| | • • ® |
|--|-------|
| | |

IBM Connections 4 Public Deployment Scenarios

Deployment Scenarios ERC 1.0



Trademarks

IBM® and the IBM logo are registered trademarks of International Business Machines Corporation.

The following are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide:

| AIX® | Cognos® | DB™ |
|-------------------------|--------------|-----------|
| DB2 Universal Database™ | DB2® | Domino® |
| Lotus® | LotusScript® | Notes® |
| Power® | Quickr® | Rational® |
| Sametime® | System z® | Tivoli® |
| WebSphere® | 400® | |

Intel and Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows and Windows NT are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java[™] and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Other product and service names might be trademarks of IBM or other companies.

January 2013 edition

The information contained in this document has not been submitted to any formal IBM test and is distributed on an "as is" basis without any warranty either express or implied. The use of this information or the implementation of any of these techniques is a customer responsibility and depends on the customer's ability to evaluate and integrate them into the customer's operational environment. While each item may have been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will result elsewhere. Customers attempting to adapt these techniques to their own environments do so at their own risk.

© Copyright International Business Machines Corporation 2013.

This document may not be reproduced in whole or in part without the prior written permission of IBM.

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

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

About the author



Zhen Yu Cai works on IBM Connections System Verification Test team. He is interested in system performance and security integration. Zhen Yu may be reached at caizheny@cn.ibm.com.

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 | 7.0.0.21 | RHEL 5.8 64 bit | 11.6 GiB | HW |
| | Manager / HTTP | | RHEL 5.8 (Tikanga) Kernel 2.6.18-308 | | |
| node1.company.com | Node1 | 7.0.0.21 | RHEL 5.8 64 bit | 11.6 GiB | HW |
| | | | RHEL 5.8 (Tikanga) Kernel 2.6.18-308 | | |
| node2.company.com | Node2 | 7.0.0.21 | RHEL 5.8 64 bit | 11.6 GiB | HW |
| | | | RHEL 5.8 (Tikanga) Kernel 2.6.18-308 | | |
| node3.company.com | Node3 | 7.0.0.21 | RHEL 5.8 64 bit | 11.6 GiB | HW |
| | | | RHEL 5.8 (Tikanga) Kernel 2.6.18-308 | | |
| oracle&tdi.company.com | RDBMS | Oracle 11g R2.0.3 | RHEL 5.8 64 bit | 11.6 GiB | HW |
| | Tivoli Directory Integrator | Tivoli Directory Integrator V7.1 fp5 | RHEL 5.8 (Tikanga) Kernel 2. Pre-installation prerequisite 6.18-308 | | |
| Idap_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



____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,wsize=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,wsize=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 6 5536 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.

| onfigure Security Update | 5 | | DATABASE 118 |
|--|--|---|--------------|
| Configure Security Bolance Described Schwarz Usaters Agen Comwarz Usaters ansaka Comwarz Continueutarion, Optione ansak Traje Traseutarion, Optione ansak Traje Traseutarion, Optione ansak Traje Traseutarion, Optione ansak Traje Traseutarion, Optione ansak Traje | Provide your email address to be and initials configuration manag Egult I spith to receive security upd My Oracle Support Pessword | informed of security issues, install the p er. <u>View Stalls</u> Easter for you if you use your My Orack address/username. ans: via My Oracle Support. | DATABASE II" |
| Bute | | 191 | pert > Canc |

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**.

| Download Software Updates Available Languages: Selected Languages: Installation Option Brazilian Portuguese English Product Languages Canadian French English Database Edition Catalan Croatian Installation Location Czech Image: Selected Languages Operating System Groups Database Edition Catalan Preceduitite Checks Egyptian Image: Selected Languages Summary English (United Kingdom) Image: Selected Languages Install Froduct Estonian Image: Selected Languages | valiable Languages: strabic lengali irazilian Portuguese lulgarian iradian French Catalan irostian izech Xanish Jutch igyptian ingish (United Kingdom) istonian innish rench ierman ireek | Languages: |
|---|---|------------|
| Installation Option Arabic English Grid Installation Options Brazilian Portuguese Bulgarian Product Languages Canadian French Catalan Database Edition Croatian Croatian Installation Location Creech Image: Comparison Operating System Groups Database Egyptian Summary English (United Kingdom) Image: Comparison Install Froduct Estionian Image: Comparison | Irabić English Irazilian Portuguese Ulgarian Zanadian French Zatalan Zroatlan Zeech Jutch Igyptian Inglish (United Kingdom) Istonian Innish rench Jernan Ireek Istonian | |
| Crid Installation Options Brazilian Portuguese Product Languages Bulgarian Canadian French Canadian French Database Edition Croatian Installation Location Creatian Operating System Groups Danish Prengulate Checks Egyptian Summary English (United Kingdom) Install Froduct Estonian | luigarian Canadian French Canadian French Catalan Croatian Creatia | |
| Product Languages Bulgarian Database Edition Catalan Installation Location Croatian Installation Location Creatian Operating System Groups Danish Prerequisite Checks Egyptian Summary English (United Kingdom) Install Froduct Estonian | lulgarian Canadian French Catalan Croatian Czech Danish Dutch (gyptian Inglish (United Kingdom) Stonian Innish rench Lerman Creek, | |
| Database Edition Catalan Installation Location Croatian Operating System Groups Danish Prereguistie Checks Egyptian Summary English (United Kingdom) Install Froduct Estonian | anadan French Stallan Croatlan Zeech Janish Jutch igyptian Inglish (United Kingdom) Stonian innish French Jerman Treek | |
| Installation Location Operating System Groups Danish Preregulste Checks Summary Install Product Estonian English (United Kingdom) | Croatian Creatian Danish Danish Mutch igyptian Inglish (United Kingdom) Istonian Innish rench ierman irrek | |
| Operating System Groups Danish Preregulate Checks Egyptian Summary English (United Kingdom) Install Product Finnish | 2ech Danish Junish Jungish (United Kingdom) Istonian Innish Irench Ierman Irekk | |
| Prerequipite Checks Dutch Egyptian Summary English (United Kingdom) Estonian Estonian | Dutch gyptian hglish (United Kingdom) istonian innish rench ierman ireek tebrew | |
| Summary English (United Kingdom) | gyptian Inglish (United Kingdom) Sistonian innish rench Jerman jreek | |
| Install Product Estonian Carl | Stonian innish irench Jerman ireek | |
| Finnish | innish Carench Jerman Jereek | |
| | rench Jerman Greek | |
| German | lreek Inbrew | |
| Creek | Sebrew | |
| Hebrew | | |
| Hungarian | fungarian | |
| | | |
| lcelandic | celandic | |
| | | |
| lcelandic | celandic | |
| Icelandic Indonesian | celandic donesian | |
| Icelandic Indonesian | celandic ndonesian | |
| Icelandic Indonesian | celandic ndonesian | |
| German Greek Hebrew Hungarian | fungarian | |

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.

| Summary | |
|--|--|
| Configure Security Updates Download Software Updates Installation Option Options Product Languages Database Edition Operating System Groups Precedulate Checks Summary Install Product Faugn | Oracle Database 11g Release 2 Installer Global settings Disk space: required 4.5 CB available 334.95 CB Source location: /opt/build/Oracle11R203/database/install/./stage/products.xml Database edition: Enterprise Edition (Install database software only) Oracle base: /opt/oracle Software location: /opt/oracle/product/11.2.0/dbhome_11 Privileged Operating System Groups: dba (OSDBA) |
| | |

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

____11. Wait until the installation completes.

Use dbca to create Oracle instance

___1. Start dbcaby 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.

| Database Configuration Aa | sistant, Step 1 of 12 : Operations | | 12 |
|---------------------------|---|---|----|
| | Select the operation that you want to perf | iorm: | |
| | Create a Database | | |
| | Configure Database Options | | |
| K | C Delete a Database | | |
| | C Manage Templates | | |
| | ASM configuration operations mus Management Configuration Assista | t be performed using Automatic Storage int (ASMCA) from Oracle Grid Infrastructure home. | |
| | | | |
| Cancel Help | | (≼ Back Next >) | |

Figure 14. Database Configuration Assistant: Selection operation

____4. In the Database templates screen, select the default and click Next.

| | Select | Template | Includes Datafiles |
|------------------------------|--------|---|--------------------|
| | 0 | General Purpose or Transaction Processing | Yes |
| | C | Custom Database | No |
| (Inclusion of the local data | C | Data Warehouse | Yes |
| Management . | | | 4 |
| | | | |

