Hostnames: Name field** to match the short name of your iSeries server. Press **Enter**.

Note: The *ADMIN instance of the HTTP server does not start without a host name.

5. Verify your system configuration:

The IPTest Java utility is shipped with the WebSphere Application Server product and can be used to debug TCP/IP configuration problems. To run this utility, enter this command on an OS/400 command line:

```
RUNJAVA CLASS(IPTest) CLASSPATH('/QIBM/ProdData/WebAS5/ND/bin')
```

Note: The class name parameter that you specify for CLASS (IPTest) is case-sensitive.

This display illustrates the output from this command:

```
Java Shell Display
Local Address: 12.34.56.78
Local Name: MYSYSTEM.MYCOMPANY.COM
All addresses for MYSYSTEM.MYCOMPANY.COM:
 12.34.56.78
Java Program Completed

===> _____
_____
_____
F3=Exit  F6=Print  F9=Retrieve  F12=Exit
F13=Clear F17=Top   F18=Bottom  F21=CL Command Entry
```

The Local Address is the IP address for your iSeries server. This value must not be blank and must match the IP address verified in the first step ("Verify that your TCP/IP address and LOOPBACK

interface are active”). The Local Name is the domain-qualified host name for your iSeries server. If this value is blank, see the instructions in the first step. Press **F3** to exit.

Note: If a host name has not been configured for your iSeries server, you receive an `UnknownHostException` message.



“Configure an HTTP server instance”

Configure an HTTP server instance

An HTTP server instance is not required to install WebSphere Application Server. However, it is recommended to support requests for servlets and JavaServer Pages (JSP) resources managed by WebSphere Application Server.

Notes:

1. The IBM HTTP Server (original) is not supported for WebSphere Application Server V5.0. This topic discusses how to configure HTTP Servers native to the iSeries server.
2. You are able to configure remote HTTP Servers residing on other supported platforms which route requests to WebSphere Application Server running on the iSeries server. For more information, see the Remote HTTP topic in *Administration*.

Select the HTTP Server you want to use to serve requests to WebSphere Application Server:

- **Configure IBM HTTP Server for iSeries (powered by Apache) instance**

“Configure IBM HTTP Server (powered by Apache) (V5R1 or V5R2)”

- **Configure Lotus Domino Web server instance**

“Configure Lotus Domino Web server” on page 52



“Configure IBM HTTP Server (powered by Apache) (V5R1 or V5R2)”
or



“Configure Lotus Domino Web server” on page 52

Configure IBM HTTP Server (powered by Apache) (V5R1 or V5R2)

To configure a new instance of IBM HTTP Server to communicate with WebSphere Application Server, perform these steps:

1. **“Start the *ADMIN instance of IBM HTTP Server”**
This step describes how to start the *ADMIN server instance so that you can use the IBM HTTP Server for iSeries configuration and administration forms.
2. **“Create a new instance of IBM HTTP Server (powered by Apache) (V5R1 and V5R2)” on page 49.**
Note: If you have an existing instance that you want to use with WebSphere Application Server, skip this step.
This step describes how to create a new HTTP server instance by using the configuration and administration forms.
3. **“Configure the IBM HTTP Server (powered by Apache) instance (V5R1 and V5R2)” on page 51.**
This step describes how to configure the HTTP server instance so that the HTTP server and WebSphere Application Server can communicate with each other.



“Start the *ADMIN instance of IBM HTTP Server”

Start the *ADMIN instance of IBM HTTP Server: Start the *ADMIN instance of IBM HTTP Server (powered by Apache) to create, change, or display an IBM HTTP Server instance configuration by using the IBM HTTP Server for iSeries Configuration and Administration forms.


You can start the *ADMIN server instance from an OS/400 command line or from iSeries Navigator.

- **From an OS/400 command line:**

To start the *ADMIN instance from an OS/400 command line, type:
`STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)`
 and press **Enter**.

- **From iSeries Navigator:**

iSeries Navigator is the graphical interface to the iSeries server. iSeries Navigator is part of the iSeries Access for Windows product.

Note: For more information on iSeries Access for Windows and iSeries Navigator, see the iSeries Access Family Web site (<http://www.ibm.com/eserver/iseries/access/>) .

To start the *ADMIN instance from iSeries Navigator, perform these steps:

1. Start iSeries Navigator.
2. Double-click your iSeries server
3. Select **Network** —> **Servers** —> **TCP/IP**.
4. Right-click **HTTP Administration** in the right frame.
5. Select **Start**.

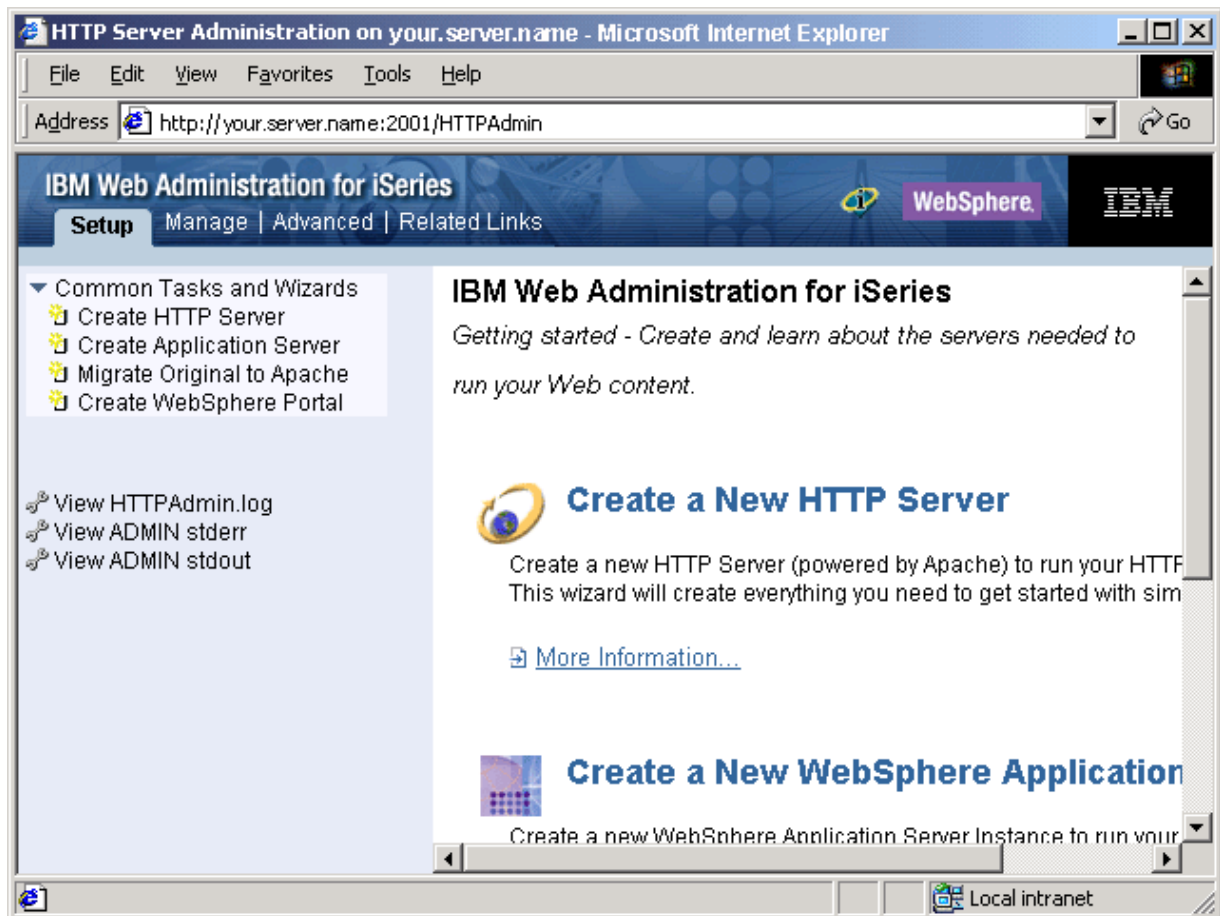
Note: Do not select the **Start Instance** option from the menu. If the server is already started, the **Start** option is disabled on the menu.



