LifeCycle Manager Installation Guide

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Version Log

The version log describes the changes between versions of this document.

Part Number	Release Date	Description
1.0	2012-12	Updated for version 10.1.0.0
2.0	2013-5	GA version 10.1.0.0
3.0	2013-12	Updated for version 10.1.1.0
4.0	2014-05	Updated for version 10.1.2.0

Contents

Installation Overview

1

This section contains the following:

What is LifeCycle Manager?

LifeCycle Manager is a framework that facilitates standardized and uniform installation, maintenance, and management of M3 products. This framework enables administration and customization of several servers and products from a centralized location. For information about supported platforms, see the System Requirements in *LifeCycle Manager Installation Guide*.

Knowledge Prerequisites

This installation guide is intended for certified LifeCycle Manager installers. To install this product, you must have the following knowledge and experience:

- Must be a certified M3 System Foundation installer.
- Have system administrator experience in the platform where you are installing the product.

- Experience setting up and administering an application server.
- Experience working with LDAP.
- Experience working with AD LDS if you intend to use AD LDS as your LifeCycle Manager authentication LDAP repository.
- Experience with third-party products and middleware mentioned in the System Requirements.

LifeCycle Manager Components

The LifeCycle Manager (LCM) installation consists of three components:

- LifeCycle Manager Server

  This is the central point of the architecture. This server hosts all of the installation components and scripts. It also hosts a database that contains information about all of the managed servers and Infor products installed on those servers.

- LifeCycle Manager Service

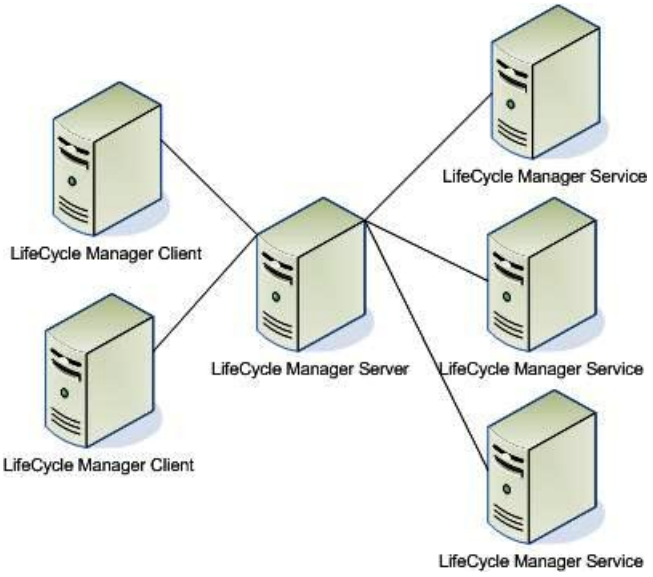
  This must be installed on each server that you want to manage with LifeCycle Manager. For example, the M3 Business Engine server or the Infor Smart Office server. To be able to install a LifeCycle Manager Service, a LifeCycle Manager Server must first be installed in the network.

- LifeCycle Manager Client

  This is the user interface for LifeCycle Manager. It is used by all users who manage Infor applications on the network. The client can be installed on each user's desktop computer or on a centralized administration client. The client cannot communicate directly with the LifeCycle Manager Services, but must log on to the LifeCycle Manager Server. The server authenticates the user against an LDAP server.

These components can be installed using several architectures. A recommended architecture is to separate the server, client and service components using different machines, as shown in the following figure.

Figure 1. LifeCycle Manager components.



Network Requirements

If you plan to install LifeCycle Manager Server using server's hostname instead of IP address, be sure that name resolution is working on your network. The server hosting LifeCycle Manager Server service must be accessible from LifeCycle Manager Client computer using LifeCycle Manager Server hostname or FQDN.

Note: Avoid using the underscore (_) character in hostnames. Refer to

```
http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=
/com.ibm.websphere.express.doc/info/exp/ae/rins_hostname.html
```

All active network cards installed on a server and connected to the LifeCycle Manager Server or LifeCycle Manager Services must be configured to use the following:

- A Fully Qualified Domain Name (FQDN)
- A static IP address

  Special consideration has to be taken if the server is configured with multiple network cards or addresses. LifeCycle Manager database binds by default to the network card listed as primary. If a LifeCycle Manager Client connects to the LifeCycle Manager Server using the secondary network adapter, the LifeCycle Manager Server service cannot bind to the LifeCycle Manager database. You have to connect to the LifeCycle Manager Server using the primary network card.