Figure 15. Database Configuration Assistant: Database templates

____5. In the Database Identification screen, input SID name and click **Next**.

| An Oracle database is un "name.domain". | iquely identified by a Global Database Name, typically of the form |
|---|---|
| Global Database Name: | LSCONN |
| A database is referenced any other instance on the | by at least one Oracle instance which is uniquely identified from s computer by an Oracle System Identifier (SID). |
| SID: | LSCONN |
| | * |
| | |

Figure 16. Database Configuration Assistant: Database Identification

____6. In the Management Options screen, use the default and click **Next**.

| | Enterprise Manager | Automatic Maintenance Tasks |
|---|--------------------------|---------------------------------|
| | Configure Enterprise Ma | inager |
| 1 | C Register with Grid Con | trol for centralized management |
| - | Management Service | No Agents Found |
| - | Configure Database C | ontrol for local management |
| - | Enable Daily Disk Ba | ckup to Recovery Area |
| | Backup Start Time: | 02 - 00 - 0 AM C PM |
| | 05 Username | |
| | 05 Password. | |
| | | |
| | | |
| | | <u>k</u> |
| | | • |
| - | | |
| | | |

Figure 17. Database Configuration Assistant: Management Options

____7. In the Database Credentials screen, use the Same Administrative Password for All Accounts and click **Next**.

| User Name | Password | Confirm Password |
|------------------|----------|------------------|
| 515 | | |
| SYSTEM | | |
| DBSNMP | | |
| SYSMAN | | |
| | | |
| Contirm Password | | |
| | | |

Figure 18. Database Configuration Assistant: Database Credentials

____8. In the Database File Locations screen, use the default file location and click **Next**.

| Storage Type: | File System | |
|----------------------------------|------------------------------|-------|
| Storage Locations: | | |
| 👘 🕷 Use Database File | Locations from Template | |
| O Use Common Loca | ation for All Database Files | |
| Database Files Loc | ation (| Brow |
| O Use Oracle-Manag | ged Files | |
| CERTERNER AND A | | |
| Database Area | | Brows |
| Distabase Area (Multiplex Redo L | ogs and Control Files) | Brow |

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.

| Sample Schemas | Custom Scripts | |
|---|--|------------------------|
| Sample Schemas by some demons your database: H Information Exch The tablespace v Specify whether o | illustrate the use of a layered approach to complexity, and are stration programs. Installing this will give you the following scher tuman Resources, Order Entry, Online Catalog, Product Media, ange, Sales History. It will also create a tablespace called EXAM will be about 130 MB. or not to add the Sample Schemas to your database. mas | used nas ir PLE. |
| | | |

Figure 21. Database Configuration Assistant: Database Content

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

| Memory | Sizing | Character Sets | Connection Mode | | |
|---|-------------------------------|--|--|-------|--|
| - Database Character Se | 1 | | | | |
| C Use the default | | | | | |
| The default character set for this database is based on the language setting of this operating system: WEBMSWIN1252. | | | | | |
| see Unicode (AL32UTF8) | | | | | |
| Setting character set groups. | to Unicode | (AL32UTF8) enables | you to store multiple langua | 7e | |
| C Choose from the list | of character | sets | | | |
| Database Character | Set: AL3 | 2UTF8 - Unicode U | FF-B Universal character set | - | |
| | | | | | |
| | IT SP | ow recommended c | haracter sets only | | |
| National Character Set: | AL16UT | ow recommended o | haracter sets only 16 Universal character set | | |
| National Character Set: Default Language: | AL16UT | ow recommended c F16 - Unicode UTF- n | haracter sets only 16 Universal character set | • | |
| National Character Set: Default Language: Default Territory: | AL16UT America United S | ow recommended c F16 - Unicode UTF- n tates | haracter sets only 16 Universal character set | • • • | |

Figure 22. Database Configuration Assistant: Initialization Parameters

____12. The Database Storage screen is displayed. Click Next.

| - Controlfile - Datafiles - Redo Log Groups | Database Storage From the Database Storage page, you can specify storage parameters for database creation. This page displays a tree listing and summary view (multi-column lists) to enable you to change and view the following objects: • Control files • Tablespaces • Database Storage page. • Control files • Tablespaces • Datables • Rollback Segments • Redo Log Groups From any object type folder, click Create to create a new object. To delete an object select the specific object from within the object type folder and click Delete. Important: If you select a database template including data files, then you will not be able to add or remove data files, tablespaces, or rollback segments. Selecting this type of template enables you to change the following: • Destination of the datafiles • Control files or log groups. For more information, refer to the Oracle Database Storage Administrator's Guide. |
|---|--|
| Create Defete | File Location Variable |

Figure 23. Database Configuration Assistant: Database Storage

____13. In the Creation Options screens, use the default option and click **Next**.

| _ □Save as a | Database Template | |
|--------------------------------------|--|-----------|
| Name: Description: | LSCONN2 | |
| Generate Destination Directory | Database Creation Scripts /opt/oracle/admin/LSCONN2/scripts |] (Browse |
| | | |

Figure 24. Database Configuration Assistant: Creation Options

____14. Review the summary, and then click **OK**.

| | | | Exercise 1 | | |
|--------------------|---------------------------|-----------------------------------|------------|---------|--|
| (OD LC) | E DACE (and de | Name | Tablespace | Size(M) | |
| URALL | E_BASE}/orada | ta/(DB_UNIQUE_NAME)/system01.dbf | STATEM | /00 | |
| {ORACL | E_BASE}/orada | ta/{DB_UNIQUE_NAME}/sysaux01.dbf | SYSAUX | 490 | |
| {ORACL | E_BASE}/orada | ta/{DB_UNIQUE_NAME}/undotbs01.dbf | UNDOTBS1 | 25 | |
| {ORACL | E_BASE)/orada | ta/{DB_UNIQUE_NAME}/users01.dbf | USERS | 5 | |
| {ORACL | E_BASE}/orada | ta/{DB_UNIQUE_NAME}/temp01.dbf | TEMP | 20 | |
| /upt/u | Log Groups | | 2.00 | | |
| Redo | | | | | |
| Group | Size(K) | | | | |
| Redo Group 1 | Size(k) 51200 | | | | |
| Group 1 2 | Size(k) 51200 51200 | | | | |

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



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

- Port: 389
- Bind user: cn=root / passw0rd
- Search base: I=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**.

| | Welcome to the IBM WebSphere Application Server Network Deployment installation wizard. |
|----------------------------------|---|
| WebSphere, <mark>software</mark> | This wizard installs IBM WebSphere Application Server Network Deployment Additional information can be found at the <u>Information Centers</u> and <u>Support</u> <u>sites for WebSphere and related products</u> homepage. |
| A | Click Next to continue. |
| | |
| X | |
| | |
| aliShield | |
| distilleru | |

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**.

| 🙆 IBM WebSphere A | pplication Server 7.0 | × |
|--------------------|--|---|
| WebSphere software | Installation Directory IBM WebSphere Application Server Network Deployment, Version 7.0 will be installed to the specified directory. Specify a different directory or click Browse to select a different install location. Product installation location: Locat/IBM /WebSphere /DeploymentManager | |
| | Browse | |
| InstallShield | < <u>Back Next > Cancel</u> | |

Figure 31. IBM WebSphere Application Server 7.0: Installation Directory

___6. Select Management and click Next.

| during installation. Although only one environment type can be chosen, additional profiles can be created after installation using the Profile Management Tool. Environments | |
|---|---|
| Environments | |
| Environments | |
| Cell (deployment manager and a managed node) | |
| Management | |
| Application server | - |
| Custom | |
| Secure proxy (configuration-only) | |
| None | |
| Description | |
| A management profile provides the server and services for managing multiple application server environments. The administrative agent manages application servers on the same machine. The Network Deployment edition also includes a deployment manager for tightly coupled management and a job manager for loosely coupled management of topologies distributed over multiple machines. | |
| | Management Application server Custom Secure proxy (configuration-only) None Description A management profile provides the server and services for managing multiple application server environments. The administrative agent manages application servers on the same machine. The Network Deployment edition also includes a deployment manager for tightly coupled management and a job manager for loosely coupled management of topologies distributed over multiple machines. |

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**.

| Er | hable Administrative Security |
|-----------|---|
| oftware a | hoose whether to enable administrative security. To enable security, becify a user name and password to log in to the administrative tools. The dministrative user is created in a repository within the Application Server. fter installation finishes, you can add more users, groups, or external epositories. |
| | Enable administrative security. |
| Us | er name: |
| W | asadmin |
| Pa | issword: |
| • | ***** |
| Co | onfirm password: |
| • | |
| St | ee the <u>Information Center</u> for more information about administrative ecurity. |
| | |
| | |
| | |