“Create a new instance of IBM HTTP Server (powered by Apache) (V5R1 and V5R2)” on page 49

Create a new instance of IBM HTTP Server (powered by Apache) (V5R1 and V5R2): To create a new instance of the IBM HTTP Server (powered by Apache) with a basic configuration, use the IBM HTTP Server for iSeries Configuration and Administration forms. Perform the steps below.

1. Using a Web browser, go to the IBM HTTP Server Configuration and Administration forms by performing these steps:
 - a. Open this URL in your browser:
`http://your.server.name:2001/`
where *your.server.name* is the name of your iSeries server.
 - b. Enter a valid user ID and password for your iSeries server.
 - c. At the **iSeries Tasks** page, select **IBM HTTP Server for iSeries**.
2. The **HTTP Server for iSeries** page is displayed. To create a new HTTP server, click the **Setup** tab. Expand **Common Tasks and Wizards** and click **Create New HTTP Server**.



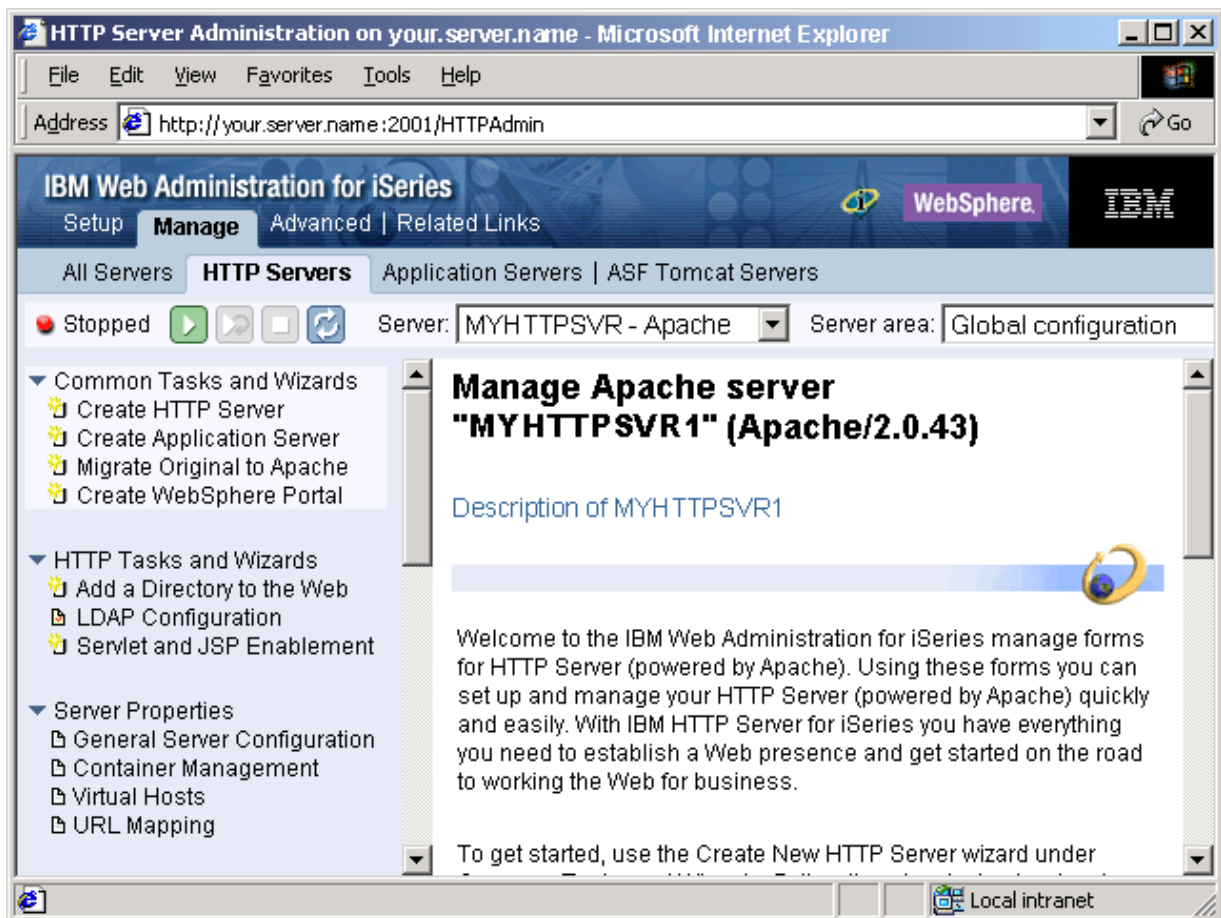
3. Select **HTTP server (powered by Apache)**, and click **Next**.
4. In the right frame, type a name for the HTTP server instance. This name appears in the HTTPSVR subsystem when the job is running. Optionally, you can also enter a description for the HTTP server instance. Click **Next**.

Note: Write down your HTTP server instance name to be used in later steps.
5. Type the server root. You can use the default values, or you can specify another server root or document root directory. Click **Next**.
6. In the next panel, set the document root. Click **Next**.
7. Select the IP address and port.
 - a. In the **IP address** field, select **All addresses**.