  -or-

- A reserved IP address if the network card is configured to use Dynamic Host Configuration Protocol (DHCP).

Note: Do not forget to configure reverse DNS lookup for all enabled network cards installed in your server.

Network cards that are not attached to the network must be disabled.

System Requirements

This section contains the following:

LifeCycle Manager Server Machine Requirements

Component	Supported Version(s)	Notes
Operating system	Microsoft Windows Server 2012 Standard Edition Microsoft Windows Server 2012 R2 Standard Edition	The only supported configurations are: • Server with full GUI Interface. • Server with minimal GUI Interface. **Note:** Infor recommends to use English as primary OS language.
Java Application server	Java Development Kit 7.0 Update 21 or later 32-bit (x86) or 64-bit (x64)	For more information, see: http://www.oracle.com/technetwork/java/index.html **Note:** Infor recommends to install the JVM directly under the root directory to avoid a path containing blank spaces.

LifeCycle Manager Client Machine Requirements

Component	Supported Version(s)	Notes
Operating system	Microsoft Windows 7 32-bit (x86) or 64-bit (x64) Ultimate or Enterprise Edition Microsoft Windows 8 32-bit (x86) or 64-bit (x64) Microsoft Windows 8.1 32-bit (x86) or 64-bit (x64) Microsoft Windows Server 2012 Standard Edition. Microsoft Windows Server 2012 R2 Standard Edition.	The only supported configuration for Windows Server 2012 is Server with full GUI Interface.
Java Application server	Java Development Kit 7.0 (1.7) Update 21 or later 32-bit (x86) or 64-bit (x64)	For more information, see: http://www.oracle.com/technetwork/java/index.html
Web Browser	Internet Explorer 9 Internet Explorer 10 Internet Explorer 11	

LifeCycle Manager Service Machine Requirements

LCM Service Software Requirements for Windows

Component	Supported Version(s)	Notes
Operating system	Microsoft Windows Server 2012 Standard Edition Microsoft Windows Server 2012 R2 Standard Edition Microsoft Windows Server 2008 Enterprise or Standard Edition R2 SP1 or later, x64	The only supported configurations for Windows Server 2012 are: • Server with full GUI Interface. • Server with minimal GUI Interface. Microsoft Windows Server 2008 is only supported for customers who are upgrading their M3 system.

Component	Supported Version(s)	Notes
Java Application server	Java Development Kit 7.0 (1.7) Update 21 or later 32-bit (x86) or 64-bit (x64)	For more information, see: http://www.oracle.com/technetwork/java/index.html **Important:** Other products installed on this server can have different Java requirements. Before you install the LifeCycle Manager service, review Java requirements for all products and ensure that you install a Java version that meets the minimum requirements. **Note:** Infor recommends that you install the JVM directly under the root to avoid a path containing blank spaces.

LCM Service Software Requirements for i5/OS

Component	Supported Version(s)	Notes
Operating system	IBM i 7.1 (i5/OS V7R1) IBM i 7.2 (i5/OS V7R2)	LifeCycle Manager Service must run under English CCSID 37. Primary OS language installed must be English.
Java Application server	For IBM i 7.1 (i5/OS V7R1) - Java Development Kit 7 (5761JV1 options *BASE, 14, 15). Minimum fix levels: SF99572 level 12, Java. For IBMi 7.2 (i5/OS V7R2) - Java Development Kit 7 (5770JV1 options *BASE, 14, 15) Minimum fix levels: SF99716 level 1, Java.	Option 14 is Java SE 7 32-bit. Option 15 is Java SE 7 64-bit. **Important:** Other products installed on this server can have different Java requirements. Before you install the LifeCycle Manager service, review Java requirements for all products and ensure that you install a Java version that meets the minimum requirements.

LCM Service Software Requirements for AIX

Component	Supported Version(s)	Notes
Operating system	IBM AIX 7.1 with the these APARs: IZ87216 IZ87564	For more information, see: http://www.ibm.com/software/
Java Application server	For IBM AIX 7.1: Java 7 (SR2 or later) SDK (64-bit)	For more information, see: https://www.ibm.com/developerworks/java/jdk/aix/index.html **Important:** Other products installed on this server can have different Java requirements. Before you install the LifeCycle Manager service, review Java requirements for all products. Ensure that you install a Java version that meets the minimum requirements.

LifeCycle Manager Middleware Requirements

LifeCycle Manager supports the following middleware:

Important: Individual products might not support all versions of middleware listed in the following table. For more information, see the System Requirements in the corresponding Installation Guide for each product.

