Installing IBM Tivoli[®] Directory Server V6.0

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What this exercise is about

The objective of this lab is to provide step by step instructions for installing and configuring IBM Tivoli Directory Server (LDAP).

List of software required for the student to complete the lab:

- WebSphere[®] Application Server V6.1 Network Deployment Installed
- WebSphere Partner Gateway Server V6.1 Installed
- IBM DB2[®] UDB ESE 8.2 or higher installed
- IBM Directory Server V6.0

What you should be able to do

At the end of this lab you should be able to:

• Install and Configure Tivoli Directory Server (LDAP)

Exercise Instructions

Some instructions in this lab may be Windows® operating-system specific. If you plan on running the lab on an operating-system other than Windows, you will need to run the appropriate commands, and use appropriate files (.sh vs. .bat) for your operating system. The directory locations are specified in the lab instructions using symbolic references, as follows:

Reference Variable	Windows Location	Linux® Location
<db2_home></db2_home>	C:\IBM\SQLLIB	/opt/IBM/SQLLIB
<wpg_home></wpg_home>	C:\IBM\WPG61	/opt/IBM/WPG61
<wpg_hub_simple_home></wpg_hub_simple_home>	C:\IBM\WPG61\wpghubsimple	/opt/IBM/WPG61/wpghubsimple
<wpg_hub_distr_home></wpg_hub_distr_home>	C:\IBM\WPG61\wpghubappsprofile	/opt/IBM/WPG61/wpghubappsprofile
<wpg_appsdb_home></wpg_appsdb_home>	C:\IBM\WPG61\wpgappsdb	/opt/IBM/WPG61/wpgappsdb
<wpg_masdb_home></wpg_masdb_home>	C:\IBM\WPG61\wpgmasdb	/opt/IBM/WPG61/wpgmasdb
<was_home></was_home>	C:\IBM\WAS61	/opt/IBM/WAS61
<ldap_install_images></ldap_install_images>	C:\download\LDAP60\unzip	/opt/download/LDAP60/unzip
<lab_files></lab_files>	C:\WPG61Labfiles	/tmp/WPG61Labfiles
<temp></temp>	C:\temp	/tmp

Windows users note: When directory locations are passed as parameters to a Java[™] program such as EJB[™]deploy or wsadmin, it is necessary to replace the backslashes with forward slashes to follow the Java convention.

Part 1: Install Tivoli Directory Server V6.0

This part of the lab demonstrates how to install and configure Tivoli Directory Server V6.0 on a Windows operating system.

- 1. In order to install and configure IBM Tivoli Directory Server V6.0 an operating system user is required. The following procedure walks you through setting up the user. Although this procedure uses default names, you can substitute your own user and group names. Group and user names cannot exceed eight characters
 - ____a. Log in as the bcguser
 - ____b. Add **bcguser** to **DB2ADMNS** group.
 - ____ c. Navigate to Start → Settings → Control Panel → Administrative Tools → Computer Management
 - ____d. In the left navigation panel of the Computer Management tool, expand the "Local Users and Groups" listed under System Tools
 - ____e. Click on Groups
 - ____f. In the right hand panel. Right click on DB2ADMNS group and select Add to Group
 - ____g. In the next dialog box that opens, click Add
 - ___h. Enter bcguser and click Ok
 - _____i. Click **Ok** on the **DB2ADMNS Properties** dialog box
- 2. The following is the installation file needed to install the IBM Tivoli Directory Server V6.0
 - ___a. C83X4ML.zip
- 1. Extract the above mentioned file to <LDAP_INSTALL_IMAGES>
- 2. Ensure the disk structure contents extracted are as shown in the image below:



____3. Navigate to the itds directory and double click over setup.exe to launch the installer. The Tivoli Directory Server installation wizard prompts with the language selection panel