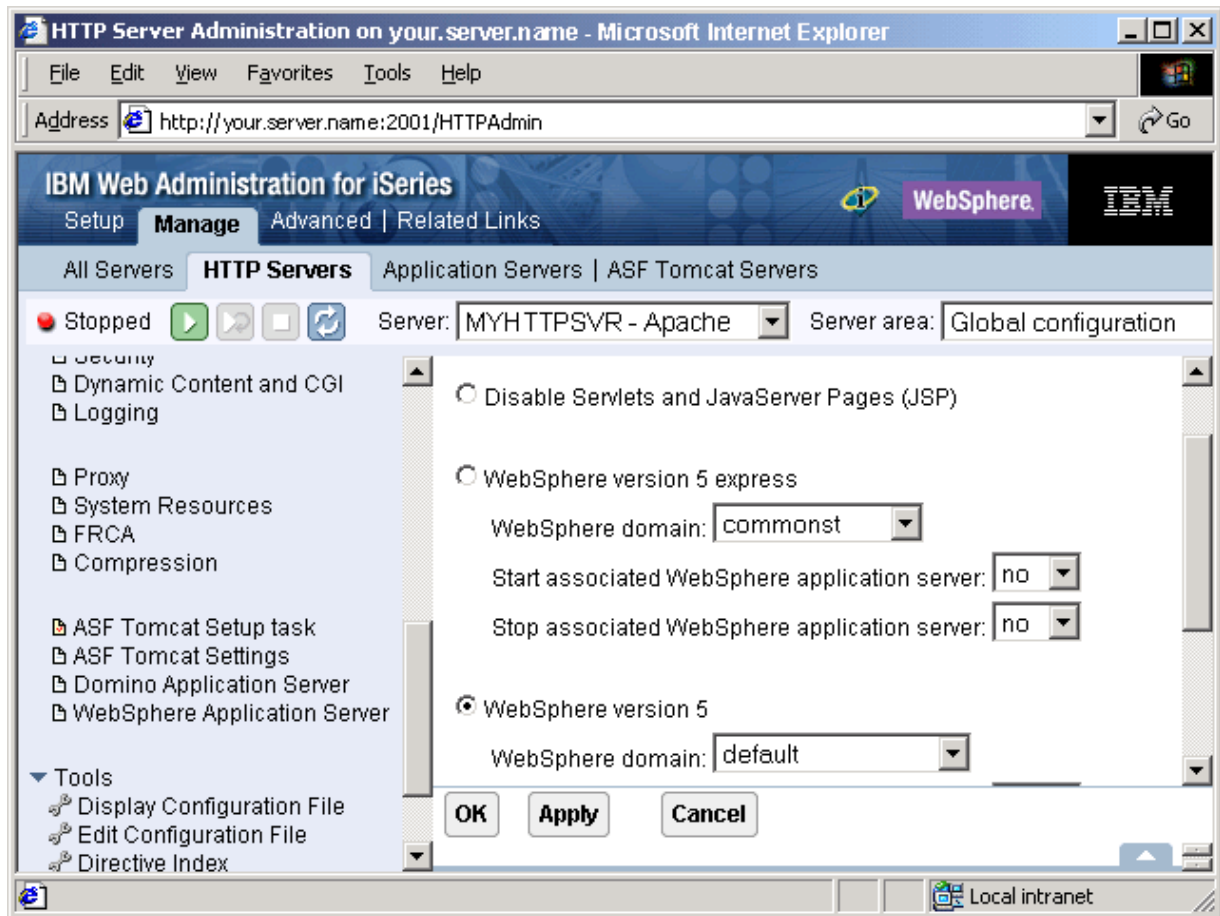
- b. The default port number is 80. You can specify a different port number for the HTTP server to use to process requests. Click **Next**.

Notes:

- 1) If you specify a port other than the default port, you must configure your virtual host Domain Name System (DNS) aliases in the administrative console to reflect your port number. For more information, see Virtual host.
 - 2) Write down the number of your internal HTTP port for use in later steps.
8. Select a logging option. It is recommended that you select **Yes**. The logs are stored in the */server_root/logs* directory, where *server_root* is the server root that you set in step 6.
9. Specify how long you want to keep the error and access log files. Click **Next**.
10. Review your settings. To create the HTTP server instance, click **Finish**. To make changes, click **Back**.
11. After clicking **Finish**, the configuration is created. The **Manage Apache Server** page appears.



12. With your new HTTP server selected, expand **Server Properties** in the left frame. Click **WebSphere Application Server**. Select the version of WebSphere Application Server to configure, and select the WebSphere Application Server instance. If the instance is not part of a Network Deployment cell, you can configure the HTTP server to start the associated Application Server when the HTTP server is started. Also, you can configure the HTTP server to stop the associated Application Server when the HTTP server is stopped. In this example the HTTP server is configured not to do either of those activities. To write the changes to the configuration file and return to the main configuration page, click **OK**.



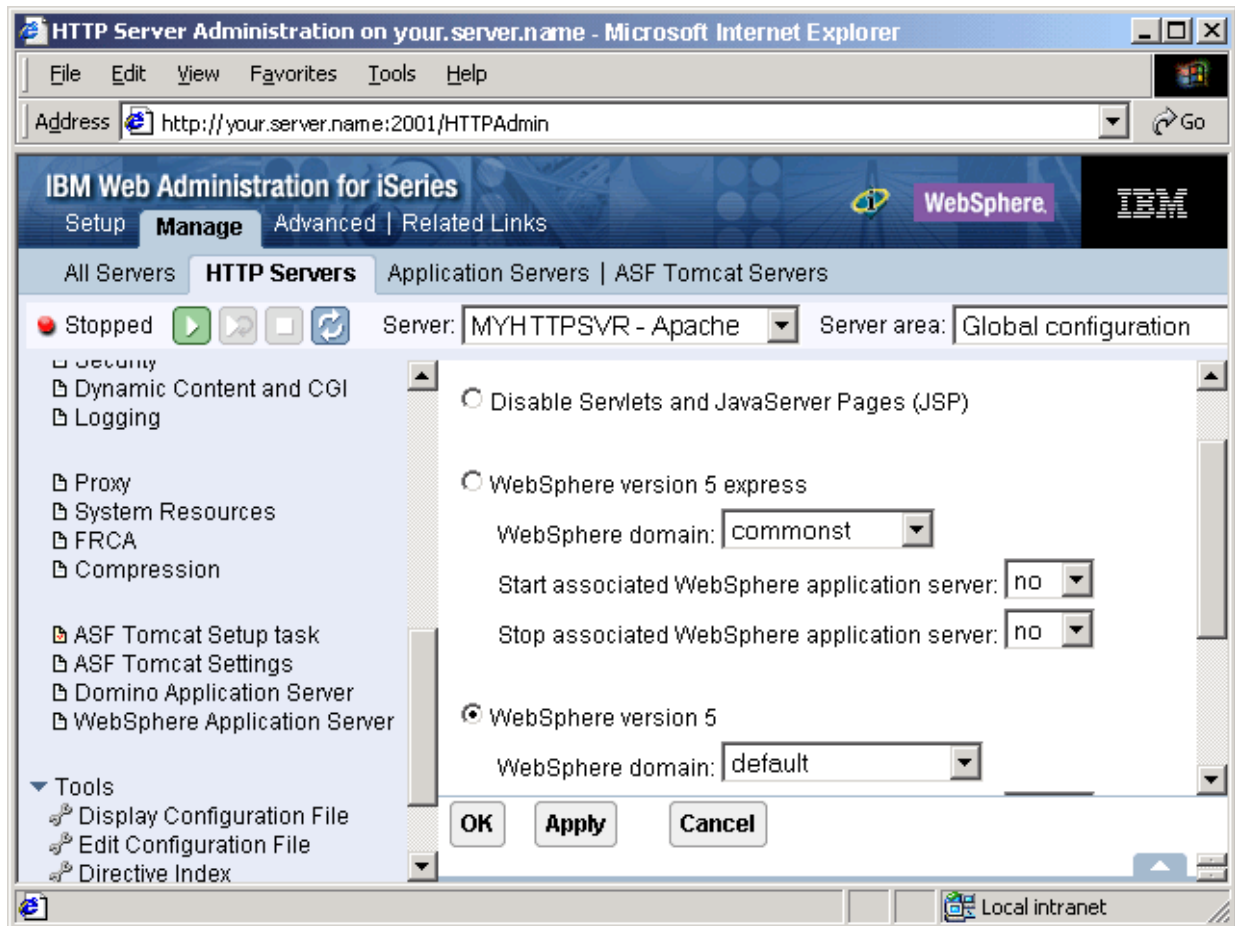
**You have completed step 3 of 5.
Continue on to step 4.**



“Step 4: Configure and start the Network Deployment domain” on page 54

Configure the IBM HTTP Server (powered by Apache) instance (V5R1 and V5R2): After you create the HTTP server instance, you must configure the instance so that it works with WebSphere Application Server.