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

___9. Do not select Create a repository. Click **Next**.

| BM WebSphere A | Pplication Server 7.0 Repository for Centralized Installation Managers Choose whether to create a repository for centralized installation management. Deployment managers can access and install contents from this repository to other target locations. If created now, a copy of this installation package can be put in the repository. Use the WebSphere Installation Factory to create and populate a repository later. Create a repository for Centralized Installation Managers. |
|----------------|--|
| InstallShield | < Back Next > Cancel |

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

____10. Verify the permissions. Click **Next**.

| F. S | Installation Summary | ĥ |
|--|--|------|
| WebSphere, software | Review the summary for correctness. Click Back to change values on previous panels. Click Next to begin the installation. | |
| CHE . | Verify my permissions to perform the installation. | i He |
| | Verifying your permissions can help ensure that the installation can finish successfully. If you are sure you have proper permissions, then you can bypass this check and save time. | |
| | The following product will be installed: | |
| X | IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer | |
| | The following features will be installed: | |
| | Core product files | |
| and a second | Total size | - |

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.

| ¥ . | Installing con | nponent: prereq.jython | | |
|------------------|----------------|------------------------|--------|--------|
| WebSphere, softw | vare | 583 | | |
| | | | | |
| X | | | | |
| | | | | |
| istallShield | | | | |
| | | < Back | Next > | Cancel |

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



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**.

| BM WebSphere | Application Server 7.0 | × |
|--------------------------------|---|---|
| 144 | Software License Agreement | |
| | Please read the following license agreement carefully. | |
| A MAN CALIFORNIA IN CALIFORNIA | International Program License Agreement | • |
| New Software | Part 1 - General Terms | 1 |
| | BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, OR USING THE PROGRAM YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF ANOTHER PERSON OR A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND THAT PERSON, COMPANY, OR LEGAL ENTITY TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS, | |
| | - DO NOT DOWNLOAD INSTALL COPY ACCESS OR LISE THE PROGRAM | • |
| | Read non-IBM terms | |
| | I accept both the IBM and the non-IBM terms | |
| | I do not accept the terms in the license agreement Print | |
| InstallShield | | |
| | < Back Next > Cancel | |
| | | |

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

____3. Click **Next** in the System Prerequisites Check screen.

| | System Prerequisites Check |
|---------------------|---|
| WebSphere, software | Passed: Your operating system completed the prerequisites check successfully. |
| | Your operating system meets or exceeds the requirements for this product. See the <u>WebSphere Application Server detailed system</u> requirements Web pages for more information about supported operating systems. Go to the <u>product support</u> Web pages to obtain the latest maintenance packages to apply after installation. |
| | The installation wizard also checks for existing installations of WebSphere Application Server. To have more than one installation of WebSphere Application Server running on the same machine, unique port values must be assigned to each installation. Otherwise, only one installation of WebSphere Application Server can run. |
| | Installations of WebSphere Application Server prior to Version 6.1 may not be found reliably. |
| | Installations of WebSphere Application Server that are not |

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.

| ere Application Server Netwo detected an existing installation work Deployment. You can add new copy or create a new profi ady installed on your computer. | n of IBM WebSphere new features to an le that runs from the |
|--|---|
| WebSphere Application Server | Network Deployment |
| Settin Automitica and Color | Rrnwse |
| | |
| | |
| | ere Application Server Netwo detected an existing installatio work Deployment. You can add new copy or create a new profi ady installed on your computer. WebSphere Application Server DeploymentManager/ |

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**.

| | Optional Features Installation | |
|---------------------|--|---|
| NebSphere, software | Select IBM WebSphere Application Server Network Deployment features to install. See the InstallGuide_en.html file in the docs directory for detailed descriptions of the optional features. | |
| A TON | Install the Sample applications. | |
| | The Samples include both source code files and integrated enterprise applications that demonstrate some of the latest Java (TM) Platform, Enterprise Edition (Java EE) and WebSphere technologies. The samples are recommended for installation to learning and demonstration environments, such as development environments. However, they are not recommended for installation to production application server environments. | 1 |
| VIII | Install non-English language packages for the administrative console. | |
| | In addition to installing the English language files, you can also install all the non-English language files needed for using the administrative console from machines with non-English locales. | |
| أتداخت لتتأليه لأ | The station is a first the tensor of a state | |

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

____6. Change the default installation path if needed and click **Next**.

| H | Installation Directory IBM WebSphere Application Server Network Deployment | nt. Version 7.0 will be | |
|--|--|-------------------------|--|
| ive. (| installed to the specified directory. | | |
| WebSphere, software | Specify a different directory or click Browse to select a different install location. | | |
| States | Product installation location: | | |
| PE | /opt/IBM/WebSphere/AppServer | | |
| | | Browse | |
| Contraction in the second | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| nstallShield | 5-1. | | |
| in the second se | | | |
| | < Back Next > | Cancel | |

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**.

| Enable Administrative Security |
|--|
| Choose whether to enable administrative security. To enable security, specify a user name and password to log in to the administrative tools. The administrative user is created in a repository within the Application Server. After installation finishes, you can add more users, groups, or external repositories. |
| Enable administrative security. |
| User name: |
| wasadmin |
| Password: |
| ••••• |
| Confirm password: |
| ****** |
| See the Information Center for more information about administrative security. |
| |
| |
| |

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

____9. Verify the permissions. Click **Next**.

| WebSitter software Review the summary for correctness. Click Back to change values on previous panels. Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installation. Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: Image: Click Next to begin the installed: < | | Installation Summary |
|--|-----------------------------------|--|
| Verify my permissions to perform the installation. Verifying your permissions can help ensure that the installation can finish successfully. If you are sure you have proper permissions, then you can bypass this check and save time. The following product will be installed: IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer The following features will be installed: Core product files Total size: | webS <mark>phere,</mark> software | Review the summary for correctness. Click Back to change values on previous panels. Click Next to begin the installation. |
| Verifying your permissions can help ensure that the installation can finish successfully. If you are sure you have proper permissions, then you can bypass this check and save time. The following product will be installed: IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer The following features will be installed: Core product files | | Verify my permissions to perform the installation. |
| The following product will be installed: • IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer The following features will be installed: • Core product files Total size: | | Verifying your permissions can help ensure that the installation can finish successfully. If you are sure you have proper permissions, then you can bypass this check and save time. |
| IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer The following features will be installed: Core product files Total size: | | The following product will be installed: |
| The following features will be installed: Core product files Total size: | X | IBM WebSphere Application Server Network Deployment Product installation location: /opt/IBM/WebSphere/AppServer |
| Core product files Total size: | | The following features will be installed: |
| Total size | | Core product files |
| Total Sec. | | Total size: |

Figure 48. IBM WebSphere Application Server 7.0: Installation Summary

____10. You have sufficient permissions for the installation. Click Next.

| 和 | Installation Summary |
|--------------------|---|
| WebSphere. softwar | e Success: You have sufficient permissions to perform the installation. |
| A | Review the summary for correctness. Click Back to change values on previous panels. Click Next to begin the installation. |
| | The following product will be installed: • IBM WebSphere Application Server Network Deployment |
| X | Product installation location: /opt/IBM/WebSphere/AppServer The following features will be installed: Core product files |
| | Total size: • 1170 MB |
| InstallShield | |

Figure 49. IBM WebSphere Application Server 7.0: Installation Summary

The component starts to install.

| 🙆 IBM WebSphere A | pplication Server 7.0 | _ D X |
|--------------------|-------------------------------------|----------------------|
| 】 | Installing component: prereq.jython | |
| WebSphere software | 5.83 | |
| InstallShield | | |
| | < <u>B</u> ack | Next > <u>Cancel</u> |

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.

| 🙆 IBM HTTP Server | 7.0 |
|--------------------|---|
| WebSphere software | Welcome to IBM HTTP Server 7.0 This wizard installs IBM HTTP Server 7.0 on your computer. See the IBM HTTP Server 7.0 Installation Guide to learn more about this installation. Click Next to continue. |
| InstallShield | < Back Next > Cancel |

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.

| | System Prerequisites Check |
|--------------------|---|
| ebSphere, software | Passed: Your operating system completed the prerequisites check successfully. |
| | Your operating system meets or exceeds the requirements for this product See the <u>WebSphere Application Server detailed system requirements</u> Web pages for more information about supported operating systems. Go to the <u>product support</u> Web pages to obtain the latest maintenance packages to apply after installation. Click Next to continue the installation. |
| | |
| allShield | |

Figure 54. IBM HTTP Server 7.0: System Prerequisites Check

____4. Change the default installation path if needed and click **Next**.

| 🙆 IBM HTTP Server 7 | /.0 | _ C X |
|---------------------|---------------------------------|----------------|
| | Enter the installation location | |
| WebSphere software | I/opt/IRM/HTTPServer | Browse |
| InstallShield | < <u>Back</u> Next > | <u>C</u> ancel |