Operating System	Supported Databases	Supported Application Servers	Other Middleware
Microsoft Windows Server 2012 Standard Edition	SQL Server 2012 Enterprise or Standard Edition SP1 or higher 64-bit (x64)	IBM WebSphere Application Network Deployment (WAS ND) 8.5	IBM HTTP Server 8.5 OpenText StreamServe v5.6
Microsoft Windows Server 2012 R2 Standard Edition	SQL Server 2012 Enterprise or Standard Edition SP1 or higher 64-bit (x64)		OpenText StreamServe v5.6

Operating System	Supported Databases	Supported Application Servers	Other Middleware
Microsoft Windows Server 2008 Enterprise or Standard Edition R2 SP1 or higher, x64 **Note:** This operating system is only supported for customers who are upgrading their M3 system.	SQL Server 2012 Enterprise or Standard Edition SP1 or higher, 64-bit (x64)		
IBM i 7.1 (i5/OS V7R1)	IBM DB2 for IBM i 7.1		
IBM i 7.2 (i5/OS V7R2)	IBM DB2 for IBM i 7.2		
IBM AIX 7.1	Oracle R2 11g Oracle 12c		OpenText StreamServe v5.6

LDAP Considerations

LifeCycle Manager (LCM) authenticates against user data stored in a Lightweight Directory Access Protocol (LDAP) server. Only users who belong to the users or administrators group in the LDAP server will have access to use the LCM Client tool. When you install LCM, you supply information that allows it to communicate with an LDAP that contains the necessary groups and users.

Important: Active Directory is a critical part of infrastructure. The installation of LCM Server on a domain controller is not allowed.

Users and Roles

When a user logs on using the LifeCycle Manager Client, the user ID and password are sent over an encrypted SSL connection to the LifeCycle Manager Server. The server authenticates the user against an LDAP server and checks if the user is a member of the LifeCycle Manager user group. If no such group has been defined, all users that can be found in LDAP using the defined user search filter are

allowed to log on. The Client only displays the tasks that the user is allowed to perform. Therefore, for a viewer user, only a few or no tasks at all will be displayed when the user is positioned on a node in the tree.

There are three levels of users in an LifeCycle Manager environment:

- LifeCycle Manager Administrators

  Members of this group are allowed to execute all tasks throughout the server environment.

- Product Installation Administrators

  Members of this group are allowed to administer and perform tasks on a specific product installation, as well as on all product installations that are children to it.

  Note: An administrator group can be defined for each product installation.

  To be able to set the administrator group for a product installation, you need to be administrator for the parent of that product installation (or be a LifeCycle Manager administrator). This exception also applies to the Adding a Path and Removing a Path tasks.

- Viewers

  All users that can log on to LifeCycle Manager can view information about managed servers and installed applications. The users, however, are not allowed to perform any task, unless the task is explicitly defined as a “viewer task”.

Example

On an M3 Business Engine (BE) installation, the administrator group BEAdmins is defined. On the PROD environment under the M3 BE installation, the administrator group ProdAdmins is defined. Alice is a member of the BEAdmins group. Therefore, she is allowed to administer both the BE installation and all environments under it. She can also create new BE environments and set administrator groups for them. Bob is a member of the ProdAdmins group. He is allowed to administer the PROD environment, but not the BE installation, nor any other environments under it. Bob is not allowed to change the administrator group for the PROD environment.

LDAP Options

The LifeCycle Manager installation provides two LDAP options. Review the following topics carefully to determine which option best meets your needs.

- Manual Configuration with an Existing LDAP
- Installing a Pre-configured AD LDS Instance

Manual Configuration with an Existing LDAP

If you have an existing LDAP that already contains your users, Infor recommends that you choose the manual LDAP configuration option. This option configures LifeCycle Manager to authenticate to your LDAP. By using this method, your existing users and the LifeCycle Manager users will be the same and you can avoid dual user maintenance.

If you already have an LDAP server installed to manage your user resources, Infor recommends that you do the following:

- Add the necessary group or user structure to the LDAP.
- Install LifeCycle Manager using the option to manually configure settings for a central LDAP server.

Installing a Pre-configured AD LDS Instance

If you do not have an existing LDAP server, the LifeCycle Manager installation program will deliver an Active Directory Lightweight Directory Service (AD LDS) instance that is already configured for LifeCycle Manager users. In this case, you do not need to provide any configuration data during the installation.

For more information on AD LDS, see http://technet.microsoft.com/library/hh831593 for a Windows 2012-based installation.

