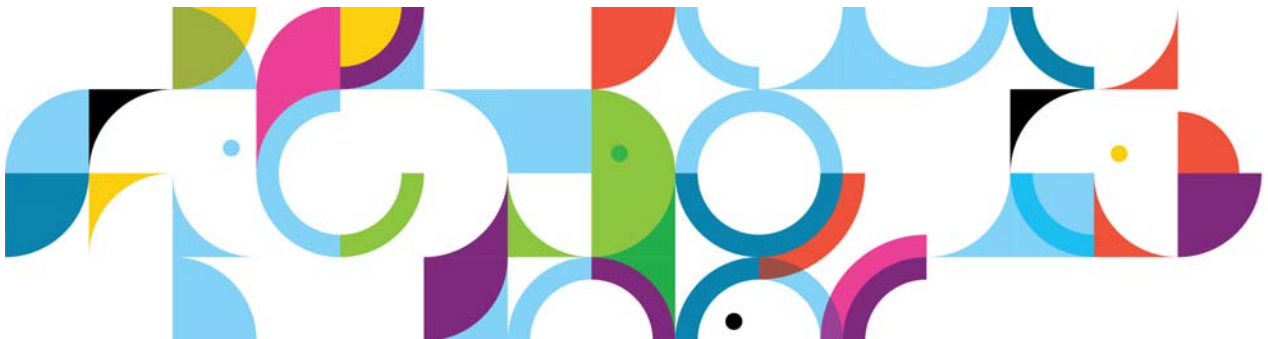




*IBM Connections 4 Public
Deployment Scenarios*

Deployment Scenarios

ERC 1.0



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IBM Connections 4: PDS Red Hat Oracle Tivoli Directory Server 3 Nodes

About the author



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Overview

This scenario explains how to deploy IBM® Connections 4.0 in a network deployment that involves multiple computers with one IBM WebSphere cell that contains three nodes, all of which host IBM® Connections 4.0. This article is an end-to-end guide to deploying this type of configuration with all prerequisites.

- The computer `dm&ihs.company.com` shares Deployment Manager and IBM HTTP Server.
- The database server hosts all application databases in a single instance.
- The Topology type is Large Deployment.
- Cognos/Metrics not deployed.
- The Security type is custom TAI.

Systems and naming conventions that are used in this document

Computer Name	Applications	Version#	OS	RAM	VM or HW
dm&ihs.company.com	Deployment Manager / HTTP	7.0.0.21	RHEL 5.8 64 bit RHEL 5.8 (Tikanga) Kernel 2.6.18-308	11.6 GiB	HW
node1.company.com	Node1	7.0.0.21	RHEL 5.8 64 bit RHEL 5.8 (Tikanga) Kernel 2.6.18-308	11.6 GiB	HW
node2.company.com	Node2	7.0.0.21	RHEL 5.8 64 bit RHEL 5.8 (Tikanga) Kernel 2.6.18-308	11.6 GiB	HW
node3.company.com	Node3	7.0.0.21	RHEL 5.8 64 bit RHEL 5.8 (Tikanga) Kernel 2.6.18-308	11.6 GiB	HW
oracle&tdi.company.com	RDBMS Tivoli Directory Integrator	Oracle 11g R2.0.3 Tivoli Directory Integrator V7.1 fp5	RHEL 5.8 64 bit RHEL 5.8 (Tikanga) Kernel 2. Pre-installation prerequisite 6.18-308	11.6 GiB	HW
ldap_edir.company.com	ITDS6.3				VM

Contents

1. Pre-installation prerequisite
2. Post-installation configuration

Topology

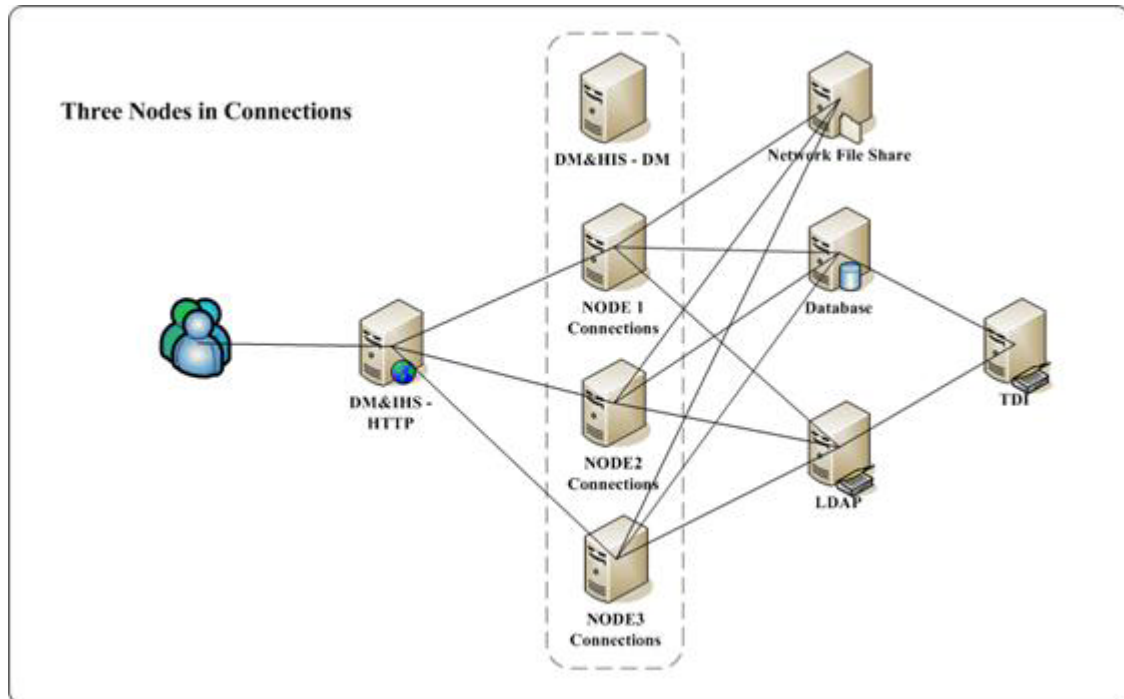


Figure 1. Topology: Three Nodes in Connections

1. Pre-installation prerequisite

Setup of an NFS server on Red Hat: Shared Area Needed

In a three-node clustered environment, it is necessary to set up a shared area which all three nodes can map and write to.

On NFS server side

- __ 1. Edit exports
 - __ a. `vi /etc/exports.`
 - __ b. Add the following line:

```
/<folder_to_export>  
*(fsid=0,rw,insecure,no_subtree_check,no_wdelay,sync,no_root_squash)
```
 - __ c. Save and close.
- __ 2. Activate `idmapd/nfs`
 - __ a. `/etc/init.d/rpcidmapd start`
- __ 3. Restart the services:
 - __ a. `/etc/init.d/rpcidmapd restart`
 - __ b. `service nfsserver restart`
`service nfs restart`
`/etc/rc.d/init.d/nfs start`
- __ 4. Check the exports:
 - __ a. `exportfs`
 - __ b. If everything goes well, you should see this message:
`/<folder_to_export> <world>`

On NFS client side



Optional

- __ 1. Make sure that `idmapd` service is enabled and started:
`etc/init.d/rpcidmapd restart`
- __ 2. Test manual mount by using NFS version 4:
`mount -t nfs4 <nfs_server>:/ /<mount_point_on_client>`

__ 3. Update the /etc/fstab as follows:

__ a. vi /etc/fstab

__ b. Add the following line:

```
<nfs_server>:/      /<mount_point_on_client>      nfs4
    rsize=32768,wsiz=32768,intr 0 0
```

__ 4. Mount the remote file system:

```
mount <nfs_server>:/
```

__ 5. Check with mount command if it displays as follows:

```
<nfs_server>:/      /<mount_point_on_client>  type nfs4
(rw,noatime,rsize=32768,wsiz=32768,intr,addr=10.10.25.4)
```

Install Oracle database 11.2.0.3 on RHEL 5.8 x86_64

- __ 1. Start Oracle installation by using Oracle user, not root user.

```
[oracle@lccn65 database]$ ./runInstaller
Starting Oracle Universal Installer...

Checking Temp space: must be greater than 120 MB.   Actual 343204 MB   Passed
Checking swap space: must be greater than 150 MB.   Actual 14015 MB   Passed
Checking monitor: must be configured to display at least 256 colors.   Actual 65536   Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2012-08-27_11-53-26AM. Please wait ...[oracle@lccn65 database]$
```

Figure 2. Command to start Oracle installation

- __ 2. The Oracle Database 11g Release 2 Installer opens. Click **Next**.



Figure 3. Oracle Database 11g Release 2 Installer

- ___ 3. In the Download Software Updates screen, select Skip software updates and click **Next**.

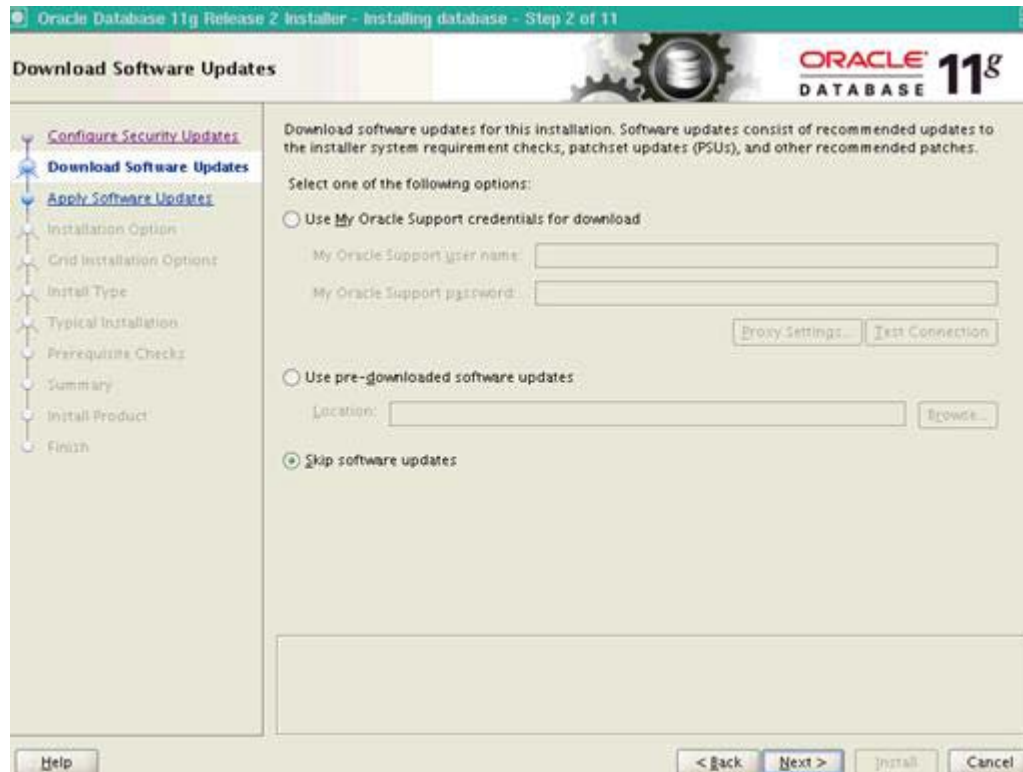


Figure 4. Oracle Database 11g Release 2 Installer: Download Software Updates

___ 4. In the Select Installation Option screen, click Install database software only and click **Next**.

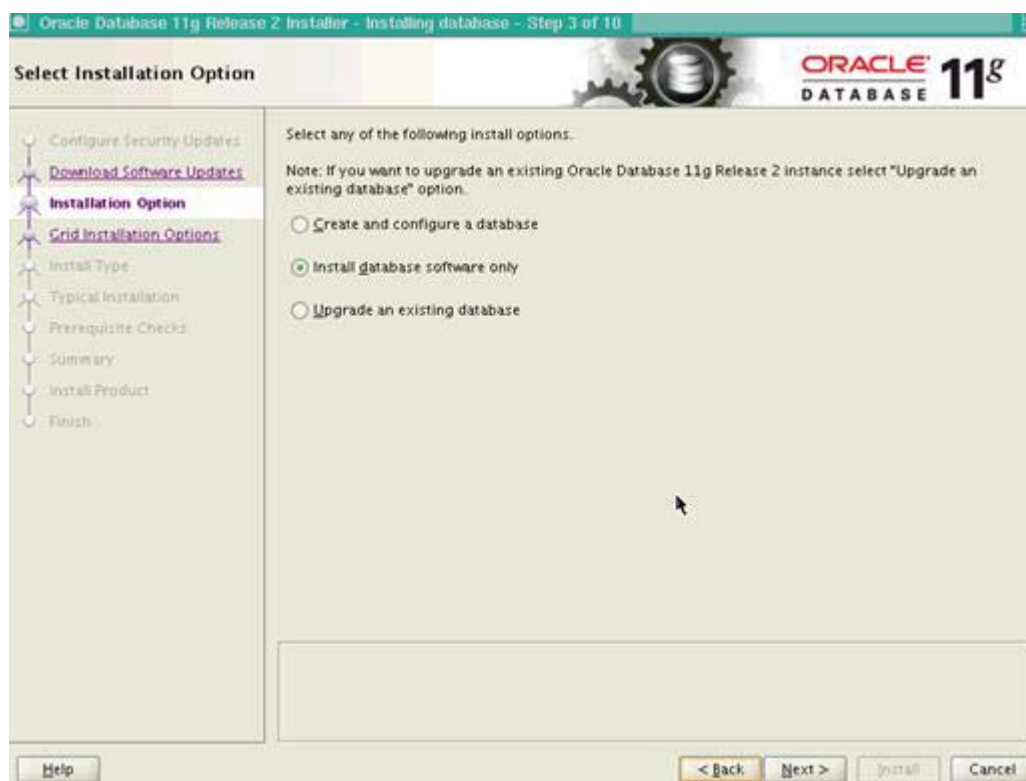


Figure 5. Oracle Database 11g Release 2 Installer: Select Installation Option

- ___ 5. In the Grid Installation Options screen, click Single instance database installation and click **Next**.

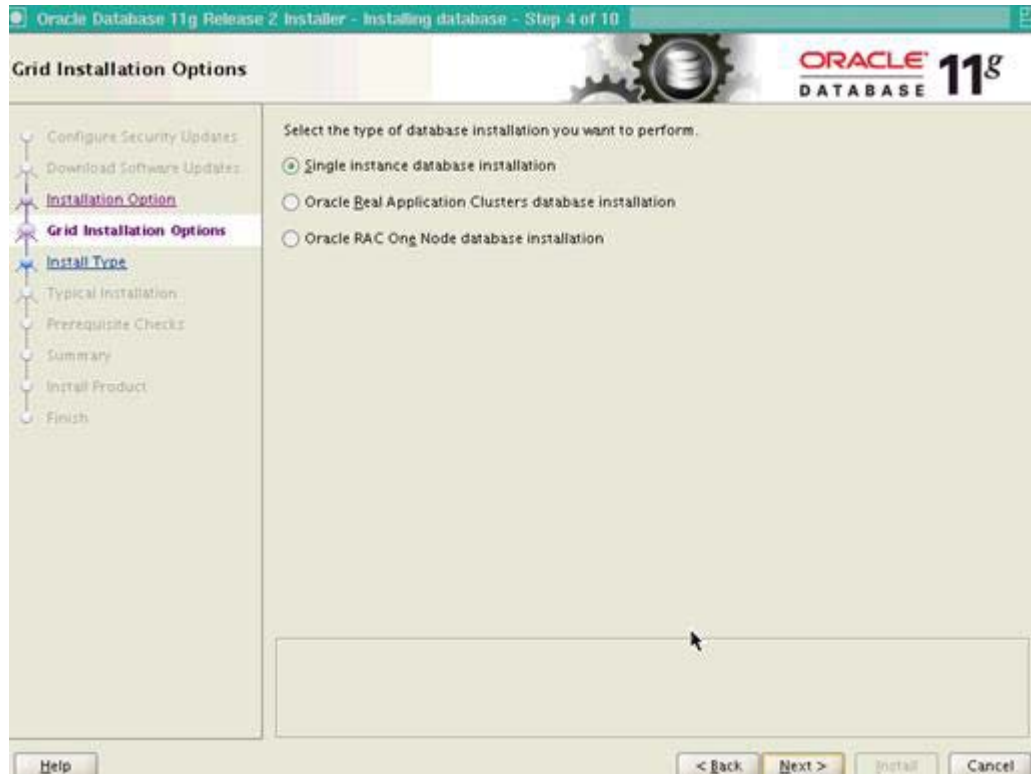


Figure 6. Oracle Database 11g Release 2 Installer: Grid Installation Options

___ 6. In the Select Product Languages screen, use the default language and click **Next**.

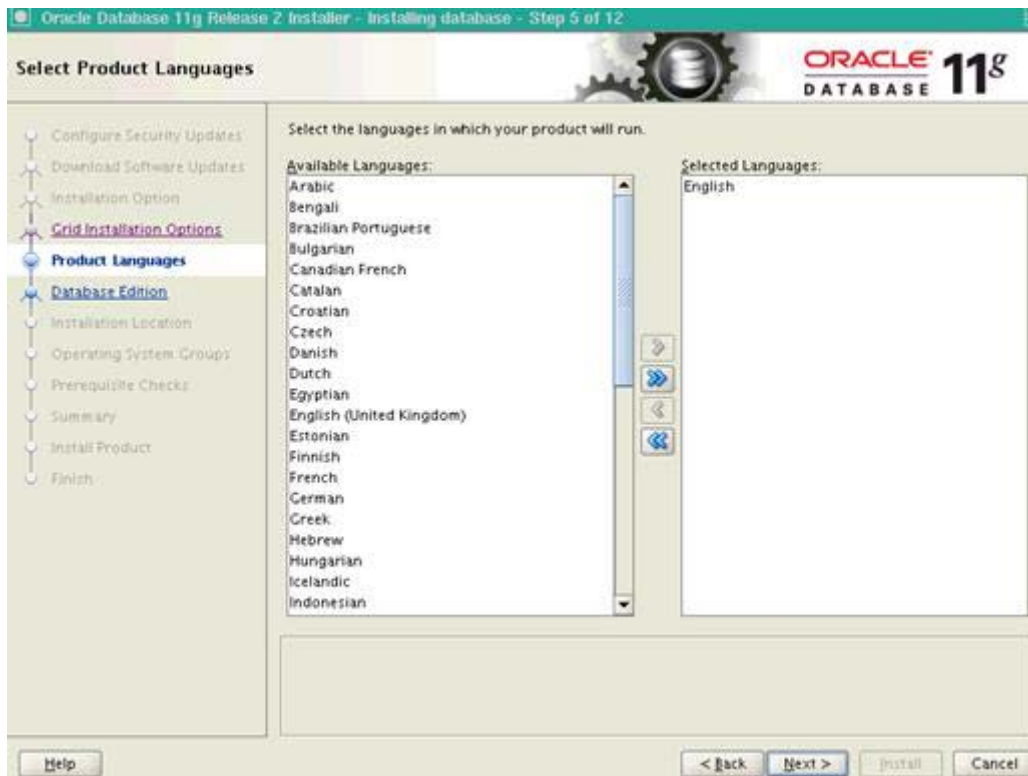


Figure 7. Oracle Database 11g Release 2 Installer: Select Product Languages

7. In the Select Database Edition screen, select Enterprise Edition (4.5GB) and click **Next**.

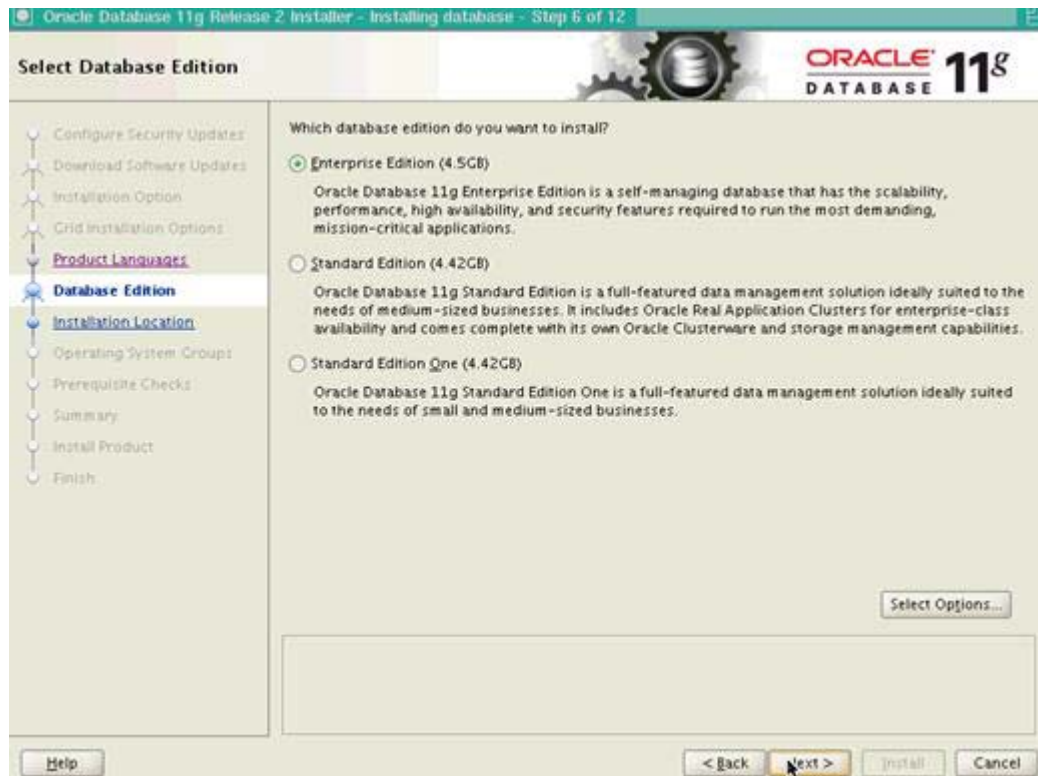


Figure 8. Oracle Database 11g Release 2 Installer: Select Database Edition

___ 8. In the Specify Installation Location screen, select the default location and click **Next**.

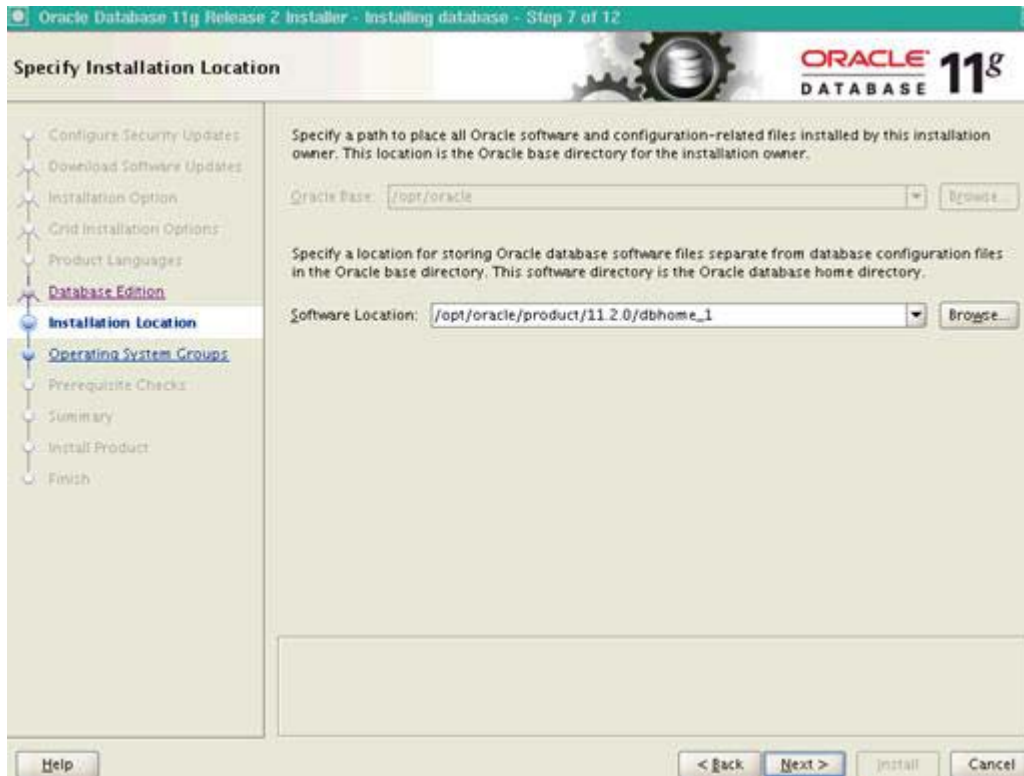


Figure 9. Oracle Database 11g Release 2 Installer: Specify Installation Location

- ___ 9. In the Privileged Operating System Groups screen, select the default and click **Next**.

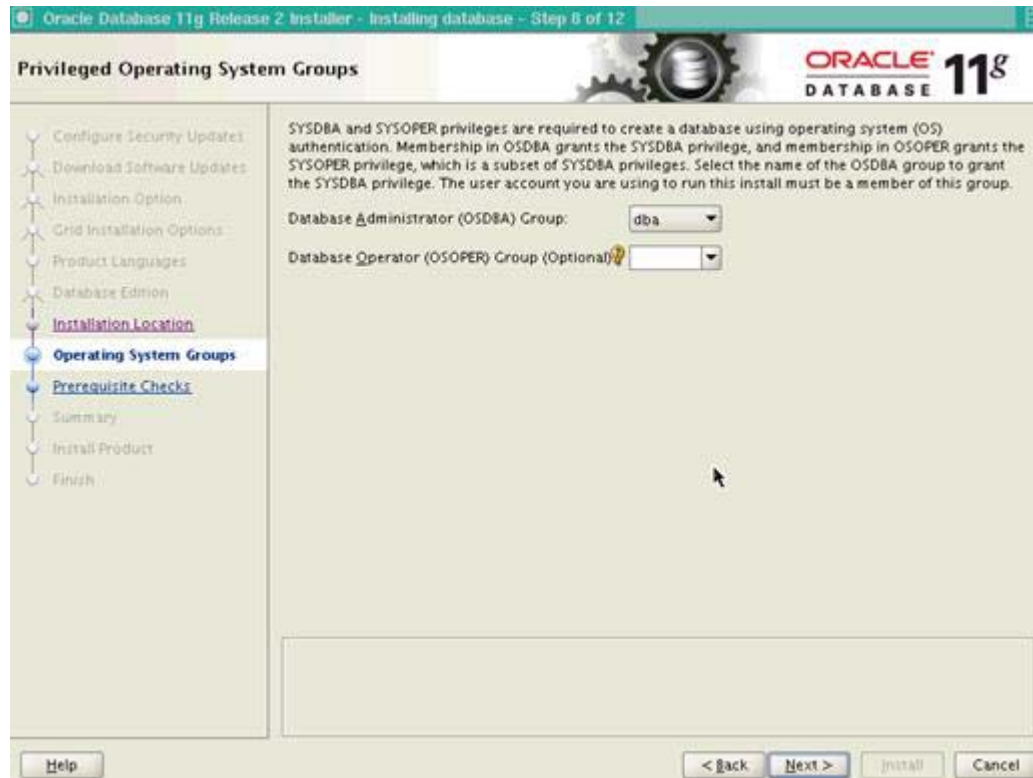


Figure 10. Oracle Database 11g Release 2 Installer: Privileged Operating System Groups

___ 10. Review the Summary, and then click **Install**.



Figure 11. Oracle Database 11g Release 2 Installer: Summary

___ 11. Wait until the installation completes.

Use dbca to create Oracle instance

1. Start dbca by using Oracle user.

```
[oracle@lccn65 database]$ dbca
```

Figure 12. Starting dbca

2. The Database Configuration Assistant opens. Click **Next**.

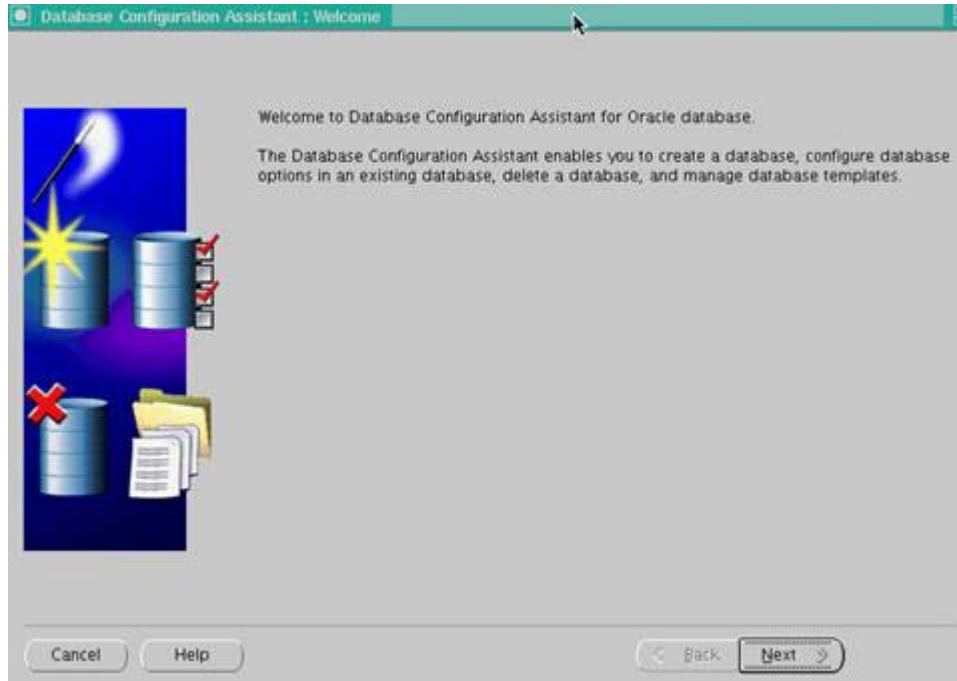


Figure 13. Database Configuration Assistant: Welcome

3. Select **Create a Database**.

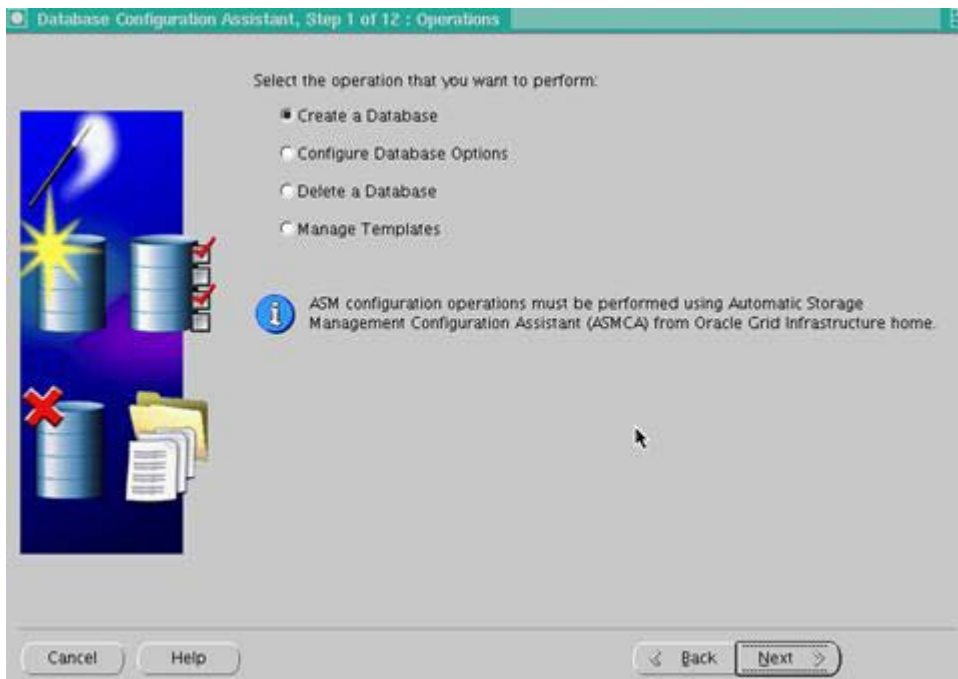


Figure 14. Database Configuration Assistant: Selection operation

4. In the Database templates screen, select the default and click **Next**.

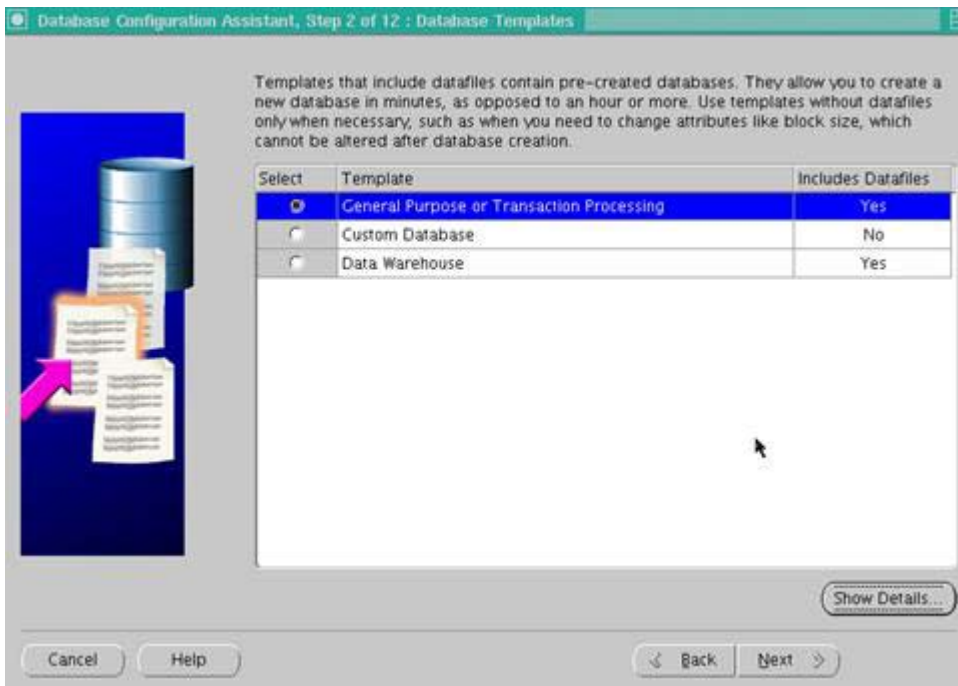


Figure 15. Database Configuration Assistant: Database templates

- ___ 5. In the Database Identification screen, input SID name and click **Next**.

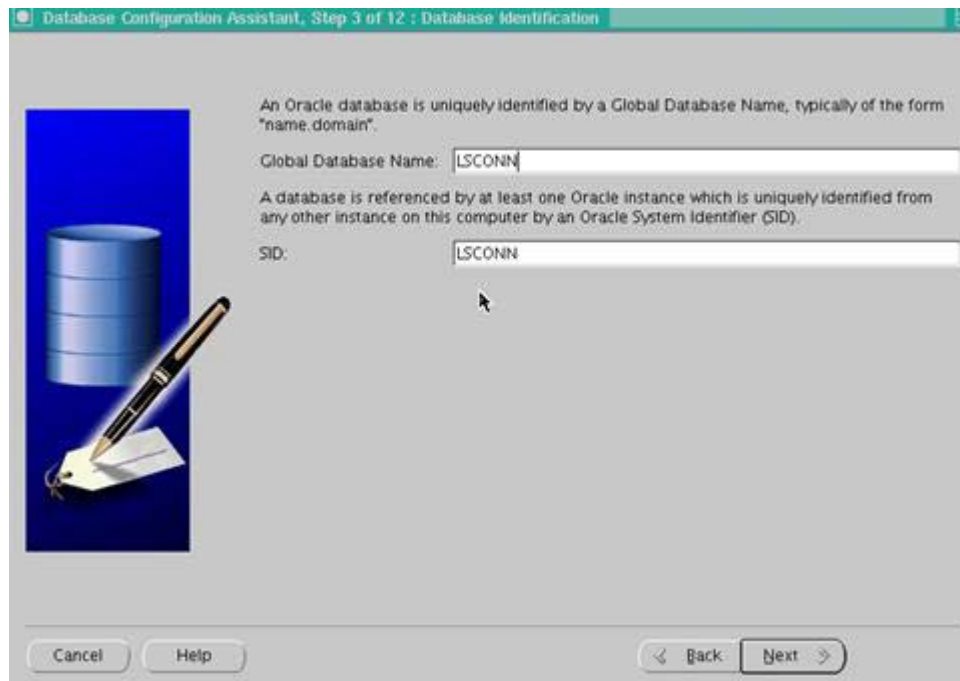


Figure 16. Database Configuration Assistant: Database Identification

- ___ 6. In the Management Options screen, use the default and click **Next**.