Figure 55. IBM HTTP Server 7.0: Installation Directory

____5. In the Port Values Assignment screen, use the default values and click Next.

| BM HTTP Server 7 | | _ = × |
|---------------------|--|--|
| WebSphere, software | Port Values Assignment IBM HTTP Server communi- ports are already in use by change the port numbers f | cates using the port numbers listed below. If these / IBM HTTP Server or another application, then rom their default values. |
| | HTTP Port: | 80 |
| Stin | HTTP Administration Port: | 8008 |
| | | |
| InstallShield | | |
| | 1 | < Back Next > Cancel |

Figure 56. IBM HTTP Server 7.0: Port Values Assignment

____6. Enter admin user name and password and click **Next**.

| | HTTP Administration Server Authentication |
|--------------------|--|
| VebSchere software | Create a user ID and password to authenticate to the IBM HTTP Server administration server using the WebSphere Application Server administrative console. The newly-created user ID and password is encrypted and stored in the conf/admin.passwd file. You can create additional user IDs after the installation by using the htpasswd utility. |
| PSTT | Create a user ID for IBM HTTP Server administration server authenticati |
| TREE | User ID: |
| PAT | ihsadmin |
| | Password: |
| | ****** |
| | Confirm Password: |
| VI | •••••• |
| | |
| | |
| | |
| | |
| | |
| tallShield | |

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

___7. Specify admin group user name and password and click Next.



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.

| 🙆 IBM HTTP Server | 7.0 | I X |
|--------------------|--------------------------------------|-----|
| K. | Initializing component: prereq.ihs | |
| WebSphere software | 28% | |
| InstallShield - | < <u>R</u> ack <u>N</u> ext > ⊆ancel | |

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**.

| WebSphere, software | Installation Wizard for the Update Installer Welcome to the Installation Wizard for the IBM Update Installer for WebSphere Software. Additional information can be found at the <u>Information Centers and</u> Support sites for WebSphere and related products home page. |
|---------------------|---|
| | Click Next to continue. |
| stallShield | Back Next > Cancel |

Figure 63. Update Installer 7.0.0.11: Welcome

____2. Accept the license agreement and click **Next**.

| | Software License Agreement | |
|----------------|--|---|
| gn in i | Please read the following license agreement carefully. | |
| ebSohere softw | International Program License Agreement | • |
| an | Part 1 - General Terms | F |
| | BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, OR USING THE PROGRAM YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF ANOTHER PERSON OR A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND THAT PERSON, COMPANY, OR LEGAL ENTITY TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS, - DO NOT DOWNLOAD, INSTALL, COPY, ACCESS, OR USE THE PROGRAM; AND | |
| X | Read non-IBM terms | |
| | I accent both the IBN and the non-IBM terms | |
| | - Si accept both the long and the non-low terms | |
| | I do not accept the terms in the license agreement Print | |
| IShield | I do not accept the terms in the license agreement Print | |

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**.

| | Installation Directory | |
|---------------------|---|---------------------|
| VebSphere, software | IBM Update Installer for Websphere Software, Version 7 installed to the specified directory. | .0.0.11 will be |
| | You can specify a different directory or click Browse to | select a directory. |
| Stere | Directory path: | |
| Pat | /opt/IBM/WebSphere/UpdateInstaller | |
| | | Browse |
| N | | |
| | 1 | |

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.

| | Installation Summary |
|------------------|---|
| bSphere, softwar | Review the summary for correctness. Click Back to change the values on previous panels. Click Next to begin the installation. |
| 1 | The following product will be installed: |
| A | IBM Update Installer for WebSphere Software Path: /opt/IBM/WebSphere/UpdateInstaller |
| Hi- | for a total size: |
| | • 330 MB |
| | k l |
| Shield | l |
| | |

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**.

| <mark>bSphere,</mark> software | Product Selection Enter the installation location of the product that You can select a different directory from the drop different directory, or click Browse to select a di | you want to update. o-down list, specify a rectory. |
|--------------------------------|--|---|
| Bitt | /opt/IBM/WebSphere/AppServer | |
| | | Browse |
| llShield | L | |

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.

| Available Maintena Select maintenance | ance Packa backages to | ige to Install | |
|---|---------------------------|--------------------------|--|
| Select Recommend | ed Updates | Deselect All Updates | |
| 7.0.0.7-WS-WAS-I | FPM62615.pa | ak | |
| 7.0.0.21-WS-WAS | IFPM51981.p | pak Installed | |
| 7.0.0.21-WS-WAS | IEPM56596.p | bak - Installed | |
| 7.0.0.1-ws-was-ifp | m60895.pak | - Installed | |
| 7.0.0.19-WS-WAS | IFPM53930.p | oak - Installed | |
| 7.0.0.21-WS-WAS | IFPM65486.p | oak - Installed | |
| Each package selecti available for further s | on might res election. | trict remaining packages | |
| | | | |

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.

| Security Configuration Wizard | Security Configuration Report | |
|---|--|---|
| Admin Launches a wizard to configure t | he basic security settings. | Authentication |
| Enable administrative security | Administrative user roles Administrative erose roles Administrative exthentication | Authentication mechanisms and expiration LTPA Kerberos and LTPA Kerberos |
| Application security | | Authentication cache settings |
| Enable application security | | Web and SIP security RMI/IIOP security |
| lava 2 security | | Java Authentication and Authorization Service |
| Use Java 2 security to restrict ap Ø Warn if applications are gran | plication access to local resources | Use realm-gualified user names |
| Restrict access to resource a | othentication data | * Security domains |
| Juer account repository | | Esternal authorization providers |
| Current realm definition Federated repositories | | · Gustemacconting |
| Available realm definitions | 1000 1000 000 000 | |
| Federated repositories | Configure Set as current | |

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.

| Dat security > web | ecurity - General settings |
|-------------------------|---|
| ecifies the settings fo | r Web authentication. |
| eral Properties | |
| Web authentication bel | avior |
| Authenticate only | when the URI is protected |
| 🔽 Use availab | le authentication data when an unprotected URI is accessed |
| O Authenticate whe | n any URI is accessed |
| | thentication when cartificate authentication for the HTTDS client fails |

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.

| <u>Global security</u> > Single sign-on (SSO) |
|--|
| Specifies the configuration values for single sign-on. |
| General Properties |
| 🗹 Enabled |
| Requires SSL |
| Domain name |
| <domain name=""></domain> |
| 🗹 Interoperability Mode |
| Web inbound security attribute propagation |
| Apply OK Reset Cancel |

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...

| Add Base entry to Realm Use built-in rep | sitory Remove | | |
|---|------------------------|-----------------|--|
| Select Base Entry | Repository Identifier | Repository Type | |
| You can administer the following resources: | | | |
| m o=defaultWIMFileBasedRealm | InternalFileRepository | File | |

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 |
| Distinguished name of a base entry in this repository |
| Apply OK Reset Cancel |

Figure 78. Adding Repository

____5. Enter the Repository identifier, primary host name, bind distinguished name, bind password, and login properties.

| ral Properties | | |
|----------------------------------|----------------------|--|
| epository identifier | | |
| loodlyrn366 | | |
| DAP server | | Security |
| Directory type | | Bind distinguished name |
| IBM Tivoli Directory Server | I | en=reot |
| | | Bind password |
| Primary host name | 289 | |
| Contractly reserves in a | Leves. | Login properties |
| Failover server used when prim | ary is not available | ei uid |
| Delete | | LDAP attribute for Kerberos principal name |
| Select Failover Host Name | Port | krbPrindpalName |
| None | | Certificate mapping |
| | S | EXACT_DN |
| Add | | Certificate filter |
| | | |
| Support referrals to other I DAS | CARGARY | |
| ignore | servers | |
| - Color | | Require SSL communications |
| | | |
| | | Centrally managed |
| | | Manage endpoint security configurations |
| | | |

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).

| Distinguished name of a base entry that uniquely identifies this set of entries in the re l=SharedLDAP,c=US,ou=Lotus Distinguished name of a base entry in this repository | Distinguished name of a base entry that uniquely identifies this set of entries in the realr ISharedLDAP,c=US,ou=Lotus Distinguished name of a base entry in this repository I=SharedLDAP,c=US,ou=Lotus |
|--|--|
| Distinguished name of a base entry in this repository | Distinguished name of a base entry in this repository I=SharedLDAP,c=US,ou=Lotus |
| | I=SharedLDAP,c=US,ou=Lotus |
| I=SharedLDAP,c=US,ou=Lotus | |

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.