🗁 C:\download\Tivoli_LDAP_V6.0 📃 🗖 🖡	×	
File Edit View Favorites Tools » 🥂		
🔇 Back 👻 🕥 👻 🦻 🔎 Search	»	
Address 🛅 C:\download\Tivoli_LDA 💌 🄁 Go		
🛅 license		
🛅 neededFiles		
🛅 optionsFiles		
🔊 archive. jar		
🔄 consoleSetup.exe		
🥐 media.inf		
🐸 setup.exe		

4. Select **English** as language to be used for this installation wizard

🕄 IBM Tivoli Directo	ory Server 💶 🗖 🗙
Select a language to b	e used for this wizard.
English	V
<u>o</u> k	Cancel

____5. Click **OK**. The InstallShield Wizard starts and greets with Welcome page



- ____6. Click Next
- 7. In the following panel, read the License Agreement and select the radio button next to "I accept the terms in the license agreement" to continue further

🛃 IBM Tivoli Directory Se	erver 6.0
	Software License Agreement
	Please read the following license agreement carefully.
	International Program License Agreement
	Part 1 - General Terms
- 12/1 ⁰ e	BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, OR
	AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS OF THIS
14	OF ANOTHER PERSON OR A COMPANY OR OTHER LEGAL ENTITY,
For	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
1988	PROGRAM; AND
	O I do not accept the terms in the license agreement
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- ____8. Click Next
- 9. In the following panel, the InstallShield Wizard lists the available applications related to Tivoli Directory Server setup. Review the listed applications carefully

Note: DB2 is part of the Tivoli Directory Server installation package. Pre-existing DB2 install supported by Tivoli Directory Server V6.0 can also be used.

😼 IBM Tivoli Directory Serv	ver 6.0	
16	The following applications have been identified on your system.	
	DB2 8.1.13	<u> </u>
InstallShield		
	< <u>B</u> ack <u>Next</u> >	<u>C</u> ancel

____ 10. Click Next

____ 11. In the following panel, click the **Browse** button for the Directory field and change the default target install directory to **C:\IBM\LDAP60**

🛃 IBM Tivoli Directory Se	erver 6.0
2 10 100	Click Next to install "IBM Tivoli Directory Server 6.0" to this directory, or click Browse to install to a different directory.
	Directory:
	C:\IBM\LDAP60
0 8	Browse
InstallShield	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

____ 12. Click Next

____13. In the following panel, ensure that all the features listed are selected except DB2 V8.2

🔁 IBM Tivoli Directory Ser	ver 6.0	_ 🗆 ×
200	Select the features to install:	
	Client SDK 6.0	
	🗹 Java Client 6.0	
	🔽 Web Administration Tool 6.0	
1.2 / 1 ⁰ 2	✓ Proxy Server 6.0	
0	🔽 Server 6.0 (Full Server Package)	
	🔽 embedded version of WebSphere Application Server - Express	
Ter	🗖 DB2 V8.2	
4. 7	GSKit	
DOUDER .	Space required for C:\: 332 MB Available: 32566 MB	•
InstallShield		
	< <u>B</u> ack <u>N</u> ext > <u>C</u> a	ncel

Note: As DB2 is already installed and was detected by the Installation Wizard earlier, the check box next to DB2 V8.2 is not selected by default. Do not reselect as it already exist on this system.

14. Click Next	1	4.	Clic	k N	lext	
-----------------------	---	----	------	-----	------	--

_____ 15. In the following panel, review the installation summary

😼 IBM Tivoli Directory Serv	rer 6.0	_ 🗆 ×
2.0	Installation has enough information to start copying files. Please review the settings below and if you wish to change any setting, click Back. If you are satisfied with the settings, click Next to begin copying files.	
	IBM Tivoli Directory Server 6.0 will be installed to the following directory: C:\IBM\LDAP60 The following features will be installed: Client SDK Java Client Web Administration Tool Proxy Server Server	
InstallShield		
	< <u>B</u> ack <u>Next ></u> <u>C</u> an	icel