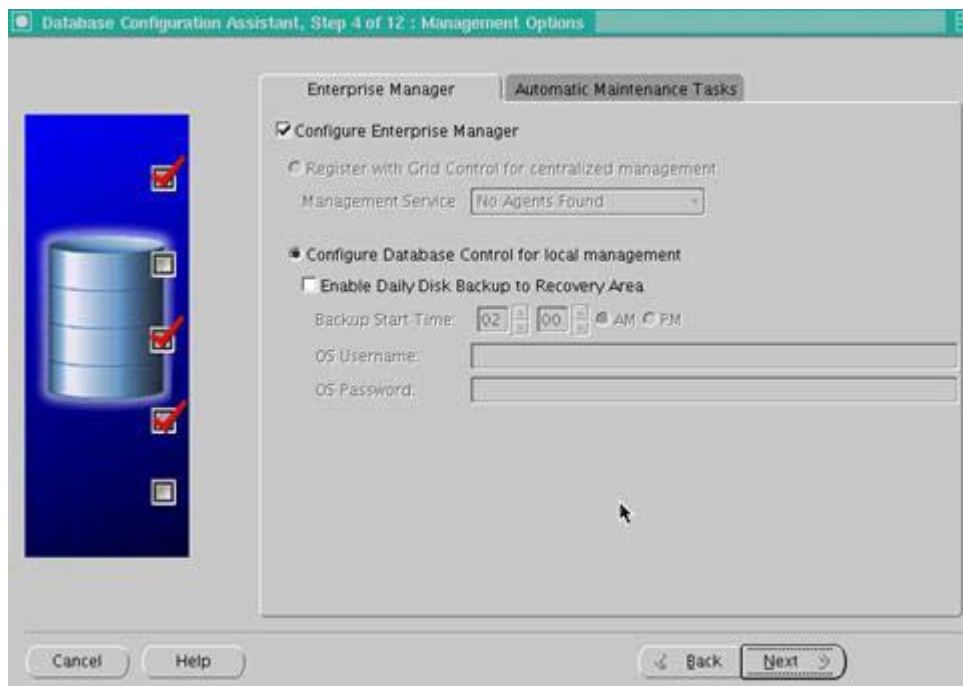


Figure 17. Database Configuration Assistant: Management Options

- ___ 7. In the Database Credentials screen, use the Same Administrative Password for All Accounts and click **Next**.

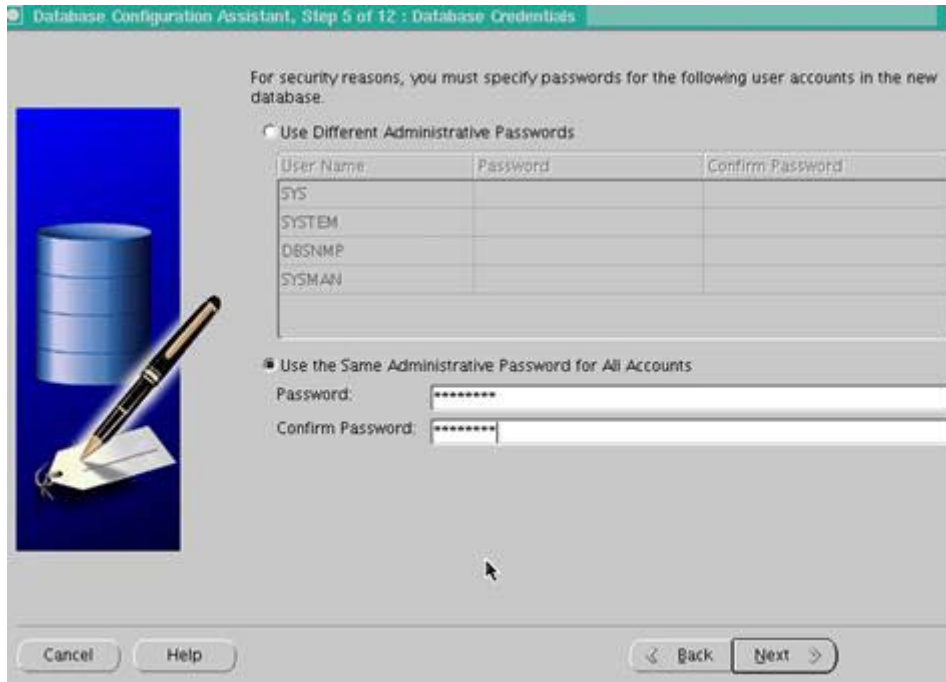


Figure 18. Database Configuration Assistant: Database Credentials

- ___ 8. In the Database File Locations screen, use the default file location and click **Next**.

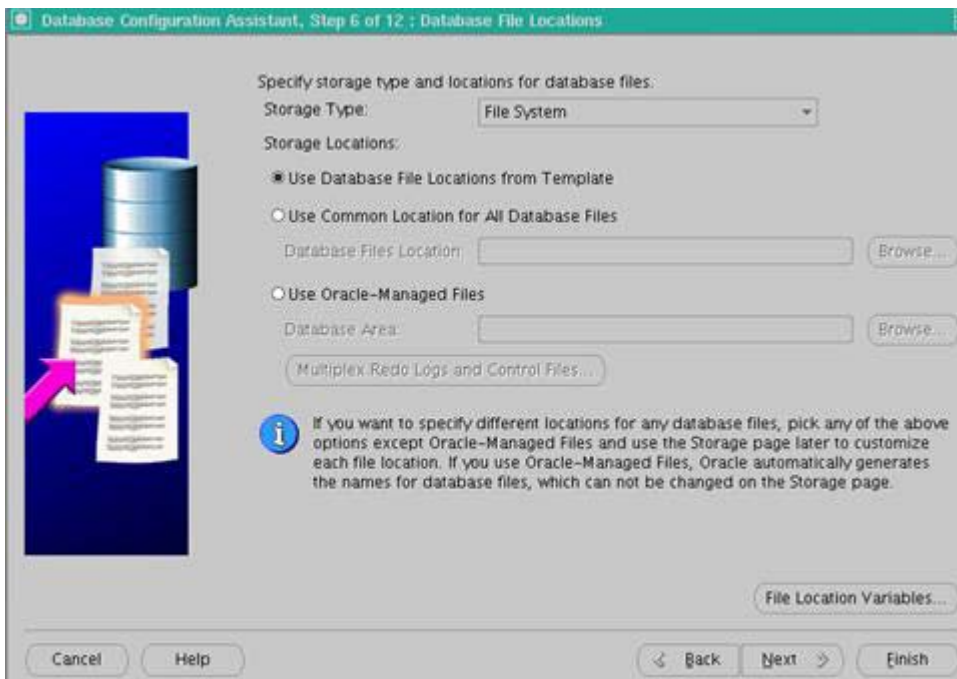


Figure 19. Database Configuration Assistant: Database File Locations

- ___ 9. In the Recovery Configuration screen, use the default configuration and click **Next**.

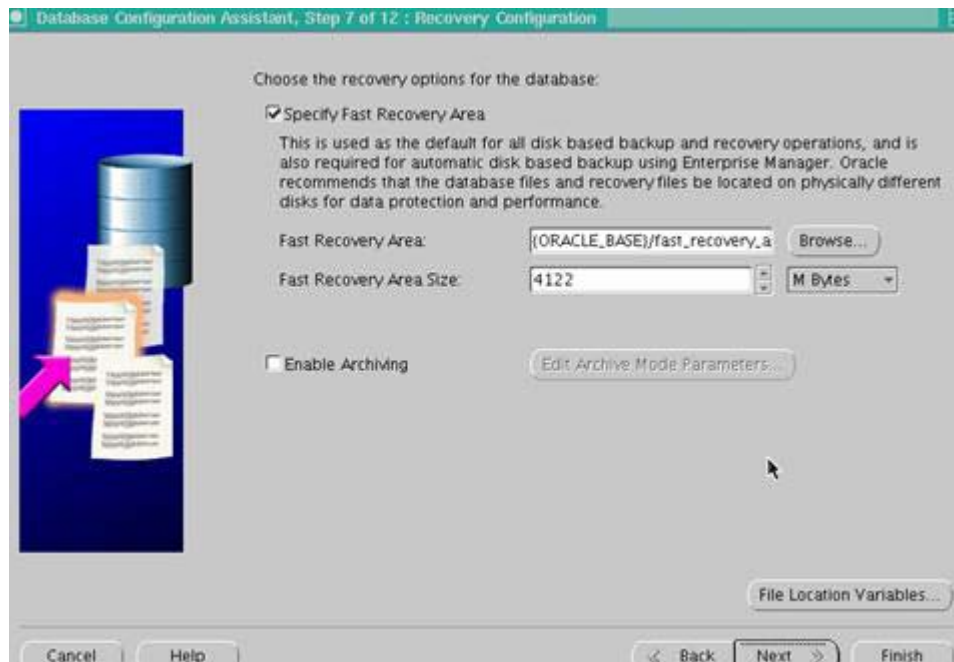


Figure 20. Database Configuration Assistant: Recovery Configuration

- ___ 10. In the Database Content screen, use the default content and click **Next**.

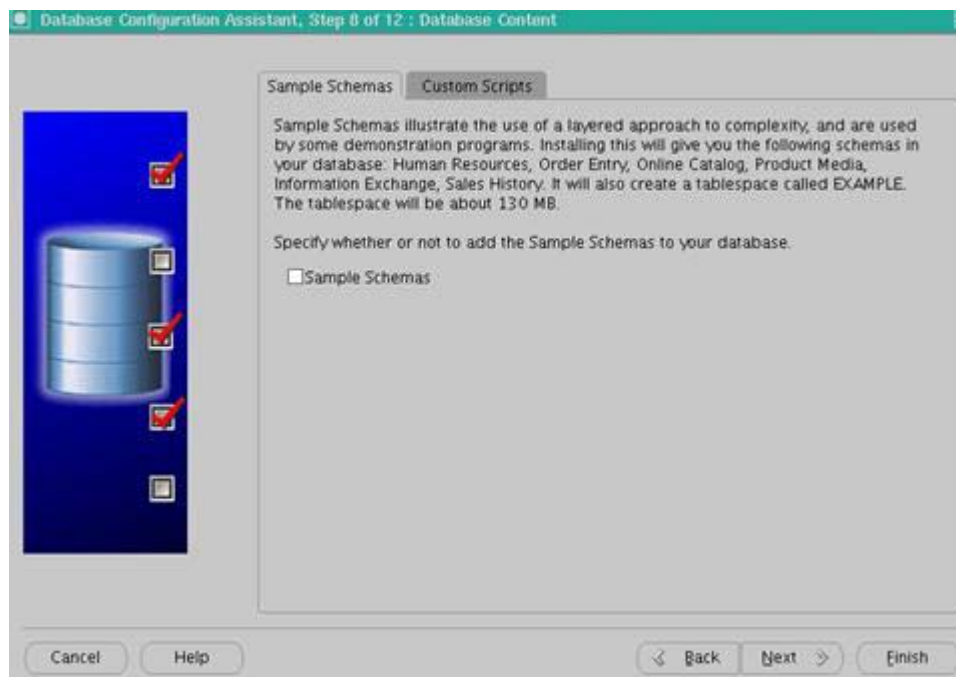


Figure 21. Database Configuration Assistant: Database Content

- ___ 11. In the Initialization Parameters screen, on Character Sets tab, select **Use Unicode (AL32UTF8)** and click **Next**.

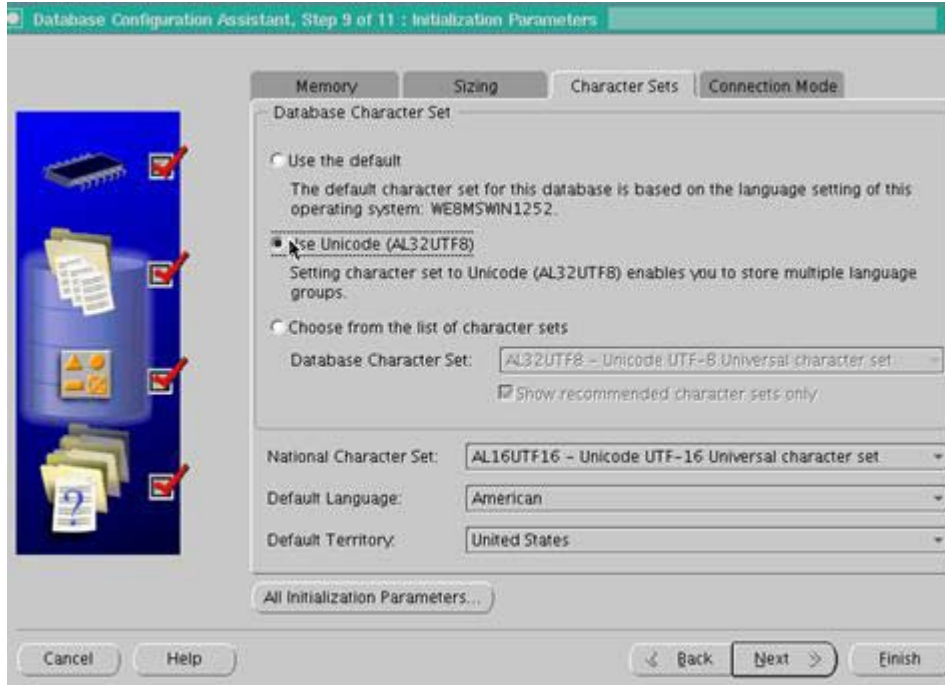


Figure 22. Database Configuration Assistant: Initialization Parameters

- ___ 12. The Database Storage screen is displayed. Click **Next**.

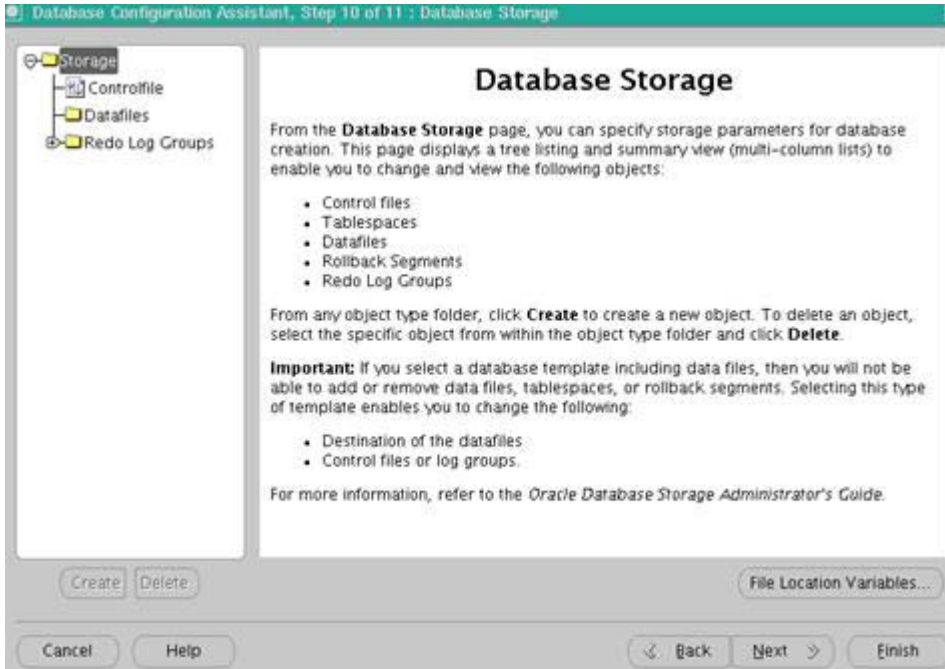


Figure 23. Database Configuration Assistant: Database Storage

___ 13. In the Creation Options screens, use the default option and click **Next**.

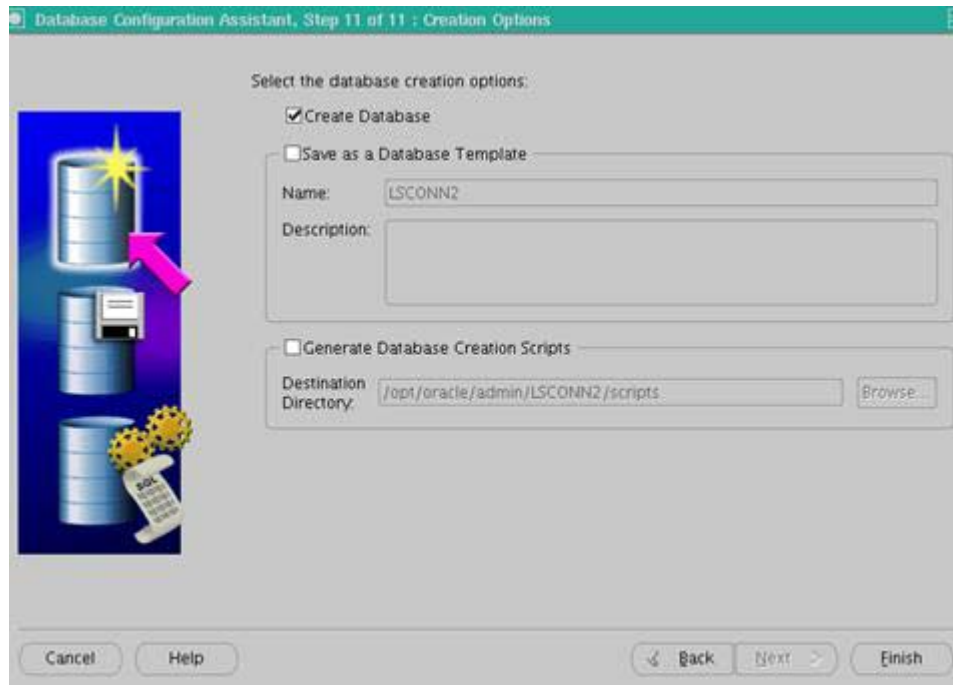


Figure 24. Database Configuration Assistant: Creation Options

14. Review the summary, and then click **OK**.

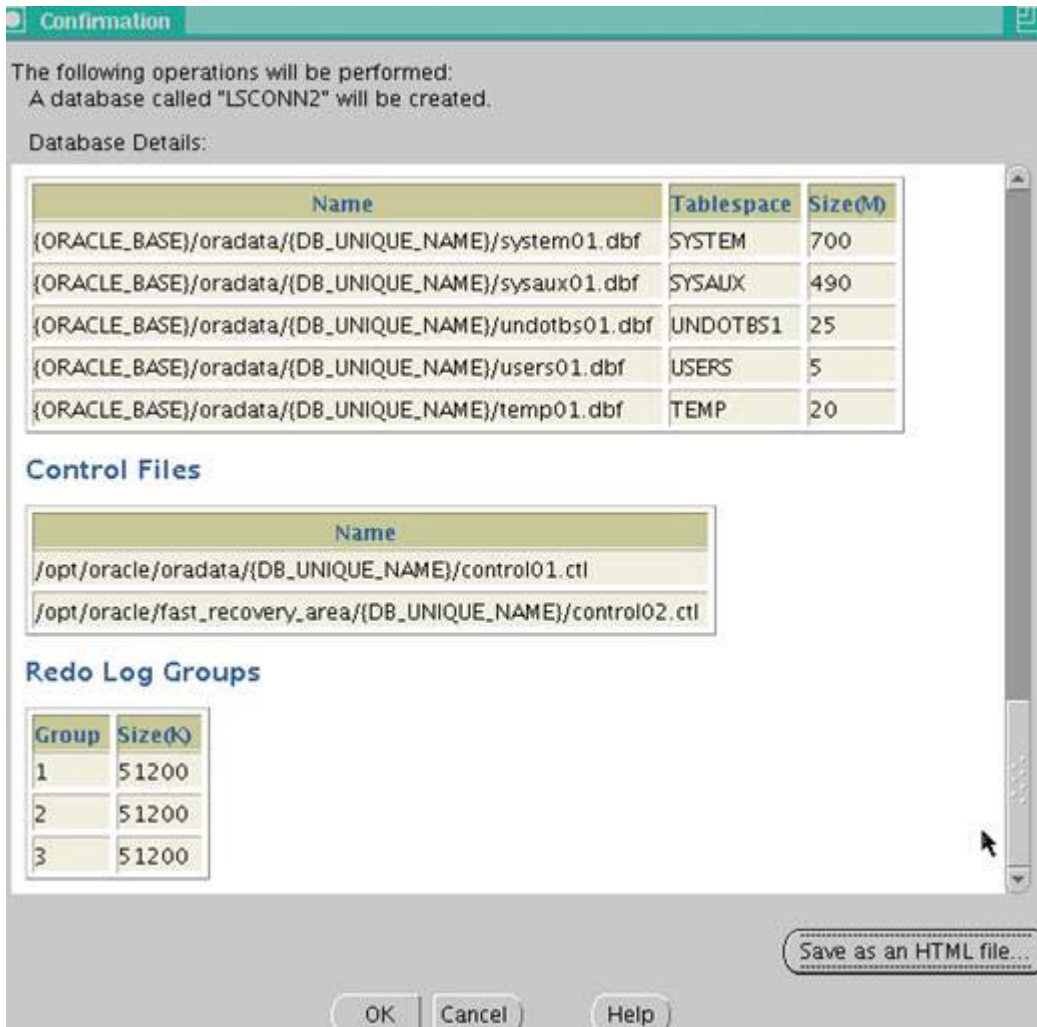


Figure 25. Database Configuration Assistant: Summary

The assistant starts to create the Oracle instance.

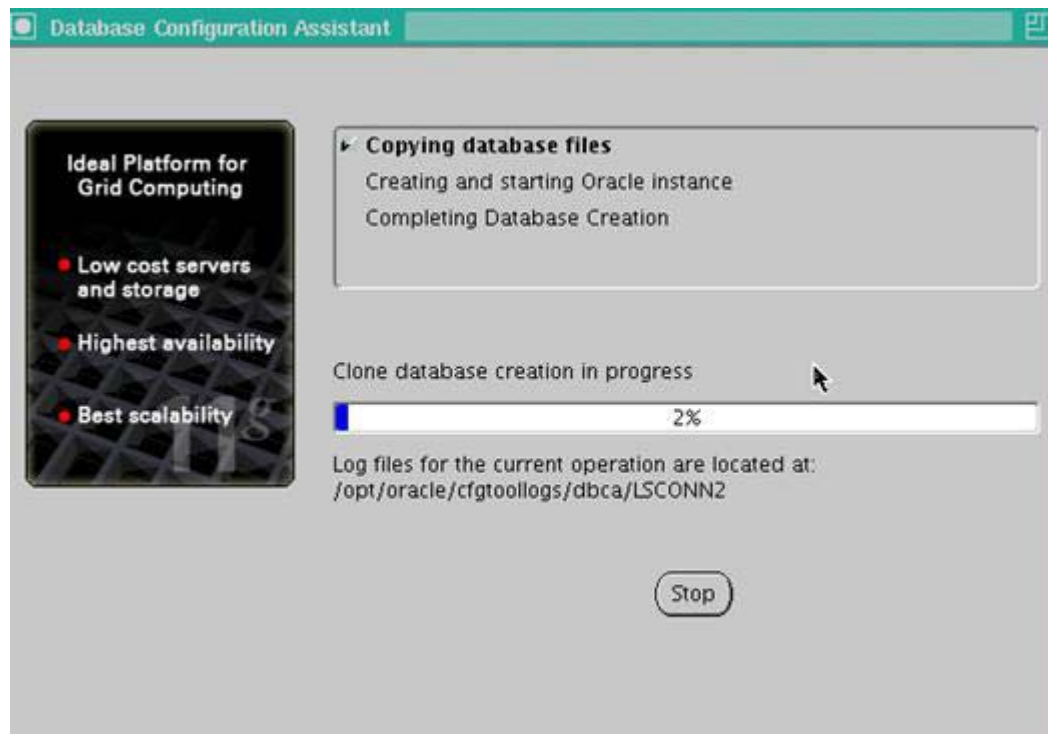


Figure 26. Database Configuration Assistant: Oracle instance creation in progress

___ 15. Wait until the creation completes.

Prepare to configure the LDAP directory

Gathering all needed LDAP information as follows:

- LDAP type: ITDS6.3
- LDAP host



Note

Ask for the LDAP host if you do not know it.

- Port: 389
- Bind user: cn=root / passw0rd
- Search base: l=SharedLDAP, c=US, ou=Lotus, o=Software Group, dc=ibm,dc=com
- User number: 100K

Install IBM WebSphere Deployment Manager: 7.0.0.0

__ 1. Start the WebSphere Application Server installation. Click **Next**.

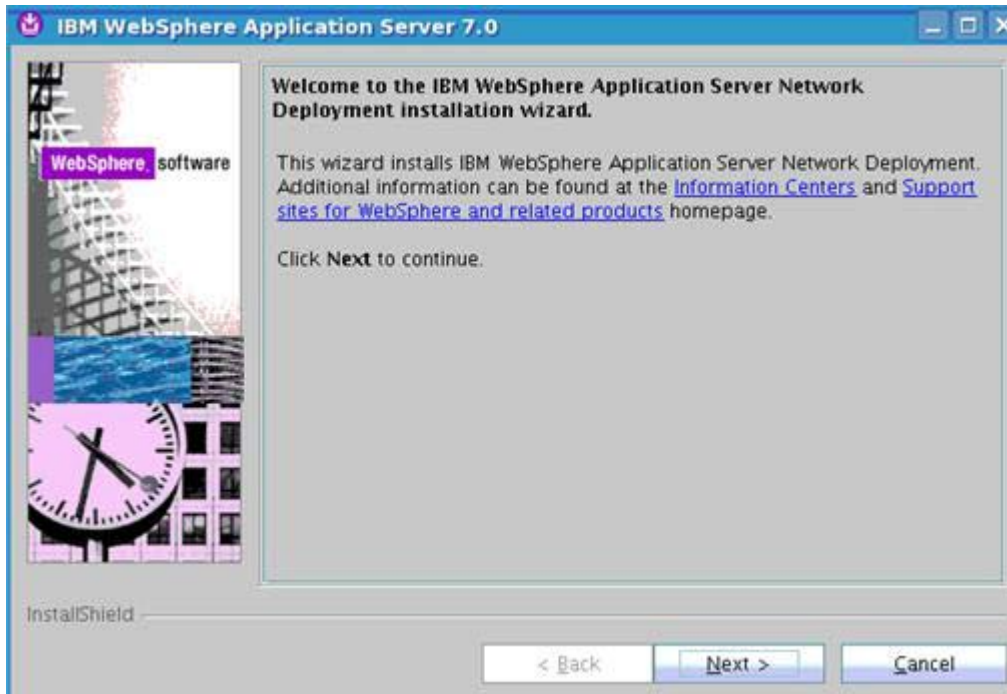


Figure 27. IBM WebSphere Application Server 7.0: Welcome.

__ 2. Accept the license agreement and click **Next**.

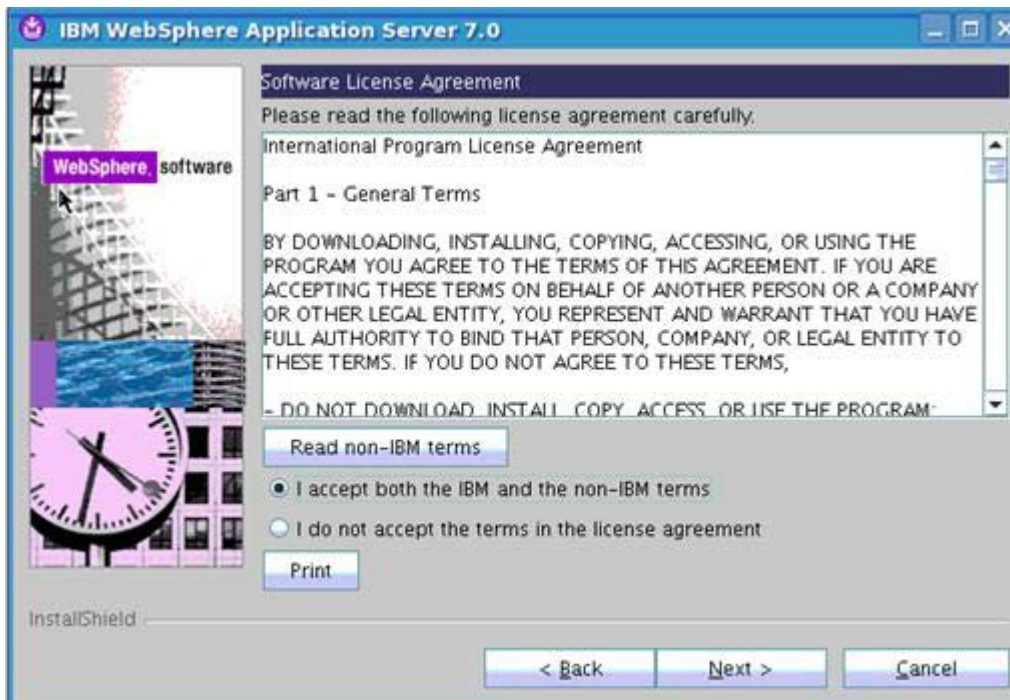


Figure 28. IBM WebSphere Application Server 7.0: Software License Agreement

- ___ 3. Click **Next** in the System Prerequisites Check screen.

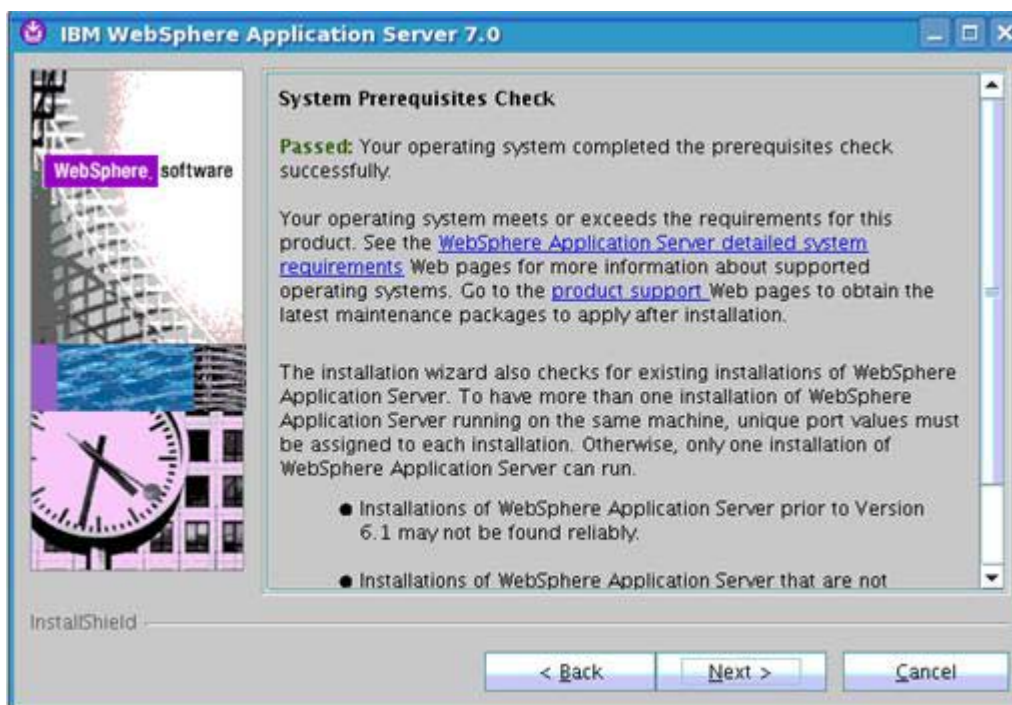


Figure 29. IBM WebSphere Application Server 7.0: System Prerequisites Check

- ___ 4. Do not select anything from the optional features and click **Next**.

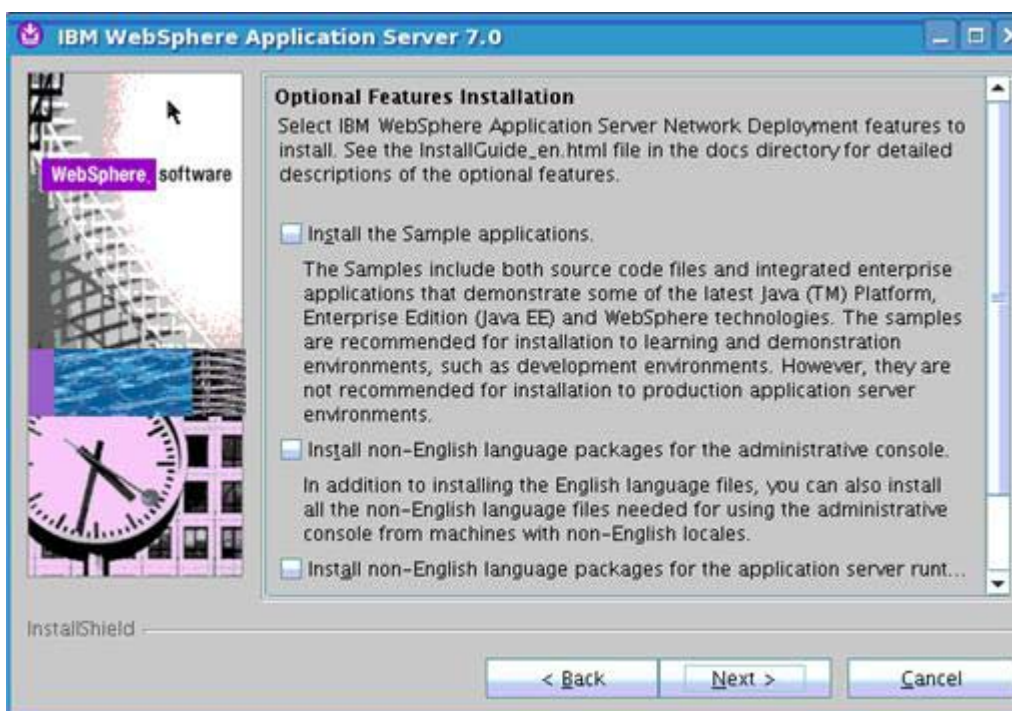


Figure 30. IBM WebSphere Application Server 7.0: Optional Features Installation

5. Change the default installation path if needed and click **Next**.

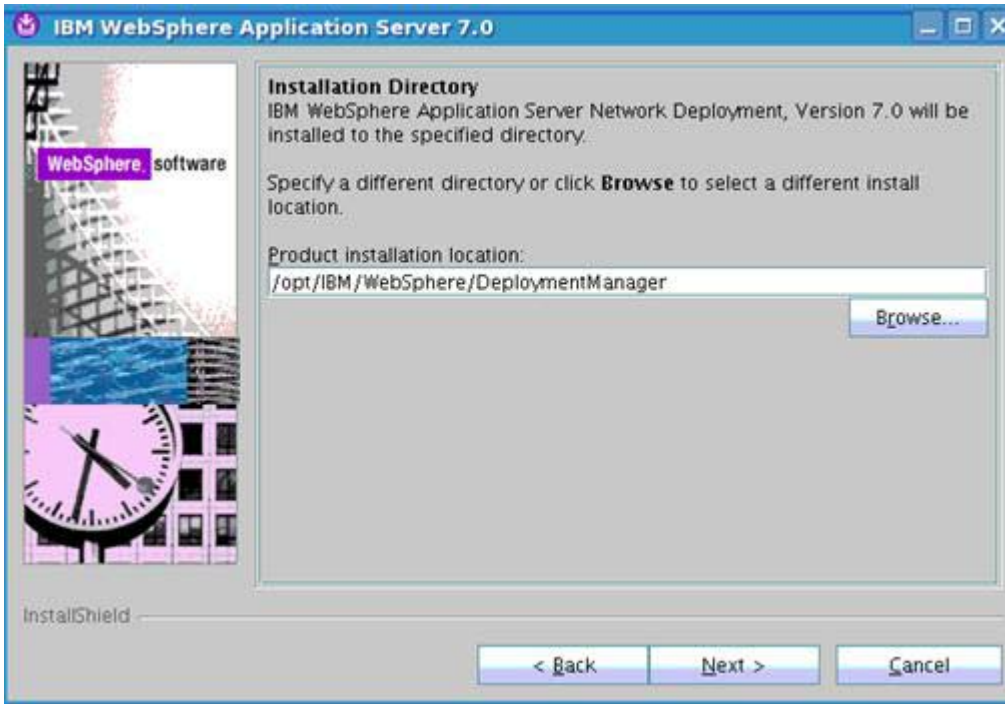


Figure 31. IBM WebSphere Application Server 7.0: Installation Directory

6. Select **Management** and click **Next**.

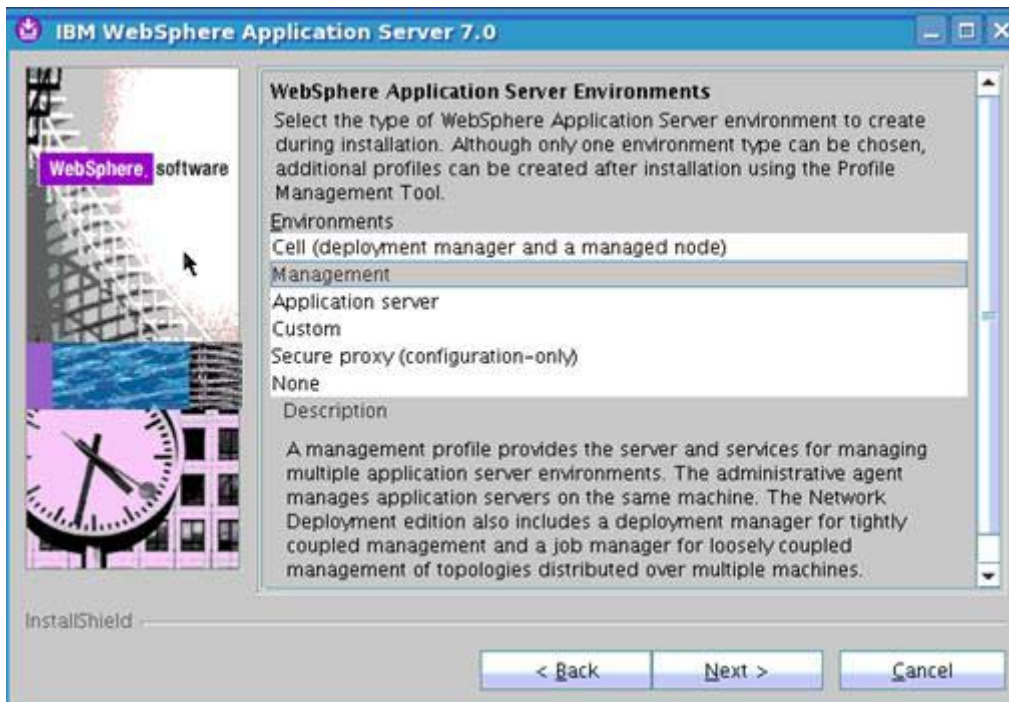


Figure 32. IBM WebSphere Application Server 7.0: WebSphere Application Server Environments

- ___ 7. Select **Deployment Manager** and click **Next**.