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.

| IBM. | Welcome to the InstallShield Wizard for IBM Tivoli Directory Integrator v7.0 |
|-----------|--|
| | The InstallShield Wizard will install IBM Tivoli Directory Integrator v7.0 on your computer. To continue, choose Next. |
| | Ibm Hvon Directory integrator v7.0 |
| | |
| | |
| allShield | 0 |
| | |

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**.

| IBM. | | | | |
|--------|-----------------------------------|-----------------------------------|--------------------------|--------------------|
| | Click next to so This may take | earch for previous IBM a while | Tivoli Directory Integra | tor installations. |
| | | | | |
| Shield | | | | |
| | 1 | - Beat | Alexa - | Consol |

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.

| IMPORTANT: READ CAREFULLY Two license agreements are presented below. 1. IBM International License Agreement for Evaluation of Programs 2. IBM International Program License Agreement If you are obtaining the Program for purposes of productive use (other than evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification. I do not accept the terms in the license agreement. I do not accept the terms in the license agreement. It do not acc | IBM. | Please read the following license agreement carefully. | |
|--|--|---|---|
| Two license agreements are presented below. I. IBM International License Agreement for Evaluation of Programs IBM International Program License Agreement If you are obtaining the Program for purposes of productive use (other than evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification. I accept the terms in the license agreement. I do not accept the terms in the license agreement. Print | 121-462209455 | IMPORTANT: READ CAREFULLY | |
| IBM International License Agreement for Evaluation of Programs IBM International Program License Agreement If you are obtaining the Program for purposes of productive use (other than evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification. I accept the terms in the license agreement. I do not accept the terms in the license agreement. StaliShield | 2 | Two license agreements are presented below. | |
| If you are obtaining the Program for purposes of productive use (other than evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification. I accept the terms in the license agreement. I do not accept the terms in the license agreement. Print stallShield | | 1. IBM International License Agreement for Evaluation of Programs 2. IBM International Program License Agreement | |
| I accept the terms in the license agreement. I do not accept the terms in the license agreement. Print stallShield | | If you are obtaining the Program for purposes of productive use (other tha evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification. | n |
| I do not accept the terms in the license agreement. Print stallShield | | I accept the terms in the license agreement. | |
| Print | and the second s | | |
| stallShield | | I do not accept the terms in the license agreement. | |
| stalShield | | I do not accept the terms in the license agreement. Print | |
| | | I do not accept the terms in the license agreement. Print | _ |

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.

| IBM. | Click Next to install "IBM Tivoli Directory Integrator v7.0" to Browse to install to a different directory. | o this directory, or clid |
|-----------------------|--|---------------------------|
| | Directory Name: | |
| | /opt/IBM/TDI/V7.0 | |
| and the second second | | Browse |
| | | |
| | | |
| 1 | | |
| | | |
| allShield | | |

Figure 86. IBM Tivoli Directory Integrator 7.0: Directory location

____8. Choose the **typical** installation type and click **Next** to continue.

| 🕻 IBM Tivoli Direc | tory Integrator v7.0 |
|--------------------|--|
| IBM. | Choose the installation type that best suits your needs. |
| InstallShield | < Back Next > Cancel |

Figure 87. IBM Tivoli Directory Integrator 7.0: Installation type

____9. Select "Do no specify option: use current directory at startup time" and click **Next** to continue.

| • IBM. | You have the option of selecting a Solutions Directory. A Solutions D a static directory where the IBM Tivoli Directory Integrator Server an Configuration Editor look for your solutions. | irectory is id |
|-------------|--|-------------------|
| | Use a subdirectory named TDI under my home directory | |
| | Subsection Use Install Directory | |
| | Select a directory to use | |
| | | Browse |
| | Do not specify - use current working directory at startup time | |
| stallShield | | |
| | A Dark Maxt a | Concol |

Figure 88. IBM Tivoli Directory Integrator 7.0: Solutions directory

____10. Use the default ports and click **Next** to continue.

| IBM. | Enter the port values to be used | d by Integrated Solutions Co | nsole SE. |
|-------|----------------------------------|------------------------------|-----------|
| | HTTP port: | 13100 | |
| | HTTPS port: | 13101 | |
| | Action Manager API port: | 13104 | |
| hield | | | |

Figure 89. IBM Tivoli Directory Integrator 7.0: Port values

____11. Do not select the Register option. Click **Next** to continue.

| IBM. | You have the option of registering the Administration and Monitoring Console as a system service. |
|------------|---|
| | Register the Administration and Monitoring Console as a system service |
| | Service Name: |
| | |
| | |
| tallShield | |

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.

| 🐞 IBM Tivoli Direc | tory Integrator v7.0 | _ × |
|--------------------|--|-----|
| IBM. | Please read the summary information below. | |
| | IBM Tivoli Directory Integrator v7.0 will be installed in the following location: /opt/IBM/TDI/V7.0 | - |
| | with the following features: | |
| | Runtime Server Configuration Editor Javadocs (Product API reference) Examples (Example Configs) embedded web platform (includes Integrated Solutions Console SE) Administration and Monitoring Console | a. |
| | for a total size: | |
| | 387.3 MB | • |
| InstallShield | | |
| | < <u>B</u> ack Install Cancel | |
| | | |

Figure 91. IBM Tivoli Directory Integrator 7.0: Summary information

The installation begins.

| IBM. | Ny Integrator 7.0 | |
|-----------------------|--|--------|
| | Installing 1014 Timeli Disectory Internation 7.0 Disectory | |
| | /opt/IBM/TDI/V7.0/maintenance | wait |
| and the second second | 23% | |
| | * | |
| | | |
| stallShield | | |
| | | Cancel |

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.

| IBM. | Please read the summary information below. |
|-----------|--|
| | The InstallShield Wizard has successfully installed IBM Tivoli Directory Integrator v7.0. Choose Finish to exit the wizard. |
| | |
| | Start the Configuration Editor |
| allShield | |

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.



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.

Database task selection



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 i | nstance. | |
| O DB2 Universal Database (TM) | | | IBM. |
| Oracle Enterprise Edition | | | |
| Database installation location: | | | |
| /opt/oracle/product/11.2.0/dbhome | _1 | Bro | wse |
| Database instance: | | | |
| LSCONN | | | |
| | | | |
| | <u>B</u> ack | hext | |

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

| Select the applications for which you want to create databases. You cannot select applications that already have databases. Note: The Search and News repository applications are contained in the Home page database. | IBM. |
|---|--------|
| Cognos database is for Congos BI Server. You will need Cognos to use Metrics. | |
| Activities | |
| 🗹 Blogs | = |
| 🖸 Communities | 100 |
| 🗹 Bookmarks | |
| Profiles | |
| I Home page | |
| 🗹 Wikis | |
| 🗹 Files | |
| Forums | |
| Mabila | |
| | |
| Back | Cancel |

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

___5. Specify password for all applications. Then, click **Next**.

| Deciry the passwords | for the database user | 5. | | 781 |
|------------------------|--|--------------------|---------------------------------------|------|
| g use the sume passe | Password | Confirm password | | 1017 |
| | ••••• | | | |
| O Create different pas | swords for each appli Database username | cation Password | Confirm password | |
| Activities | OAUSER | 1 | | |
| Blogs | BLOGSUSER | 1 | i i i i i i i i i i i i i i i i i i i | |
| Communities | SNCOMMUSER | 1 | Î | 1 |
| Bookmarks | DOGEARUSER | 1 | Î T | |
| Profiles | PROFUSER |)í | i i i i i i i i i i i i i i i i i i i | |
| Home page | HOMEPAGEUSER | Ĩ. | li i | |
| Wikis | WIKISUSER | i. | i i | |

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

___6. Select Create in the summary screen. ç

Pre-configuration task summary

| IBM Connections is ready to create da | tabases for the following | g applications. | |
|---|---|----------------------------|----------------|
| Action: Create IBM Connections datab Database type: Oracle Enterprise Edit Database install location: /opt/oracle/ Database install location: /opt/oracle/ Database instance: LSCONN The selected applications are: Activiti Home page, Wikis, Files, Forums, Mob Activities Database name: LSCONN Database user: OAUSER Sql scripts to run: createDb.sql, appG Blogs Database name: LSCONN Database user: BLOGSUSER Sql scripts to run: createDb.sql, appG | pase ion product/11.2.0/dbhome_ es, Blogs, Communities, ile, Metrics, Cognos rants.sql | _1 Bookmarks, Profiles, | |
| Communities | | | - |
| Show the detailed database comma | inds. | | 0 |
| | Back | Create | <u>C</u> ancel |