Pre-installation of LifeCycle Manager Server

2

This section contains the following:

Setting up the LDAP

Use this procedure to install LifeCycle Manager using the manual LDAP configuration option. If you plan to use the pre-configured AD LDS option, skip this section.

❑ Verify required LDAP installation values

___ Fill in the worksheet in LDAP Installation Values. Contact the LDAP administrator if you are unsure about these settings. For more information about the LDAP settings in the lcm.properties file, see LDAP Properties.

Creating a User for Running a Windows Service

A dedicated user for running the LifeCycle Manager Server is required. You may choose to create this user before starting the Installing a LifeCycle Manager Server procedure below or create the user as part of the installation.

❑ Create a user for running a Windows service

___ Create a user account for running a Windows Service and add or remove the required rights. For more information, see Create a service account.

Installing a LifeCycle Manager Server

3

This section contains the following:

Installing a LifeCycle Manager Server

Use the following procedures to install a LifeCycle Manager Server.

❑ Prepare for installation

___**1** Create a temporary directory for the installation file.

___**2** Download the required file LifeCycleManagerServer_<*version*>.jar from the Infor Download Center to a temporary directory.

❑ Install a LifeCycle Manager Server

___**1** Open a command prompt.

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd shortcut and select Run as Administrator.

___**2** Navigate to the directory where the .jar file is located.

___**3** Run the command to start the installation of the LCM Server.

If no default Java is installed, you must enter the full path to Java in the **bin** directory of the Java JDK installation. For example, run the following command and press Enter:

```
"C:\jdk1.7\bin\java" -jar LifeCycleManagerServer_10.1.x.x.jar
```

The LifeCycle Manager Server Setup window is displayed.

___**4** Click Next.

___**5** Select to Install a new server.

___**6** Click Next. The Destination Folder window is displayed.

___7 Select the destination folder or browse to another location. Make sure that the selected destination folder does not contain any folder named LCM-Server.

___8 Click Next. The Java Virtual Machine window is displayed.

___9 Select the path or browse to another location for the Java JDK installation to use for the LifeCycle Manager Server.

___10 Click Next. The Server Settings window is displayed.

___11 Provide the necessary information. Consider the following fields:

Server host:	Select the server IP address or hostname. If you select to install the LifeCycle Manager Server using the server's hostname instead of IP address, be sure that name resolution is working on your network. The server hosting LifeCycle Manager Server must be accessible from both the hosts where LCM Services will be installed and from the LifeCycle Manager Client computers using the LifeCycle Manager Server hostname or FQDN.
Base port:	Accept the default value (4060) if not in use, or type a base port number for a range of four ports that will be used for LifeCycle Manager Server communication.

___12 Click Next. The Backup Routines window is displayed.

___13 Provide necessary information to set up the backup strategy for the LifeCycle Manager Server. Consider the following fields:

Important: It is extremely vital that backup of the LifeCycle Manager Server installation directory is frequently created and verified in case of a crash of the server where LifeCycle Manager Server is installed.

Configure backup routines	If you select No, all the backup routine parameters are disabled. If you select to configure backup routines later, you must configure the backup routines directly in the lcm.properties file located in the folder of the LifeCycle Manager Server installation. For more information about the backup settings in lcm.properties, see *LifeCycle Manager Administration Guide*.
Backup path	Type the destination where the backup should be placed. Type the IP address or name of the remote server and folder name. The folder name must already exist because it will not be automatically created. **Important:** You should not use a path that is on the same server where the LifeCycle Manager Server is installed.

Backup user	Type the user who has necessary privileges to access and create files on the server where the backup will be created. If the backup server is a member of a domain, then you must type *Domain\User*. If the backup server is not a member of a domain, then you must type *Server\User* .
Backup user password	Type the password of the backup user. **Important:** The backup user password cannot end with @.
Day of week to run backup	Select what day of the week the backup will be run, or select everyday.
Time to start backup	Select what time the backup will be started. A backup of the database will not take more than a minute or two.
Remove backup after following number of days	Select this option if you want backups to be deleted after the number of days you have typed (default is to never remove the backup).

___14 Click Next. The LDAP Configuration window is displayed prompting you to select whether to use Manual configure for a central LDAP server or a Preconfigured Active Directory Lightweight Directory Services (AD LDS) instance.

___15 Consider the following options:

- If you plan to install LifeCycle Manager using your existing LDAP server, perform the task Complete the installation with a manual LDAP install. For more information, see Manual Configuration with an Existing LDAP.