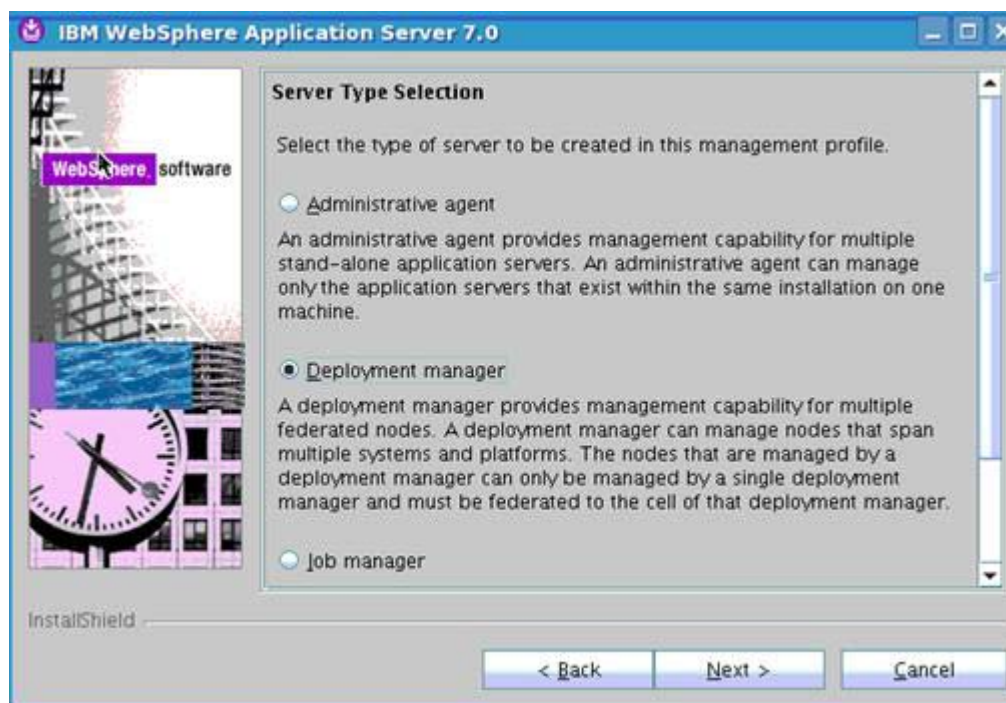


Figure 33. IBM WebSphere Application Server 7.0: Server Type Selection

- ___ 8. Enter admin user name and password and click **Next**.



Figure 34. IBM WebSphere Application Server 7.0: Enable Administration Security

___ 9. Do not select Create a repository. Click **Next**.

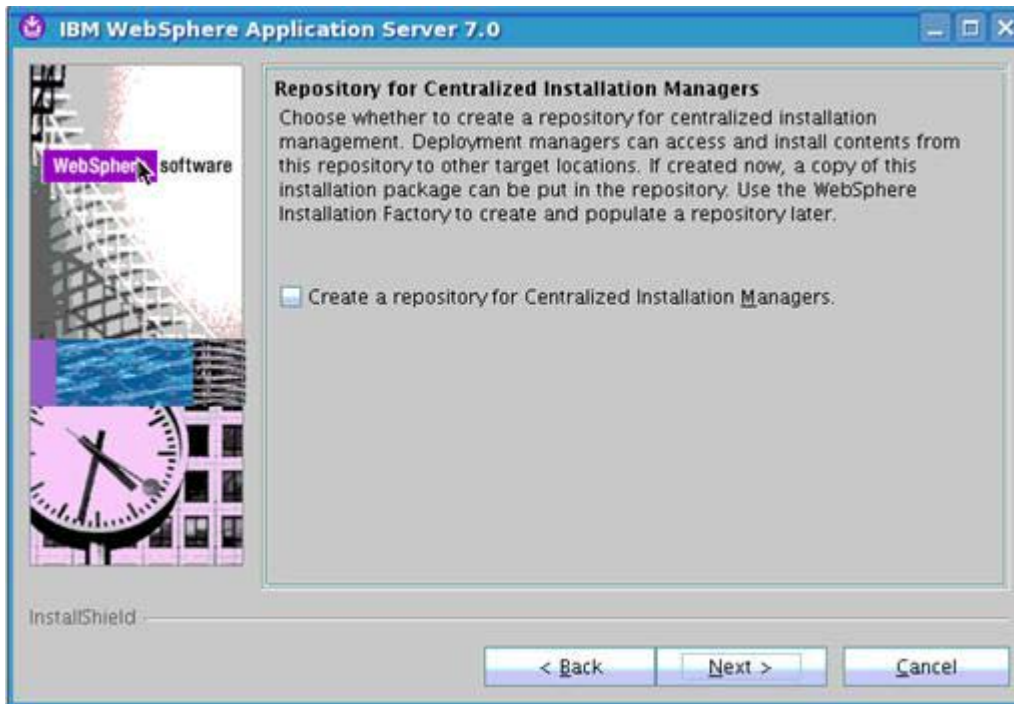


Figure 35. IBM WebSphere Application Server 7.0: Repository for Centralized Installation Managers

___ 10. Verify the permissions. Click **Next**.

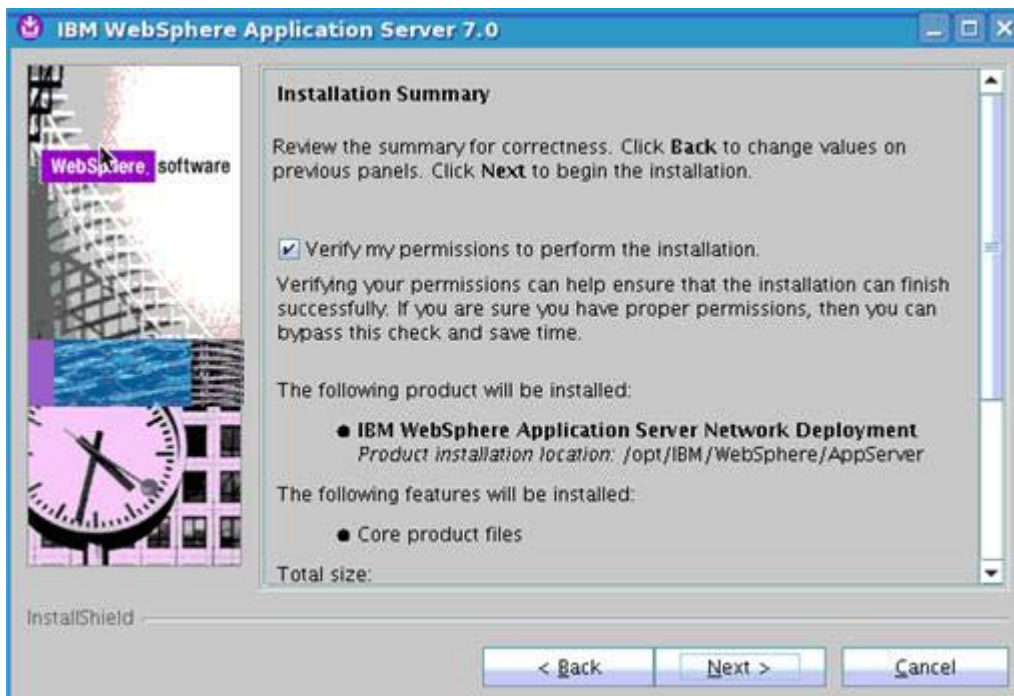


Figure 36. IBM WebSphere Application Server 7.0: Installation Summary

___ 11. You have sufficient permissions for the installation. Click **Next**.

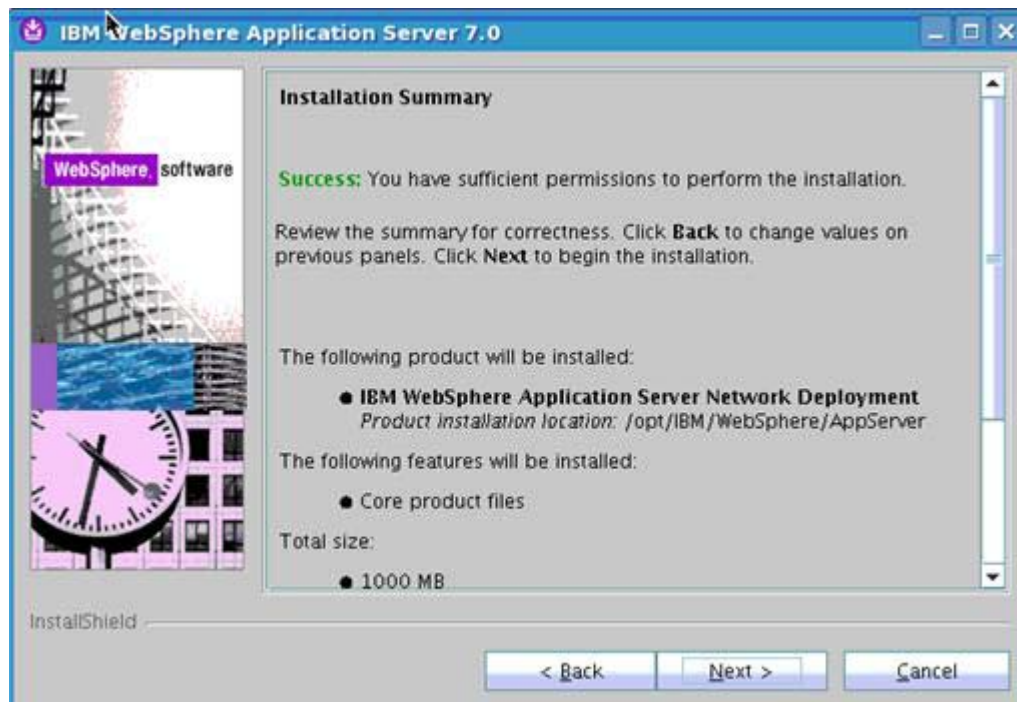


Figure 37. IBM WebSphere Application Server 7.0: Installation Summary

The component starts to install.

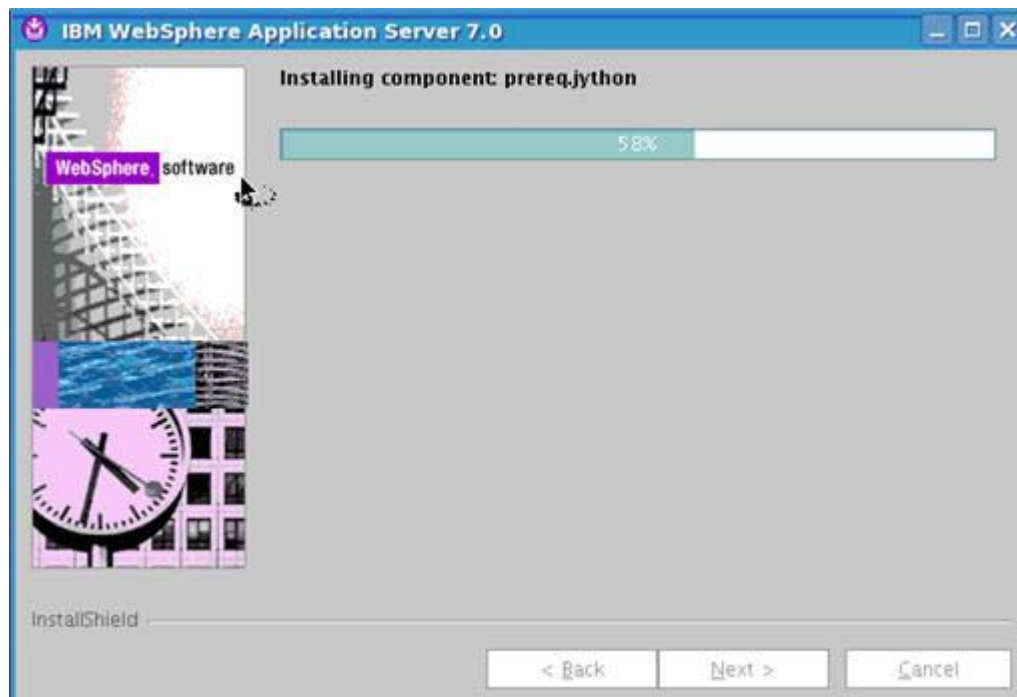


Figure 38. IBM WebSphere Application Server 7.0: Component installation in progress

___ 12. Wait until the installation completes and click **Finish** to exit the installer.

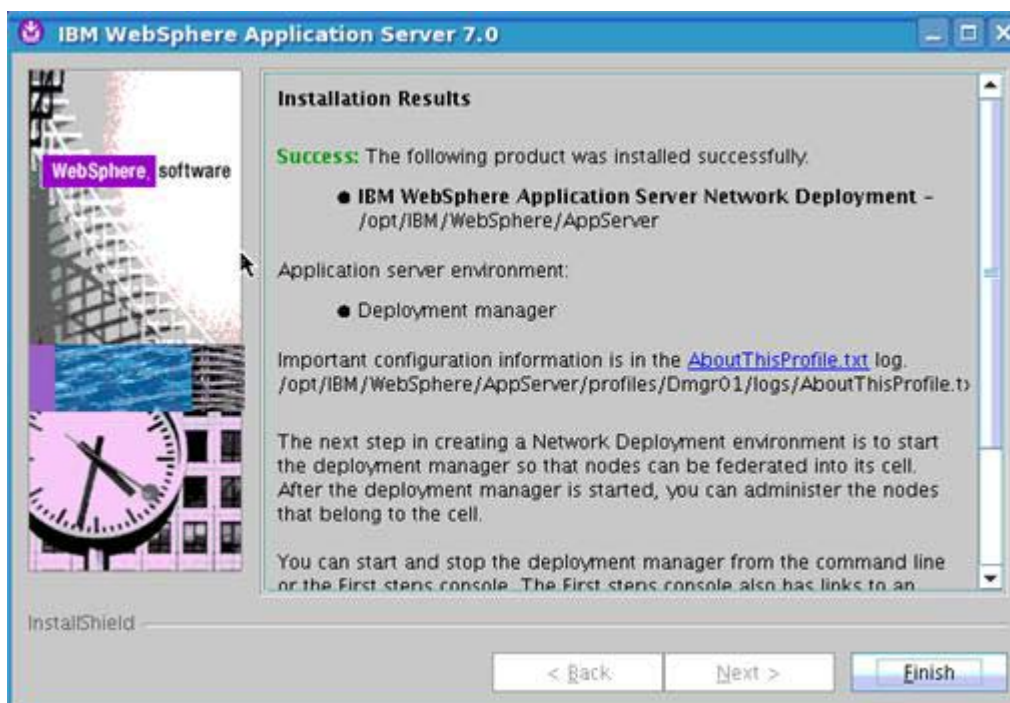


Figure 39. IBM WebSphere Application Server 7.0: Installation Results

Install IBM WebSphere Application Server: 7.0.0.0 on three nodes



Note

This step must be done on three nodes.

1. Start the WebSphere Application Server installation. Click **Next**.

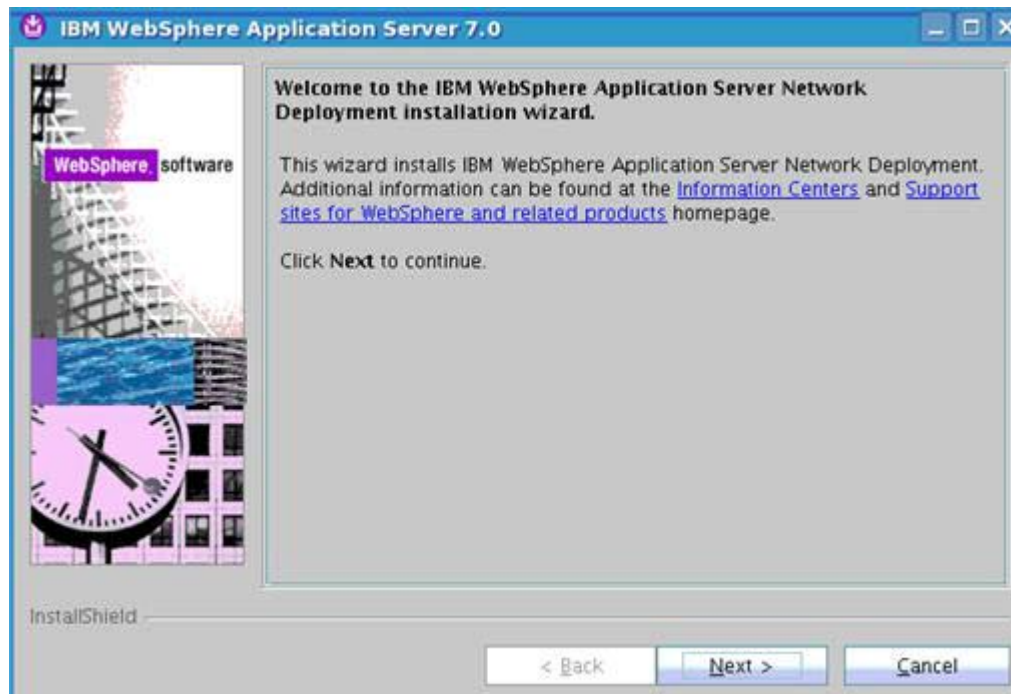


Figure 40. IBM WebSphere Application Server 7.0: Welcome

2. Accept the license agreement and click **Next**.

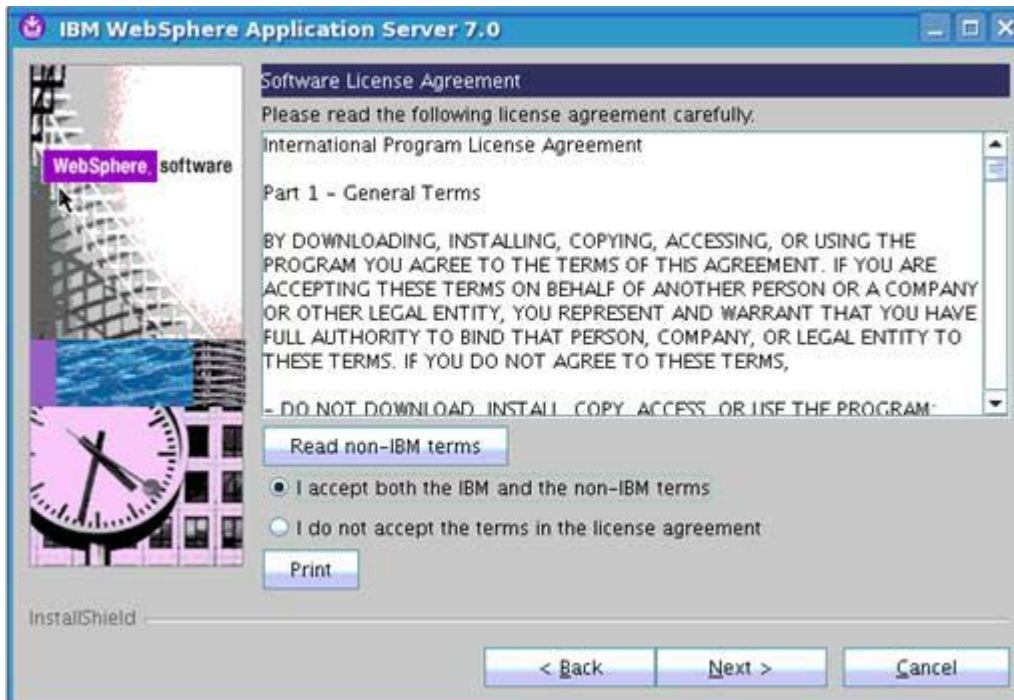


Figure 41. IBM WebSphere Application Server 7.0: Software License Agreement

3. Click **Next** in the System Prerequisites Check screen.

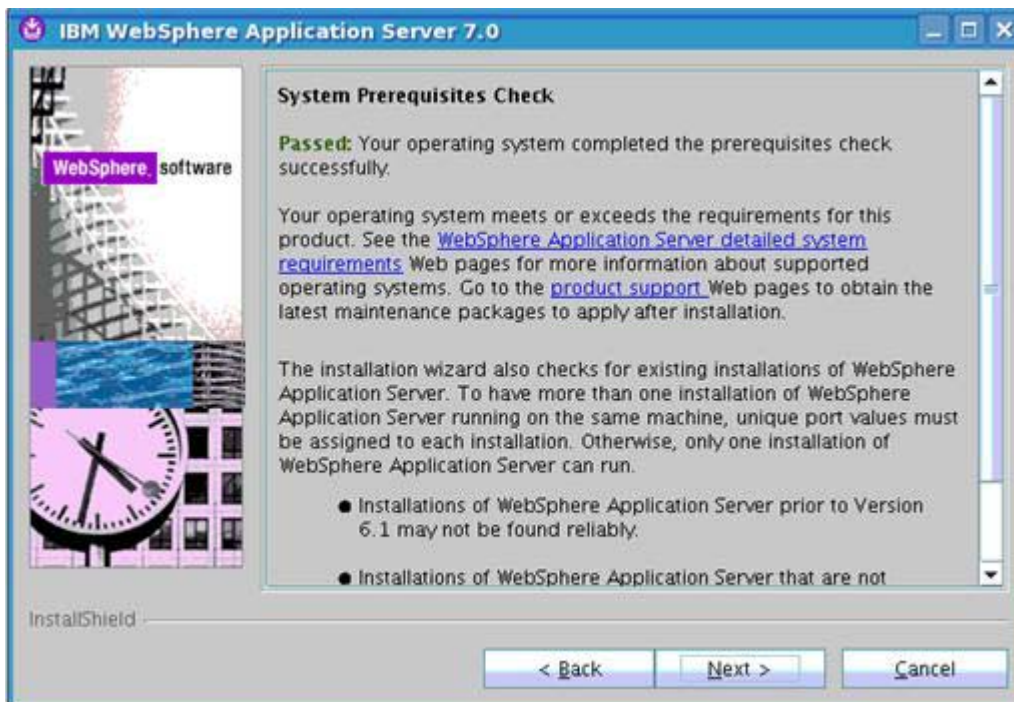


Figure 42. IBM WebSphere Application Server 7.0: System Prerequisites Check

4. Select “Install a new copy of IBM WebSphere Application Server Network Deployment” and click **Next**.

**Note**

This screen displays only if the Deployment Manager and AppServer are installed on the same computer.

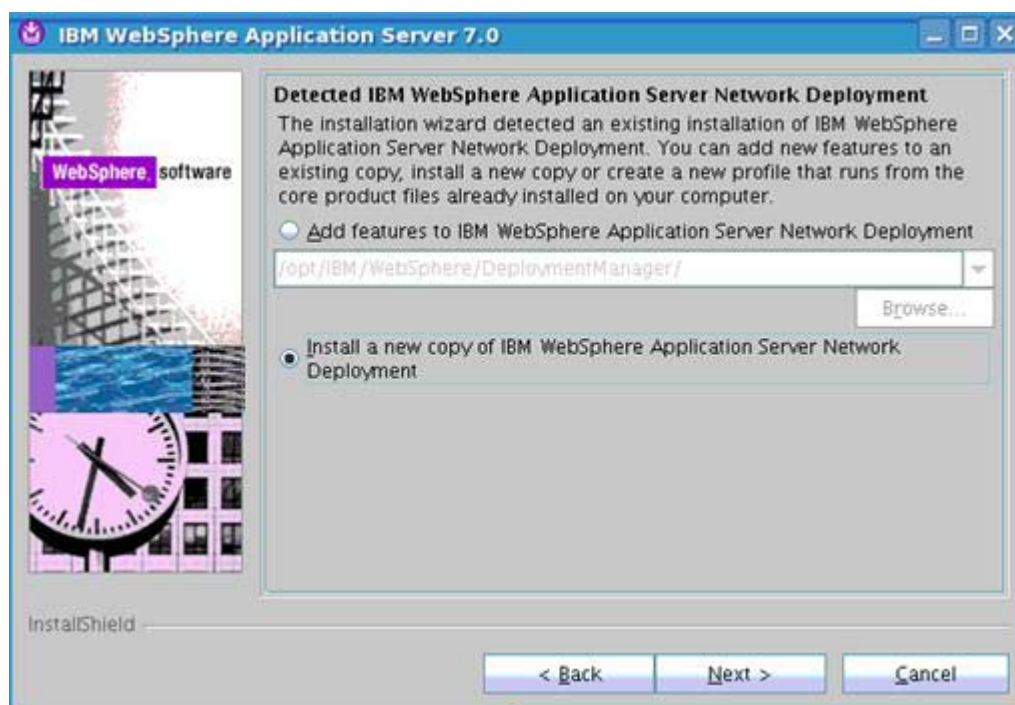


Figure 43. IBM WebSphere Application Server 7.0: Detected IBM WebSphere Application Server Network Deployment

5. Do not select anything from the optional features and click **Next**.

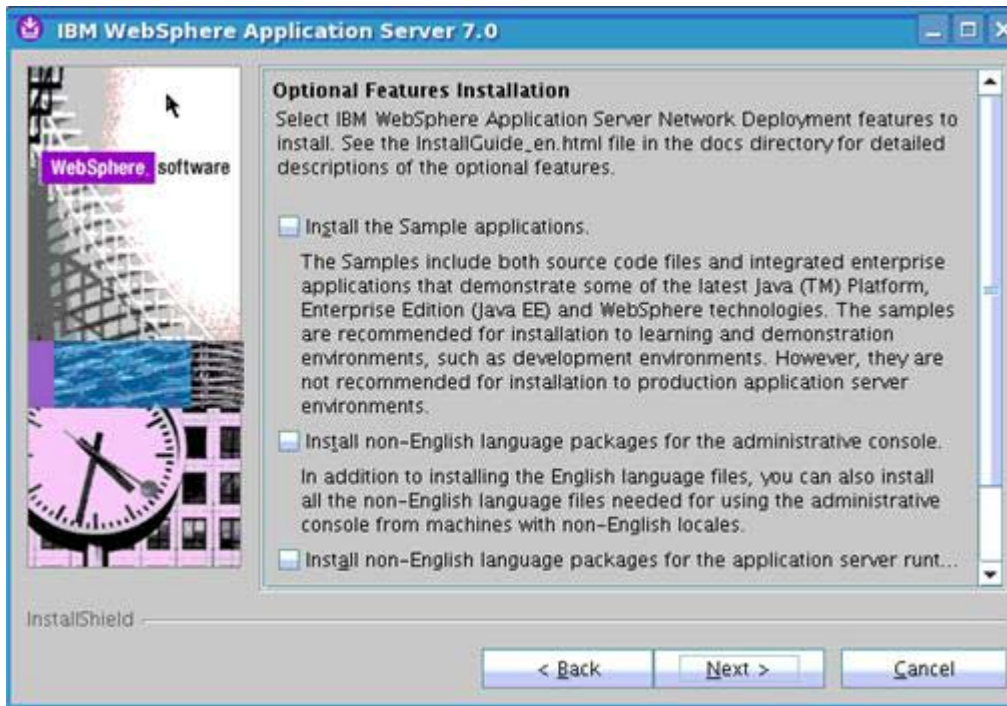


Figure 44. IBM WebSphere Application Server 7.0: Optional Features Installation

6. Change the default installation path if needed and click **Next**.

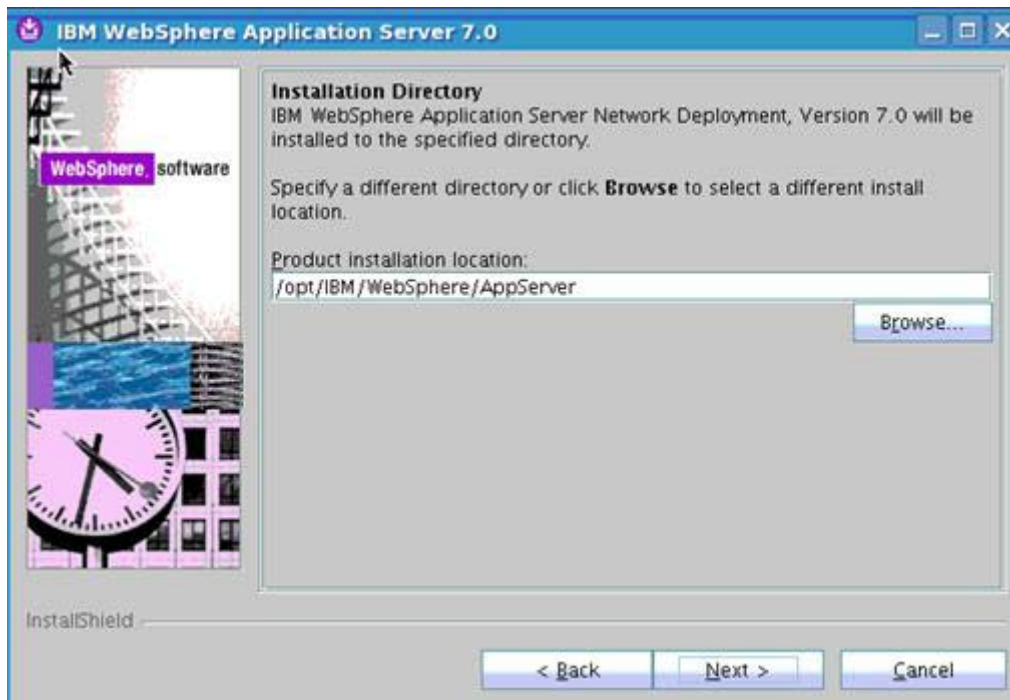


Figure 45. IBM WebSphere Application Server 7.0: Installation Directory

- ___ 7. Select **Application server** and click **Next**.

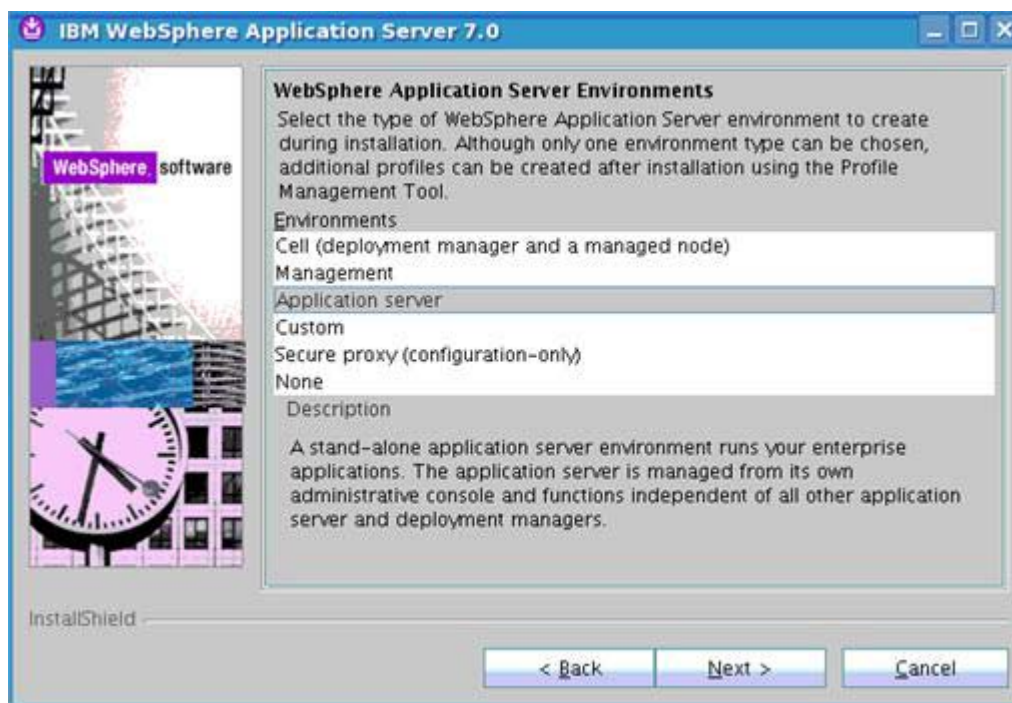


Figure 46. IBM WebSphere Application Server 7.0: WebSphere Application Server Environments

- ___ 8. Enter admin user name and password and click **Next**.



Figure 47. IBM WebSphere Application Server 7.0: Enable Administration Security

___ 9. Verify the permissions. Click **Next**.

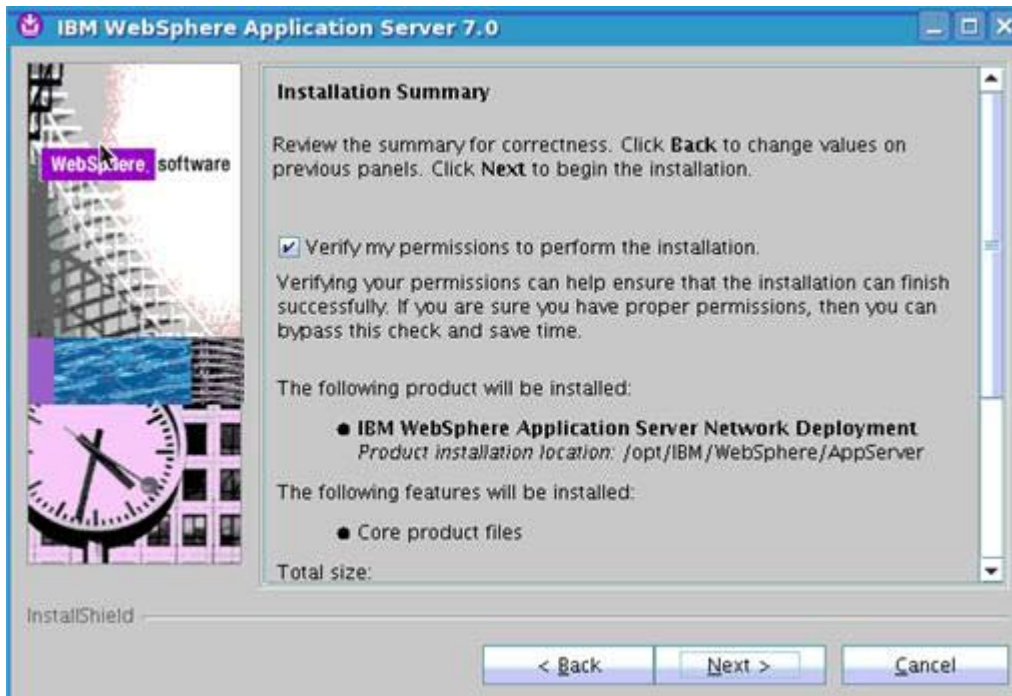


Figure 48. IBM WebSphere Application Server 7.0: Installation Summary

___ 10. You have sufficient permissions for the installation. Click **Next**.

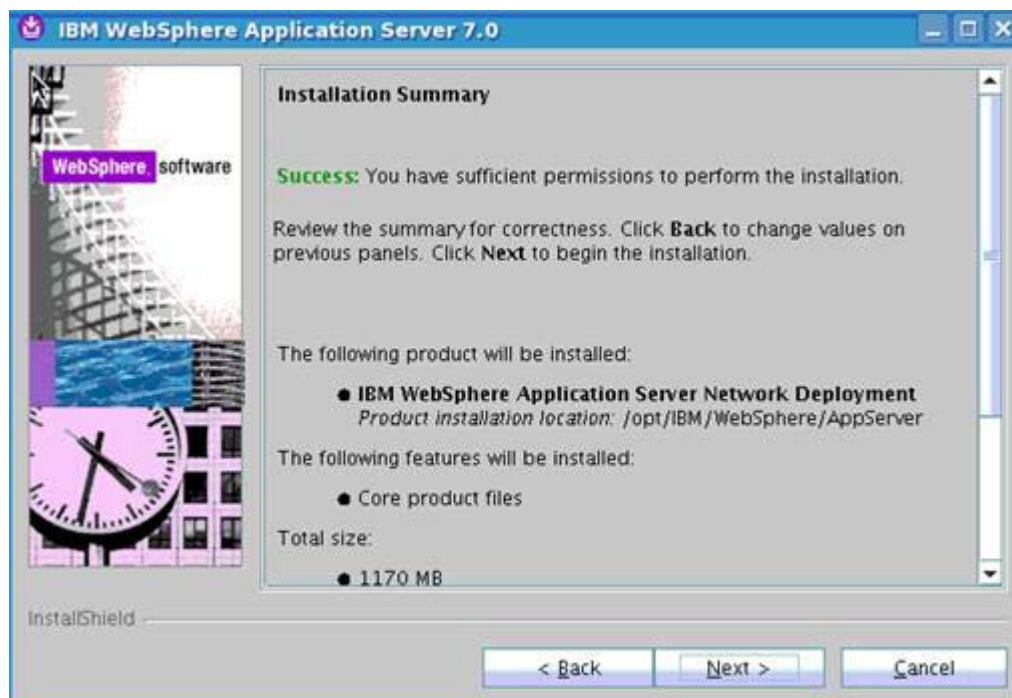


Figure 49. IBM WebSphere Application Server 7.0: Installation Summary

The component starts to install.