1. Select the **Manage** tab. In the **Server** drop-down list on the upper-right, select the HTTP server instance that you want to manage.
2. With your HTTP server selected, expand **Server Properties** in the left frame. Click **WebSphere Application Server**. Select the version of WebSphere Application Server to configure, and select the WebSphere Application Server instance. If the instance is not part of a Network Deployment cell, you can configure the HTTP server to start the associated Application Server when the HTTP server is started. Also, you can configure the HTTP server to stop the associated Application Server when the HTTP server is stopped. In this example the HTTP server is configured not to do either of those activities.



3. Click **OK** to write the changes to the configuration file and return to the main configuration page.

**You have completed step 3 of 5.
Continue on to step 4.**



“Step 4: Configure and start the Network Deployment domain” on page 54

Configure Lotus Domino Web server

To configure the Lotus^(R) Domino^(TM) Web server for use with WebSphere Application Server, you must update the Domino server’s configuration.

Lotus Domino for iSeries Version 5.0.5 (or later) Web server, Lotus Domino for iSeries Version 6.0 Web server, or Lotus Domino for iSeries Version 6.5 Web server can be used as a Web server with WebSphere Application Server.

Note: Refer to the Administration Help for your version of Domino for information on installing and setting up Domino servers on OS/400. The help database is shipped with Lotus Domino and is also available in the Notes.net Documentation Library

(<http://www.notes.net/notesua.nsf?OpenDatabase>) .

To configure each instance of a Domino server on your iSeries server, perform these steps:

1. “Update the Domino server’s notes.ini file” on page 53 to work with WebSphere Application Server.

2. "Start the Domino server."
3. "Update the Domino server document" on page 54 to work with WebSphere Application Server.
4. "Stop and start the Domino server's HTTP task" on page 54 to apply the changes to the server document and to the notes.ini file.



"Update the Domino server's notes.ini file"

Update the Domino server's notes.ini file: To update the Domino server's notes.ini file to work with WebSphere Application Server, perform these steps:

1. Enter the Work with Domino Servers (WRKDOMSVR) command on an OS/400 command line.
2. For the appropriate Domino server instance, specify option 13 (Edit NOTES.INI) to edit the server's notes.ini file.

3. Add this line to the end of the notes.ini file:

```
WebSphereInit=/QIBM/UserData/WebAS5/Base/default/config/cells/plugin-cfg.xml
```

Note: The line above is for the WebSphere Application Server's default instance. For a nondefault instance, change the line to refer to the directory of the application server instance.

4. Press **F3** twice to save and exit the notes.ini file.



"Start the Domino server"

Start the Domino server: To start the Domino server, perform these steps:

Use the Start Domino Server (STRDOMSVR) command to start a Domino server on AS/400. Make sure you have *JOBCTL special authority.

1. On any AS/400 command line, type:

```
strdomsvr
```

2. Press **F4** to have the system prompt you for the server name.
3. Type the server name in the field provided. If you are not sure of the name, press **F4** to display a list of Domino servers on your iSeries server.
4. Press **Enter**.

While the system is starting the Domino server, you see a message that indicates the server is starting. If the message appears for more than 1 or 2 minutes, the server may be waiting for you to enter a password. To determine if the server is waiting for a password, use the WRKDOMCSL command to start a server console session for the server. You can enter the password in this console session.



"Update the Domino server document" on page 54

Update the Domino server document: To update the Domino server document to work with WebSphere Application Server, perform these steps:

1. From a Lotus Notes client connected to the appropriate Domino server, edit the Domino document, which can be found in the Domino server's Domino Directory. The name of the file is names.nsf.
2. Within the server document, click the **Internet Protocols** tab and then click the **HTTP** tab.
3. Type this line in the **DSAPI filter file names** field:

`/QSYS.LIB/QEJBAS5.LIB/LIBDOMINOH.SRVPGM`

Note: Ensure that you do not have a space before or after this command or the filter fails.

4. Save and exit the Domino server document.

Note: To use the Lotus Domino Web server with WebSphere Application Server, you do not have to modify the Java servlet support field in the Domino server document.

Continue



“Stop and start the Domino server's HTTP task”

Stop and start the Domino server's HTTP task: After you update the Domino server document and the server's notes.ini file, you must stop and start the Domino server's HTTP task for those changes to take effect.

To stop and start the Domino server's HTTP task, perform these steps:

1. Enter the Work with Domino Servers (WRKDOMSVR) command on an OS/400 command line.
2. For your Domino server instance, specify option 8 (Work console) to select the Domino server's console.
3. From the Domino server's console, enter this command to stop the Domino server's HTTP task:
`tell http quit`
4. From the Domino server's console, enter this command to start the Domino server's HTTP task:
`load http`

**You have completed step 3 of 5.
Continue on to step 4.**



“Step 4: Configure and start the Network Deployment domain”

Step 4: Configure and start the Network Deployment domain

This topic describes how to configure your iSeries server and the Network Deployment environment so that Network Deployment runs correctly.

To create an initial configuration for WebSphere Application Server Network Deployment for iSeries, perform these steps:

1. “Start Deployment Manager” on page 55
This topic describes how to start the Deployment Manager (Network Deployment environment). The Deployment Manager must be started before you can add a node to the Deployment Manager's domain.

2. "Add a node to the network deployment instance" on page 56
This topic describes how to add the node (WebSphere Application Server instance) to the Deployment Manager's domain.
3. "Start the deployment manager administrative console" on page 57
This topic describes how to start the administrative console for the Deployment Manager.
4. "Configure the virtual host" on page 59
This topic describes how to configure a virtual host for the domain. If your Web Server instance is using the default Web Server port, 80, you can skip this step.
5. "Start the HTTP server instance" on page 62
This topic describes how to start your HTTP server instance.
6. "Start the Application Server" on page 64
This topic describes how to use the administrative console for the Deployment Manager to start the application server for the node.



"Start Deployment Manager"

Start Deployment Manager

Perform these steps to start Network Deployment on iSeries:

1. Start the Network Deployment default instance.
WebSphere Application Server Network Deployment provides a default instance that is ready to run after you start the WebSphere Application Server Network Deployment environment. For more information on the default instance, including the TCP/IP ports it uses and how to change them, see Default Network Deployment instance in the *Administration* topic.
When you start the QEJBASND5 subsystem, the default Network Deployment instance is started. To start the QEJBASND5 subsystem, enter this command on an OS/400 command line:

```
STRSBS QEJBAS5/QEJBASND5
```
2. "Verify that the Network Deployment environment has started." This step describes how to verify that the Network Deployment environment has started.

If you have problems with any part of the installation, see "Troubleshoot the installation" on page 68.



"Verify that the Network Deployment environment has started"

Verify that the Network Deployment environment has started

Before you start the administrative console or add a node to the Network Deployment domain, you should verify that the Network Deployment environment has started successfully. When the Network Deployment environment is ready for use, a message is written to the job log of the application server job for the Deployment Manager indicating that the Network Deployment environment is ready.

To determine if the Network Deployment environment is ready, perform these steps from an OS/400 command line:

1. Run the Work with Active Jobs (WRKACTJOB) command, specifying the QEJBASND5 subsystem on the subsystem (SBS) parameter:
WRKACTJOB SBS(QEJBASND5)
2. Find the server job for your Network Deployment instance. For the default instance, the server job is named DMGR.
3. Specify option 5 (Work with Job) on the option line next to the job, and press **Enter**.
4. On the command line of the Work with Job display, specify option 10 (Display job log, if active), and press **Enter**. Press **F10** to display all messages.
5. Look for this message:

WebSphere application server *application_server* ready.

where *application_server* is the name of your application server. For the default Network Deployment instance, the application server for the deployment manager is named dmgr.