_____16. Click **Next.** All the features selected for installation are installed in sequence.

😼 IBM Tivoli Directory Se	rver 6.0			
		Java COMPATIBL	E	
(the)	Installing IBM Tivoli Directory Serv C:\IBM\LDAP60\lib\msvcp60.dll	ver 6.0. Please w	/ait	201-
1 / · · ·		27%		
InstallShield				
		< <u>B</u> ack	Mext >	<u>C</u> ancel

__ 17. Once the installation is complete and successful, the Tivoli Directory Server Instance Administration Tool is started

🛃 IBM Tivoli Directory S	erver 6.0
	Installation is now complete.
	A configuration tool has been launched. To use IBM Tivoli Directory Server, you must configure a directory server instance* whose name matches a user name on the system. In addition, you must configure an administrator distinguished name and password for that directory server instance. If you plan to create a directory server instance rather than a proxy server instance, you must also configure a database**. It is recommended that you perform this minimal configuration now.
	*Note: Be sure you have already defined a system user ID for the owner of the directory server instance. **Note: Be sure you have already defined a second system user ID for the owner of the database if you plan to have a database owner that is separate from the directory server instance owner.
	The InstallShield Wizard has successfully installed IBM Tivoli Directory Server 📑
InstallShield	
	≺ <u>B</u> ack <u>N</u> ext > <u>Finish</u>

18. Click **Finish** when the installation is complete to close the Installation Wizard. The LDAP server installation is complete

Part 2: Create LDAP Server instance

Note: As stated above, once the installation is complete, the IBM Tivoli Directory Server Instance Administration Tool is started immediately prompting to do the necessary configuration. This tool can be also started form the Start menu as shown below:

Programs \rightarrow Tivoli Directory Server V6.0 \rightarrow Instance Administration Tool

Instance	Туре	Version	Description	Create
				Edit TCP/IP settings
				Delete
				⊻iew

- In the IBM Tivoli Directory Server Instance Administration Tool panel, click the Create button. The Create new directory service instance dialog opens
- 2. In the Create or migrate screen, ensure the radio button next to "Create a new directory server instance" is selected (default)

💋 Create new direc	tory server instance	_ 🗆 🗙
Create or migrate		
Create a new d	lirectory server instance	
◯ <u>M</u> igrate from a p	pre-6.0 version of directory server	
F Enter path of the k	packed up files	
	Browse	
Help 2	< Back Navt > Finish	Cancal
	- Edder Idext's Funder	Cancel

- ____ 3. Click Next
- 4. In the following **Instance Details** screen, provide the following **Instance details**:

- ____b. User name : bcguser
- ___ c. Install location : C
- ____ d. Encryption seed string : directoryserverinstance

Note: The encryption string must use ISO-8859-1 ASCII and have between 12 and 1016 characters.

____e. Instance description : LDAP Server V6 (or provide your own description)

👉 Create new directory server instance	_ 🗆 🗙
Instance details The directory server instance will be created in an existing system user account.	
User name bcguser	
Install location (at least 30 MB free)	
Encryption seed string	
Instance description	
LDAP Server V6	
Help ? < Back Next > Finish	Cancel

- ____5. Click Next
- 6. In the following **DB2 instance details** screen, select **bcguser** for "**DB2 instance name**" from the drop down list

🖌 Create new directory server instance	_ 🗆 🗙
DB2 instance details Enter the details of the DB2 instance to be associated with the new directory server instance. You may select an existing DB2 instance or enter a new DB2 instance name.	
DB2 instance name boguser	
 You cannot select a DB2 instance which is already associated with another directory server instance. The new DB2 instance name should be same as an existing system user account. 	
Help ? < Back Next > Finish	Cancel

- ____7. Click Next
- 8. Accept the defaults on the following TCP/IP settings for multihomed hosts screen

👉 Create new directory server instance					
TCP / IP settings for multihomed hosts					
🔽 Listen on all configured IP addresses					
Select the specific IP a	addresses to listen on				
9.3.75.97					
Help ?	< <u>B</u> ack	<u>N</u> ext >	Einish	Cancel	
				_	

- 9. Click Next
- 10. In the following **TCP/IP port settings** screen, accept the default port settings, but ensure the port settings being used here are not used by another process on the system