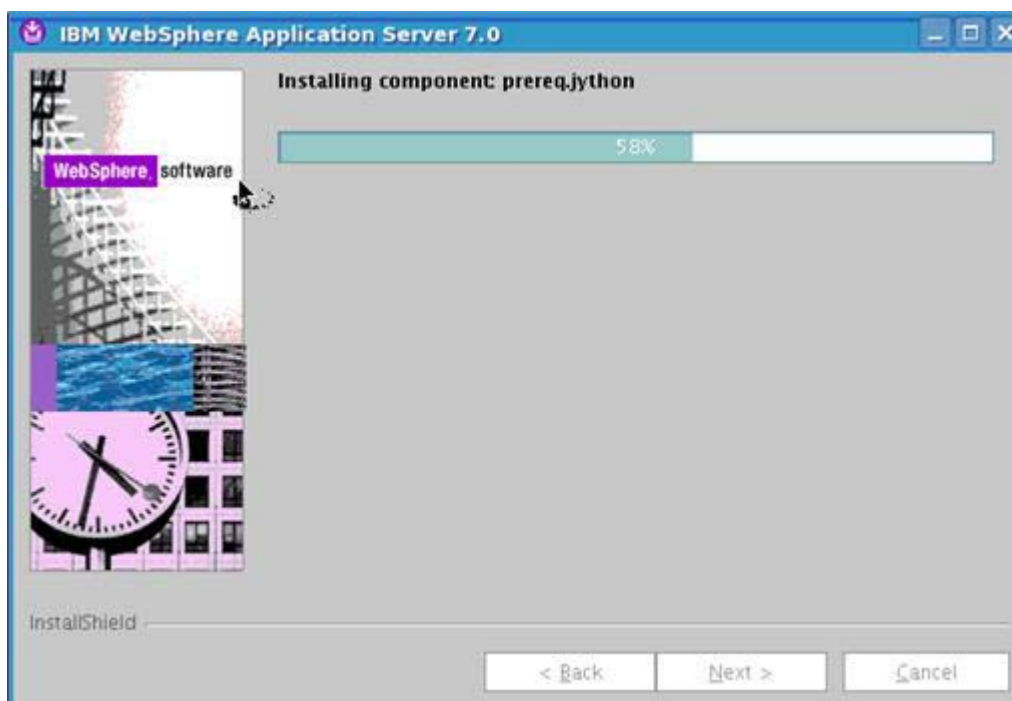


Figure 50. IBM WebSphere Application Server 7.0: Component installation in progress

___ 11. Wait until the installation completes and click **Finish** to exit the installer.

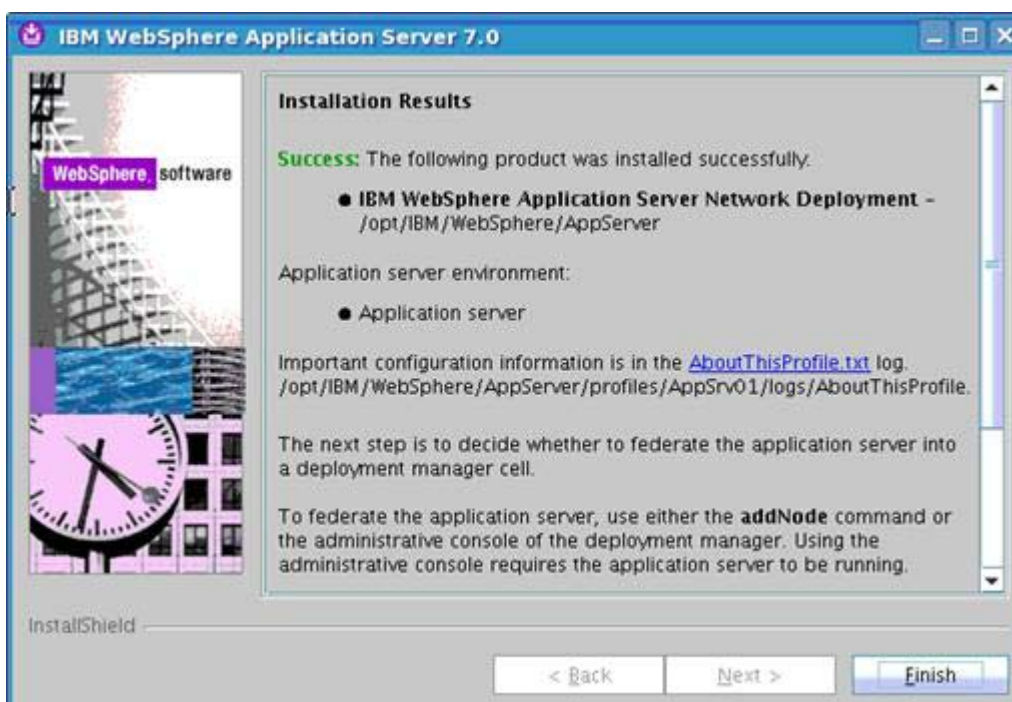


Figure 51. IBM WebSphere Application Server 7.0: Installation Results

Federate AppServer on three nodes into Deployment Manager

Next, you must federate the AppServer on each node into the deployment manager. This can be done by running the following commands.

- ___ 1. Ensure that the clocks are in synch between your Deployment Manager and AppServer on each node. Run `ntpdate clock.redhat.com` on your Deployment Manager and AppServer on each node.
- ___ 2. Make sure that the Deployment Manager is started and the AppServer on each node is stopped.
- ___ 3. From within `/opt/IBM/WebSphere/AppServer/bin` on each node run the following command, take node `lccn62` for instance:

```
./addNode.sh <node name>.cn.ibm.com 8879 -user wasadmin -password wasadmin  
-localusername wasadmin -localpassword wasadmin.
```
- ___ 4. Now do the same for the nodes `lccn63` and `lccn64` in your cluster. When you are finished, log in to your Deployment Manager at `https://<node name>.cn.ibm.com:9043/ibm/console` and go to **Servers > Server Types > WebSphere Application Servers** you should that.

Install IBM HTTP Server v7.0 + plug-ins

1. Start the installation of the IBM HTTP Server v7.0. Click **Next**.

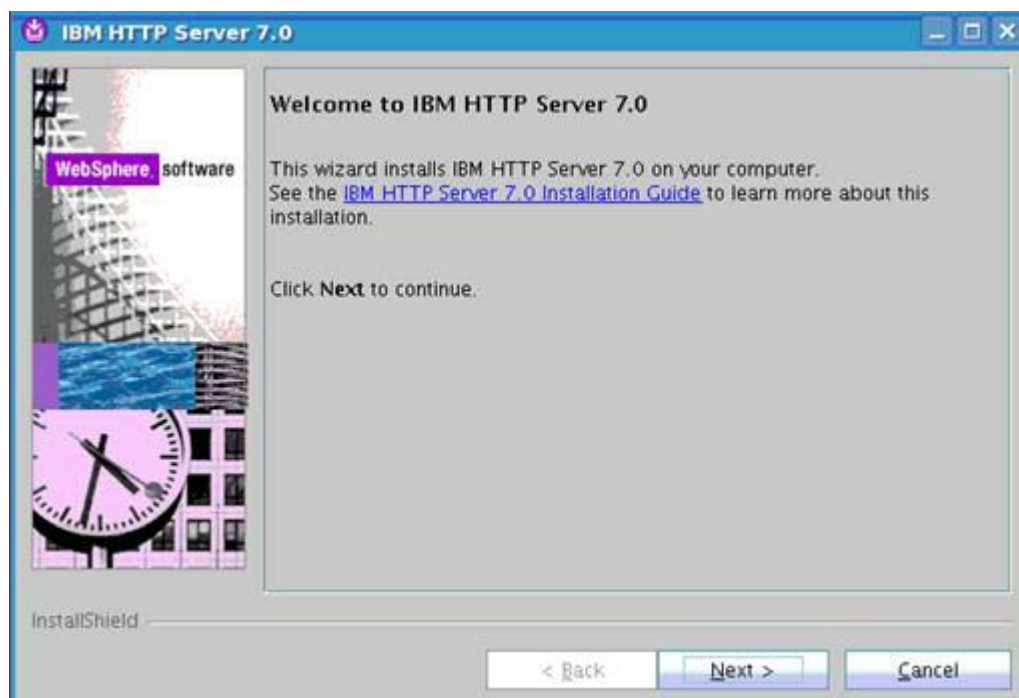


Figure 52. IBM HTTP Server 7.0: Welcome

2. Accept the license agreement and click **Next**.

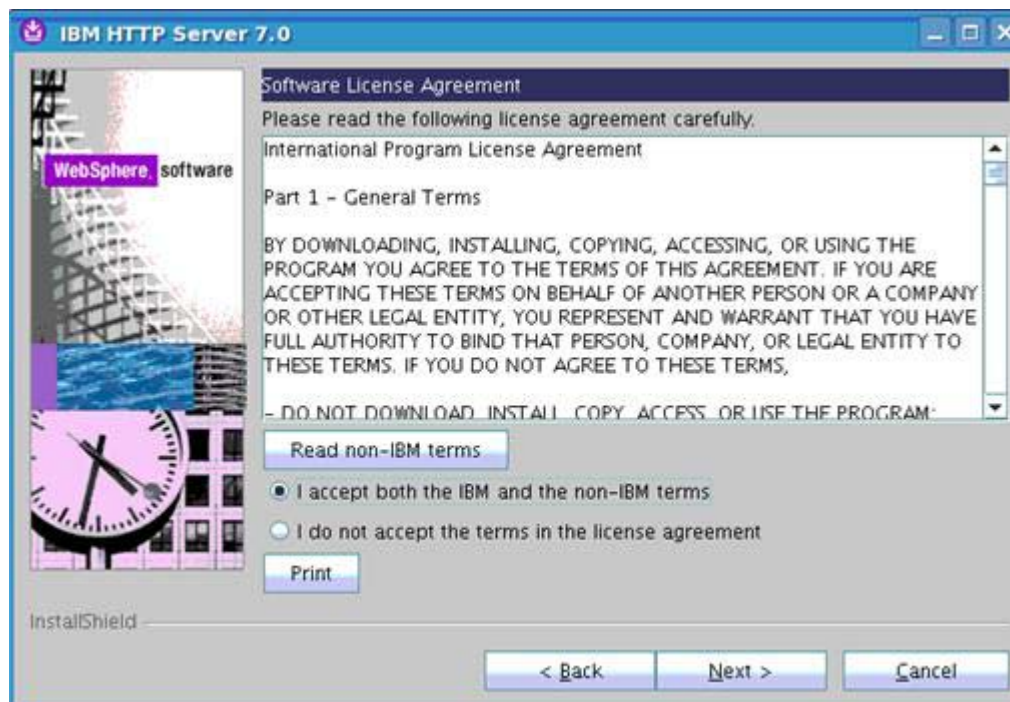


Figure 53. IBM HTTP Server 7.0: Welcome: Software License Agreement

___ 3. Click **Next** in the System Prerequisites Check screen.

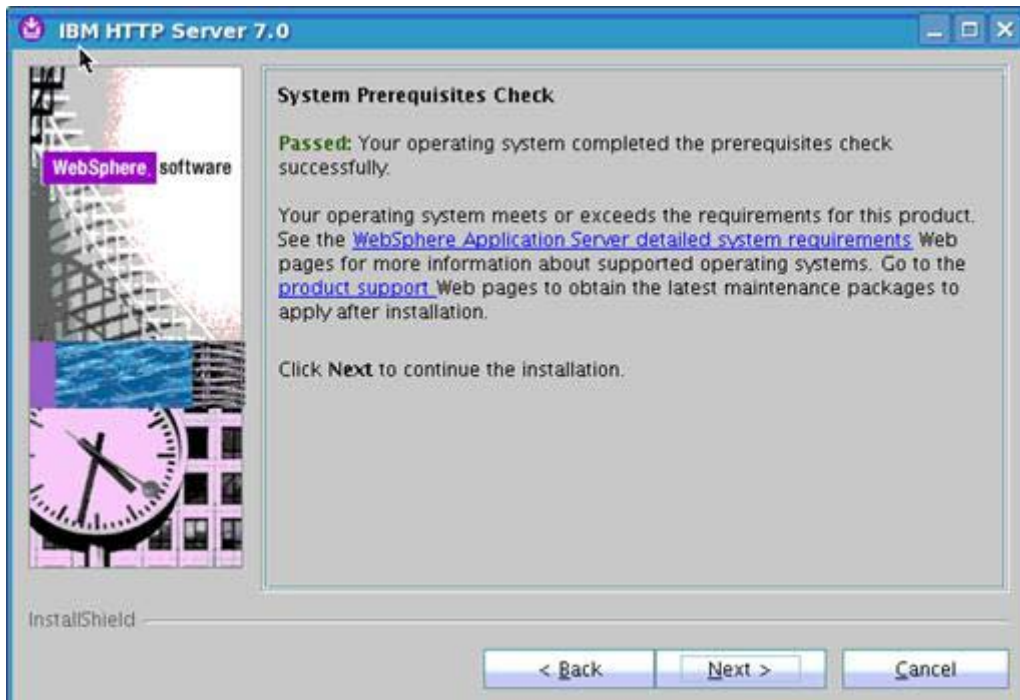


Figure 54. IBM HTTP Server 7.0: System Prerequisites Check

___ 4. Change the default installation path if needed and click **Next**.

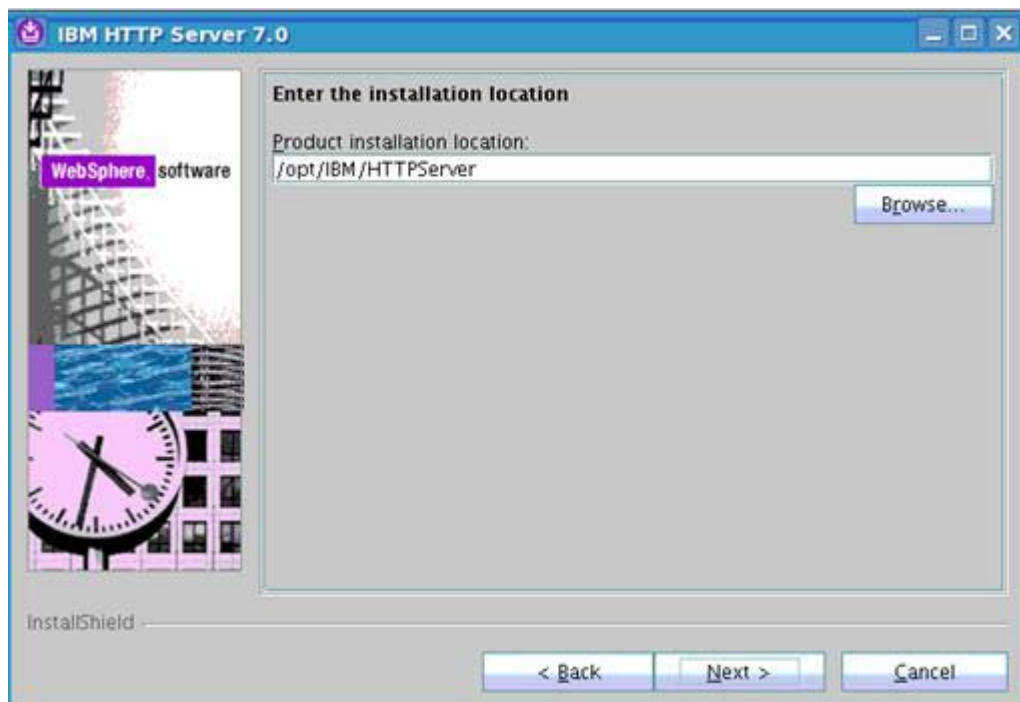


Figure 55. IBM HTTP Server 7.0: Installation Directory

- ___ 5. In the Port Values Assignment screen, use the default values and click **Next**.

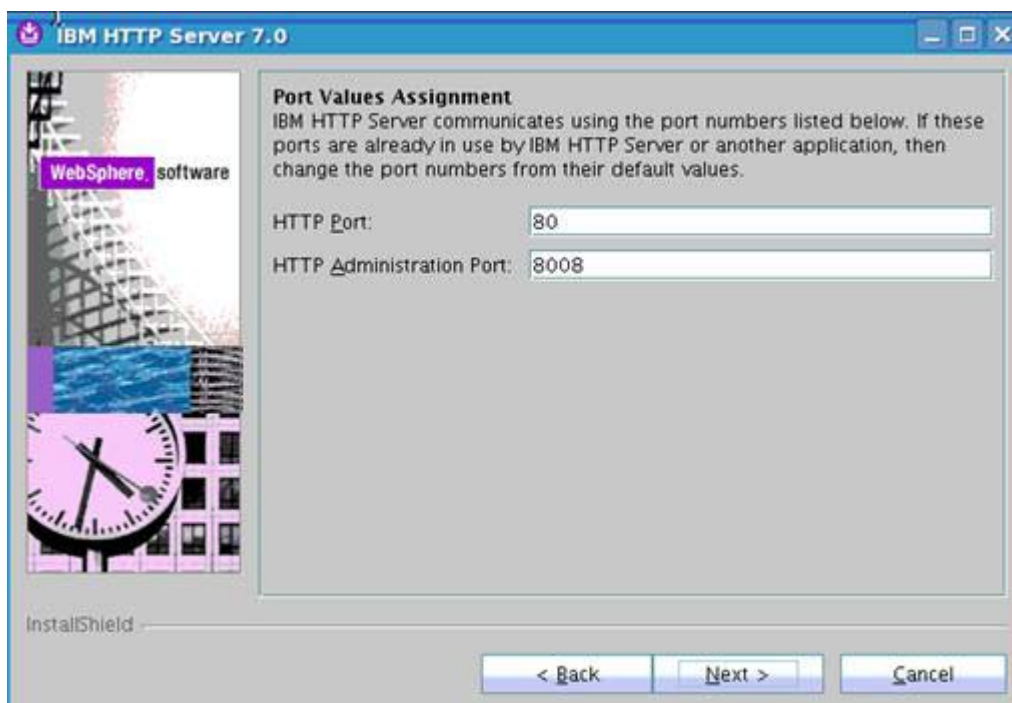


Figure 56. IBM HTTP Server 7.0: Port Values Assignment

- ___ 6. Enter admin user name and password and click **Next**.

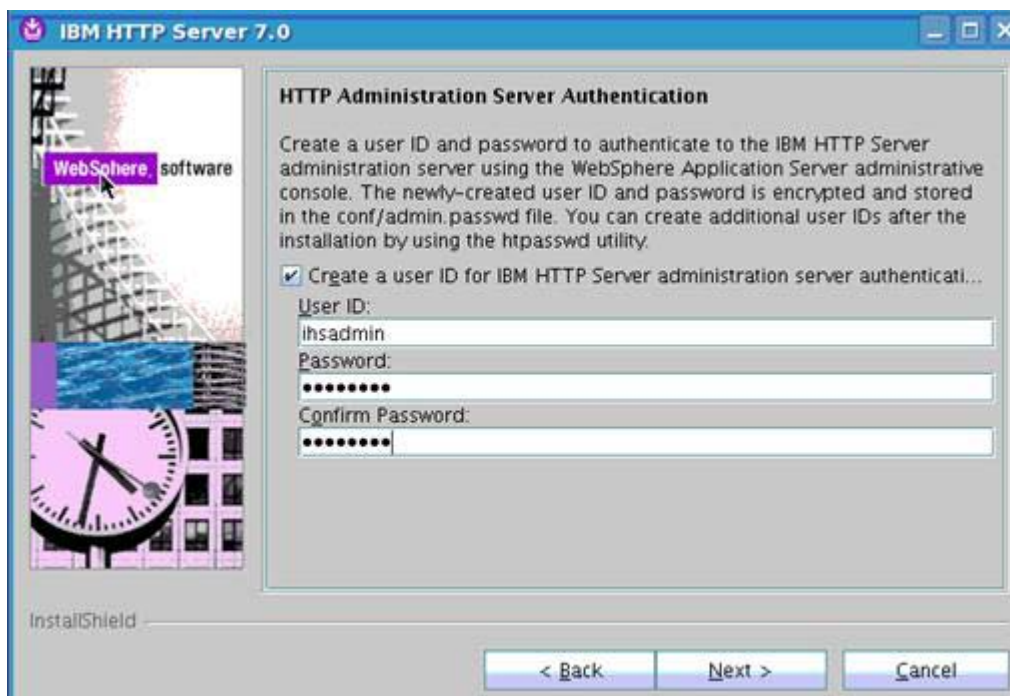


Figure 57. IBM HTTP Server 7.0: HTTP Administration Server Authentication

7. Specify admin group user name and password and click **Next**.



Note

In this example, the web server definition was changed to the host name of the web server.

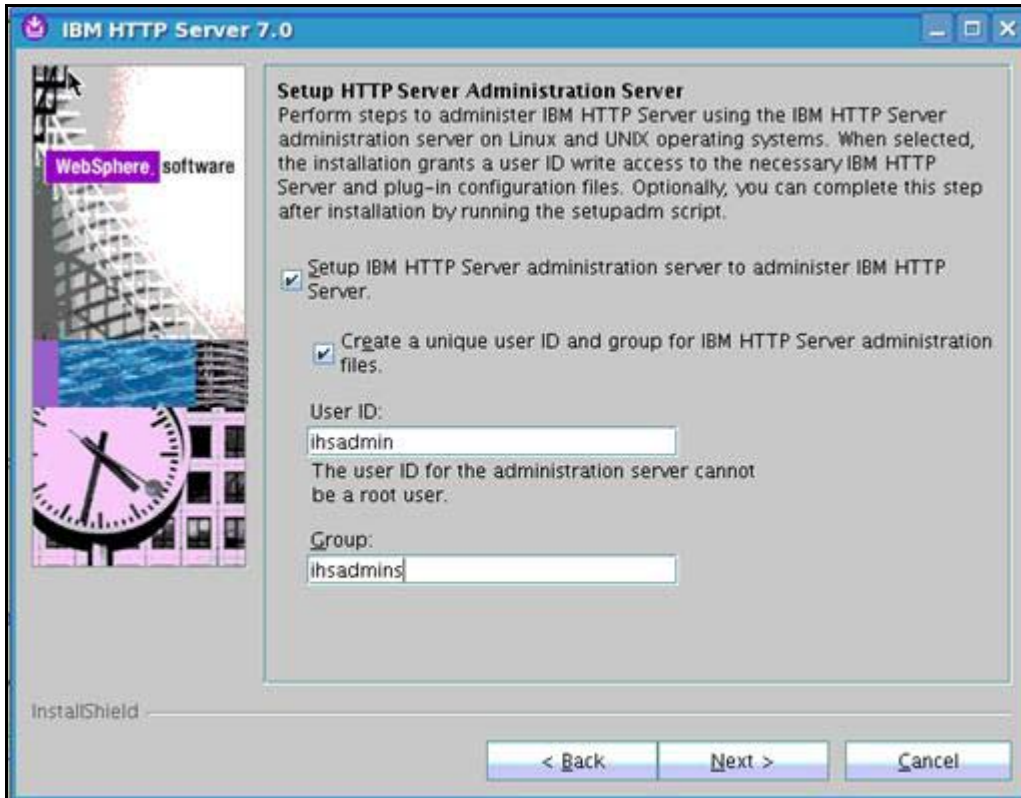


Figure 58. IBM HTTP Server 7.0: Setup HTTP Server Administration Server

- ___ 8. Check the summary and click **Next**.

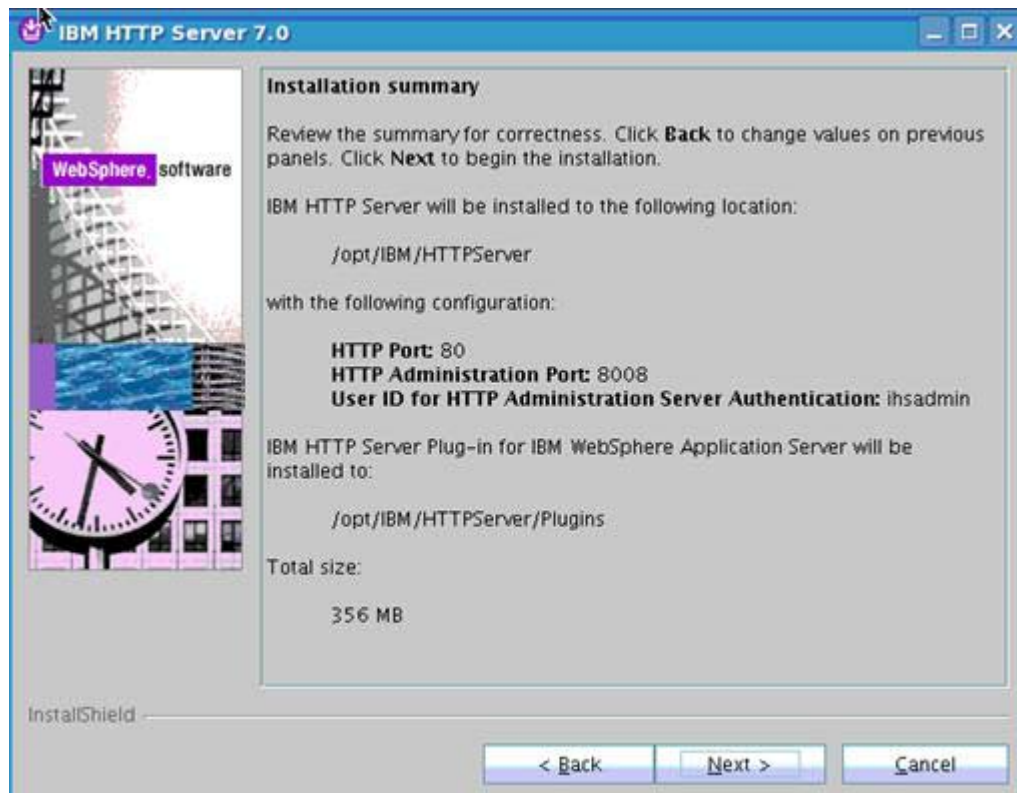


Figure 59. IBM HTTP Server 7.0: Installation summary

The component starts to install.

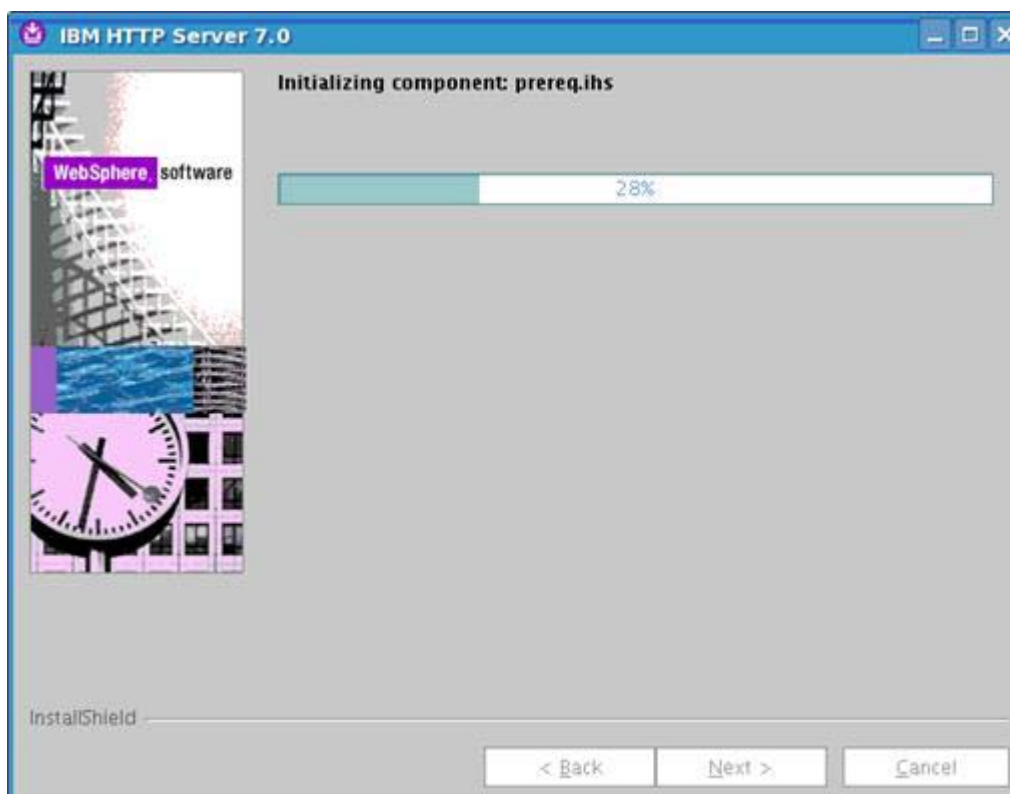


Figure 60. IBM HTTP Server 7.0: Component installation in progress

- ___ 9. Wait until the installation completes and click **Finish** to exit the installer.

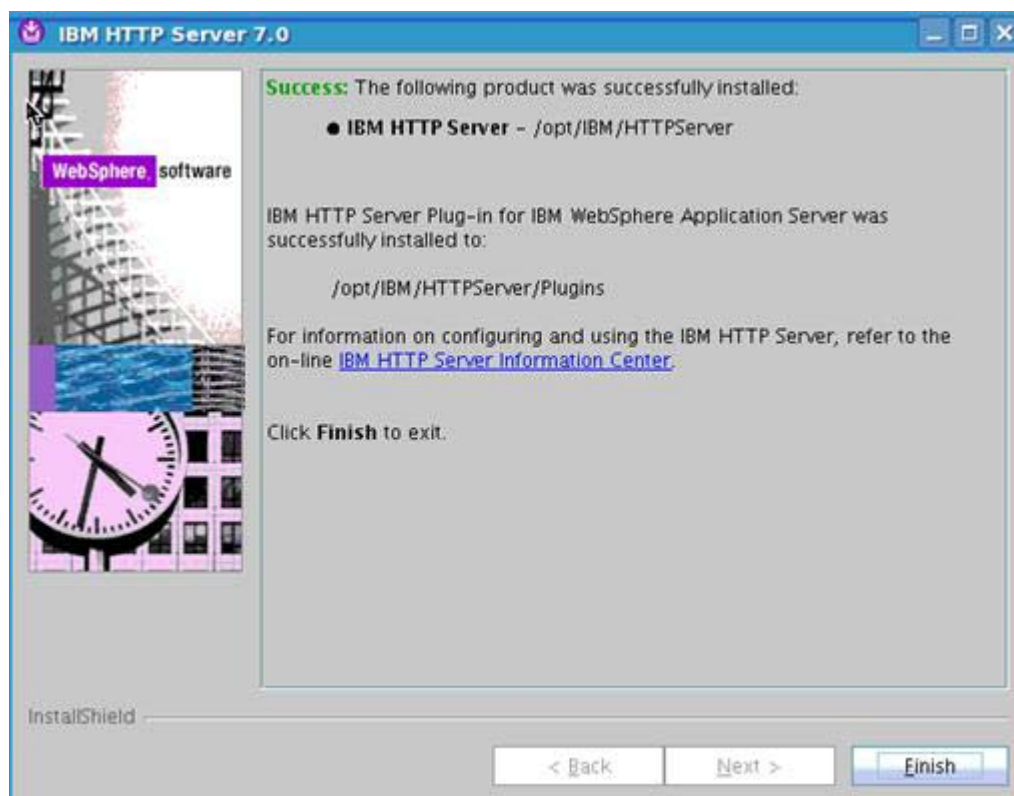


Figure 61. IBM HTTP Server 7.0: Installation completion

- ___ 10. Verify the installation. Go to `/opt/IBM/HTTPServer/bin` and run `./apachectl start`. You can also start the admin by running `./adminctl start`. Then, go to `http://<node name>.cn.ibm.com` and you see the following screen:



Figure 62. WebSphere software: IBM HTTP Server Version 7.0.

Install WebSphere Application Server 7.0 Update Installer

1. Start the installation for the Update Installer 7.0.0.11. Click **Next**.

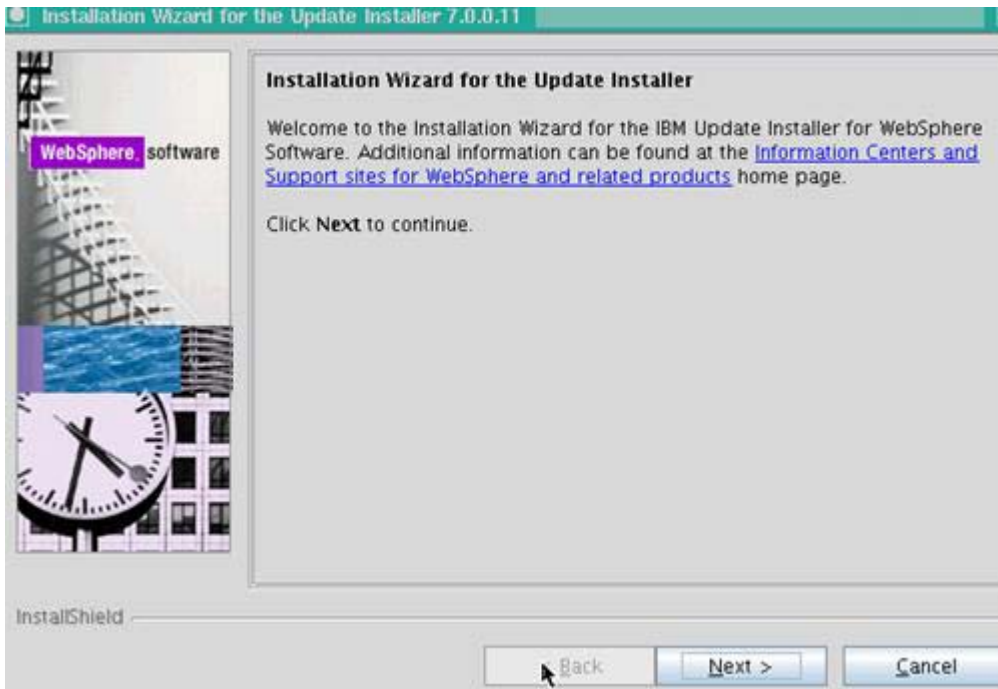


Figure 63. Update Installer 7.0.0.11: Welcome

2. Accept the license agreement and click **Next**.

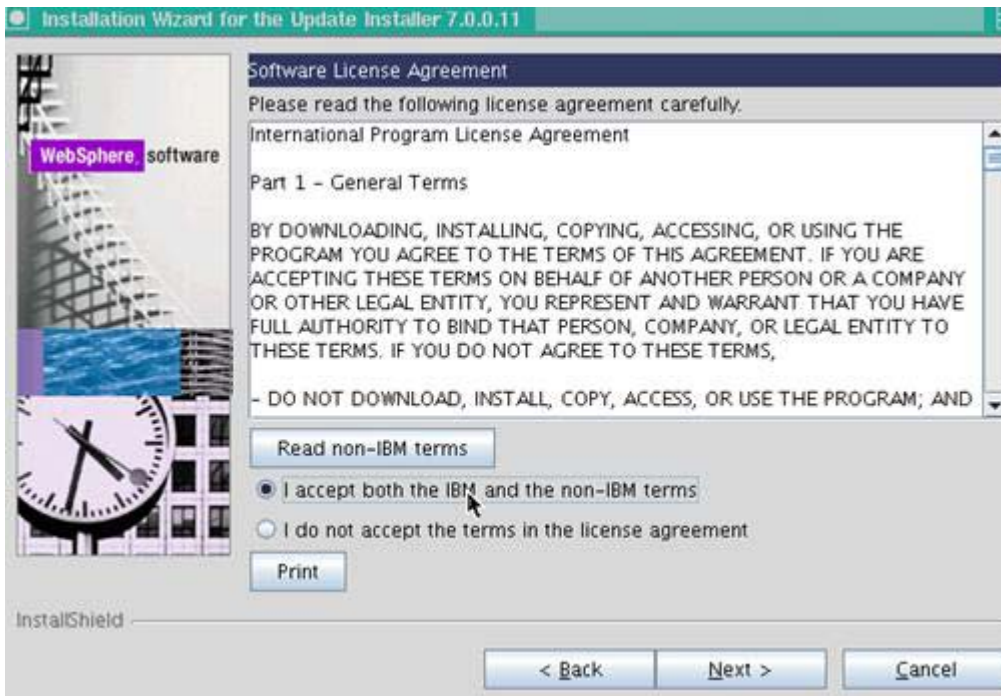


Figure 64. Update Installer 7.0.0.11: Software License Agreement

- ___ 3. Click **Next** in the System Prerequisites Check screen.