If the message is not displayed, press **F5** to refresh the job log messages until the message is displayed.

When the message is displayed, the Network Deployment environment has successfully started. It may take up to 20 minutes for the message to be displayed, depending on your iSeries server. If the message is not displayed, see Troubleshooting.

6. To display the port number on which the Deployment Manager is listening for the administrative console, position the cursor on the last line of the message and press **F1**. This message is displayed:

WebSphere application server *application_server*
in job *app_server_job* is ready to handle administrative requests
on port *port_number*.

where *application_server* is the name of the deployment manager's application server, *app_server_job* is the OS/400 job name for the deployment manager's application server, and *port_number* is the number of the port used by the administrative console.

Press **F3** twice to exit.



“Add a node to the network deployment instance”

Add a node to the network deployment instance

Use the *addNode* script to add WebSphere Application Server nodes to the cell which your Network Deployment instance is managing. Repeat the steps below for each node (or WebSphere Application Server instance) you wish to manage using your Network Deployment instance

These steps are performed on the iSeries server hosting your *WebSphere Application Server* node.

1. Start a Qshell session from the OS/400 command line:
STRQSH
2. Invoke the *addNode* script specifying the host name and Simple Object Access Protocol (SOAP) port for the Deployment Manager:

```
/QIBM/ProdData/WebAS5/Base/bin/addNode hostName soapPort -includeapps
```

where *hostName* is the host name of the server on which you installed Network Deployment and *soapPort* is the SOAP port for the Network Deployment instance. For the Network Deployment instance, the default soap port is 8879.

By default, any applications installed on the WebSphere Application Server instance are removed from the instance when it is added to a cell. If this is the only node you are adding, or if you know there

are no conflicts with applications installed on other nodes, you can specify the *-includeapps* parameter when invoking `addNode`. When this parameter is specified, `addNode` does not remove any installed applications.

Note: The *hostname* and *soapPort* parameters are positional and must be the first two parameters. Additional parameters such as *-includeapps* must be specified after the *soapPort* value.

3. “Verify that the WebSphere Application Server node agent has started”

The `addNode` command creates a new server, the node agent, under the WebSphere Application Server instance being added to the Network Deployment domain. The node agent server is started as a side effect of adding the node to the domain. This topic describes how to verify that the node agent has started.



“Verify that the WebSphere Application Server node agent has started”

Verify that the WebSphere Application Server node agent has started

Before you start the administrative console, you should verify that the node agent has started successfully. When the node agent is ready for use, a message is written to the job log of the application server job indicating that the node agent is ready.

To determine if the node agent is ready, perform these steps from an OS/400 command line:

1. Run the Work with Active Jobs (WRKACTJOB) command, specifying the QEJBAS5 subsystem on the subsystem (SBS) parameter:
`WRKACTJOB SBS(QEJBAS5)`
2. Find the server job for your instance. The node agent’s job name is the same as the node name for the instance. For the default WebSphere Application Server instance, the node name is the same as the host name of the iSeries sever.
3. Specify option 5 (Work with Job) on the option line next to the job, and press **Enter**.
4. On the command line of the Work with Job display, specify option 10 (Display job log, if active), and press **Enter**. Press **F10** to display all messages.
5. Look for this message:

WebSphere application server nodeagent ready.

If the message is not displayed, press **F5** to refresh the job log messages until the message is displayed.

When the message is displayed, the node agent has successfully. It may take up to 20 minutes for the message to be displayed, depending on your iSeries server. If the message is not displayed, see Troubleshooting.



“Start the deployment manager administrative console”

Start the deployment manager administrative console

The administrative console is a Web-based application that runs on any browser supported by Network Deployment.

The browser-based administrative console for WebSphere Application Server Network Deployment requires that cookies be enabled in the browser. Therefore, before you start the administrative console on your workstation, you must ensure that cookies are enabled.

- In Netscape, perform these steps:
 1. Click the **Edit** pull-down menu and choose **Preferences...**
 2. In the left pane, click **Advanced**.
 3. The right pane shows the settings for cookies. Ensure that cookies are not disabled.
- In Microsoft Internet Explorer 4.0, 5.0, and 5.5 perform these steps:
 1. Click the **Tools** pull-down menu and choose **Internet Options...**
 2. Click the **Security** tab.
 3. Click **Custom Level**. Under **Cookies**, select **Enable**.
 4. Click **OK**.
- In Microsoft Internet Explorer 6.0, perform these steps:
 1. Click the **Tools** pull-down menu and choose **Internet Options...**
 2. Click the **Privacy** tab.
 3. Click **Advanced**. Select **Accept** to accept first-party and third-party cookies.
 4. Click **OK**.

To start the administrative console on a workstation, perform these steps:

1. Open this URL in your browser:
`http://your.server.name:port/admin`

where *your.server.name* is the host name of the iSeries server on which the application server of the deployment manager is running, and *port* is the administrative console port as noted in the ready message in the joblog of the application server of the deployment manager. For the default Network Deployment instance, the administrative console port is 9090.

2. When prompted, enter a user ID. The administrative console is displayed in the browser window.
Note: The user ID does not need to be an OS/400 user profile. This user ID is used only to track which users make changes to the application server configuration.
3. “Verify node exists in configuration”
This topic describes how to verify that the WebSphere Application Server node was successfully added to the Deployment Manager domain.



“Verify node exists in configuration”

Verify node exists in configuration

To verify that the WebSphere Application Server node was successfully added to the Deployment Manager domain, locate the node (WebSphere Application Server instance) in the administrative console.

1. From the navigation frame of the administrative console, expand **System administration** and select **Nodes**.
2. You should see your node listed and the status should be **Started**.

Continue



“Configure the virtual host”