👉 Create new directory server instance	_ 🗆 🗙
TCP / IP port settings	<u> </u>
Enter port details	
Server port number	
389	
Server secure port number	
636	
Admin daemon port number	
3538	
Admin daemon secure port number	
3539	
Help ? < Back Next > Finish	Cancel

11. In the following Optional steps screen, ensure the check boxes next to "Configure admin DN and password" and "Configure database" are selected

👉 Create new directory server instance	
Optional steps	<u> </u>
You can choose to configure admin DN / password and database now, or configure them later using the idsxcfg tool. Uncheck the steps you do not wish to carry out now.	
Steps	
Configure admin DN and password	
Configure database	
Help ? < Back Next > Finish	Cancel

- ____ 12. Click Next
- _____ 13. In the following **Configure administrator DN and password** screen, enter the following information:
 - ____f. Administrator DN : cn=root
 - ____g. Administrator password : Idapadmin
 - ____h. Confirm password : Idapadmin

若 Create new directory server instance	_ 🗆 🗙
Configure administrator DN and password	<u> </u>
Administrator DN	
cn=root	
Administrator password	
Confirm account	
Help ? < Back Next > Finish	Cancel

- ____ 14. Click Next
- _____ 15. In the following **Configure database** screen, enter the following information:
 - ____i. Database user name : bcguser
 - ____j. Password : bcg1user
 - ____k. Database name : LDAPDB

🗲 Create new directory s	erver instance	2		
Configure database				<u> </u>
Database user name bcguser				
Password				
Database name LDAPDB				-
Help ?	< <u>B</u> ack	Next >	Finish	Cancel

- _____16. Click Next
- 17. In the following **Database options** screen, select the "**Database install location**" as "**C**" and ensure the radio button next to "**Create a universal DB2 database**" is selected

🤣 Create new directory server instance	_ 🗆 🗙
Database options	-
Database install location (at least 80 MB free)	
c 💌	
Character-set option	
Create a universal DB2 database (UTF-8 / UCS-2)	
C Create a local codepage DB2 database	
Note : Create a universal DB2 database if you anticipate storing data from multiple character sets (recommended).	- -
Help ? < Back Next > Finish	Cancel

_____ 18. Click Next

_____ 19. Double check the settings in the following Verify settings screen

🚰 Create new directory serve	r instance				
Verify settings Verify that the settings below are Click Finish to begin the instance	e correct. creation.				
A new directory server instance 'bcguser' will be created. The directory server instance will be created at: 'C'. The directory server instance will be configured for IP 'All'. The directory server instance's port will be set to '389'. The directory server instance's secure port will be set to '636'. The directory server instance's Admin Daemon port will be set to '3538'. The directory server instance's Admin Daemon secure port will be set to '3538'. The directory server instance's Admin Daemon secure port will be set to '3538'. Database instance 'bcguser' will be configured. The directory server instance admin DN will be set to 'cn=root'. The database 'LDAPDB' will be configured. The database will be created at: 'C'. Database will be UTF-8.					
Help ?	< <u>B</u> ack	<u>N</u> ext ≻	Finish	Cancel	

- ____ 20. Click Finish
- _____ 21. Once the instance creation is successful, click **OK** over the task completed information dialog
- _____ 22. Click the Close button to exit the Create new directory service instance dialog
- 23. Finally click the **Close** button to exit the **IBM Tivoli Directory Server Instance Administration Tool** panel.

💋 IBM Tivoli Di					
List of directory se	erver instances	installed on the	e machine		
Instance	Туре	Version	Description		Create
boguser		6.0	LDAP Server V6		-
					Edit TCP/IP settings
					Delete
					<u>∨</u> iew
•				F	
					se H <u>e</u> lp ?

- _____ 24. Click '**Yes**' over the confirmation dialog.
- _____ 25. The LDAP instance creation is complete

What you did in this exercise

In the lab exercise, you have installed the LDAP server and created an instance.

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