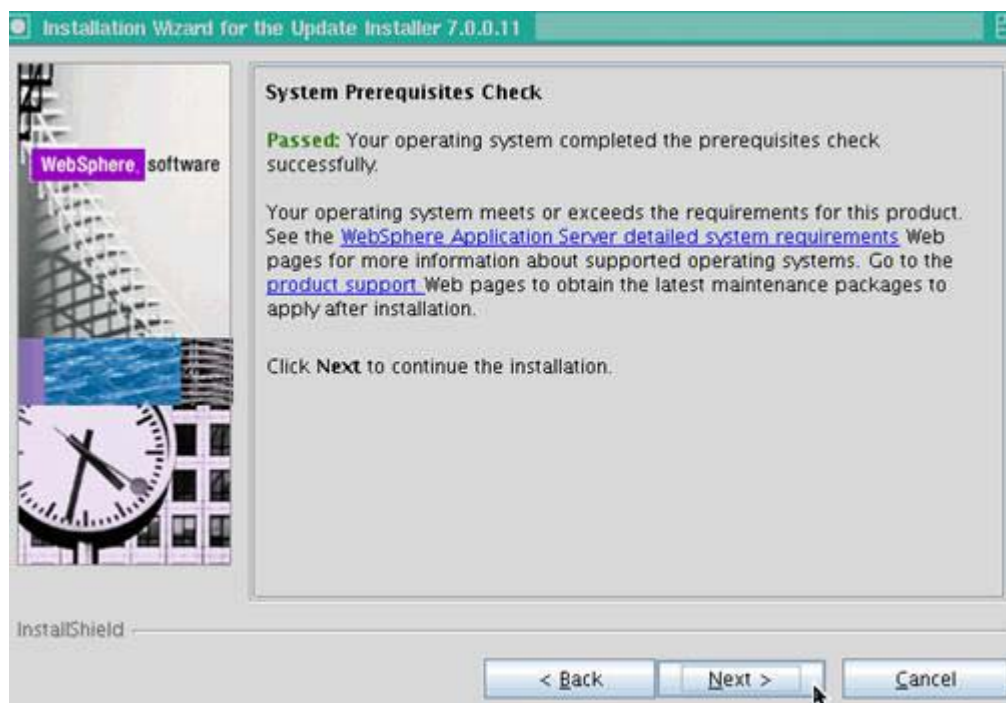


Figure 65. Update Installer 7.0.0.11: System Prerequisites Check

- ___ 4. Change the default installation path if needed and click **Next**.

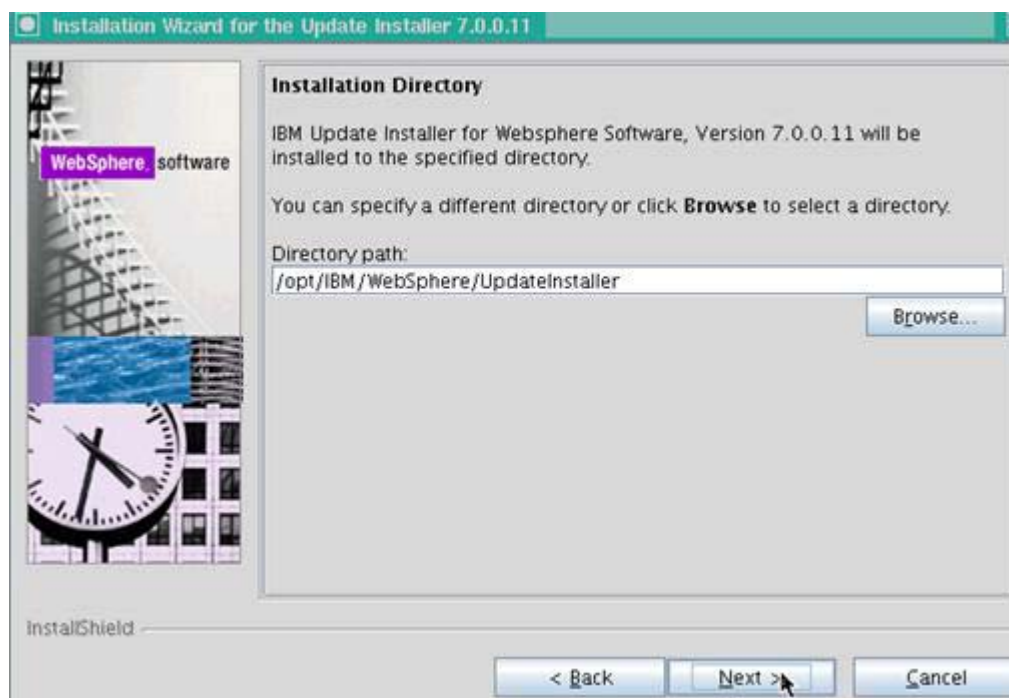


Figure 66. Update Installer 7.0.0.11: Installation Directory

5. Click **Next** in the summary page. The installation of the files starts. Wait until it completes.

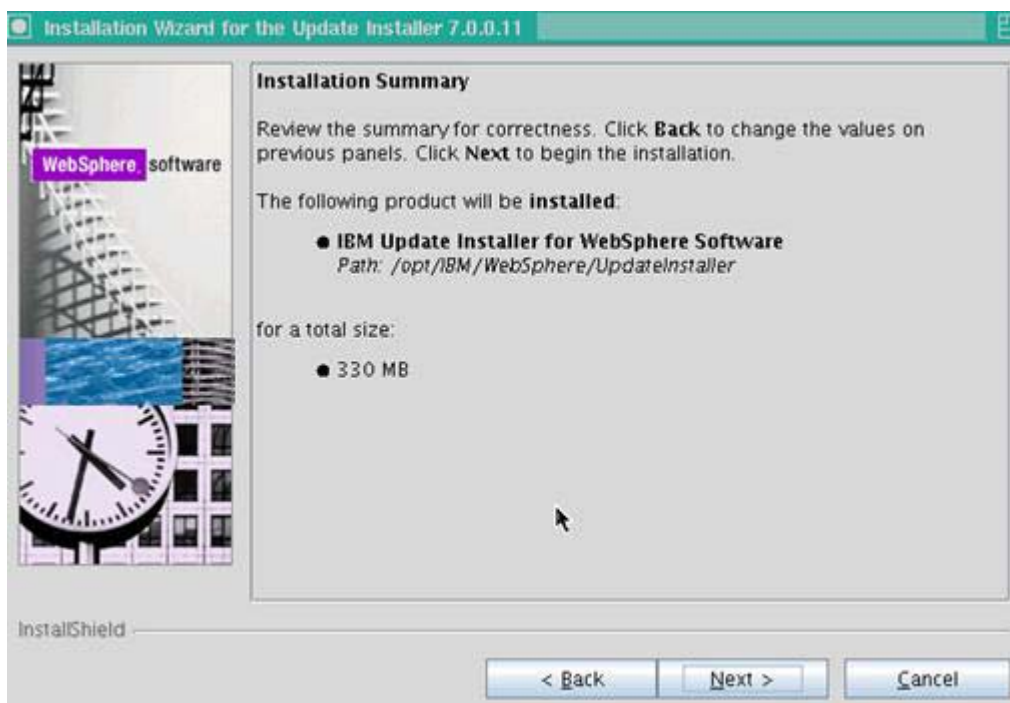


Figure 67. Update Installer 7.0.0.11: Installation Summary

Update Deployment Manager, AppServer, IBM HTTP Server, IBM HTTP Server plug-ins, and SDKs to WebSphere Application Server 7.0.0.21 FixPack

1. Stop Deployment Manager, NodeAgent, AppServer, and IBM HTTP Server Servers.
2. Start the WebSphere Application Server Update Installer by running `./update.sh` from under `/opt/IBM/WebSphere/UpdateInstaller/`. Click **Next**.

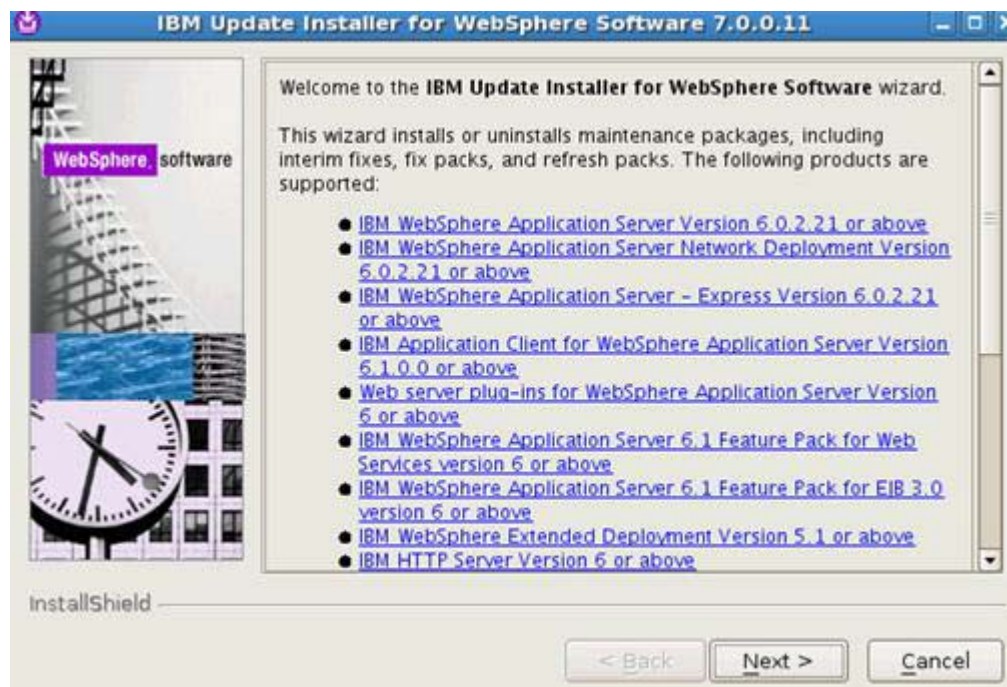


Figure 68. IBM Update Installer for the WebSphere Software 7.0.0.11: Welcome

___ 3. Browse to the path of your Deployment Manager and click **Next**.



Figure 69. IBM Update Installer for the WebSphere Software 7.0.0.11: Product Selection

___ 4. Select “Install maintenance package”, browse to the path of your pak fp 21 files, and click **Next**.

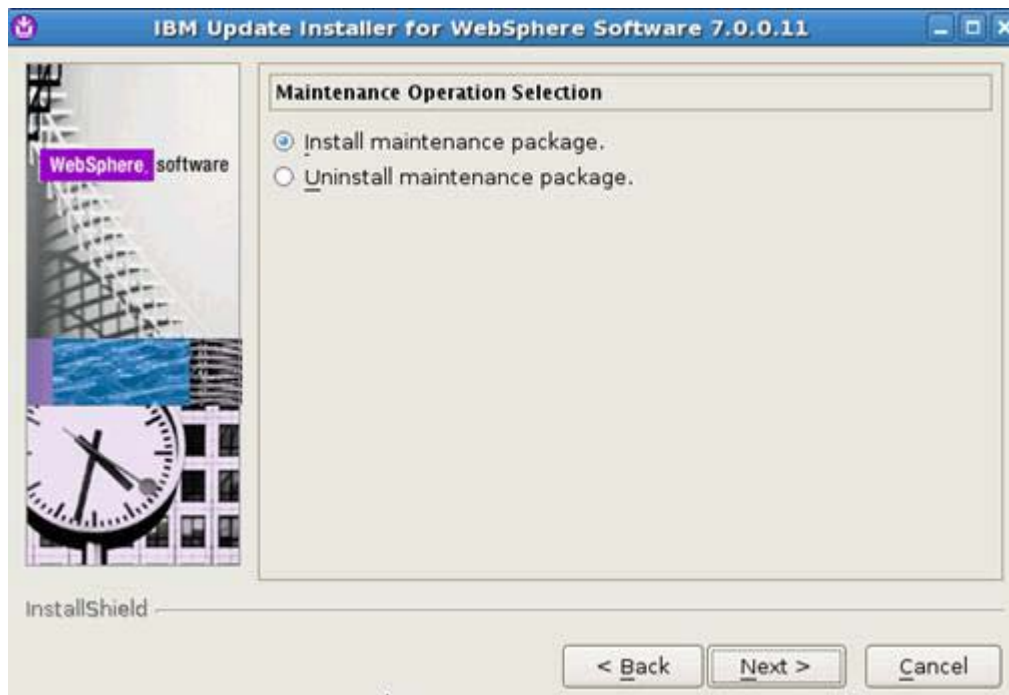


Figure 70. IBM Update Installer for the WebSphere Software 7.0.0.11: Maintenance Operation Selection

- ___ 5. The installation picks up the items that need to be installed.
- ___ 6. Click **Verify my Permissions** and then **Next** to continue.
- ___ 7. Click **Next** to install the fix packs.

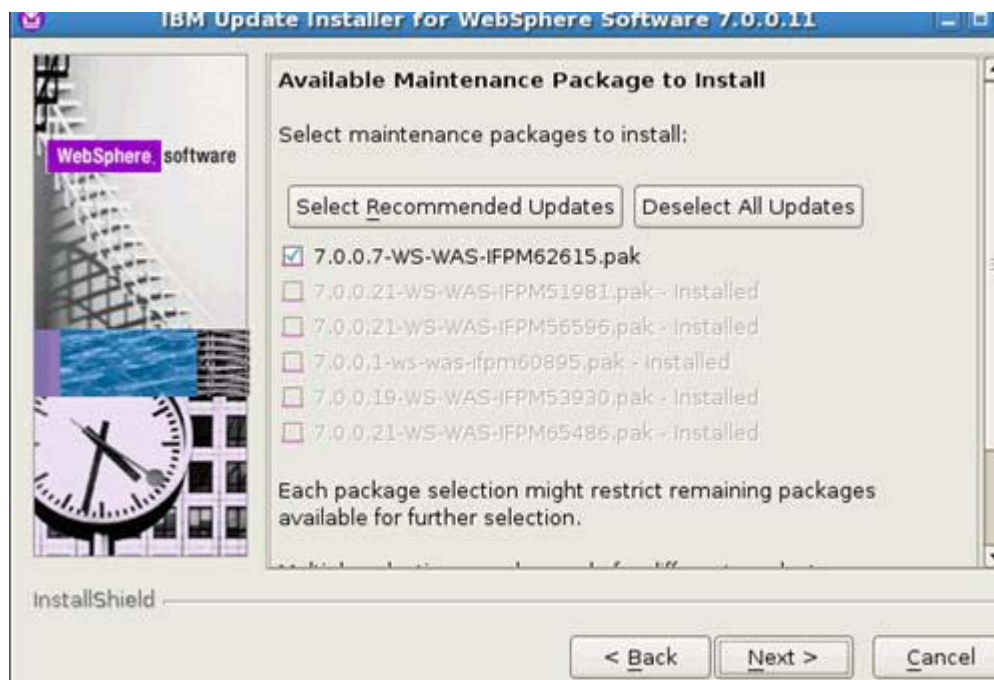


Figure 71. IBM Update Installer for the WebSphere Software 7.0.0.11: Available Maintenance Package to Install

The installation begins and will complete after some time.

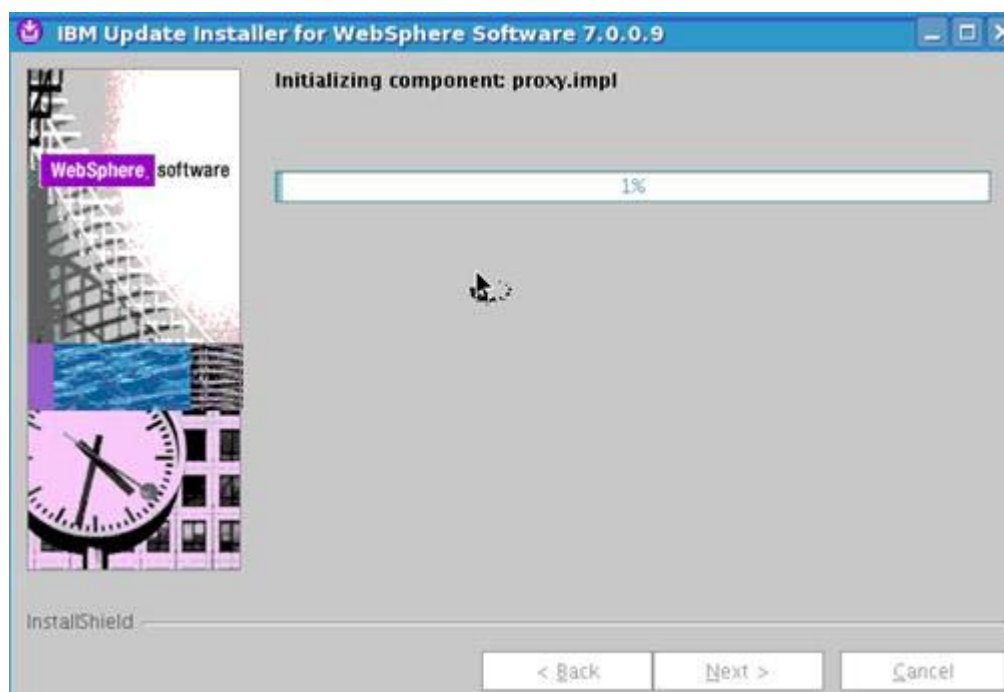


Figure 72. IBM Update Installer for the WebSphere Software 7.0.0.11: Component installation in progress

- ___ 8. Now you must do the AppServers, IBM HTTP Server and IBM HTTP Server Plugins. Follow the same steps: specify the location of each installed service.

Enable security on your Deployment Manager

Next, you add the LDAP repository.

General settings

- ___ 1. Log in to **Admin console** > <https://<dm.company.com>:9043/ibm/console>. Use wasadmin user and password.
- ___ 2. Select **Security > Global security**. Ensure that “Enable administrative security” and “Enable application security” are selected. Also, ensure that the user account is set to federated repositories.

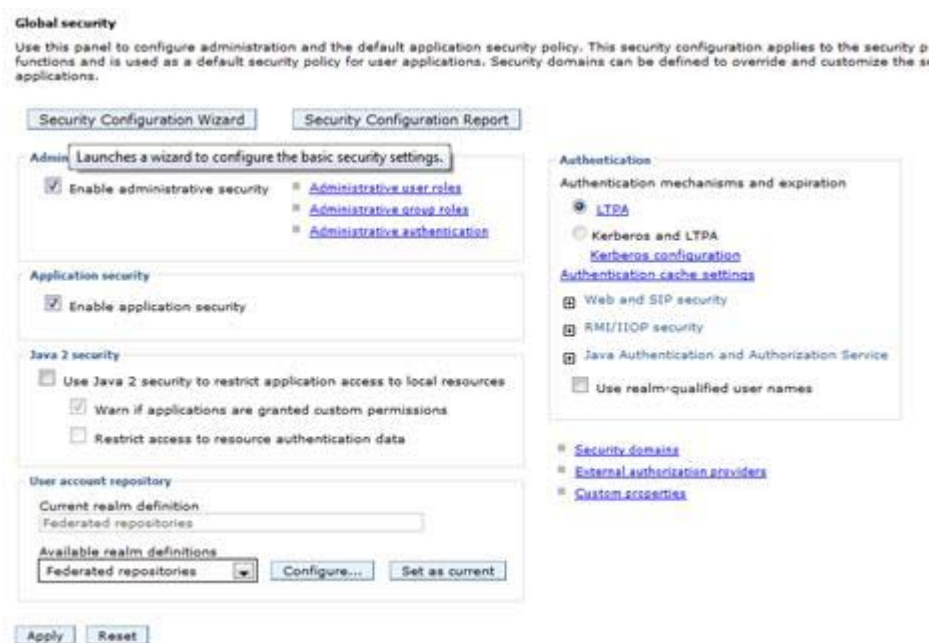


Figure 73. Global security

- ___ 3. Select **Apply** and **Save**.

- 4. Go to **Security > Global security > Web and SIP Security > General Settings**. Ensure that Use available authentication data is selected.



Figure 74. Web authentication behavior

- 5. Select **Apply** and **Save**.
- 6. Go to **Security > Global security > Web and SIP Security > Single sign-on (SSO)**. Ensure that the Interoperability Mode is selected and enter the domain name.

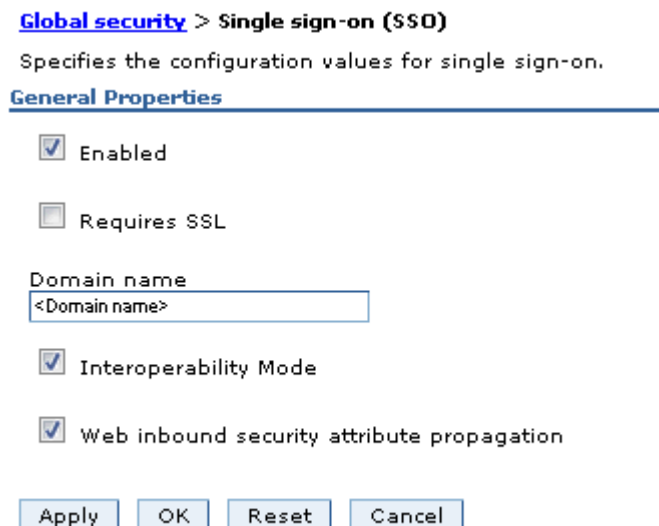


Figure 75. Interoperability Mode

- 7. Click **Apply** and **Save**.

Federate LDAP Repositories

- ___ 1. Log in to your **Admin console** > `https://<node name>.cn.ibm.com:9043/ibm/console`. Use wasadmin user and password.
- ___ 2. Select **Security > Global security > Configure...** for Federated Repositories.

User account repository

Current realm definition
Federated repositories

Available realm definitions
Federated repositories

Configure... Set as current

Figure 76. User account repository

- ___ 3. Select **Add Base Entry to Realm...**

Repositories in the realm:

Add Base entry to Realm... Use built-in repository Remove

Select	Base Entry	Repository Identifier	Repository Type
<input type="checkbox"/>	o=defaultWIMFileBasedRealm	InternalFileRepository	File

You can administer the following resources:

Figure 77. Repositories in the realm

- ___ 4. Then, select **Add Repository**.

* Repository
none defined Add Repository...

* Distinguished name of a base entry that uniquely identifies this set of entries in the realm
[Empty text box]

Distinguished name of a base entry in this repository
[Empty text box]

Apply OK Reset Cancel

Figure 78. Adding Repository

5. Enter the Repository identifier, primary host name, bind distinguished name, bind password, and login properties.

Figure 79. General properties of the repository

6. Select **OK**. You then enter the base entry: (l=SharedLDAP,c=US,ou=Lotus,o=Software Group,dc=ibm,dc=com).

Figure 80. Entering the base entry

7. Click **Apply** and **Save**.
8. Restart your Deployment Manager and three Node Agents.

IBM Tivoli Directory Integrator 7.0 installation

The installation of Tivoli Directory Integrator is needed so that the profiles database can be populated with LDAP information.



Note

It does not matter where you install the IBM Tivoli Directory Integrator.

- __ 1. Start the launchpad by running `./launchpad.sh`.
- __ 2. Select the language and then **OK**.

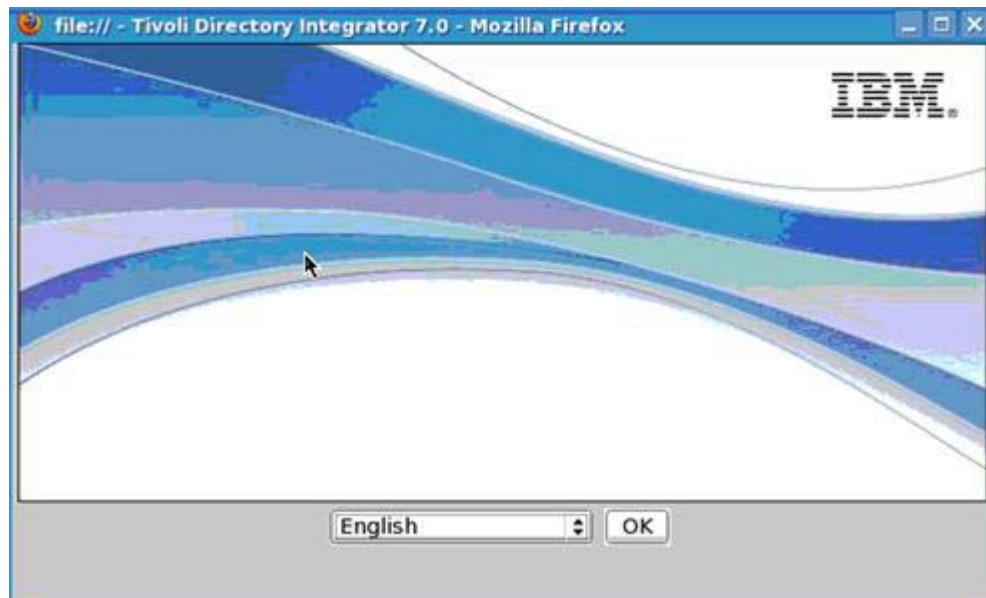


Figure 81. IBM Tivoli Directory Integrator: Language selection

- ___ 3. Select the **Install IBM Tivoli Directory Integrator** from the launch pad and then **Tivoli Directory Integrator 7.0 Installer**.

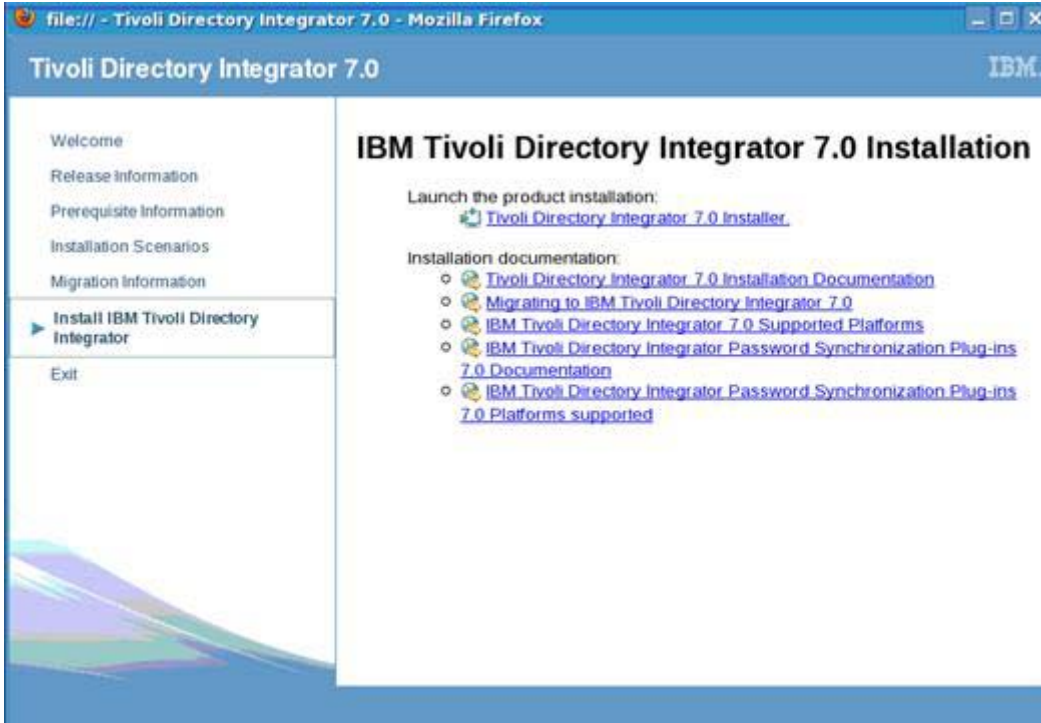


Figure 82. Tivoli Directory Integrator 7.0

- ___ 4. Click **Next** from the welcome screen.



Figure 83. IBM Tivoli Directory Integrator 7.0: Welcome

5. You then see the following screen where the installation searches to see whether Tivoli Directory Integrator is installed already. Click **Next**.

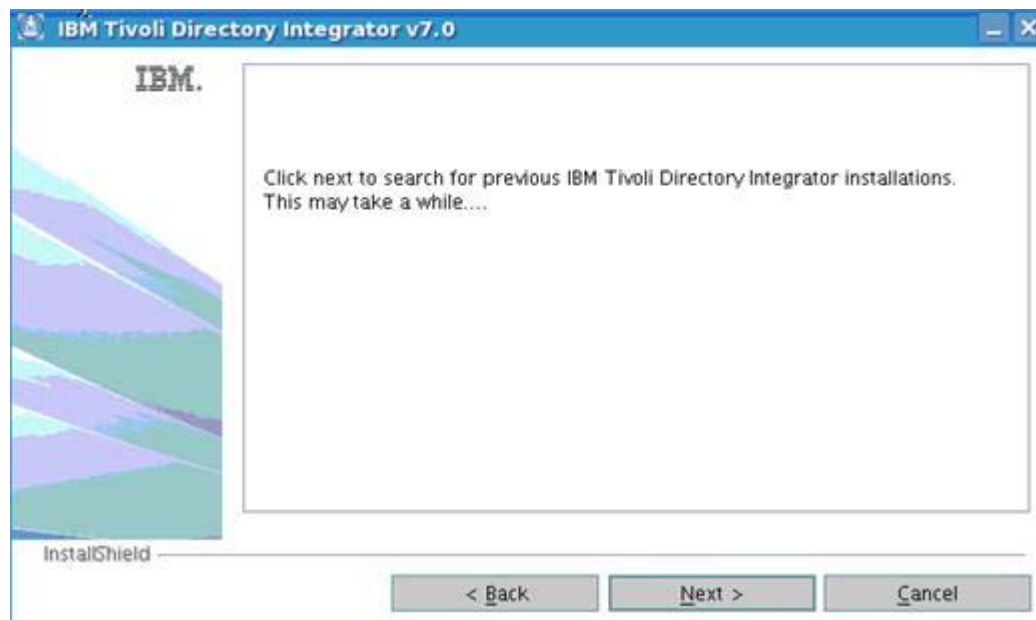


Figure 84. IBM Tivoli Directory Integrator 7.0: Searching previous installations

6. After some time this finishes. The license agreement is displayed. Accept the license terms and click **Next**.



Figure 85. IBM Tivoli Directory Integrator 7.0: License agreement

___ 7. Change the path to where Tivoli Directory Integrator is installed. Click **Next** to continue.

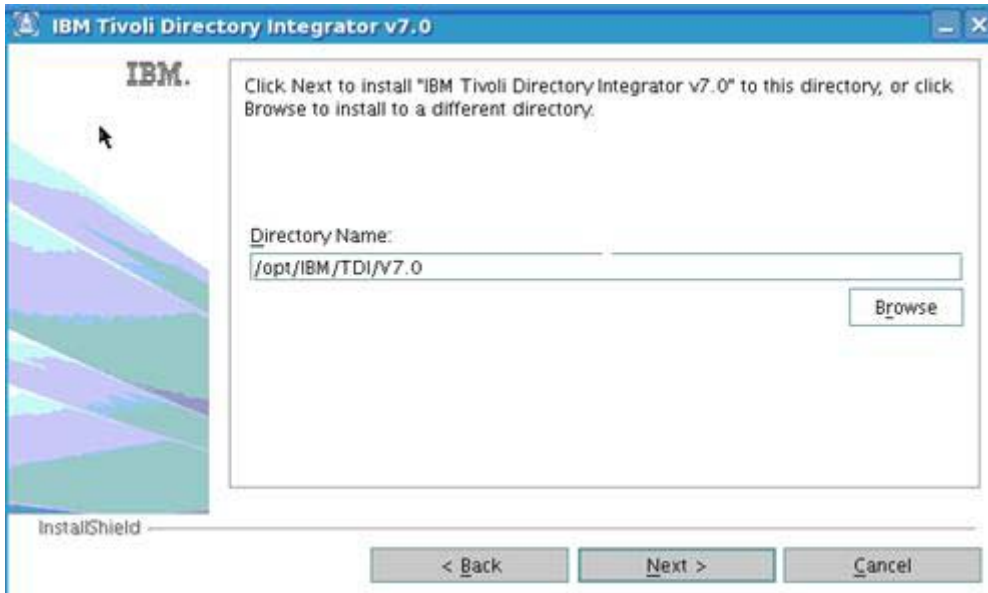


Figure 86. IBM Tivoli Directory Integrator 7.0: Directory location

___ 8. Choose the **typical** installation type and click **Next** to continue.

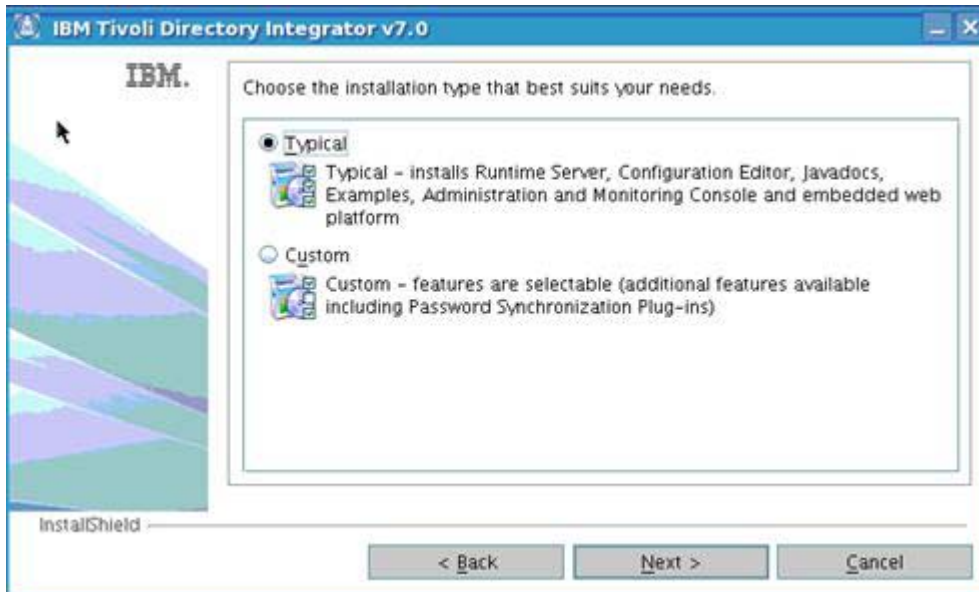


Figure 87. IBM Tivoli Directory Integrator 7.0: Installation type

- ___ 9. Select “Do not specify option: use current directory at startup time” and click **Next** to continue.