Configure the virtual host

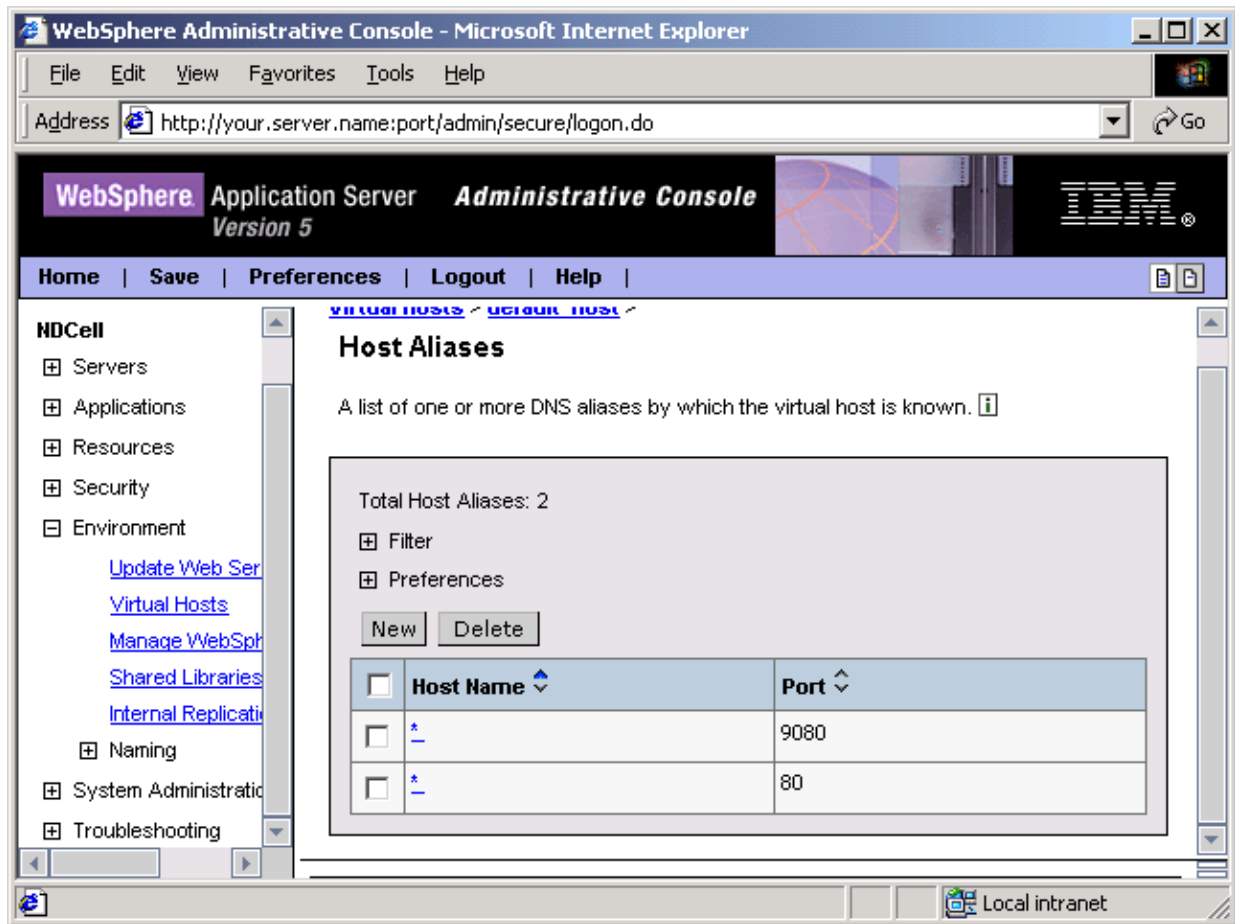
A “Virtual host” on page 61 is a configuration entity that allows WebSphere Application Server to treat multiple host machines or port numbers as a single logical host (virtual host) for configuration purposes. Each virtual host can be associated with multiple aliases. Each alias is a particular host name and port number. By combining multiple host machines into a single virtual host or by assigning host machines to different virtual hosts, you can separate and control which WebSphere Application Server resources are available for client requests.

If your external HTTP server configuration uses ports other than the default ports, you must update the Host Aliases table under the virtual host to reflect the correct HTTP port number.

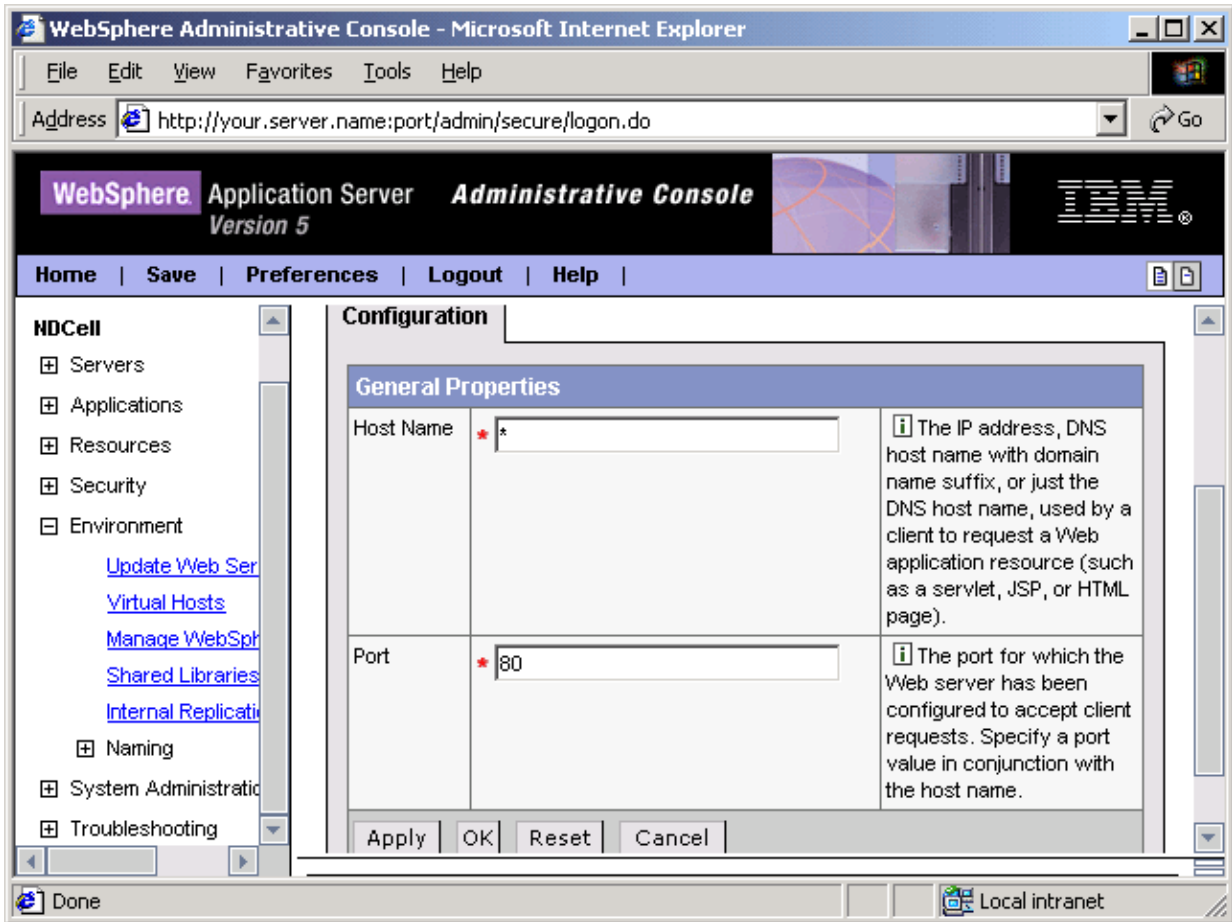
Note: If your external HTTP server configuration uses the default port (80), skip these steps and continue to “Start the HTTP server instance” on page 62.

To update the Host Aliases table for the default_host virtual host from the administrative console, use these steps:

1. Expand **Environment** -> **Virtual Hosts** in the left frame of the administrative console.
2. Click **default_host** in the right frame.
3. Click **Host Aliases**. The settings for default_host are displayed.



4. In the **Host Name** list, click on the asterisk in the row that has a **Port** of 80.
Note: The host names are set to "*" when you install WebSphere Application Server.
5. Specify the correct port number for your HTTP server in the **Port** field.



6. Click **OK** and click **Save** to save your configuration.
7. After you specify a new port number, you must regenerate the plug-in configuration. In the left pane, expand the **Environment** list item and click **Update Web Server Plugin**. When the right frame appears with a prompt, click **OK**.



“Start the HTTP server instance” on page 62

Virtual host

When you configure WebSphere Application Server, you can associate a virtual host to one or more Web Modules. Each Web Module can be associated with one and only one virtual host. Each virtual host represents a virtual configuration that can have one or more Domain Name System (DNS) aliases. A DNS alias consists of a TCP/IP host name and port number used to request the servlet (for example, yourhost:8000). A virtual host can be associated with any number of DNS aliases.