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

___7. Finally, click **Execute** to create the databases.

Database creation detailed command

| Activities | | | - | I HE INT |
|--|------------------------|--|------|----------|
| 1. /opt/oracle/product/11.2.0/dbhome_1 | /bin/sqlplus -L / as s | ysdba @connections.se | ql/ | |
| activities/oracle/createDb.sql ***** | | | . 1 | |
| 2. /opt/oracle/product/11.2.0/dbhome_1/ activities/oracle/appGrants.sql ****** | /bin/sqlplus -L / as s | ysdba @connections.so | 41 | |
| Blogs | | | | |
| /opt/oracle/product/11.2.0/dbhome_1, blogs/oracle/createDb.sql ****** | /bin/sqlplus -L / as s | ysdba @connections.se | aV | |
| /opt/oracle/product/11.2.0/dbhome_1/ blogs/oracle/appGrants.sql ****** | /bin/sqlplus -L / as s | ysdba @connections.so | al/ | |
| Communities | | | | |
| 1. /opt/oracle/product/11.2.0/dbhome_1 | /bin/sqlplus -L / as s | ysdba @connections.se | qI/ | |
| 2 /opt/oracle/product/11.2.0/dbhome 1 | /hin/solplus -L / as s | vsdha@connections.sc | 1/ | |
| communities/oracle/appGrants.sql ****** | tentadibina ct da a | yadad @connections.at | 4. | |
| 3. /opt/oracle/product/11.2.0/dbhome_1 | /bin/sqlplus -L / as s | ysdba @connections.se | ql/ | |
| communities (oracle/calendar.createDb.co | | | 0 | |
| zave As | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | Contraction of the second seco | 1000 | |

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

Creation of databases starts.

Database creation task

| gging to /home/oracle/lcWizar Config 20120828 113143 acti | d/log/dbWizard/ vities_createDb.log. | TEM. |
|--|---|------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

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.

Post configuration task summary

| Action: Create IBM Connections database Database type: Oracle Enterprise Edition Database install location: /opt/oracle/product/11.2.0/dbhome_1 Database instance: LECOMM | LEM. |
|---|--------|
| The selected applications are: Activities, Blogs, Communities, Bookmarks, Profiles, Home page, Wikis, Files, Forums, Mobile, Metrics, Cognos | |
| Activities Database name: LSCONN | |
| Database user: OAUSER Sql scripts ran: createDb.sql, appGrants.sql Result: The database creation was successful. | |
| Blogs Database name: LSCONN Database user: BLOGSUSER Sql scripts ran: createDb.sql, appGrants.sql Result: The database creation was successful. | |
| C. | |
| | Convol |

Figure 102. Database wizard for IBM Connections 4.0: Post configuration task summary
Populate the Profiles database with LDAP user information



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.

| LDAP directory. | Profiles database for IBM Connections with users from your | IBM. |
|---|--|------|
| To access information ab | out this product, click the Launch Information Center. | |
| | Launch Information Center | |
| click Next to continue. | | |
| | | |
| | | |
| icensed Materials - Property of IBM | License L-JYUN-8VNPYJ | |
| BCopyright IBM Corporation and its trademarks of IBM Corporation in the trademarks or service marks of othe | lcensors 2007, 2012. All Rights Reserved. IBM, the IBM logo, ibm com and Lotus are e United States, other countries, or both. Other company, product or service names may be ers. A current list of IBM trademarks is available on the Web at www.ibm convilegal | |

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

____2. Select your database back end. Click **Next** to continue.

| Select the Profiles database type. | | TDM |
|------------------------------------|--|-----|
| O DB2 Universal Database(TM) | | |
| Oracle Enterprise Edition | | |
| O SQL Server Enterprise Edition | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

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.

| Enter the Profiles database properties. The wizard uses th Profiles database. Host name: | is information to acc | ess the | IBM. |
|---|-----------------------|---------|------|
| <host name=""></host> | | | |
| Port: | | | |
| 1521 | | | |
| Database name: | | | |
| LSCONN | | | |
| JDBC driver library path: | | | |
| /opt/oracle/product/11.2.0/dbhome_1/jdbc/lib | | Browse | |
| User ID (Account used to write to database): | | | |
| PROFUSER | | | |
| Password: | | | |
| | | 3 | |
| Landal and the second | | | |
| | | | |
| | Back | Cancel | Next |

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 | conne | ction |
|------|--------|-------|-------|
| | | | |

| Specify the LDAP host name and port to enable the Profiles popula to the LDAP server. | ation wizard to o | connect | IBM. |
|--|-------------------|----------------|------|
| <ldap name="" server=""></ldap> | | | |
| LDAP server port: | | | |
| 389 | | | |
| Use SSL communication | | | |
| | <u>B</u> ack | <u>C</u> ancel | Next |

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

___5. Input Bind DN and password. Click **Next** to continue.

LDAP authentication properties

| Enter the bind distinguished name and password to to allow the wiza directory. Bind distinguished name (DN): | ard to access | the LDAP | IBM. |
|--|---------------|----------|------|
| cn=root | | | |
| Bind password: | | | |
| ······ | | | |
| | | | |
| | <u>B</u> ack | Cancel | Next |

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.

Base distinguished name and filter for searches

| Enter the base distinguished name and filter for this wizard to begin sea the LDAP directory tree. | rching for user | s in | IBM. |
|---|-----------------|-------|------|
| LDAP user search base: | | | |
| DC=IBM,DC=COM | | - | |
| LDAP user search filter: | | | |
| (&(uid=*)(objectclass=inetOrgPerson)) | | | |
| | | | |
| | ≩ack <u>C</u> | ancel | Next |

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

| Database Fields | LDAP Attributes or JS Functions | Description | 8 | |
|-------------------|---------------------------------|-------------------------|---|--|
| alternateLastname | | Alternate last name | - | |
| bldgld | | 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 | | |

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

|] Countries | | 1 |
|---|--------|---|
| /opt/build/IC4/Wizards/TDIPopulation/linux/TDI/isocc.csv | Browse | |
|] Departments | | |
| /opt/build/IC4/Wizards/TDIPopulation/linux/TDI/deptinfo.csv | Browse | |
|] Organizations | | |
| /opt/build/iC4/Wizards/TDIPopulation/linux/TDI/orginfo.csv | Browse | |
| Employee types | | |
| /opt/build/iC4/Wizards/TDIPopulation/linux/TDI/emptype.csv | Browse | |
| Work locations | | |
| /opt/build/IC4/Wizards/TDIPopulation/linux/TDI/workloc.csv | Browse | |

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.

Profiles population configuration summary

| Profile population wizard is ready to run the population with the follow configuration. | ring | Ê | IBM. |
|---|--------------|--------|-----------|
| Configuration details: Database host name: <database host="" name=""> Database name: LSCONN Database port: 1521 JDBC driver library path: /opt/oracle/product/11.2.0/dbhome_1/jdbc/li</database> | ib | E | |
| Database user ID: PROFUSER Database type: Oracle Enterprise Edition LDAP host name: wplccdlvm366.cn.ibm.com LDAP server port: 389 Bind distinguished name: cn=root LDAP user search base: DC=IBM,DC=COM LDAP user search filter: (&(uid=*)(objectclass=inetOrgPerson))] Tivoli Directory Integrator installation location: /opt/IBM/TDI/V7.1 Use SSL communication: No | | | |
| Optional task list: Mark managers | <u>B</u> ack | Cancel | Configure |

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**.

| select a location for the shared | d resources directory and a location for Installation Manager. | 7 |
|---|--|---|
| Install 🔵 Licenses 🔵 | Location Features Summary | |
| When you install packa 1) The shared resource 2) The installation direc Important: You can only Manager. For best resu shared resources of ful | iges, files are stored in two locations: es directory - resources that can be shared by multiple packages. ctory - any resources that are unique to the package that you are install y select the shared resources directory the first time you install a pack. lits select the drive with the most available space because it must have ture packages. | ng. ge with the IBM Installation adequate space for the |
| hared <u>R</u> esources Directory: | /opt/IBM/SSPShared | Browse |
| | tallation Mananar will be used to install undate modify manane and up | |
| Once installed, IBM Ins | canaudit monayer will be used to install, update, mouley, monaye and u | install your packages. |
| Once installed, IBM Ins | /opt/IBM/InstallationManager/eclipse | Browse |
| Once installed, IBM Ins | /opt/IBM/InstallationManager/eclipse | Browse |
| Once installed, IBM Ins stallation Manager Directory: isk Space Information /olume Available Space | /opt/IBM/InstallationManager/eclipse | Browse |
| Once installed, IBM Ins stallation Manager Directory: isk Space Information /olume Available Space 348.64 GB | /opt/IBM/InstallationManager/eclipse | Browse |
| Once installed, IBM Ins stallation Manager Directory: isk Space Information /olume Available Space 348.64 GB | /opt/IBM/InstallationManager/eclipse | Browse |