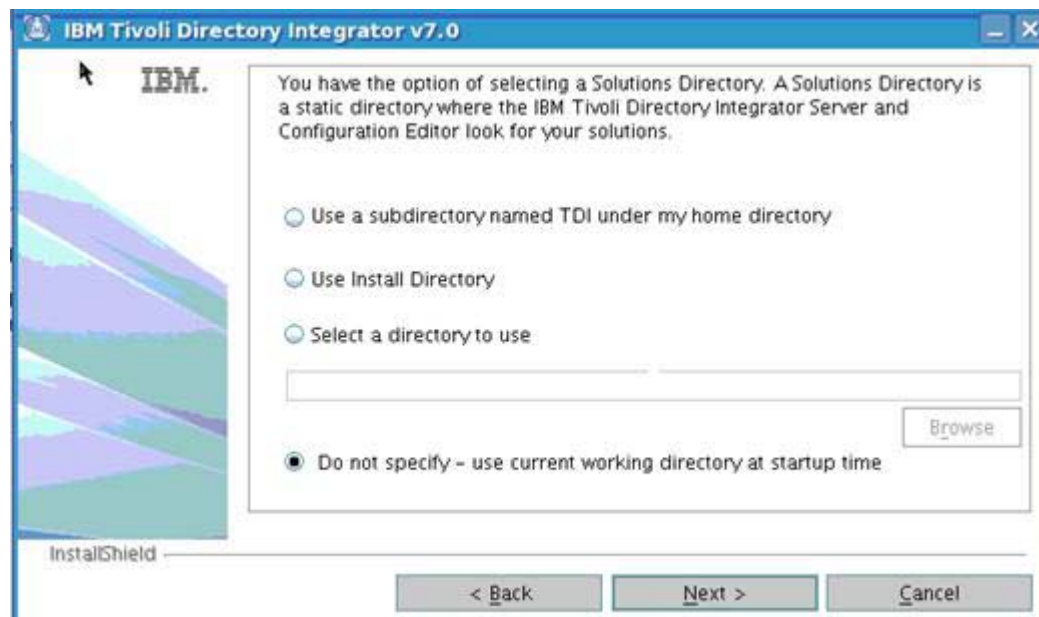


Figure 88. IBM Tivoli Directory Integrator 7.0: Solutions directory

- ___ 10. Use the default ports and click **Next** to continue.

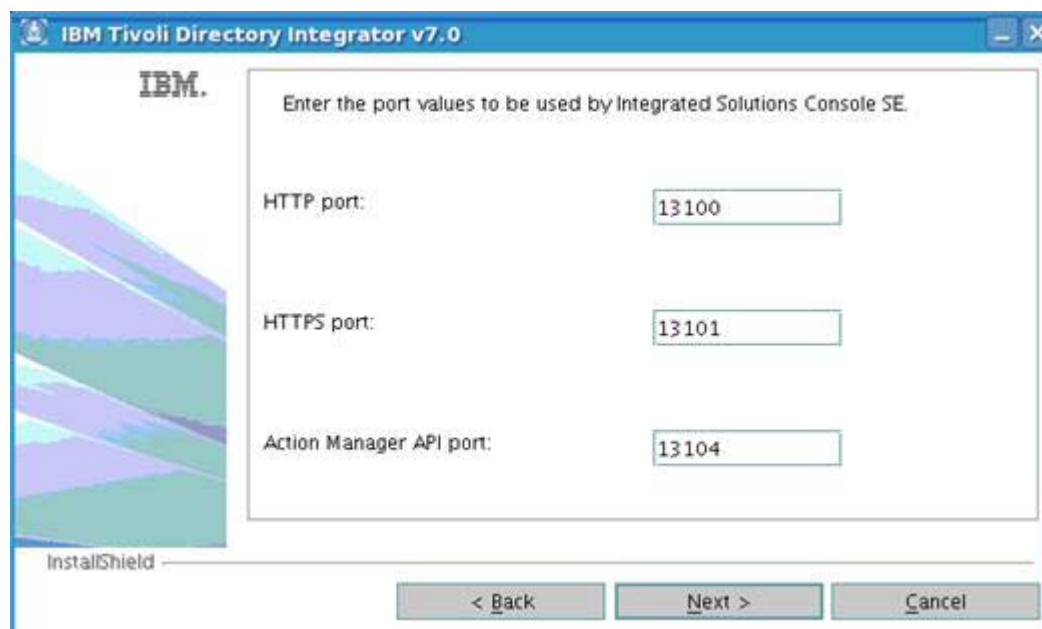


Figure 89. IBM Tivoli Directory Integrator 7.0: Port values

___ 11. Do not select the Register option. Click **Next** to continue.

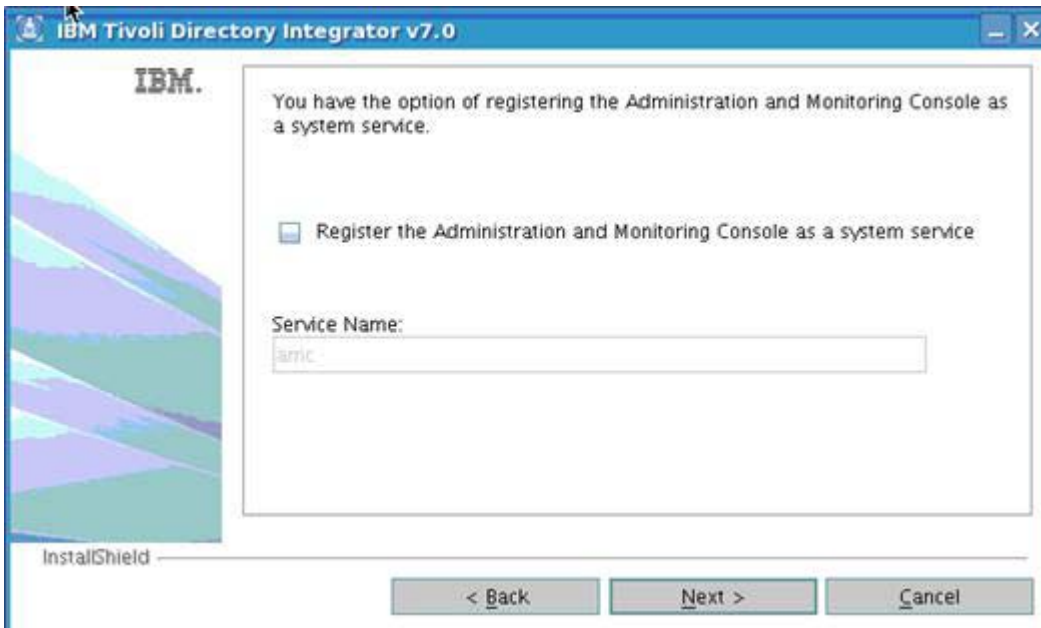


Figure 90. IBM Tivoli Directory Integrator 7.0: Register the Administration and Monitoring Console

___ 12. A summary screen is displayed. Click next to start the installation.



Figure 91. IBM Tivoli Directory Integrator 7.0: Summary information

The installation begins.

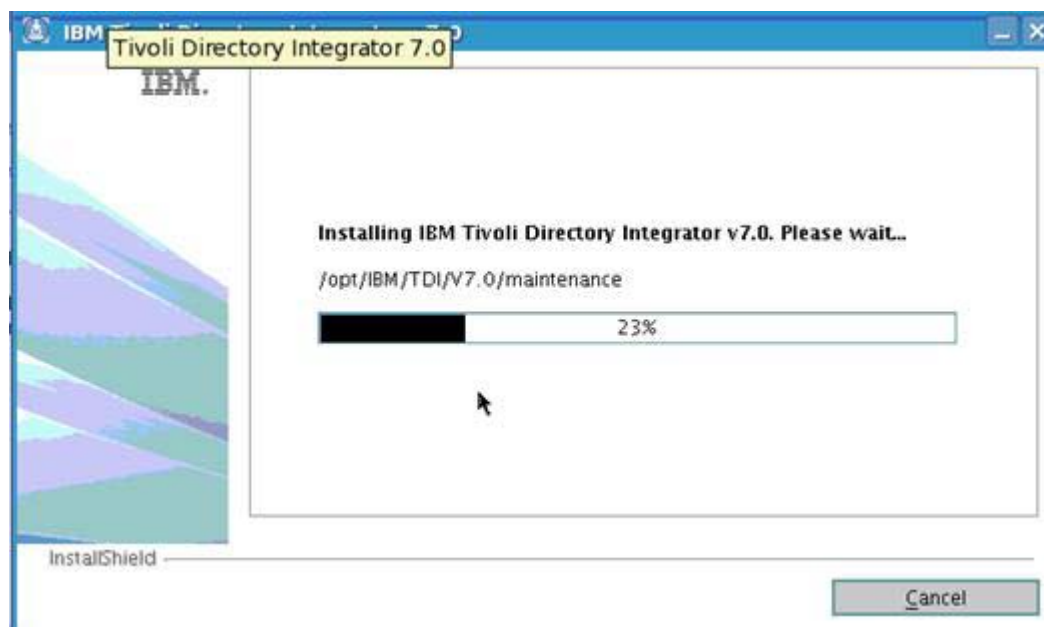


Figure 92. IBM Tivoli Directory Integrator 7.0: Installation in progress

- ___ 13. After some time the installation finishes. Clear "Start the Configuration Editor". Click **Finish** to close the installer.

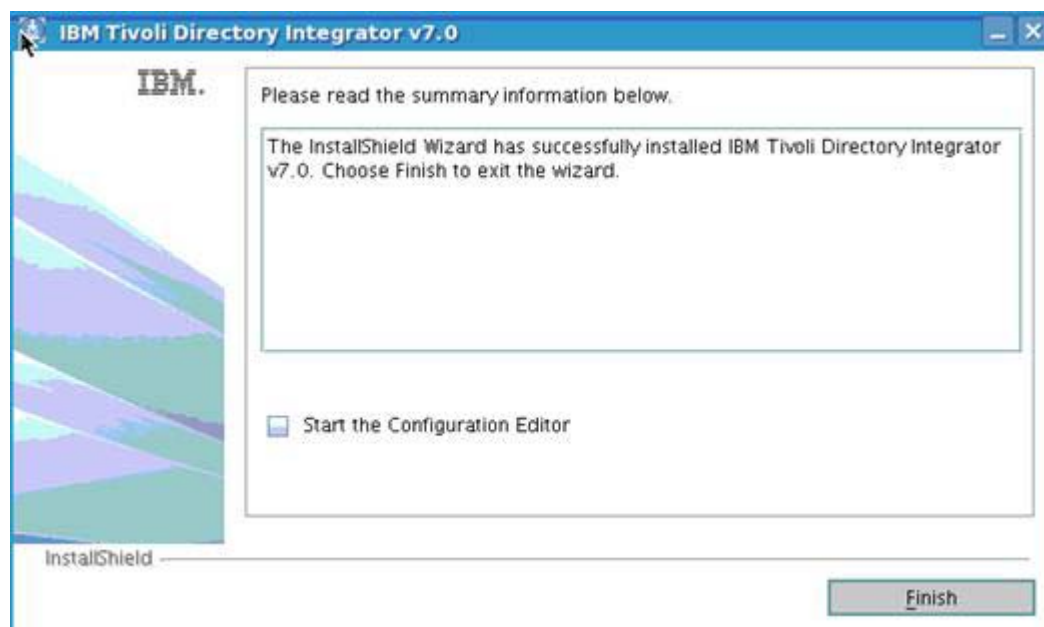


Figure 93. IBM Tivoli Directory Integrator 7.0: Installation completion

- ___ 14. Tivoli Directory Integrator 7.0 successfully installed. Now you we install FP5 on top of it.

IBM Tivoli Directory Integrator 7.0 FixPack 5 Installation

- ___ 1. Copy the fix pack to a location on your system. Extract the 7.0.0-TIV-TDI-FP0005.zip.
- ___ 2. Make sure Tivoli Directory Integrator is not running before applying the fix pack.
- ___ 3. Under the 7.0.0-TIV-TDI-FP0005 folder, there is a file called UpdateInstaller.jar. Copy it to /opt/IBM/TDI/V7.0/maintenance/ replacing the version that is contained in that folder already.
- ___ 4. Then, go to /opt/IBM/TDI/V7.0/bin and run the following command.



Note

Do NOT run these commands from a PuTTY Shell. They must be run from a VNC Session.

```
export DISPLAY=lccn61.cn.ibm.com:1.0
./applyUpdates.sh -update
/opt/software/TDI70FP5/7.0.0-TIV-TDI-FP0005/TDI-7.0-FP0005.zip
```

- ___ 5. The fix pack is then installed.

Create Connections Databases on Oracle

1. Go to the Wizard folder and run `./dbWizard.sh` by using Oracle user, not root user. This displays the following wizard. Click **Next** to continue.

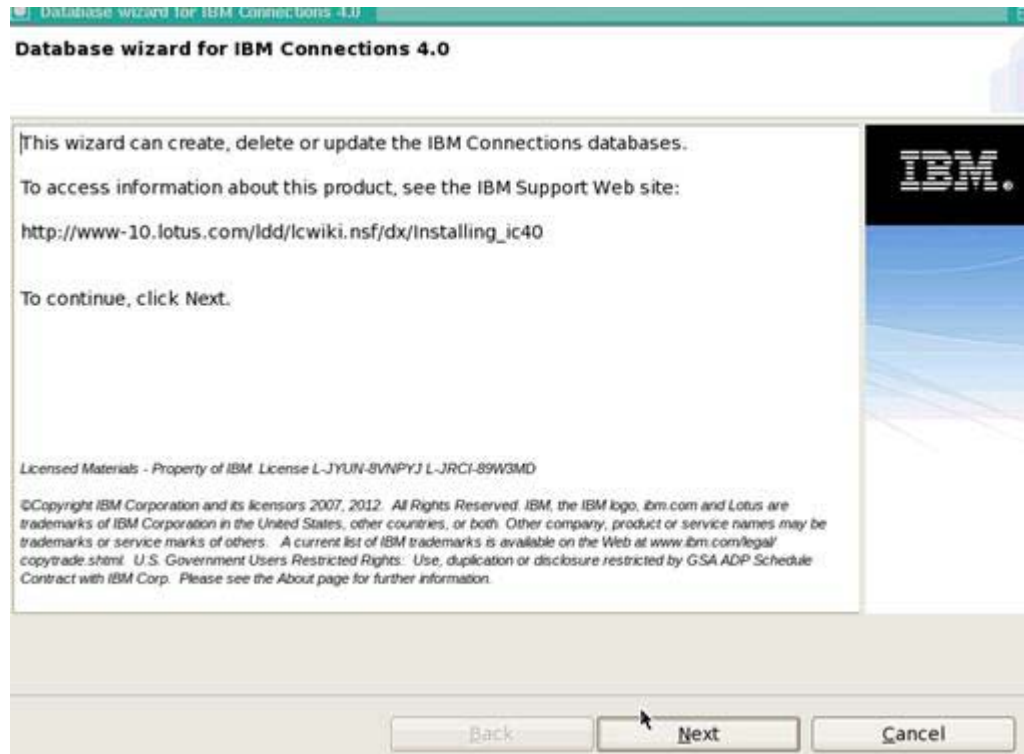


Figure 94. Database wizard for IBM Connections 4.0: Welcome

___ 2. Click **Create** and **Next** to continue.

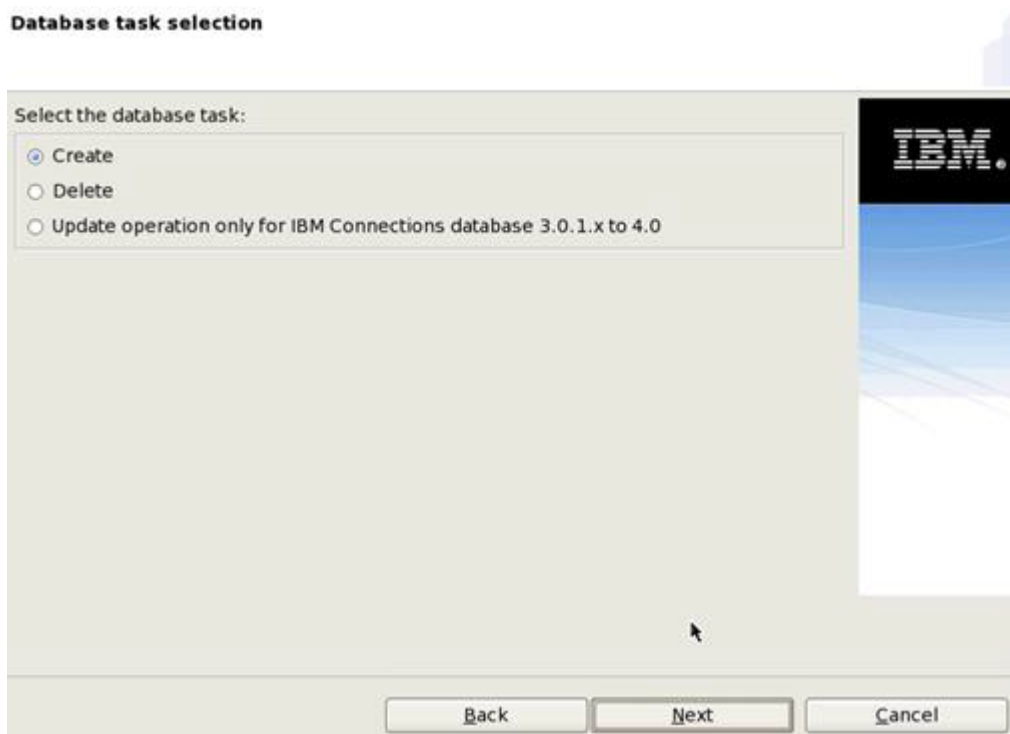


Figure 95. Database wizard for IBM Connections 4.0: Database task selection

- ___ 3. Select the path for your database installation location and the database instance name. Click **Next** to continue.

Database selection

Select the database type, installation location, and database instance.

DB2 Universal Database (TM)

Oracle Enterprise Edition

Database installation location:

Database instance:

Figure 96. Database wizard for IBM Connections 4.0: Database selection

4. Ensure that all databases are selected and then click **Next** to continue.

Applications selection

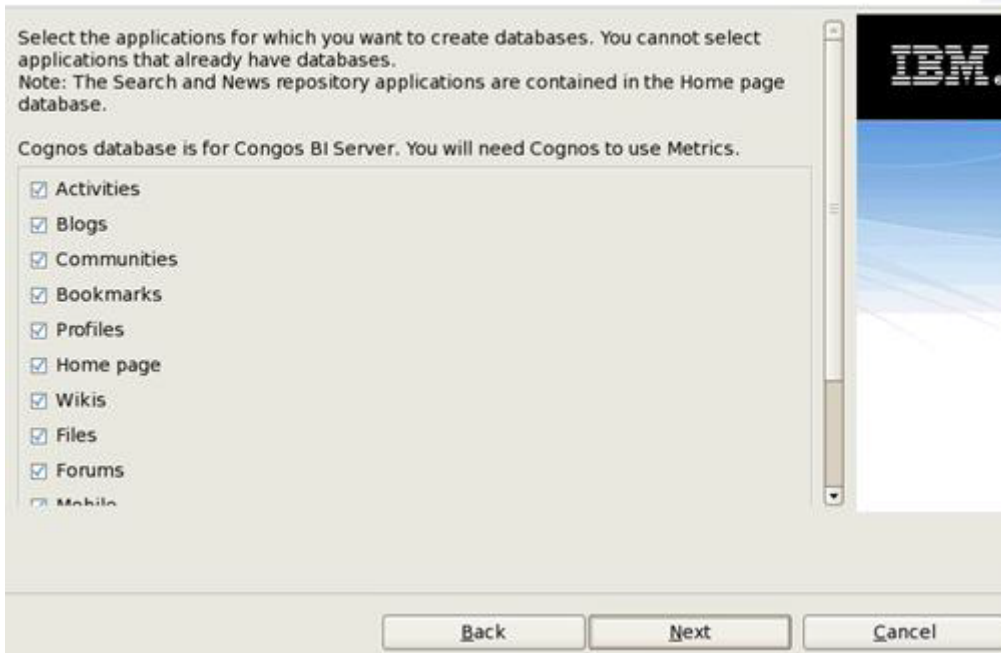


Figure 97. Database wizard for IBM Connections 4.0: Applications selection

5. Specify password for all applications. Then, click **Next**.

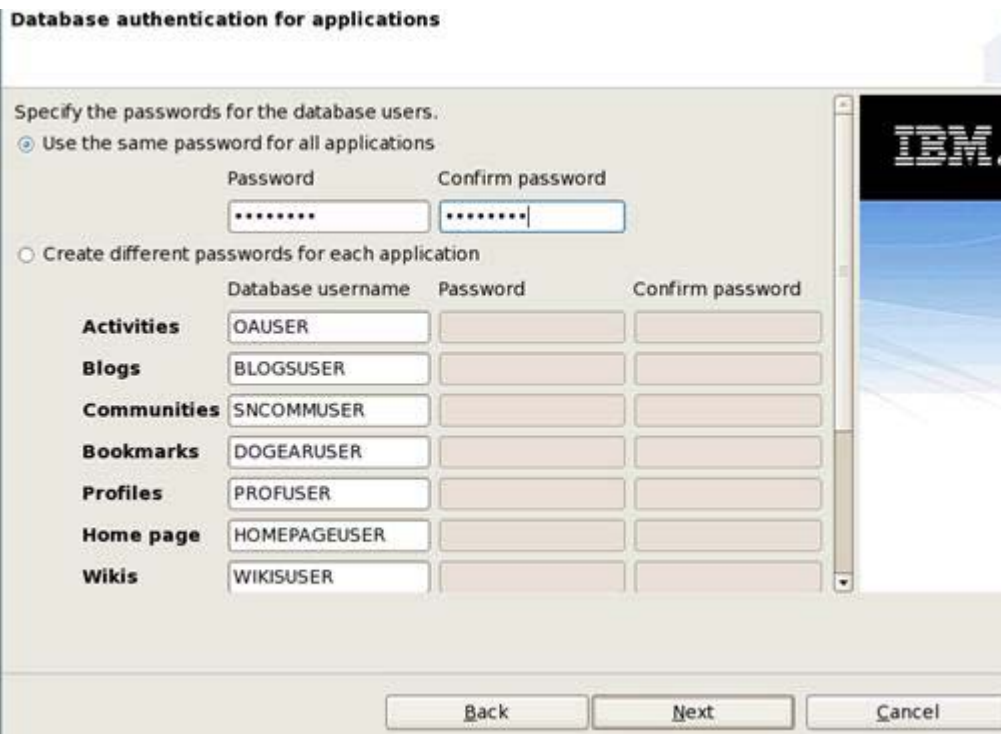


Figure 98. Database wizard for IBM Connections 4.0: Database authentication for applications

- ___ 6. Select **Create** in the summary screen. ç

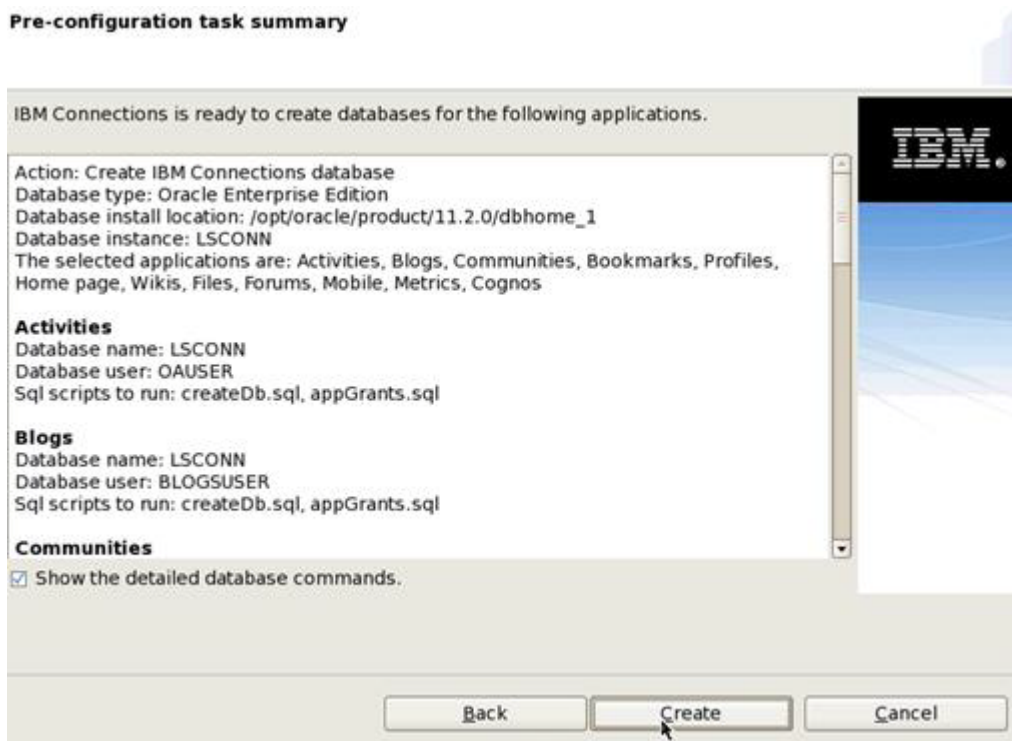


Figure 99. Database wizard for IBM Connections 4.0: Pre-configuration task summary

- ___ 7. Finally, click **Execute** to create the databases.

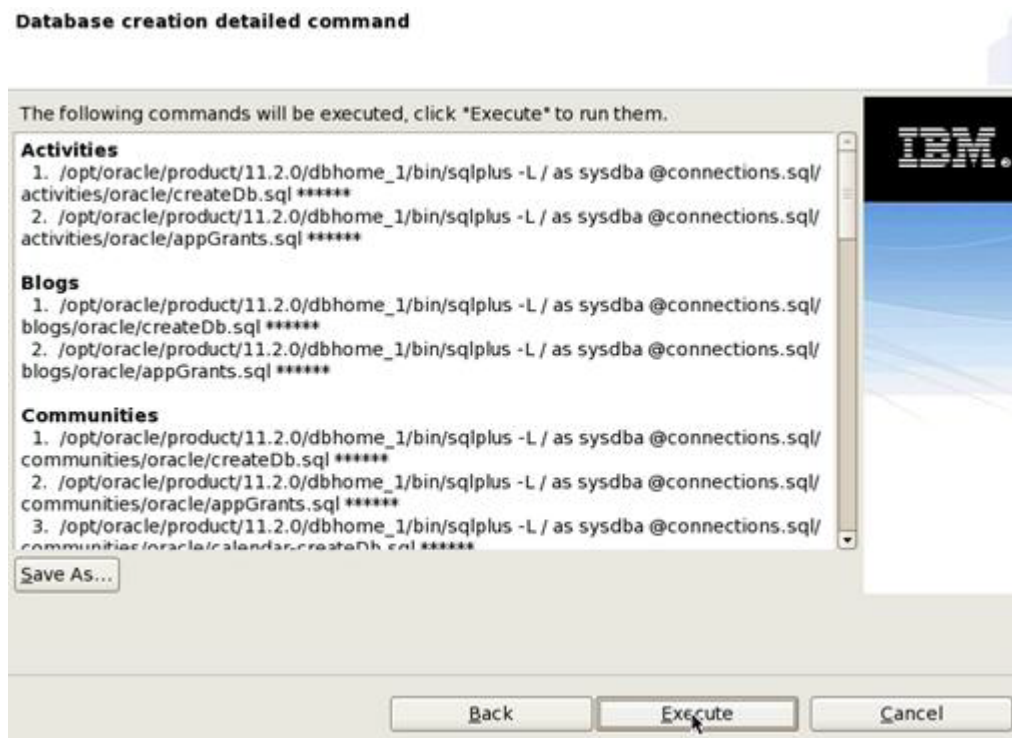


Figure 100. Database wizard for IBM Connections 4.0: Database creation detailed command

Creation of databases starts.

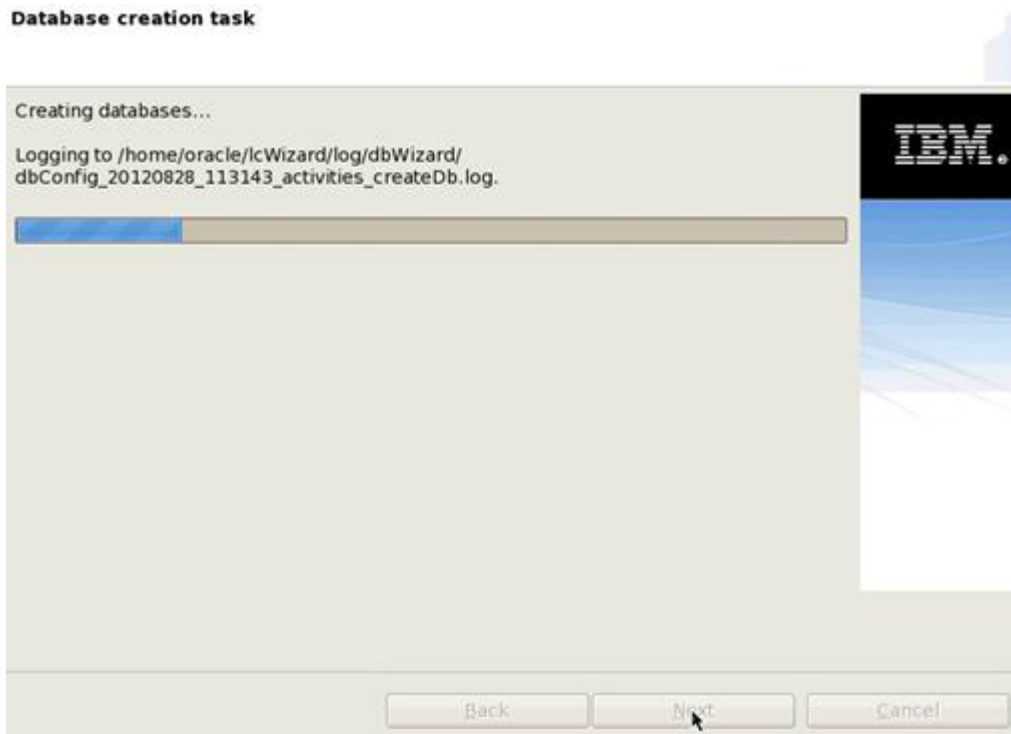


Figure 101. Database wizard for IBM Connections 4.0: Database creation task

8. After some time the databases are created successfully. Click **Finish** to exit the installer.

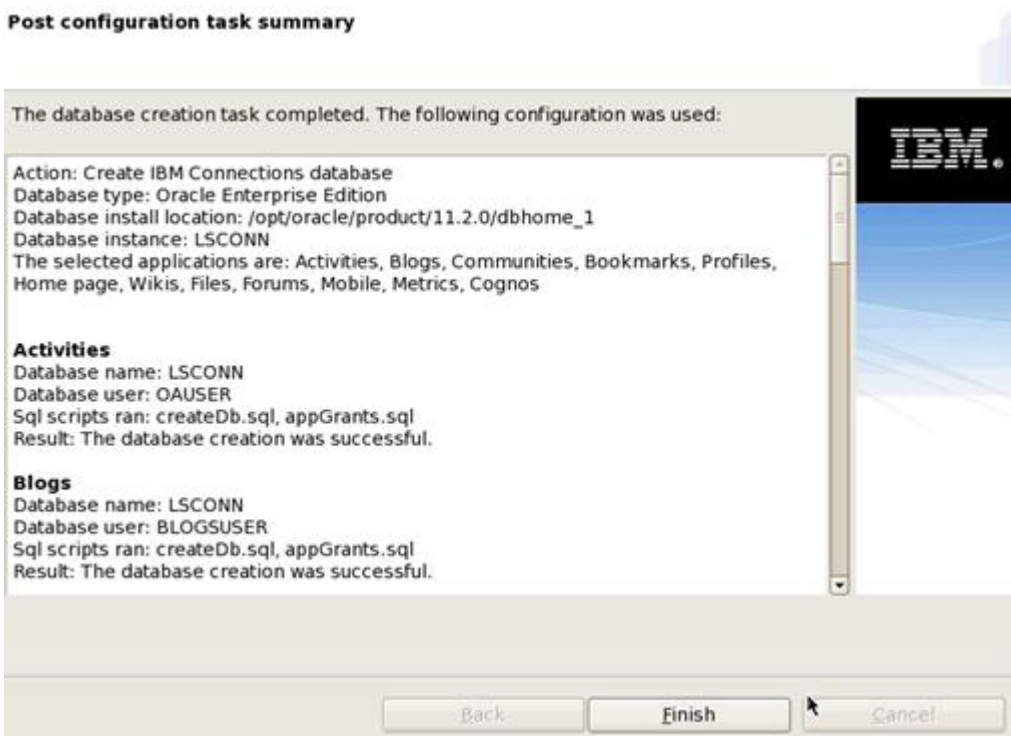


Figure 102. Database wizard for IBM Connections 4.0: Post configuration task summary

Populate the Profiles database with LDAP user information



Note

If you are building a reliability deployment, then this step is not needed as you are restoring an already populated profiles database. However, if you are not doing that then you must perform this step.

Do this step on the computer where you installed Tivoli Directory Integrator.

1. Go to the Wizard folder and run `./populationWizard.sh` which displays the following screen. Click **Next** to continue.

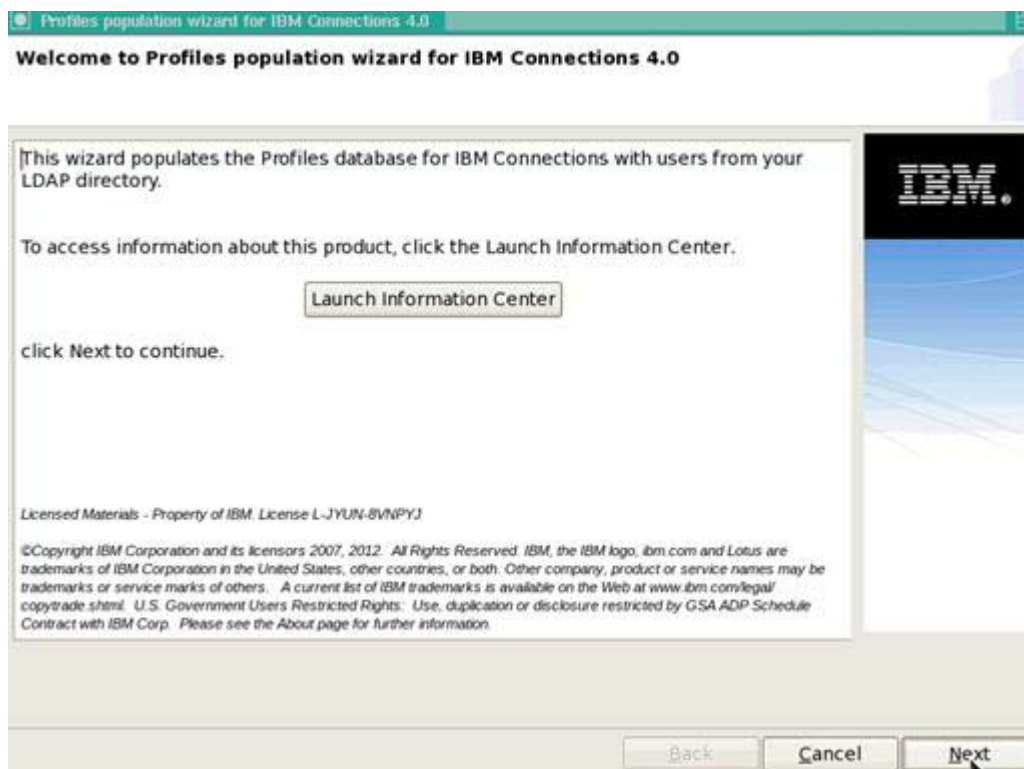


Figure 103. Profiles population wizard for IBM Connections 4.0: Welcome

___ 2. Select your database back end. Click **Next** to continue.



Figure 104. Profiles population wizard for IBM Connections 4.0: Profiles database type

- ___ 3. Next, enter the database information for where your PEOPLEDB database is located. Click **Next** to continue.

Profiles database properties

Enter the Profiles database properties. The wizard uses this information to access the Profiles database.