A client request for a servlet, JavaServer Pages (JSP) file, or related resource contains a DNS alias and a Uniform Resource Indicator (URI) that is unique to that resource. When a client request for a servlet, JSP file, or related resource is received, the DNS alias is compared to the list of all known virtual host groups to locate the correct virtual host, and the URI is compared to the list of all known URI groups to locate the correct URI group.

If a matching virtual host group or URI group is not found, an error is returned to the browser. If the virtual host group and URI group are found, the request is sent to the corresponding server group for processing and a response is returned to browser.

The first time that you start the WebSphere Application Server application server, a default virtual host (named `default_host`) is configured. The DNS aliases for the default virtual host are configured as `*:80` and `*:9080`, where port 80 is the HTTP server port and port 9080 is the port for the default server's servlet engine. Because the transport type used to communicate to the WebSphere Application Server is HTTP, WebSphere Application Server is capable of accepting requests directly from the browser.

Use the administrative console to add or change DNS aliases if you want to use ports other than the default ports listed above. If you do make a change to the DNS aliases, also regenerate the plug-in configuration, which can also be done from the administrative console. These are some situations in which you need to make additions or changes:

- The HTTP server instance is running on a port other than 80. Add the correct port number to each of the aliases. For example, change `yourhost` to `yourhost:8000`.
- If you want to make HTTPS requests, which use Secure Sockets Layer (SSL), add port 443 to each of the aliases. Port 443 is the default port for SSL requests. If your Web server (HTTP server) instance is listening for SSL requests on a port other than 443, add that port number to each of the aliases.
- You want to use a port for the application server other than default port (9080).
- You want to use other aliases that are not listed.

The virtual host also maintains a list of Multipurpose Internet Mail Extensions (MIME) types that it processes. MIME is an Internet standard for multimedia e-mail, including graphics, audio, and fax.

Start the HTTP server instance

To start the HTTP server instance, perform the steps for the HTTP server you are using:

“Start IBM HTTP Server for iSeries”

Perform these steps if you are using IBM HTTP Server (powered by Apache).

“Start the Domino server's HTTP task” on page 63

Perform these steps if you are using Lotus Domino as an HTTP server.



“Start IBM HTTP Server for iSeries”
or



“Start the Domino server's HTTP task” on page 63

Start IBM HTTP Server for iSeries

IBM HTTP Server for iSeries runs in the QHTTSPSVR subsystem, and each HTTP server instance starts multiple jobs. The WebSphere Application Server code that plugs into IBM HTTP Server for iSeries runs in the HTTP server job that communicates with one or more application servers.

If you have not yet created an HTTP server instance, see “Configure IBM HTTP Server (powered by Apache) (V5R1 or V5R2)” on page 47 for instructions.

To start the HTTP server instance that you created, perform these steps:

Enter this command on an OS/400 command line:

```
STRTCPSVR SERVER(*HTTP) HTTPSVR(myinst)
```

where *myinst* is the name of your HTTP server instance. This is the HTTP instance you configured in Step 3: Configure an HTTP Server instance.

If you change your HTTP server instance configuration, stop and then start your HTTP server instance.

To stop your HTTP server instance, enter this command from an OS/400 command line:

```
ENDTCPSVR SERVER(*HTTP) HTTPSVR(myinst)
```

where *myinst* is the of name your HTTP server instance. This is the HTTP instance you configured in Step 3: Configure an HTTP Server instance.

Note: You can also stop and start your HTTP server instance from the IBM HTTP Server for iSeries Configuration and Administration forms in the browser-based interface. For instructions on using the browser-based interface, see “Configure an HTTP server instance” on page 47.

The Configuration and Administration forms also allow you the option of restarting, as opposed to starting and stopping, your HTTP server instance. When restarting, the HTTP server recognizes all configuration changes except changes to the Basic and Security configuration forms.

Completed



“Start the Application Server” on page 64

Start the Domino server’s HTTP task

If you have not yet configured the Lotus Domino Web server, see “Configure Lotus Domino Web server” on page 52 for instructions.

To start the Domino server’s Web task, perform these steps:

1. Enter the Work with Domino Servers (WRKDOMSVR) command on an OS/400 command line.
2. For your Domino server instance, specify option 8 to select the Domino server’s console.
3. From the Domino server’s console, enter this command to restart the Domino server’s HTTP task:
tell http restart

Completed



“Start the Application Server”

Start the Application Server

Perform these steps to start the application server for a node from the administrative console for the Deployment Manager.

1. In the navigation frame of the administrative console, expand **Servers** and click **Application Servers**.
2. Click the checkbox next to the application server you wish to start.
3. Click the **Start** button.

**You have completed step 4 of 5.
Continue on to step 5.**



“Step 5: Verify the installation”

Step 5: Verify the installation

You can verify your WebSphere Application Server Network Deployment installation by invoking a verification script or by invoking example browser-based applications.

Select a verification method.

- “Invoke the install verification script”
- “Invoke an example browser-based application” on page 65

Continue



“Invoke the install verification script”
or

Continue



“Invoke an example browser-based application” on page 65

Invoke the install verification script

To verify the installation of WebSphere Application Server, invoke the ivt script from Qshell with these steps:

1. Start Qshell.
STRQSH
2. Invoke the ivt script to verify the internal HTTP instance
/QIBM/ProdData/WebAS5/Base/bin/ivt

This output is displayed if the installation verification is successful:

```
IVT0006I: Connecting to the WebSphere Server yourserver on Port:9080
IVT0007I: WebSphere Server yourserver is running on Port:9080

IVT0060I: Servlet Engine Verification: Passed
IVT0065I: JSP Verification: Passed
IVT0066I: EJB Verification: Passed
IVT00100I: IVT Verification Succeeded
```