Figure 117. IBM Connections 4.0.0 installation wizard: installation location

____6. Select the location for IBM Connections and click Next.

| A package group is a lo | cation that contains one or mo | re packages. Some compatible | package | s can be installed into | a |
|---------------------------------|---|------------------------------------|---------------------------|--|--|
| common package grou | up and will share a common use | er interface. Select an existing (| package | group, or create a new o | one. |
| install License | es Location Featur | es Summary | | | |
| ○ Use the existing par | ckage group | | | | |
| <u>Create a new packa</u> | ge group | | | | |
| Package Group Name | | Installation Directory | | Arc | hitecture |
| IBM® Connection | rs 1 | /opt/IBM/Connections | | 20000 | and a state of the |
| | The second | | | | DIOMSC |
| | 6-14-14 | | | | blowse |
| Details | | Dis | k Space | Information | Diomse |
| Details Shared Resources Dir | ectory: /opt/IBM/SSPShared | Dis Ve | k Space blume 4 | Information wailable Space | Biowse |
| Details Shared Resources Dir | ectory: /opt/IBM/SSPShared | Dis Ve / | k Space blume / | Information Wailable Space 143,25 GB | Blowse |
| Details Shared Resources Dir | ectory: /opt/IBM/SSPShared | Dis Ve / | k Space Dlume / | Information wailable Space 143.25 GB | Blowse |

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

____7. Select the features to install and click **Next**.

| marcan r e | ckages | | | | | | | |
|---|------------------------------|---------------|-----------|-------|---------|------------|--------------|------------------|
| Select the | features to install. | | | | | | | 7 |
| install | Licenses Locatio | n Feat | ures Sur | mary | | | | |
| Features | | | | | | | | P |
| E 🗊 161 | 40 Installation Manager 1.4 | 4 | | | | | | |
| 🗢 🗄 🚺 IBI | 4 Connections 4.0.0.0 | | | | | | | |
| * 2 S | Core Features | | | | | | | |
| H2 | Search | | | | | | | - |
| 123 | News repository | | | | | | | |
| E | Home page | | | | | | | |
| VB Co | All Features | | | | | | | |
| E | Activities | | | | | | | - |
| 63 | Blogs | | | | | | | |
| 80 | Communities | | | | | | | |
| 63 | Bookmarks | | | | | | | |
| | Files | | | | | | | |
| 111223 (1916) | nendencies | | | | 1 | Expand All | Collapse All | Bestore Default |
| Show de | PLC HARDING IN TO B | | endencies | | | | | (-) |
| Show de Selecte | d by Installation Manager be | ecause or dep | | | | | | |
| Show de Selecte Details | d by Installation Manager b | ecause or dep | | | | | | |
| Show de Selecte Details Matrice | d by Installation Manager b | ecause or dep | | | | | | |
| Show de Selecte Details Metrics Metrics Metrics Metrics | d by Installation Manager b | ecause or dep | | | | | | |
| Show de Selecte Details Metrics Metrics | d by Installation Manager b | ecause or dep | | | | | | |
| Show de Selecte Cetails Metrics Metrics | d by Installation Manager b | ecanze or det | | | | | | |
| Show de Solecte Solecte Metrics Metrics Disk Space | d by Installation Manager b | ecause or dep | | | | | | |
| Show de Solution Sol | e Information Volume | Required | Temporary | Total | Availat | ble | | |

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

____8. Specify the WebSphere Application Server configuration and then click **Validate**.

| 10151.001 | In a shire a france france and frances | |
|-------------------------------------|--|---|
| Common Configurations WebSohere | Common Configurations WebSphere | |
| O Topology O Database | WebSphere Application Server Selection Installation location: | + |
| O Notification | /opt/IBM/WebSphere/AppServer Browse | |
| - Hoursdoon | Deployment manager profile: | |
| | Dmgr01 ¢ | |
| | Host name: | |
| | (Hostpame) | |
| | anoschamer | |
| | Deployment Manager Credentials | 1 |
| | These credentials must exist for the selected Profile. Administrator user ID: | |
| | Abalo 000 001 | |
| | Administrator password: | |
| | •••••• | |
| | SOAP port number: | |
| | 8879 | |
| | Validate | - |
| | Validate credentials before proceeding | |
| | 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**.

| CLFRP0042E: The file des | criptors (ulimit) is lower than 8192. If the value set for this parameter is too low, a file open error, 🛛 🎽 |
|---|---|
| memory allocation failure properly. | , or connection establishment error may occur. Please refer to the infocenter to set the value |
| Install (Licenses) | Location Features Summary |
| Common Configuration WebSphere | s Common Configurations WebSphere |
| O Topology O Database | WebSphere Application Server Selection |
| O Content Store | Installation location: |
| O Notification | internation page |
| (| Validation successful. |
| | OK |
| | OK Deployment Manager Credentials These credentials must exist for the selected Profile. |
| | OK |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Interference |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Interference Administrator password: |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Interference Administrator password: |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Introductorop Administrator password: SOAP port number: |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Mathematical Control Administrator password: •••••••••••••••••••••••••••••••••••• |
| | Validation successful. OK Deployment Manager Credentials These credentials must exist for the selected Profile. Administrator user ID: Mation Color Administrator password: |

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.

| Install) Licenses) | Location Features Summar | x DO | |
|--|---|---|----------------------|
| Common Configurations WebSphere Topology | Common Configurations Database Database Location | | |
| Content Store | Are all IBM Connections applications @ Yes, the applications are on the si | using the same database instance? ame database instance. | |
| O Notification | O No, the applications are not on the | e same database instance. | |
| | Important: If you return to this page f settings are still present but not visit must enter all of the information aga settings, click Next. | rom a later page in the installation wizar le. If you want to change any settings, y in. If you do not want to change your init | d, your ou ial |
| | Database Database type: | | |
| | Oracle Enterprise Edition \$ | | <u>.</u> |
| | Database Server Information | | |
| | lcco65 cn.ibm.com | 1 | |
| | Port: | | |
| | 1521 | 10 | |
| | JDBC driver location: | A | |
| | /opt/idbc/lib | Browse | |

Figure 123. IBM Connections 4.0.0 installation wizard: Database location

____12. Specify the Content Store and then click Validate.

| Theore eller the Tollage | | 10 |
|--|--|----|
| Common Configurations WebSphere Topology Database Content Store Notification | Common Configurations Content Store Shared Content Store Content that is shared among all nodes. Ensure each node in the cluster can access the network location. Select a network shared location: /opt/IBM/LCShare Local Content Store Content is stored locally on each node. Ensure the path exists on each node. Select a local location: /opt/IBM/localshare /validate | |
| | | |

Figure 124. IBM Connections 4.0.0 installation wizard: Content Store

____13. Specify Notification configuration and click Next.

| Install Licenses | Location Features Summary |
|---|--|
| Common Configurations | Common Configurations Notification |
| Topology Database Content Store | Notification allows both IBM Connections applications and users to send mail notifications. ReplyTo allows users to reply to notifications using email. Replies appear in the relevant application in IBM Connections. |
| Notification | Enable Notification only. |
| | Enable Notification and ReplyTo. |
| | O None. |
| | Notification |
| | Mail server type: |
| | WebSphere lava Mail Session - Use a single mail server for all notifications. O NS MX Records - Use information from DNS to determine which mail servers to use. |
| | SMTP Server Information |
| | This server is used to send outgoing mail notifications. Host name of SMTP messaging server: |
| | <host messaging="" name="" of="" server="" smtp=""></host> |
| | Port (default for non-SSL is 25, SSL is 465) : |
| | 25 |
| | Encrypt outgoing mail traffic using SSL. |
| | This SMTP server requires authentication: |
| 2 H 19 | |

Figure 125. IBM Connections 4.0.0 installation wizard: Notification

____14. Review the summary information, and then click **Install**.

| instan rackages | | 3 |
|---|--|----------------|
| Review the summary infor | mation. | 2 |
| Install Licenses | Location Features Summary | |
| Target | | |
| Package Group Name: | IBM® Connections | |
| Installation Directory: | /opt/IBM/LotusConnections | |
| Shared Resources Directo | ry: /opt/IBM/SSPShared | |
| Packages | | |
| Packages | | |
| 🗊 IBMØ Installation Ma | nager 1.4.4 | _ |
| 🗢 🗊 IBM Connections 4.0 | 0.0 | |
| 🕨 💼 Core Features | | |
| All Features | 4 | |
| | | |
| Environment | Disk Space Information | |
| Environment English | Disk Space Information | Space |
| Environment English | Disk Space Information Total Available S / 348.6 | 5pace 53 G8 |
| Environment English | Disk Space Information Total Available S / 348.6 Total Download Size: 1.12 GB | Space 53 GB |
| Environment English | Disk Space Information Total Available S / 348.6 Total Download Size: 1.12 G8 Total Installation Size: 1.80 GB | Space 53 GB |
| Environment English • Repository Informatio | Disk Space Information Total Available S / 348.6 Total Download Size: 1.12 GB Total Installation Size: 1.80 GB | 5pace 53 GE |
| Environment English > Repository Informatio | Disk Space Information Total Available S / 348.6 Total Download Size: 1.12 GB Total Installation Size: 1.80 GB | Space 53 GB |