Host name:
<Host name>

Port:
1521

Database name:
LSCONN

JDBC driver library path:
/opt/oracle/product/11.2.0/dbhome_1/jdbc/lib

User ID (Account used to write to database):
PROFUSER

Password:

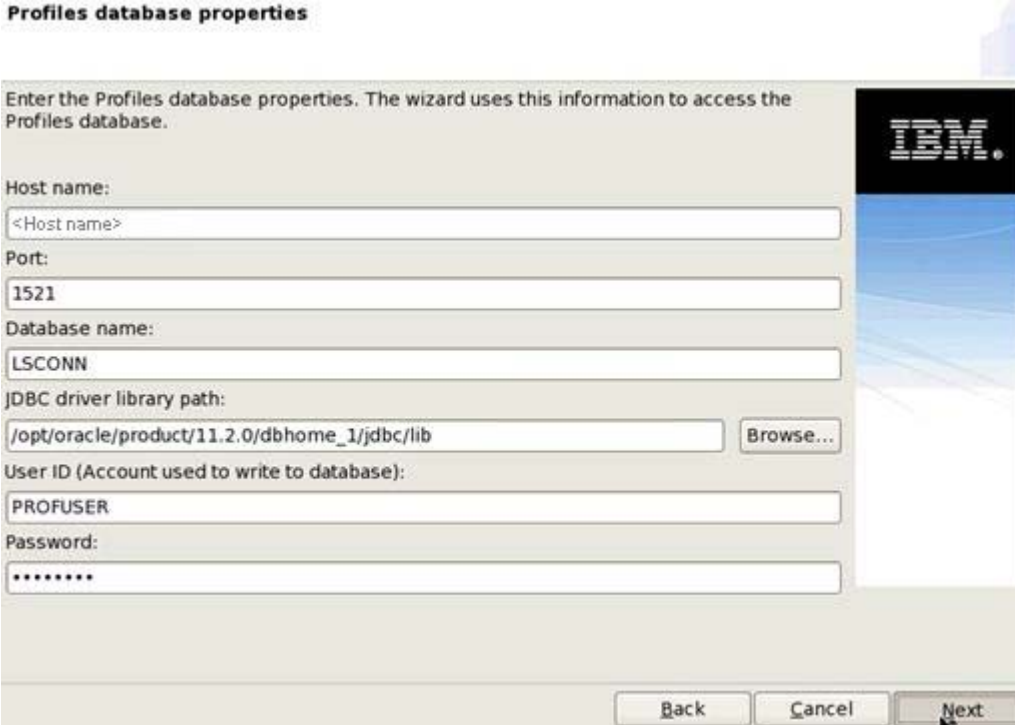


Figure 105. Profiles population wizard for IBM Connections 4.0: Profiles database properties

- ___ 4. Enter your LDAP server and port and then click **Next** to continue.

LDAP server connection

Specify the LDAP host name and port to enable the Profiles population wizard to connect to the LDAP server.

LDAP server name:
<LDAP server name>

LDAP server port:
389

Select to use SSL communication for secured access
 Use SSL communication



Figure 106. Profiles population wizard for IBM Connections 4.0: LDAP server connection

___ 5. Input Bind DN and password. Click **Next** to continue.

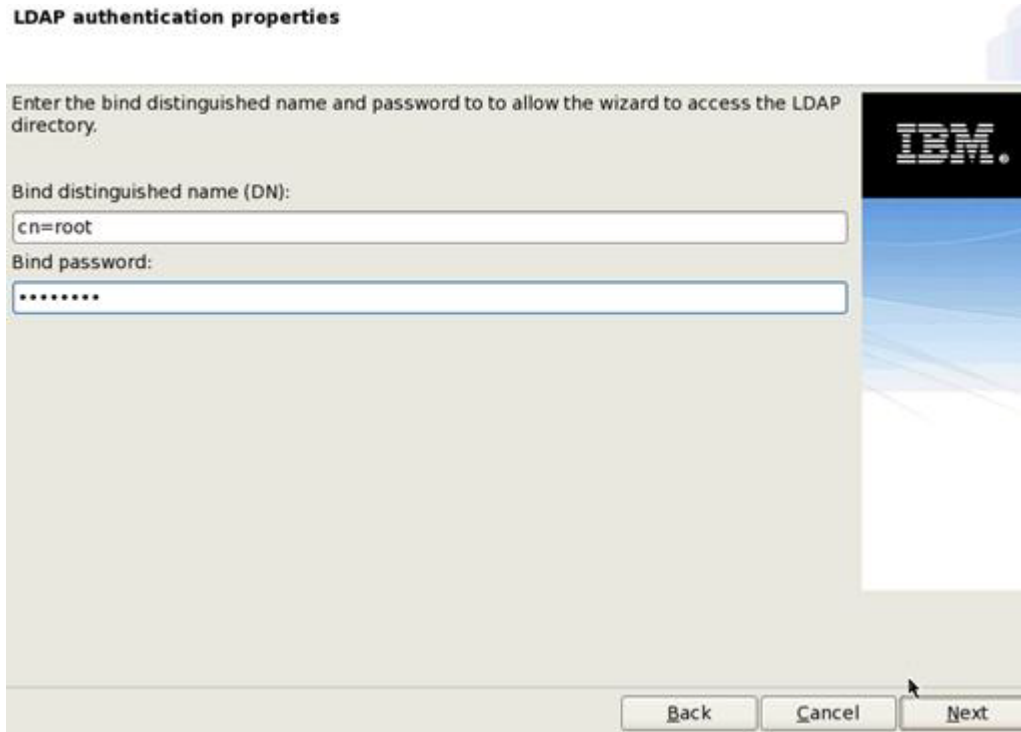


Figure 107. Profiles population wizard for IBM Connections 4.0: LDAP authentication properties

___ 6. Enter the search base and search filter. Click **Next** to continue.

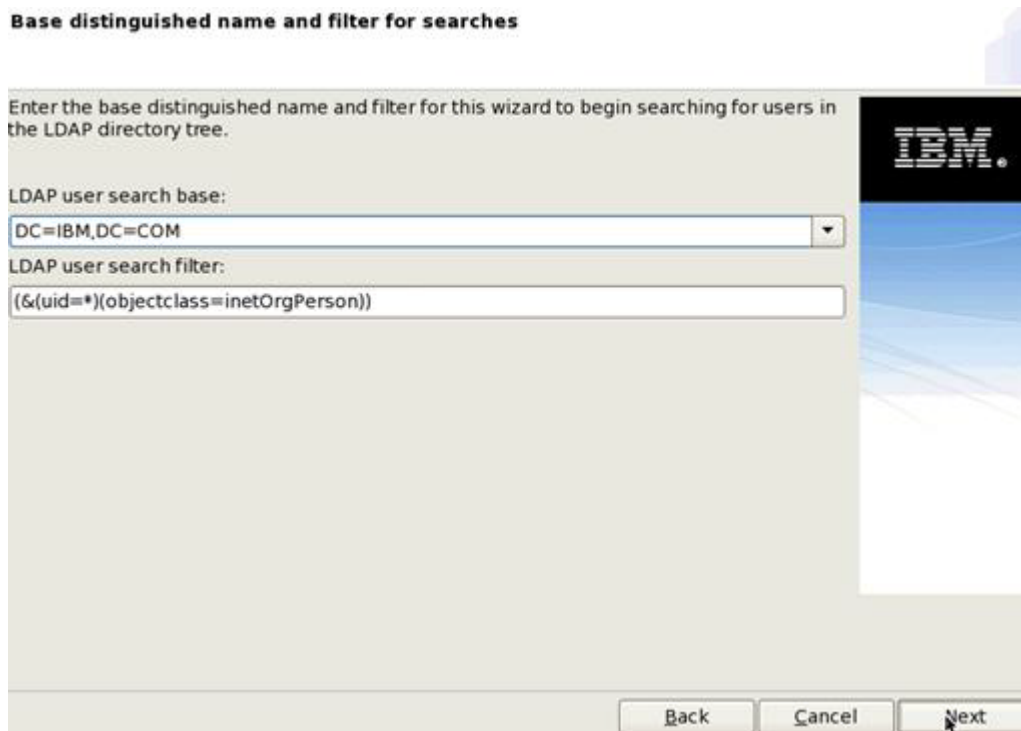


Figure 108. Profiles population wizard for IBM Connections 4.0: Base distinguished name and filter for searches

- ___ 7. Use the default Profiles database mapping. Click **Next** to continue.

Profiles database mapping

Select an LDAP attribute or a JavaScript function for each field in the Profiles database. You can sort the columns by selecting the column header, or select each row to add, remove, or edit the LDAP attribute or JavaScript function.

Database Fields	LDAP Attributes or JS Functions	Description
alternateLastname		Alternate last name
bldgid		Building
blogUrl		Blog link
calendarUrl		Calendar link
countryCode	c	Country code
courtesyTitle		Courtesy title
deptNumber		Department number
description	description	About me
displayName	cn	Name
distinguishedName	\$dn	LDAP distinguished name
email	mail	Office email

Back Cancel Next

Figure 109. Profiles population wizard for IBM Connections 4.0: Profile database mapping

- ___ 8. Use the default Optional database tasks. Then, click **Next** to continue.

Optional database tasks

Select the check box for each type of optional information that you want to add. You must supply a CSV file with data for each information type.

Countries
 Browse

Departments
 Browse

Organizations
 Browse

Employee types
 Browse

Work locations
 Browse

Back Cancel Next

Figure 110. Profiles population wizard for IBM Connections 4.0: Optional database tasks

___ 9. Finally, the summary page is displayed. Click **Configure** to populate the profiles database.

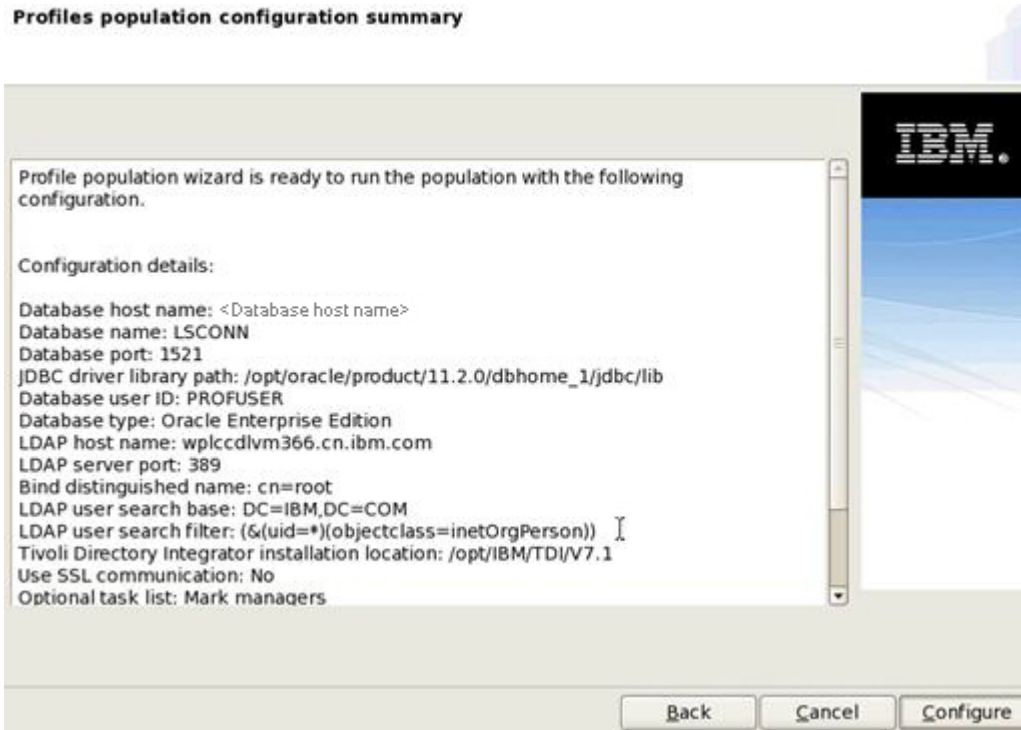


Figure 111. Profiles population wizard for IBM Connections 4.0: Profiles population configuration summary

The population task starts to run.

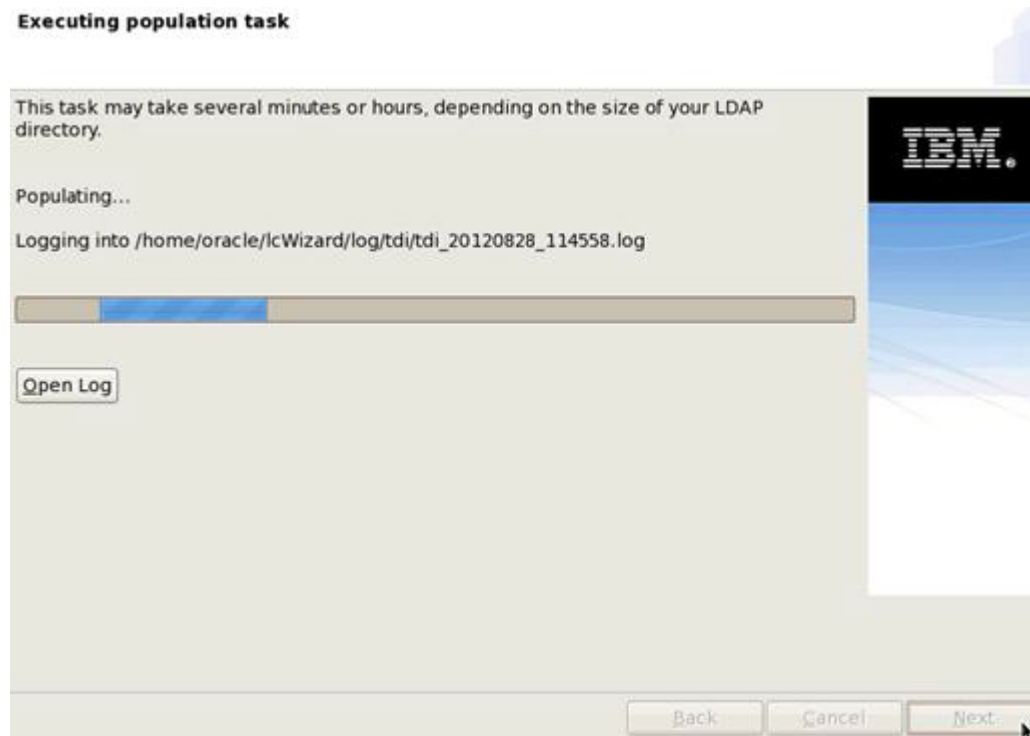


Figure 112. Profiles population wizard for IBM Connections 4.0: Population task in progress

___ 10. Wait until it finishes. Click **Finish** to exit the wizard.

Install IC 4.0

1. Start the installation wizard.

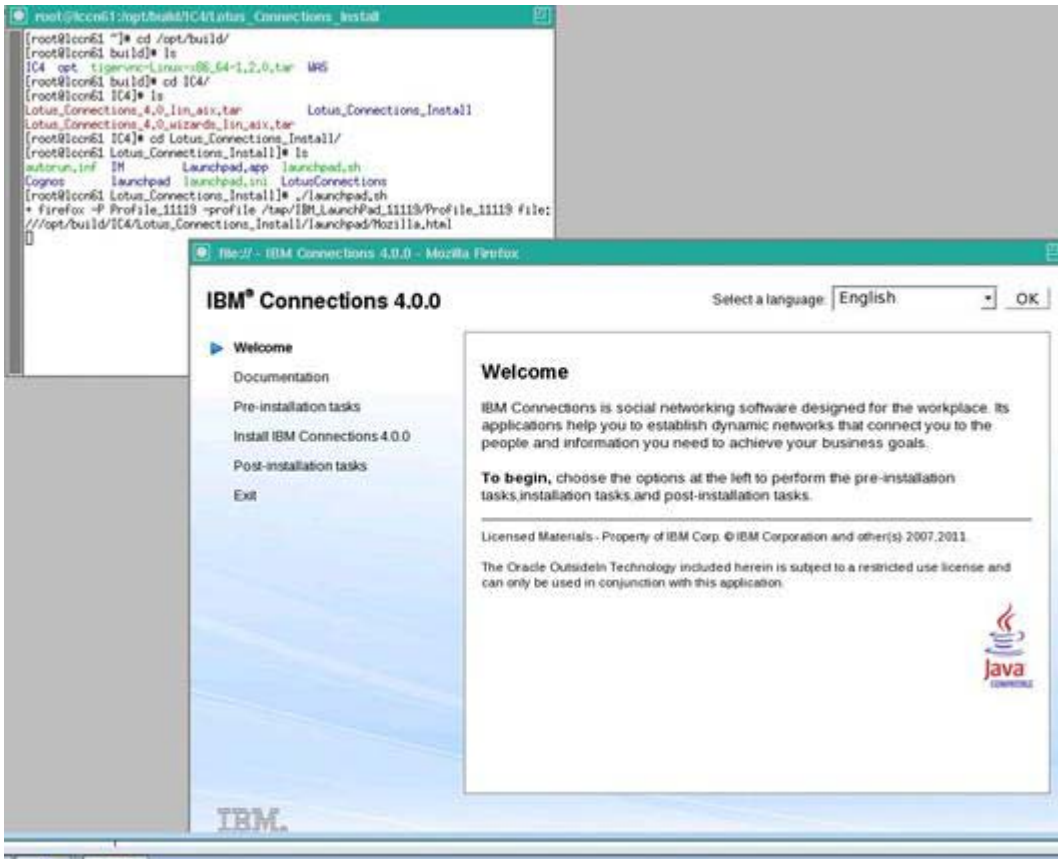


Figure 113. Starting the IBM Connections 4.0.0 installation wizard

- ___ 2. Click **Install IBM Connections 4.0.0**. Then, click **Launch the IBM Connections 4.0.0 install wizard**.

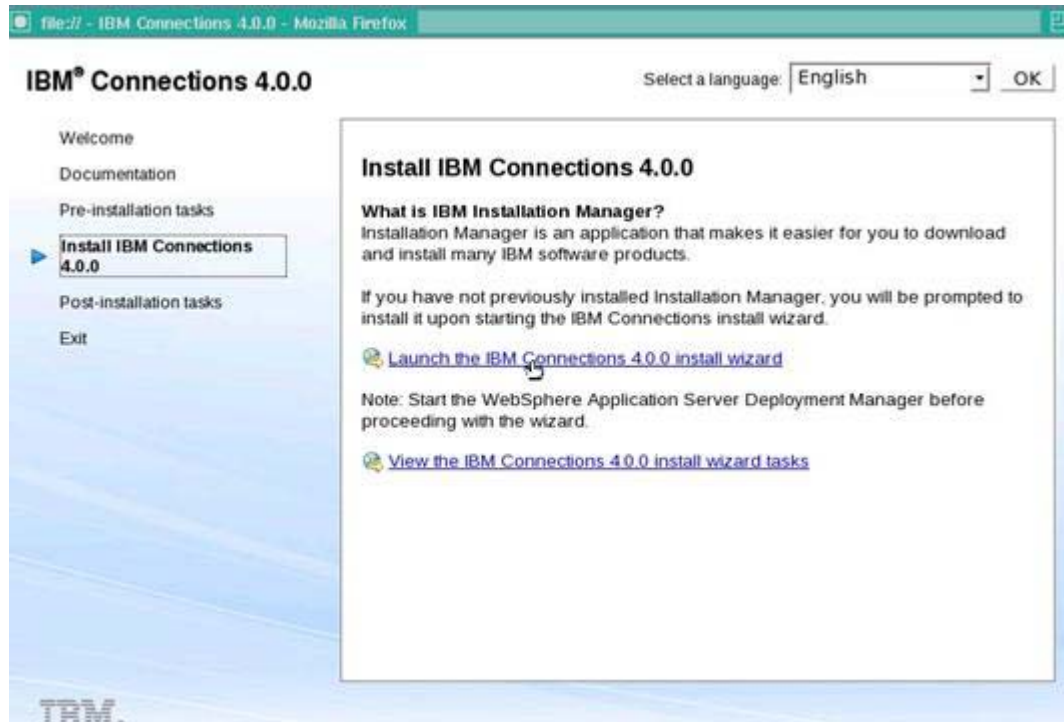


Figure 114. IBM Connections 4.0.0 installation wizard

___ 3. Select the installation packages and click **Next**.

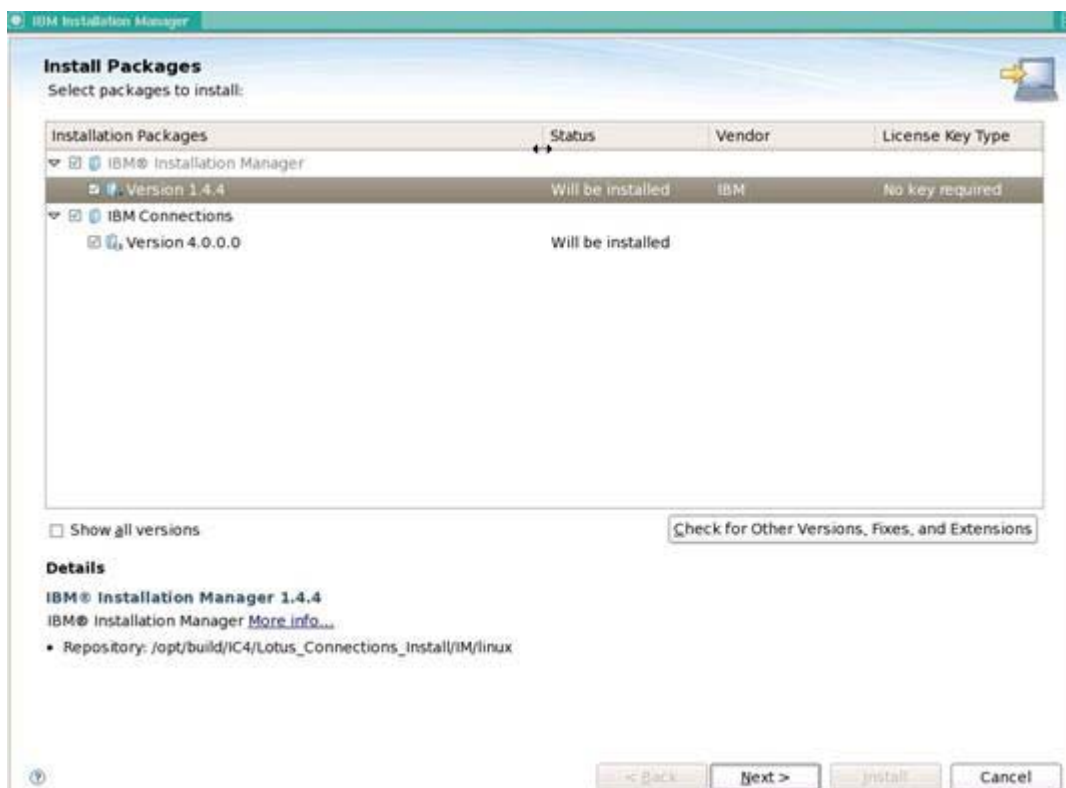


Figure 115. IBM Connections 4.0.0 installation wizard: Packages to install

4. Accept the license terms and click **Next**.

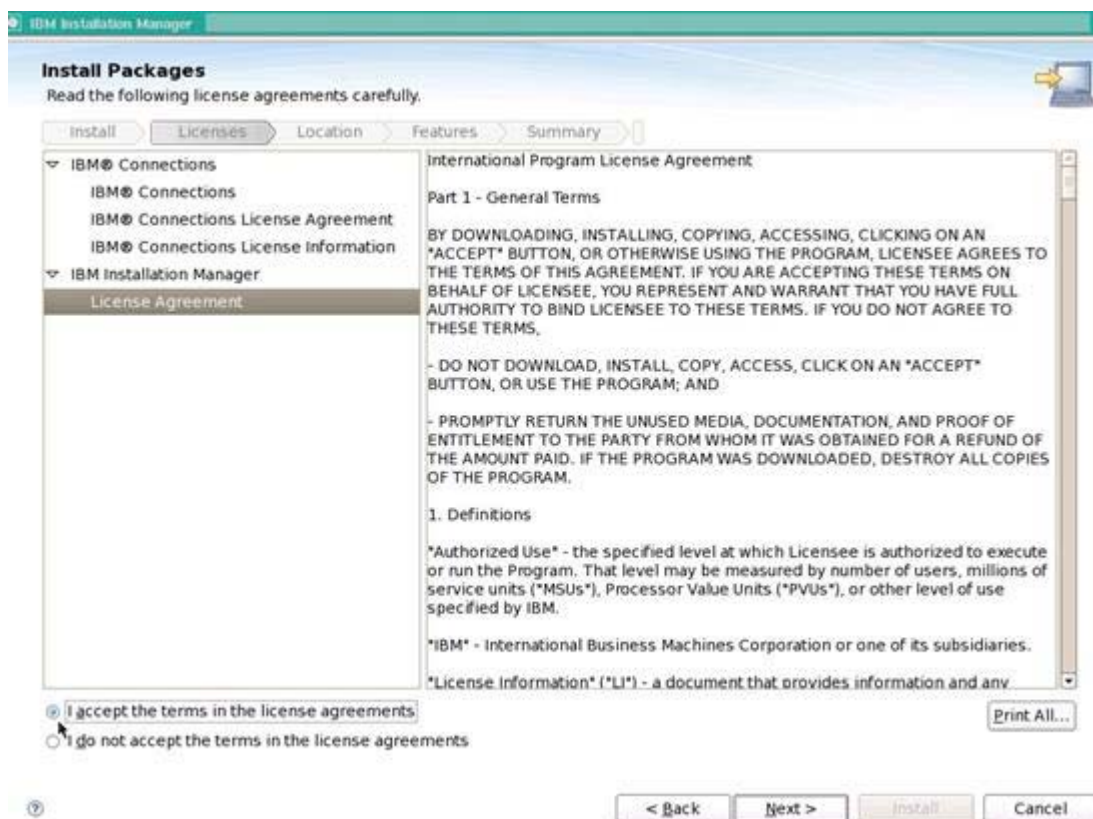


Figure 116. IBM Connections 4.0.0 installation wizard: Program License Agreement

5. Select the location for shared resources and Installation Manager and click **Next**.

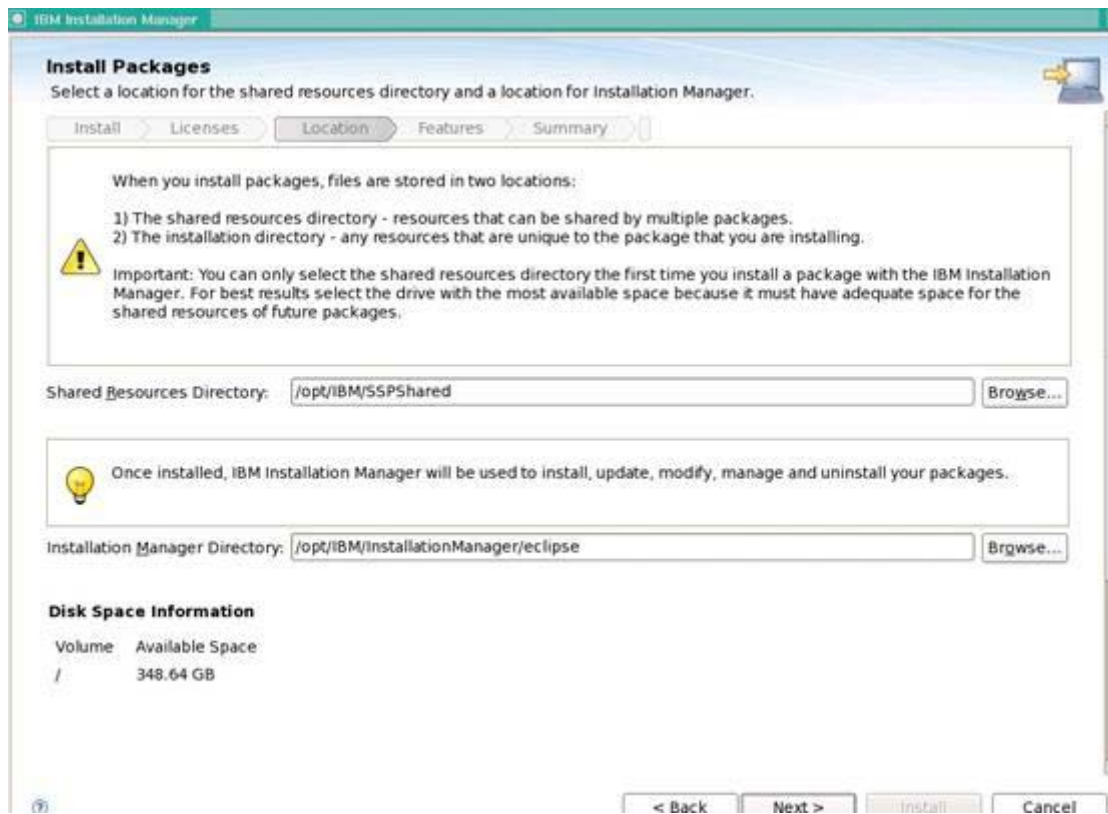


Figure 117. IBM Connections 4.0.0 installation wizard: installation location

- ___ 6. Select the location for IBM Connections and click **Next**.

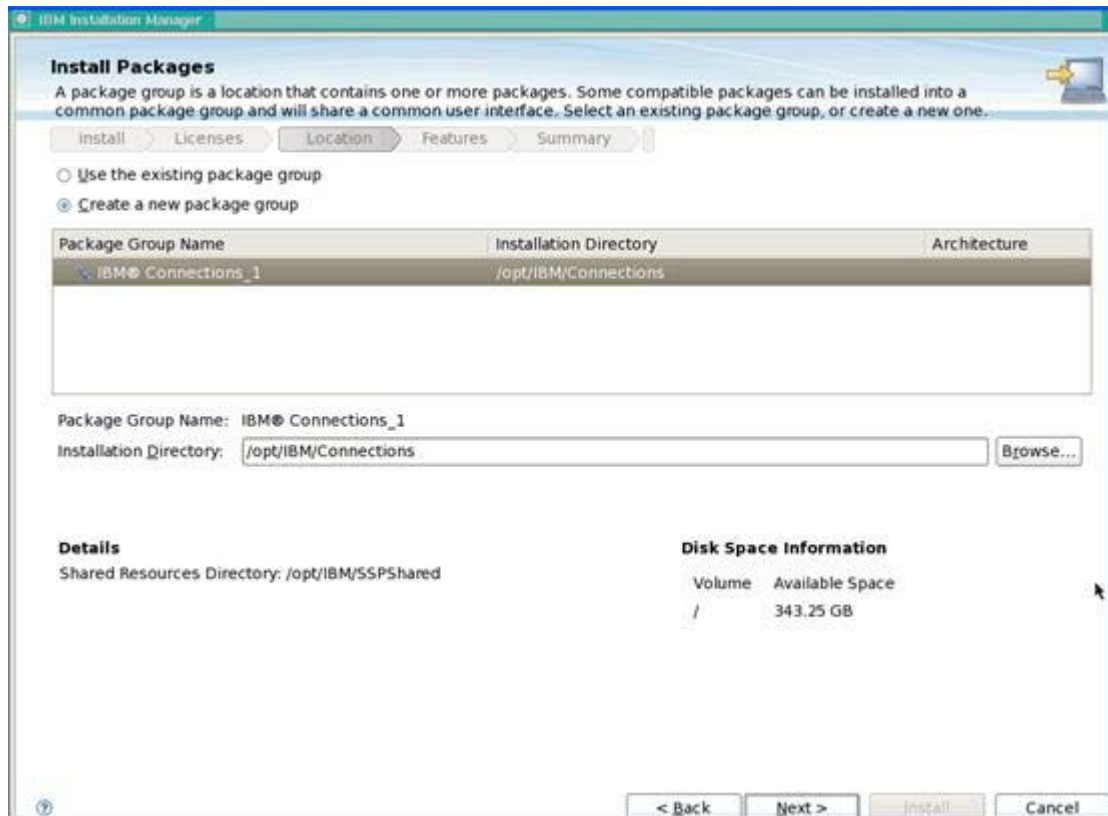


Figure 118. IBM Connections 4.0.0 installation wizard: installation location for IBM Connections

___ 7. Select the features to install and click **Next**.

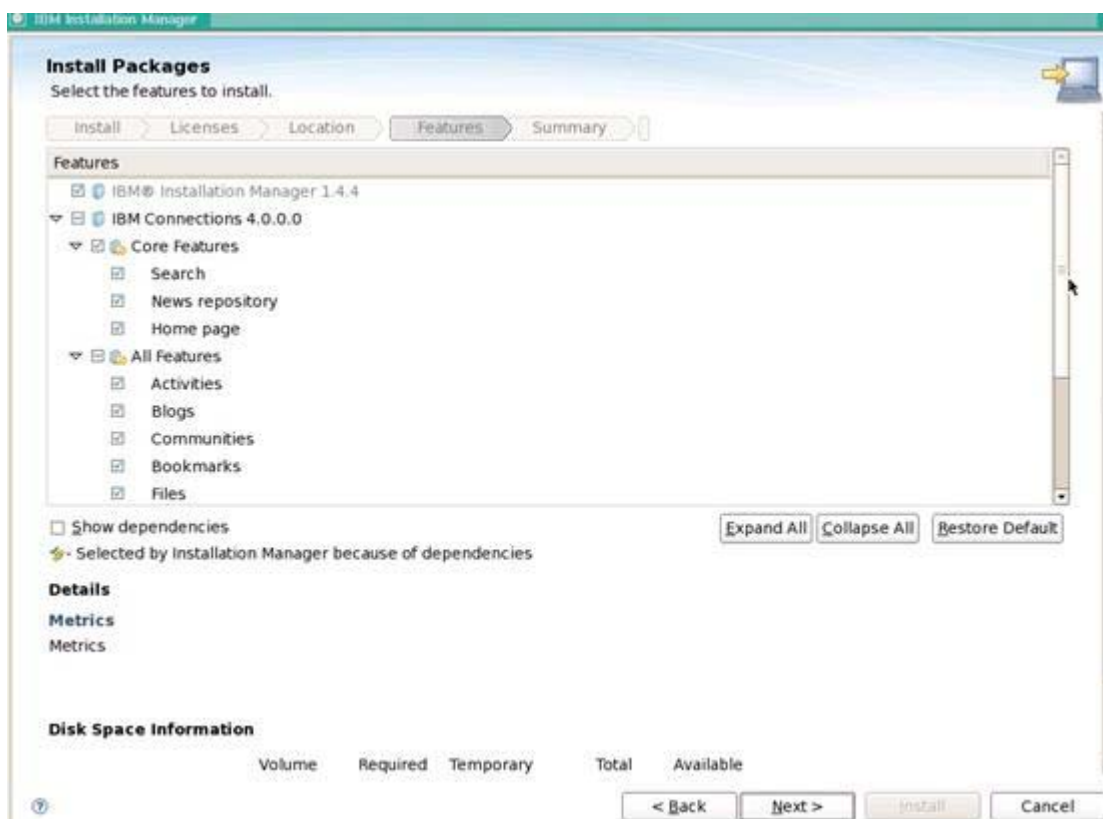


Figure 119. IBM Connections 4.0.0 installation wizard: Features to install

- ___ 8. Specify the WebSphere Application Server configuration and then click **Validate**.