**You have completed the
installation and initial
configuration.**

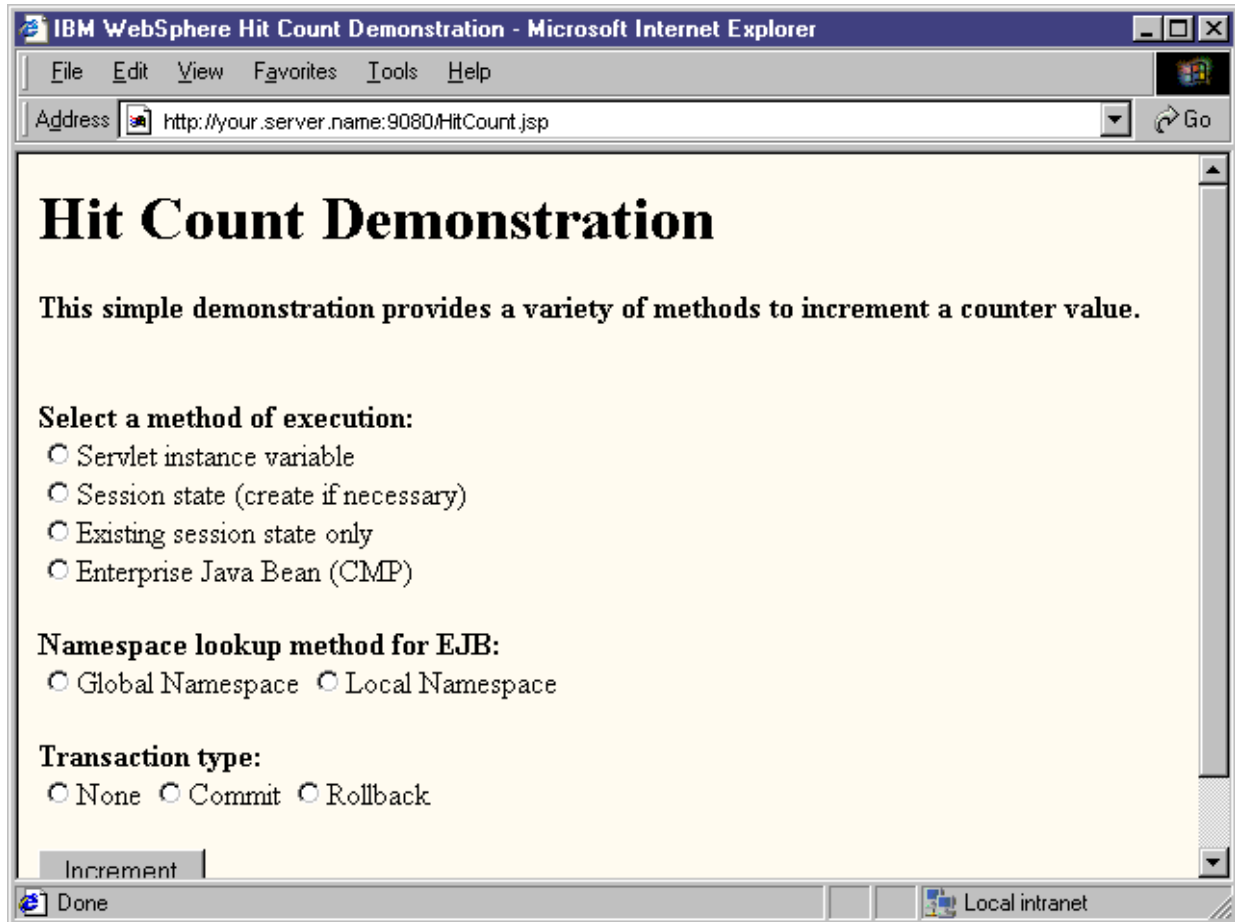


Invoke an example browser-based application

To invoke an example browser-based application to verify the installation, perform these steps:

1. If your WebSphere Application Server Network Deployment environment is not already running, see “Start Deployment Manager” on page 55.
2. Open this URL in your browser (the URL is case-sensitive; the capitalization must be consistent):
`http://your.server.name:9080/hitcount`
where *your.server.name* is the name of your iSeries server. Port 9080 is the default internal HTTP port.
3. If you see something similar to the image below, WebSphere Application Server has been set up successfully to run using the internal HTTP server.

Note: The hitcount sample works for the first 3 checkboxes. The CMP bean option requires additional setup.



4. Open this URL in your browser (the URL is case-sensitive; the capitalization must be consistent):
`http://your.server.name:80/HitCount.jsp`
where *your.server.name* is the name of your iSeries server. Port 80 is the default port for the application server's external HTTP server. If your application server's internal HTTP server uses a different port, specify the port number that your Web server uses.
5. If you see something similar to the image above, WebSphere Application Server has been set up successfully to run using the configured Web server.
Note: The hitcount sample works for the first 3 checkboxes. The CMP bean option requires additional setup.

**You have completed the
installation and initial
configuration.**



Uninstall Network Deployment

This topic discusses the tasks required to uninstall Network Deployment.

Uninstalling Network Deployment involves these tasks:

1. "Delete the licensed program" on page 67
2. "Clean up product UserData files" on page 68

Continue



“Delete the licensed program”

Delete the licensed program

If you need to uninstall WebSphere Application Server Network Deployment, you can remove either the entire WebSphere Application Server product or just the Network Deployment option. If you installed the WebSphere MQ classes for Java and JMS product as part of the WebSphere Application Server Network Deployment installation, then you must uninstall this product if you uninstall Network Deployment (unless you have also installed WebSphere Application Server and are only uninstalling Network Deployment). For more information, see *Deleting the WebSphere MQ classes for Java and JMS licensed program* (page 67).

- To remove the entire WebSphere Application Server product, perform these steps from an OS/400 command line on the iSeries server on which the product is installed:

Note: If you have installed both WebSphere Application Server V5.0 and WebSphere Application Server Network Deployment V5.0, this process removes both products.

1. Ensure that your user profile is user type (user class) *SECOFR and has a value of *USRCLS for special authority.
2. Stop the WebSphere Application Server environment. For more information, see the Shut down the WebSphere Application Server environment topic in *Administration*.

3. To delete both the WebSphere Application Server product and the Network Deployment product:

```
DLTLICPGM LICPGM(5733WS5)
```

The QEJBAS5 library and the /QIBM/ProdData/WebAS5 directory structure are removed from the system when when all options of the product are removed from the system, including *BASE.

4. To remove just the WebSphere Application Server Network Deployment product when you also have WebSphere Application Server installed, type this command on an OS/400 command line:

```
DLTLICPGM LICPGM(5733WS5) OPTION(5)
```

Deleting the WebSphere MQ classes for Java and JMS licensed program

The WebSphere MQ classes for Java and JMS product shipped with Network Deployment has a restricted license; this product can only be used with Network Deployment or if you have installed the product when installing WebSphere Application Server. If you completely uninstall the WebSphere Application Server product, you must uninstall the WebSphere MQ classes for Java and JMS product. If you have purchased a full license for this product, it does not have to be uninstalled.

To uninstall the WebSphere MQ classes for Java and JMS product, type this command on an OS/400 command line after you have uninstalled WebSphere Application Server:

```
DLTLICPGM LICPGM(5639C34)
```

Continue



“Clean up product UserData files” on page 68




Clean up product UserData files

Uninstalling WebSphere Application Server Network Deployment from the iSeries server removes all the product libraries and directories. User-defined information is not removed and can be reused if you reinstall the product. You can remove the user data manually. User data consists of all directories and files under the /QIBM/UserData/WebAS5/ND directory. You should manually delete any files or directories you no longer need.

Troubleshoot the installation

WebSphere Application Server Network Deployment offers several methods you can use to troubleshoot problems. Which method you use depends on the nature of the problem. Generally, you use a combination of these methods to determine the cause of a problem and then decide on an appropriate method for its resolution.

These resources provide general troubleshooting assistance.

- See the Troubleshooting topic.
- Read the WebSphere Application Server Network Deployment Release Notes (<http://publib.boulder.ibm.com/was400/docs/relnotes502nd.html>) .
- Check the WebSphere Application Server FAQ database (<http://www.ibm.com/eserver/series/software/websphere/wsappserver/docs/faq.htm>) .
- Refer to the WebSphere Application Server for iSeries newsgroup (<news://news.software.ibm.com/ibm.software.websphere.application-server.as400>) . This iSeries Technical Support Web-based forum is dedicated to WebSphere Application Server for iSeries.

Troubleshoot Step 2: Install

- **Wrong version of OS/400 installed on your server.**
WebSphere Application Server Network Deployment runs on OS/400 version V5R1 or V5R2. The product can not be installed on OS/400 version prior to V5R1.
- **IBM Development Kit for Java V1.3 is not installed.**
Local installation from Qshell or using the RUNJVA command requires JDK 1.3. Install product 5722-JV1, option 5 to obtain JDK 1.3. After installing option 5, you should re-install the cumulative PTF package and Java group PTF to pick up any JDK 1.3 specific fixes.

Troubleshoot Start the Network Deployment environment

- **Not authorized to user profile QEJBSVR.**
The user profile invoking STRSBS QEJBAS5/QEJBASND5 must have *USE authority to user profile QEJBSVR.

Appendix. Notices

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