Figure 126. IBM Connections 4.0.0 installation wizard: Summary information

The installation begins.

| Install Packages | | |
|---|---|------------------------------------|
| Review the summary infor | rmation. | 7 |
| Install 🔵 Licenses | Location Features Summary | |
| Target | | |
| Package Group Name: | IBM® Connections | |
| Installation Directory: | /opt/IBM/LotusConnections | |
| Shared Resources Directo | ory: /opt/IBM/SSPShared | |
| Packages | | |
| Packages | N | |
| Core Features All Features | | |
| Core Features All Features | | |
| Core Features All Features | Disk Space Information | |
| Core Features All Features Environment English | Disk Space Information | Total Available Space |
| Core Features All Features | Disk Space Information | Total Available Space 348.63 GE |
| Core Features All Features | Disk Space Information / Total Download Size: 1.12 GB Total Installation Size: 1.80 GB | Total Available Space 348.63 Gi |
| Core Features Core Features Core Features Core Features Core Features Features Features Features Features Featur | Disk Space Information / Total Download Size: 1.12 GB Total Installation Size: 1.80 GB | Total Available Space 348.63 Gi |

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**.

| Weens All tasks | | | | |
|---|--|---|--|--|
| · multiplie | Hardens | | | |
| 10 Guided Actuation | tioning > News | | | |
| E Servers | Use this page to size or change the configuration for an unmanage | ed node. An unmanaged node is a node defined in the | | |
| III Ageficiationa | cell topology that does not have a node again running to manage the process. Unmanaged nodes are topically used to manage theb servers. | | | |
| E Services | Carfiguration | | | |
| III Resources | N 9 3684 30012 | | | |
| E Security | | | | |
| 20 Environment | General Properties The additional pro- | spectal off not be available until the person | | |
| E Dystem administration | Name Additional Proge | rise. | | |
| Col Concept to marker reporting Concept concept Marker open Marker open Marker open Marker open Marker open Concept concept Concept concept Concept concept | Hond Rame Hanne Hondown Tage Linese Aparty CM. Recet Cancel | | | |

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.

| Ween Altacks | California Calif. Profile Dispetit |
|---|---|
| * Walcome | Create new Web server defection |
| E Suided Activities | |
| 3 Servers | Use this page to meate a new Web server. |
| Procession P | • Stopp it here it is and it is a made for the Web server and select the Web server type is the transmission of the transmission of the Web server you want to add. Inter 1 is in the transmission of the transmission of the Web server you want to add. Inter 2 is in the transmission of the transmission of the Web server you want to add. Inter 2 is in the transmission of the transmission of the Web server you want to add. Inter 2 is in the transmission of the trans |

Figure 131. Integrated Solutions Console: Web server definition

____5. Select the IBM HTTP Server template, and click **Next** to continue.

| Step 1: Select a | Select | Select a Web server template | | | | |
|--|--------|------------------------------|----------------|------------------------------------|--|--|
| server and select the Web server type | Select | the template that co | rresponds to t | he server that you want to create. | | |
| Step 2: Select a | * | * 9 | | | | |
| Web server template | Select | Template Name | Туре | Description | | |
| Step 3: Enter the | 0 | DHS | System | The IHS Web Server Template | | |
| properties for the new Web server | | | | | | |
| Step 4: Confirm nev Web server | | | | | | |

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.

| server and select the Web server type | Enter the Web server properties. |
|--|---|
| Step 2: Select a Web server template Step 3: Enter the properties for the new Web server Step 4: Confirm new Web server | Port BO Web server installation location //opt/IBM/HTTPServer Plug-in installation location //opt/IBM/HTTPServer/Plugins Application mapping to the Web server All All Enter the IBM Administration Server properties. Administration Server Port B008 Username ihsadmin Password Confirm password |
| | insadmin + Password + Confirm password |

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

___7. Click **Finish** from the confirm summary page.

| 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. |
|---|
| |

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:

| 했는 힘 없는 것 것 것 구난한거그는 김정 | |
|--|--|
| lakes a test connection to a Secure Sockets Layer (Si and chake | SL) port and retrieves the signer from the server during the |
| neral Properties | |
| net al rroper des | |
| <host></host> | |
| | |
| Port 443 | |
| | |
| SSL configuration for outbound connection | |
| CellDefaultSSLSettings | |
| Alias | |
| vebcert | |
| | |
| Retrieve ridner information | |
| Retrieve signer information Retrieved signer information Serial number | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to CN= <node name=""></node> | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by</node> | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN= <node name=""></node></node> | |
| Retrieve signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN=<node name=""></node></node> | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN=<node name=""> Fingerprint (SHA digest)</node></node> | |
| Retrieve signer information Retrieved signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN=<node name=""> Fingerprint (SHA digest) 6FIA3(36(AD):16(BB):9B:D4(C6(05):51(56)E7)E3(70)</node></node> | 11C8:D9:3D:D8:50 |
| Retrieve signer information Retrieve signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN=<node name=""> Fingerprint (SHA digest) Fingerprint (SHA digest) SFIA3(36(AD)16(BB)9B)D4(C6(05)51(56(E7)E3)70 Validity period</node></node> | 1(C8:D9(3D)D8:50 |
| Retrieve signer information Retrieve signer information Serial number 1336397756 Issued to CN= <node name=""> Issued by CN=<node name=""> Fingerprint (SHA digest) Fingerprint (SHA digest) Fingerprint (SHA digest) Validity period May 5, 2022</node></node> | 1.CB:D9:3D:DB:50 |

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/lccn61C
ell01/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.

| Add | Delete | Extract Retrieve from po | n | |
|--------|--------------|--|---|---|
| | 0 7 9 | | | |
| Select | Alias 🗘 | Issued to O | Fingerprint (SHA Digest) 🔿 | Expiration () |
| You | an administe | er the following resources: | | |
| 8 | datapover | OU=Root CA, O="DataPower Technology, Inc.", C=US | A9:8A:A4:85:8C:26:2F:5D:2A:80:93:CA:8A:F4:31:05:F2:54:14:17 | Valid from Jun 12, 2003 to Jun 7, 2023. |
| | rest | CN=modes.cn.ibm.com, OU=Root Certificate, OU=modesCell01, OU=modesCellManager01, O=IBM, C=US | 6A:0E:7B:8A:33:92:A5:02:45:61:81:E2:94:2C:17:EE:47:FC:87:0C | Valid from Apr 16, 2012 to Apr 13, 2027. |
| B | webserver1 | CN=WebSphere Plugin Key, OU=SWG, O=IBM, C=US | 58:48:76:EA:C4:E8:11:96:AE:E2:19:27:21:E1:46:78:A7:51:FE:88 | Valid from Jun 23, 2013 to Jun 7, 2023. |

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.

| le name pt/IBM/WAS-Root-Cert.arm | eneral Properties | | |
|-------------------------------------|------------------------|--------|--|
| pt/IBM/WAS-Root-Cert.arm | File name | | |
| | /opt/IBM/WAS-Root-Cert | Larm | |
| ita type | Data type | | |
| ase64-encoded ASCII data | Base64-encoded ASCII | data 💌 | |

Figure 137. Entering a path for the file

____9. After clicking **OK** you should get the following message.

| Messages |
|--|
| The signer certificate, root, was successfully extracted to the file /opt/IBM/WAS-Root-Cert.arm. |

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**.

| Plug-in properties | Additional Properties |
|---|---|
| Ignore DNS failures during Web server startup | = Request and |
| Refresh configuration interval Seconds Repository copy of Web server plug-in files: Plug-in configuration file name plugin-dg.xml Viev Viev Automatically generate the plug-in configuration file Plug-in key store file name plugin-key.kdb | Esponse Caching Request Routing Sustam Properties |
| Manage keys and certificates Copy to Web server key store directory | |

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.

| Alias | 20 | |
|------------------------|--------|--|
| WAS-Root-Cert.arm | | |
| File name | | |
| /opt/IBM/WAS-Root-Cert | arm | |
| Data type | | |
| Base64-encoded ASCII | data 💌 | |

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/Lot usConnections-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:

```
stletionstellationst att config libe'attoostignal-libe and' hostingalet'' hostinghese'' cluradhae-'HogeTheta'' andide'tee' principal principal principal attoine // attoine
```

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.

IIV.