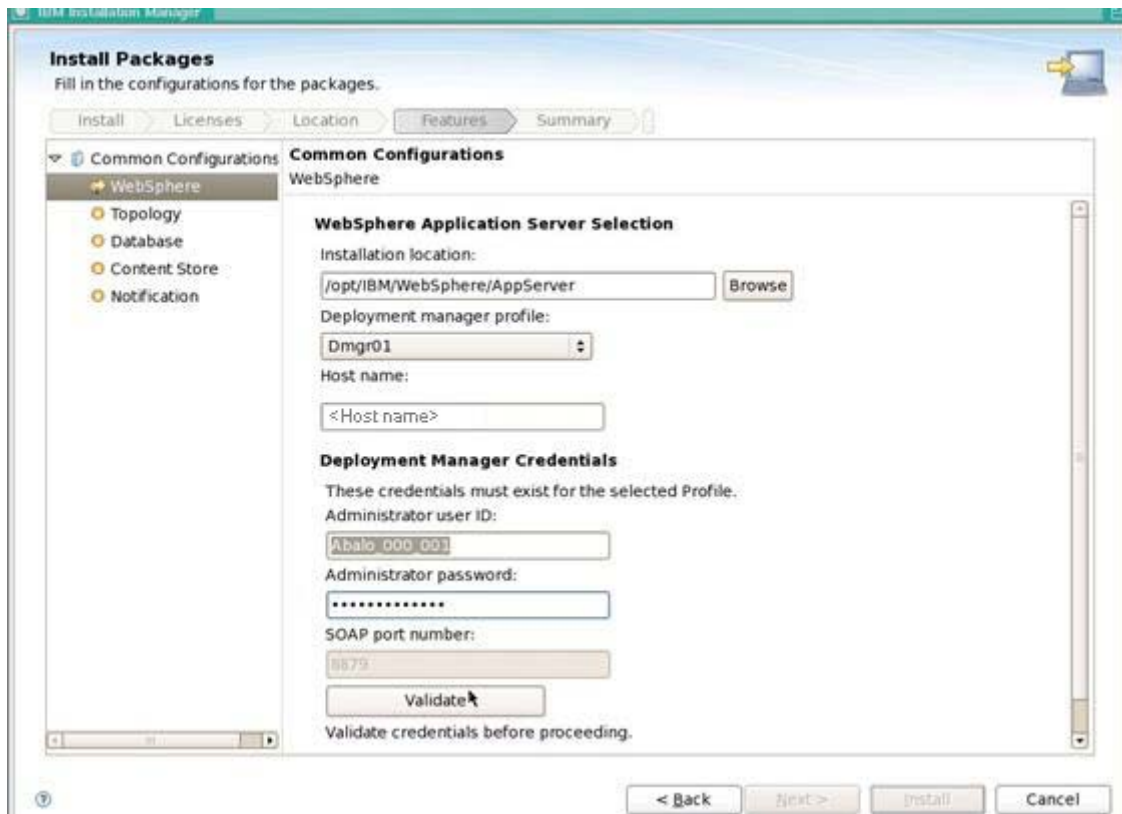


Figure 120. IBM Connections 4.0.0 installation wizard: Configurations for the packages

9. Make sure that the validation is successful. Click **OK** in the message window, and then click **Next**.

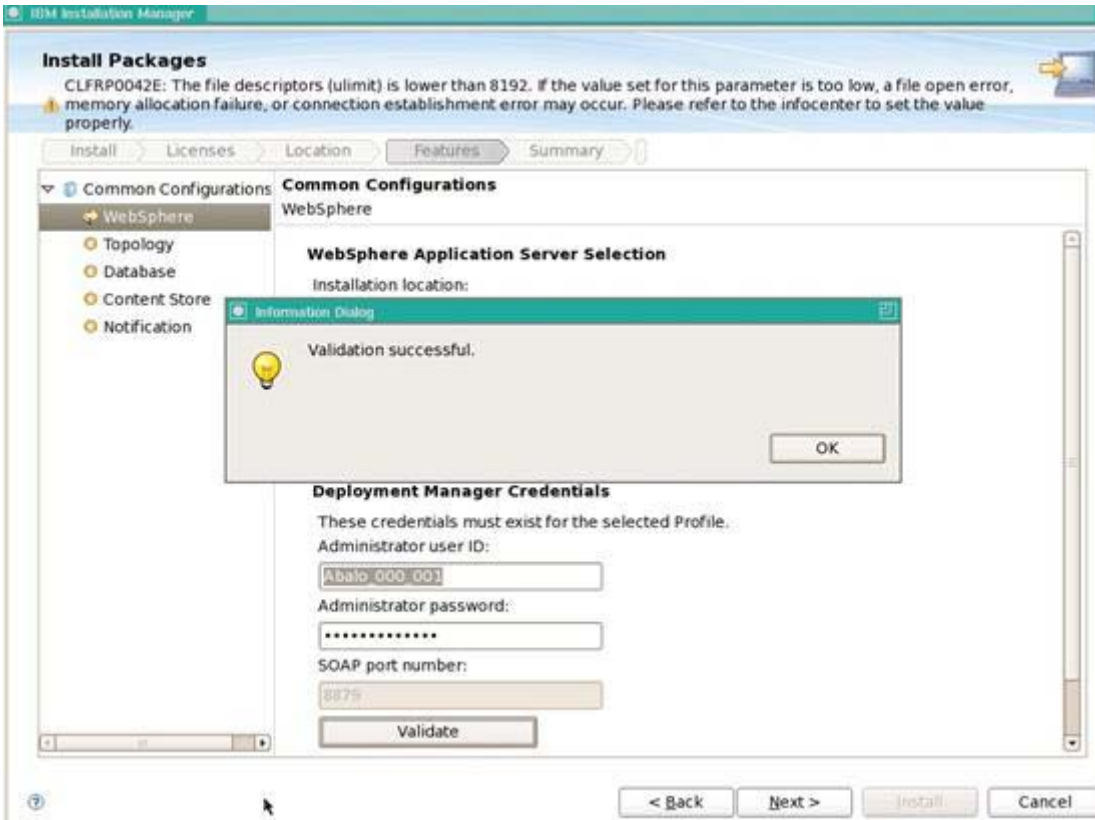


Figure 121. IBM Connections 4.0.0 installation wizard: Configurations validation

___ 10. Specify the Deployment topology and click **Next**.

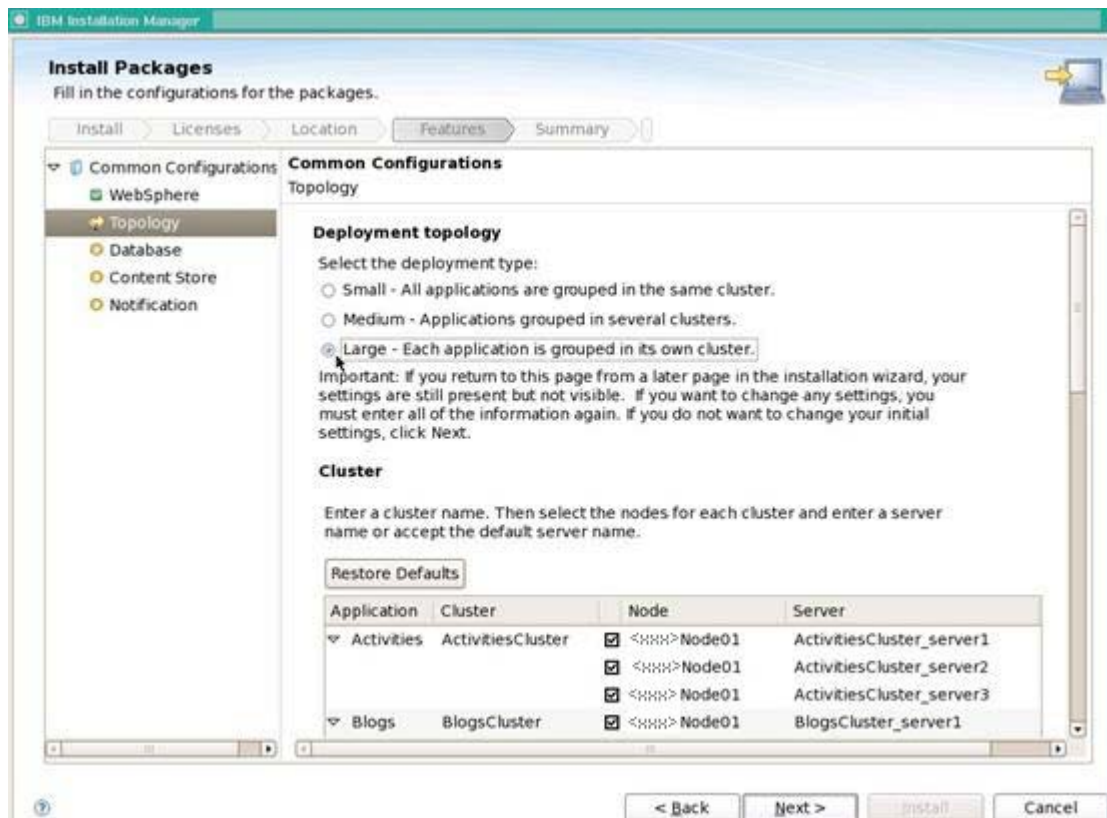


Figure 122. IBM Connections 4.0.0 installation wizard: Deployment topology

11. Specify the database configuration and then click **Validate**.

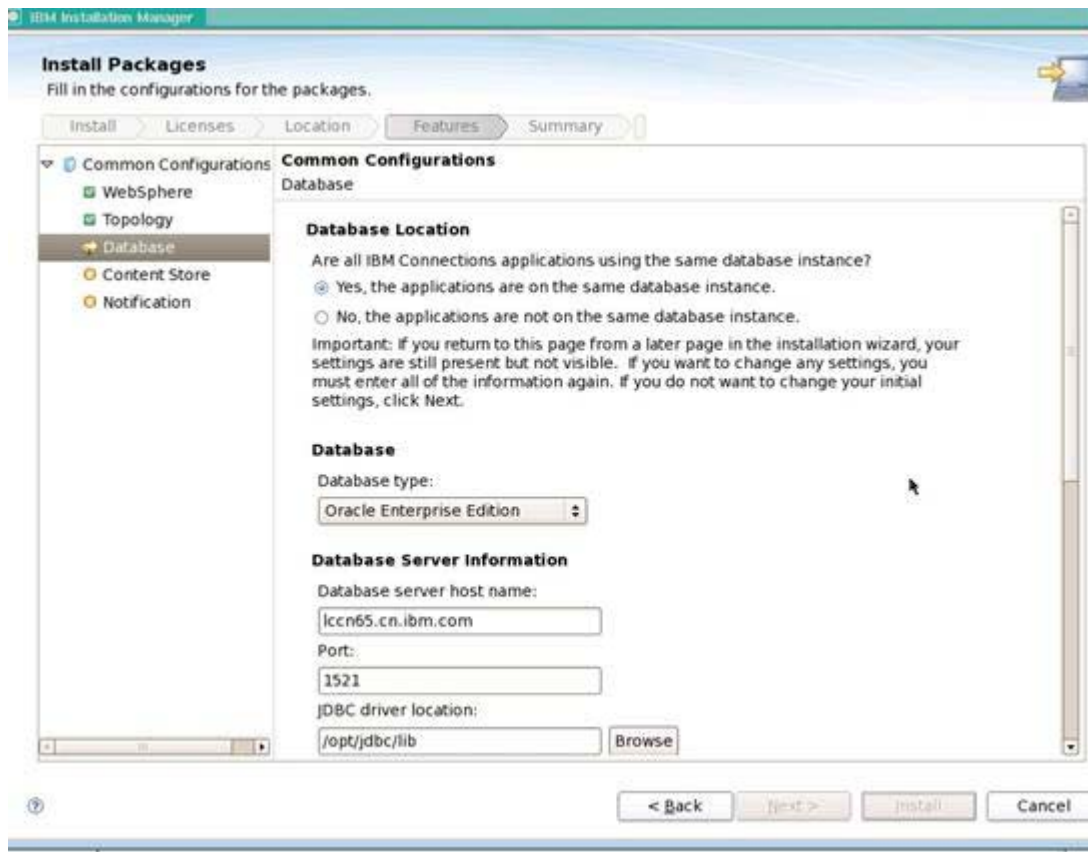


Figure 123. IBM Connections 4.0.0 installation wizard: Database location

___ 12. Specify the Content Store and then click **Validate**.

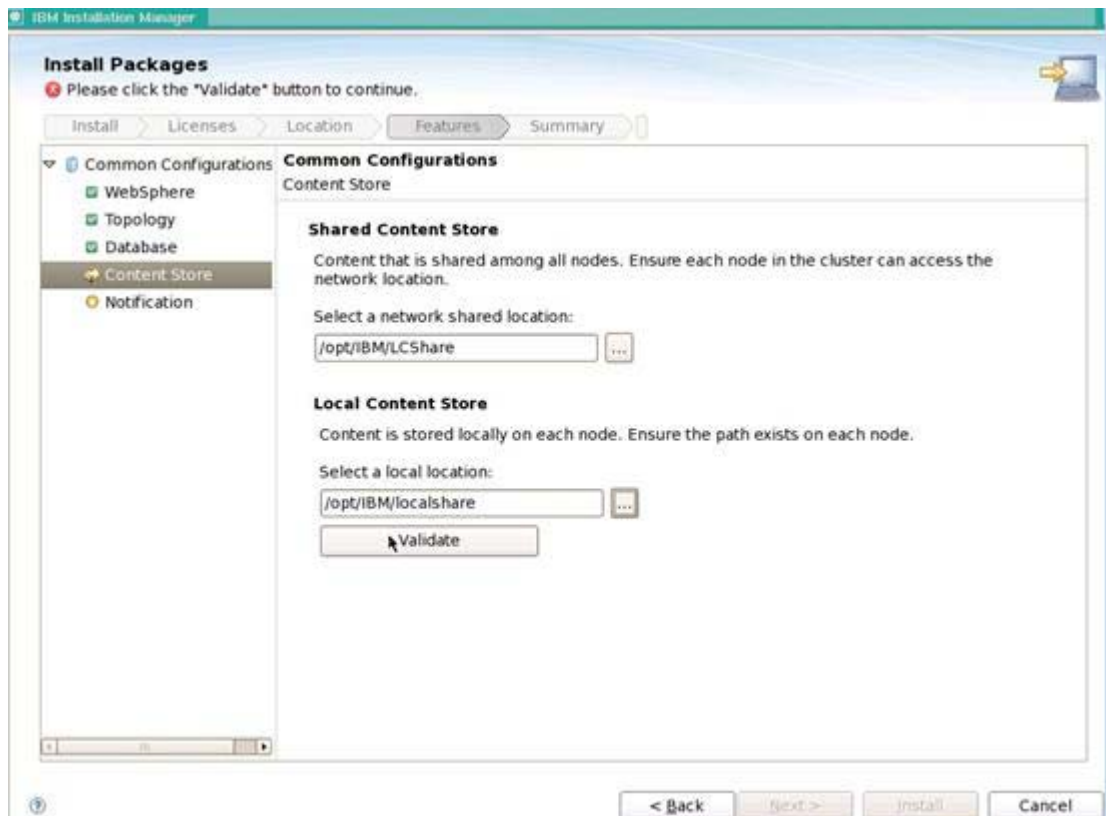


Figure 124. IBM Connections 4.0.0 installation wizard: Content Store

___ 13. Specify Notification configuration and click **Next**.

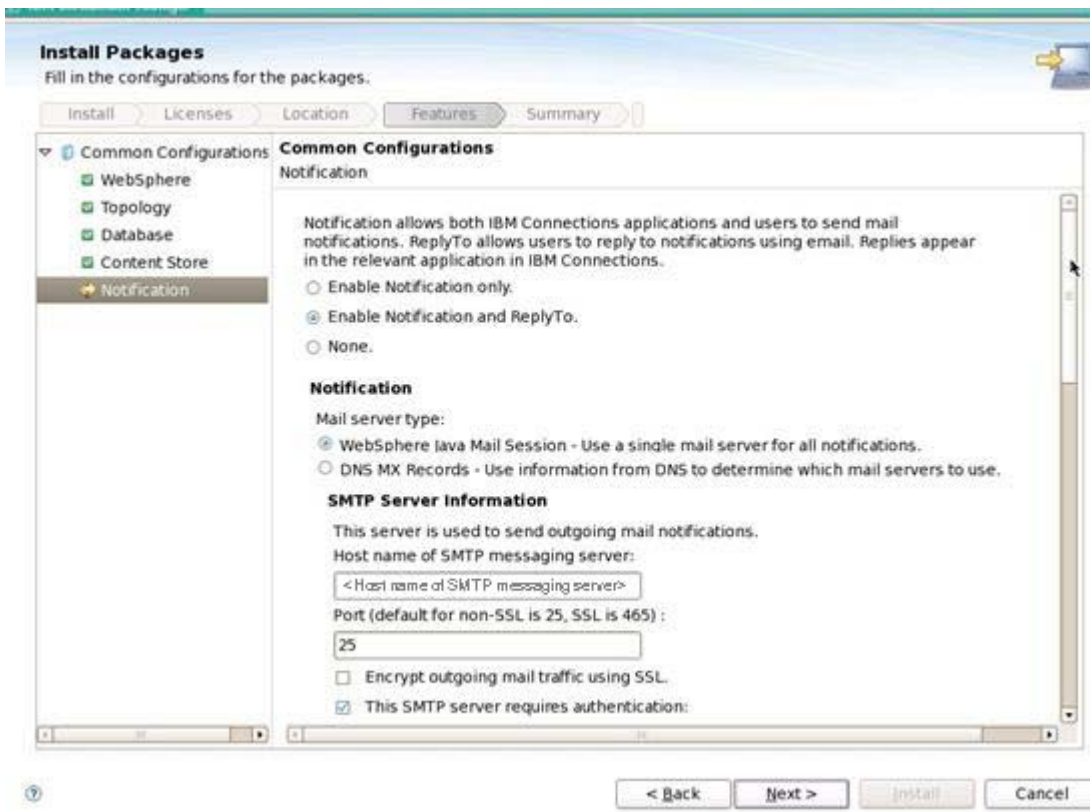


Figure 125. IBM Connections 4.0.0 installation wizard: Notification

___ 14. Review the summary information, and then click **Install**.

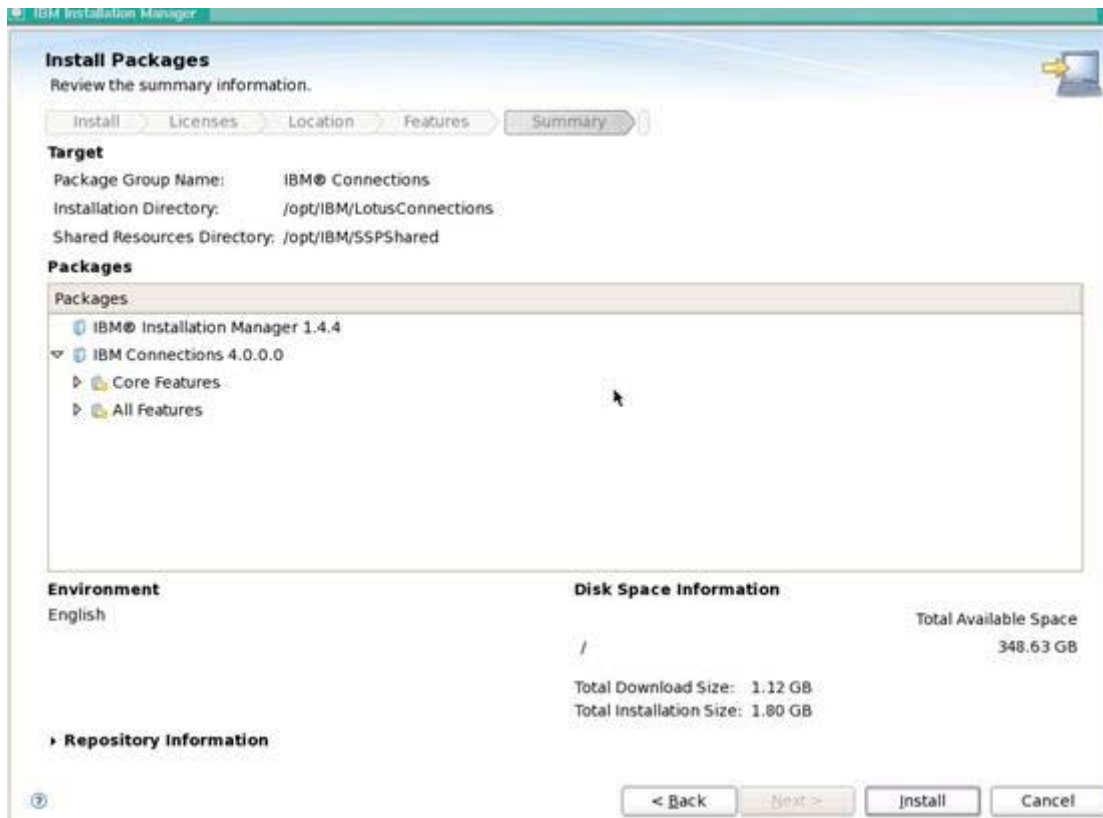


Figure 126. IBM Connections 4.0.0 installation wizard: Summary information

The installation begins.

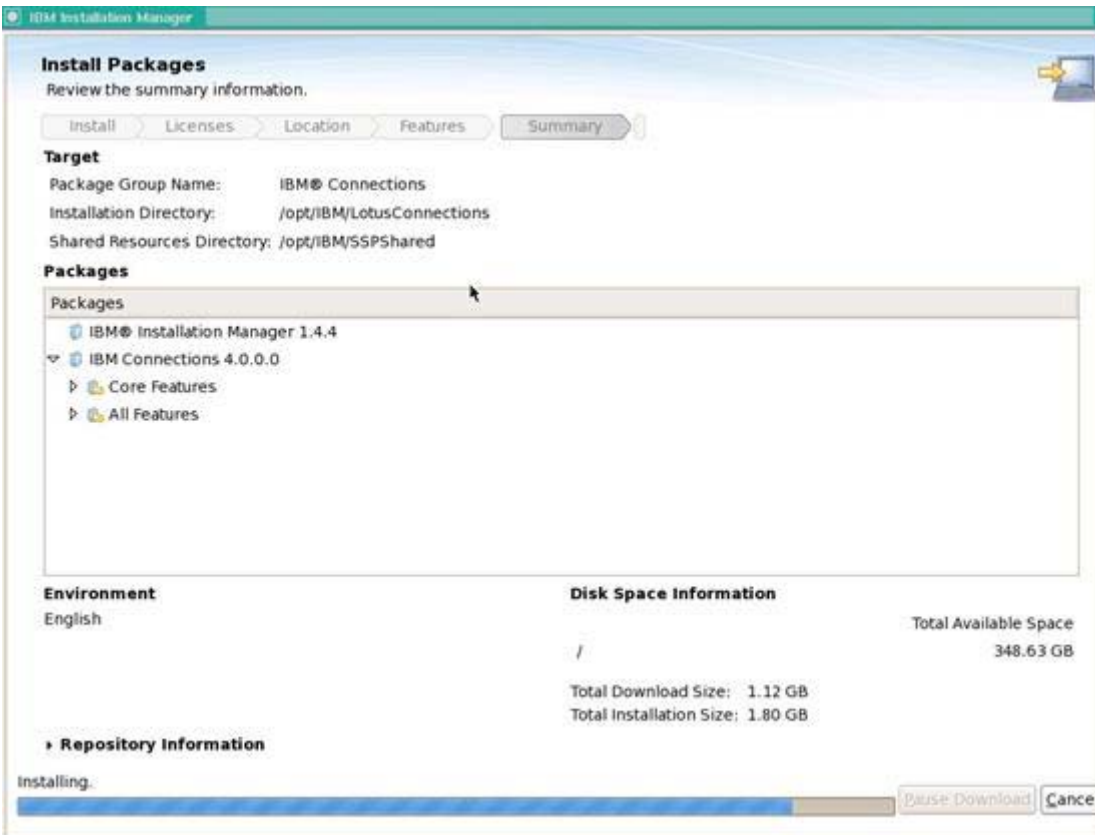


Figure 127. IBM Connections 4.0.0 installation wizard: Installation in progress

- ___ 15. Make sure that the packages are successfully installed and click **Finish** to quit the installer.

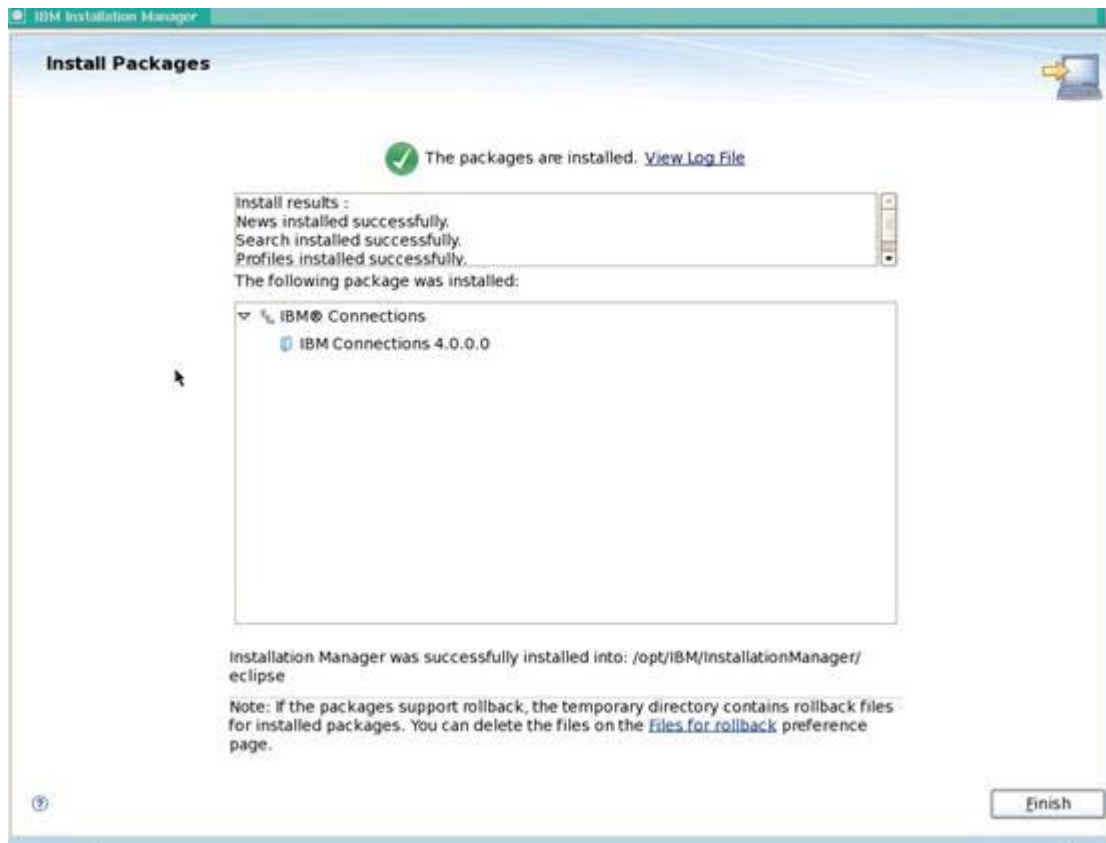


Figure 128. IBM Connections 4.0.0 installation wizard: Installation completion

2. Post-installation configuration

Configure httpd.conf to enable SSL

1. In `httpd.conf` file which is under `/opt/IBM/HTTPServer/conf`, add the following lines to the end of file before the `LoadModule was_ap20_module` and `WebSpherePluginConfig` sections:

```

AllowEncodedSlashes On
LoadModule ibm_ssl_module modules/mod_ibm_ssl.so
<IfModule mod_ibm_ssl.c>
Listen 0.0.0.0:443
ServerName lccn61.cn.ibm.com
<VirtualHost *:443>
SSLEnable
</VirtualHost>
</IfModule>
SSLDisable
Keyfile "/opt/IBM/HTTPServer/Plugins/config/<node name>/plugin-key.kdb"
SSLStashFile "/opt/IBM/HTTPServer/Plugins/config/lccn61/plugin-key.sth"

```

Create an unmanaged HTTP node and web server definition

1. Login to the **Admin console** > `https://<node name>.cn.ibm.com:9043/ibm/console`.
2. Go to **System Administration > Nodes**, and then select **Add Node**. Select **Unmanaged node** and then **Next**.



Figure 129. Integrated Solutions Console: Welcome

- ___ 3. Enter your web server information. Select **Apply** and **Save**.



Figure 130. Integrated Solutions Console: Web server information

- ___ 4. Go to **Servers > Server Types > Web server** and select **New** and enter the node, server name, and type. Click **Next** to continue.



Figure 131. Integrated Solutions Console: Web server definition

- ___ 5. Select the IBM HTTP Server template, and click **Next** to continue.

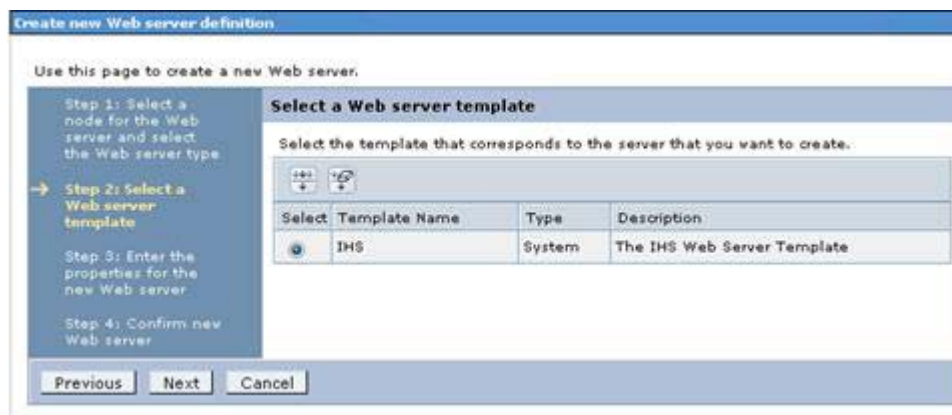


Figure 132. Integrated Solutions Console: Web server definition: Selecting a Web server template

___ 6. Enter the port, installation locations, and ihsadmin names. Click **Next** to continue.

Use this page to create a new Web server.

Step 1: Select a node for the Web server and select the Web server type

Step 2: Select a Web server template

→ Step 3: Enter the properties for the new Web server

Step 4: Confirm new Web server

Enter the properties for the new Web server

Enter the Web server properties.

* Port
80

* Web server installation location
/opt/IBM/HTTPServer

* Plug-in installation location
/opt/IBM/HTTPServer/Plugins

Application mapping to the Web server
All

Enter the IBM Administration Server properties.

* Administration Server Port
8008

* Username
ihsadmin

* Password

* Confirm password

Use SSL

Previous Next Cancel

Figure 133. Integrated Solutions Console: Entering properties for the new Web server

___ 7. Click **Finish** from the confirm summary page.

Use this page to create a new Web server.

Step 1: Select a node for the Web server and select the Web server type

Step 2: Select a Web server template

Step 3: Enter the properties for the new Web server

→ Step 4: Confirm new Web server

Confirm new Web server

The following is a summary of your selections. Click the Finish button to complete the Web server creation. If there are settings you wish to change, click on Previous button to review the server settings.

Summary of actions:

Will be created on node
"webserver1"

Platform Type "Linux"

Web server installation root
"/opt/IBM/HTTPServer"

Plug-in installation root "/opt/IBM
/HTTPServer/Plugins".

Previous Finish Cancel

Figure 134. Integrated Solutions Console: Confirming new Web server

___ 8. The server should then be created.

___ 9. Make sure to synch the nodes after this server is saved.

___ 10. Next, select the WebServer and then click **Generate plug-in**.

___ 11. Next, select the WebServer and then click **Propagate plug-in**.

___ 12. Start your WebServer. Make sure to start the admin server on the web server as well.

Exchange certificates between the IBM HTTP Server and WebSphere Application Server

- ___ 1. Next, you retrieve the signer certificate from the web server. This is done by going to **Security > SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates**. Click **Retrieve from Port**.
- ___ 2. Complete the host, port, and alias information and click **Retrieve server information**.
- ___ 3. If the connection is successful, you should see the following result:

SSL certificate and key management

SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates > Retrieve from port

Makes a test connection to a Secure Sockets Layer (SSL) port and retrieves the signer from the server during the handshake.

General Properties

* Host

* Port

SSL configuration for outbound connection

* Alias

Retrieved signer information

Serial number

Issued to

Issued by

Fingerprint (SHA digest)

Validity period

Figure 135. SSL certificate and key management

- ___ 4. Select **Apply** and **Save**.
- ___ 5. Restart your Deployment Manager and Nodes.
- ___ 6. Then, copy the existing `plugin-key.kdb` from your web server to your web server node definition you created previously. In this example:
 - Copy `/opt/IBM/HTTPServer/Plugins/config/lccn61/plugin-key.kdb` on your web server plug-ins to `/opt/IBM/WebSphere/DeploymentManager/profiles/Dmgr01/config/cells/lccn61Cell01/nodes/webserver1/servers/lccn61/plugin-key.kdb` on your web server node definition. You should overwrite the one that exists there already.

- ___ 7. Next, extract the root key from the Deployment Manager. Log in to your admin console and go to **Security > SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates**. Select the root key and then click Extract.

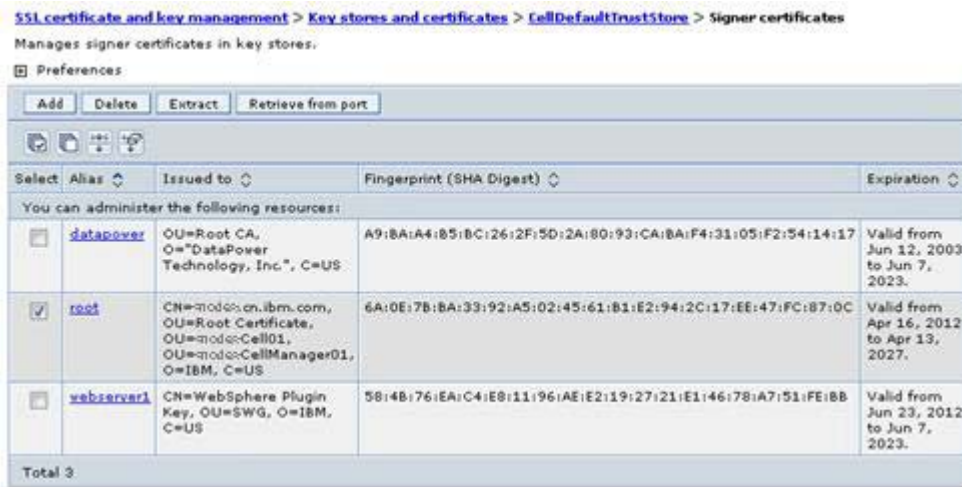


Figure 136. Security > SSL certificate and key management > Key stores and certificates > CellDefaultTrustStore > Signer certificates

- ___ 8. Enter a path and name of the file, for example `/opt/IBM/WAS-Root-Cert.arm`. Click **OK**.



Figure 137. Entering a path for the file

- ___ 9. After clicking **OK** you should get the following message.



Figure 138. Successful extraction message

- ___ 10. Now add this certificate to the web server. Go to **Servers > Server Types > Web servers**, and then select the **Web Server**.

___ 11. Click **Plug-in properties**.

[Web servers](#) > [webserver1](#) > **Plug-in properties**

Use this page to configure a Web server plug-in. The plug-in passes HTTP requests from a Web server to WebSphere(R) application servers.

Runtime Configuration

Plug-in properties

Ignore DNS failures during Web server startup

* Refresh configuration interval
60 seconds

Repository copy of Web server plug-in files:

* Plug-in configuration file name
plugin-cfg.xml [View](#)

Automatically generate the plug-in configuration file

Automatically propagate plug-in configuration file

* Plug-in key store file name
plugin-key.kdb

[Manage keys and certificates](#)

[Copy to Web server key store directory](#)

Web server copy of Web server plug-in files:

* Plug-in configuration directory and file name
/opt/IBM/HTTPServer/Plugins/config/webserver1/plugin-cfg.xml

* Plug-in key store directory and file name
/opt/IBM/HTTPServer/Plugins/config/webserver1/plugin-key.kdb

Additional Properties

- [Request and Response](#)
- [Caching](#)
- [Request Routing](#)
- [Custom Properties](#)

Figure 139. Web servers plug-in properties

___ 12. Click **Manage Keys and certificates**. From the resulting page, click the link **Signer certificates** and then click **Add**. Click **OK** and **Apply**.

Adds a signer certificate to a key store.

General Properties

* Alias
WAS-Root-Cert.arm

* File name
/opt/IBM/WAS-Root-Cert.arm

Data type
Base64-encoded ASCII data

[Apply](#) [OK](#) [Reset](#) [Cancel](#)

Figure 140. Adding a signer certificate to a key store

___ 13. Select **Save** to save changes. The Cert should be saved.

___ 14. Go back to **Web server > webserver1 > Plug-in properties** and click **Copy to Web server key store directory**.

___ 15. Synch all the three nodes and restart the Web Server.

Change the HTTP / HTTPS URLs in LotusConnections-config.xml to your WebServer

The file

/opt/IBM/WebSphere/DeploymentManager/profiles/Dmgr01/config/cells/lccn61Cell01/LotusConnections-config/LotusConnections-config.xml has URLs and ports hardcoded and these need to be changed to your WebServer.

___ 1. For each service reference, they need to change to something like the following:

```
<!--serviceReference url_config_file="url-config-af-fish.xml" bootstrapHost="" bootstrapPort="" clusterName="Elog@water" enabled="true" person_card_service_name="person_card_service" person_card_service_url_path="/enline-af/aflog/personcard" serviceName="biage" xsi_enabled="true" -->
<!--http-->
  <!--hrefPathPrefix=/biage--></!--hrefPathPrefix-->
  <!--static host="Http://lccn61.ibm.com" xsi_host="Http://lccn61.ibm.com"/-->
  <!--static service host="Http://lccn61.ibm.com"/-->
</!--http-->
</!--serviceReference-->
```

Figure 141. Changing URLs and ports to the WebServer

___ 2. When done, make sure to synch the change to three nodes and restart your servers.