  - or -

- If you want to install a pre-configured AD LDS instance, perform the task Complete the installation with a pre-configured AD LDS instance. For more information, see AD LDS in LifeCycle Manager.

❑ Complete the installation with a manual LDAP install

Important: Make sure that you have the LDAP Installation Values available as you complete this portion of the installation. Refer to LDAP Settings as you complete this portion of the installation.

___1 Select the option to Manually configure settings for a central LDAP server.

___2 Provide necessary information. Consider the following fields:

LDAP server	Type the host ID, either an IP address or domain name service (DNS) name of the LDAP server. For example, type ldap.company.com or 10.20.30.40.
LDAP port	Type the host port of the LDAP server.

Bind user (distinguished name)	Type the distinguished name for the LifeCycle Manager Server that will be used when binding to the directory service.
Bind user password	Type the bind user password. **Important:** The bind user password cannot end with @.
SSL enabled	Optional. Select Yes or No depending on whether a secure socket communication is enabled in the LDAP server.
Trust store password	Optional. This setting is needed only if SSL is enabled. Type the password for the keystore. **Important:** The trust store password cannot end with @.
Retype Trust store password	Retype the Trust store password for the keystore.

___**3** Click Next. The LDAP Configuration Settings window is displayed.

___**4** Provide necessary information. Consider the following fields:

User prefix	Type the attribute that LifeCycle Manager will use to display the user name of users in the directory service.
Group prefix	Type the attribute that LifeCycle Manager will use to display the group name of groups in the directory service.
User suffix	Type the base distinguished name which indicates the starting point for LDAP searches of users in the directory service.
Group suffix	Type the base distinguished name which indicates the starting point for LDAP searches of groups in the directory service.
Group member attribute	Type the attribute for groups in the directory service that LifeCycle Manager will use to determine which users are members of that group.
User search filter	Type the LDAP user filter that searches the user registry for users. **Note:** With this search filter, a user can log on with either the value found in cn or the value found in sAMAccountName. The user name used in LifeCycle Manager is however determined by the User prefix setting (specified above).
Group search filter	Type the LDAP user filter that searches the user registry for groups.

LCM admin group	Type a group name in the user registry that points to the LifeCycle Manager Administrators group. Members of this group are allowed to perform all tasks in LifeCycle Manager. **Note:** LifeCycle Manager must be able to find this group with an LDAP search using the group search filter (specified above).
LCM user group	Type a group name in the user registry that point out the LifeCycle Manager user group. Members of this group are allowed to log on to LifeCycle Manager but are not trusted to manage applications. **Note:** If this field is left blank, all users that are found with an LDAP search using the user search filter specified above are allowed to log on to LifeCycle Manager. LifeCycle Manager must be able to find this group with an LDAP search using the group search filter (specified above).

These values are written in the *LCMInstallDir*\LCM-Server\lcm.properties file. You can use a text editor to change values if you make a mistake during the installation, or want to change values later. The server needs to be restarted after the values in the lcm.properties file have been changed.

___**5** Click Next. The Service Account window is displayed prompting you to select whether to create a new service account user or to use an already existing user.

___**6** Perform one of the following options:

- Click Yes to create a new service account user, go to step a.
- Click No to select an existing user, go to step b.

  Note: For more information on how to manually create a user account for running a Windows Service and adding or removing the required rights, see "Create a service account" on page 68.

___**a** Provide the following information:

Service account user:	Enter the name of the user.
Service account password:	Enter the password for the user.
Retype password:	Retype the password.

___**b** Provide the following information:

Service account user:	Select a local administrator user in the list.

Service account password:	Enter the password for the local administrator user.

___**7** Click Next. The Installation Summary window is displayed.

___**8** Click Next. The Installing LifeCycle Manager Server window is displayed and installation is initialized.

___**9** When the task is finished, click Finish. The Windows service LCM-Server is automatically started. You can view the service in Computer Management > Services and Applications > Services.

❑ Complete the installation with a pre-configured AD LDS instance

___**1** Select the option to use a Preconfigured AD LDS (Active Directory Lightweight Directory Services).

___**2** Click Next. Service Account window is displayed prompting you to select whether to create a new service account user or to use an already existing user.

___**3** Perform one of the following options:

- Click Yes to create a new service account user, go to step a.
- Click No to select an existing user, go to step b.

  Note: For more information on how to manually create a user account for running a Windows Service and adding or removing the required rights, see "Create a service account" on page 68

___**a** Provide the following information:

Service account user:	Enter the name of the user.
Service account password:	Enter the password for the user.
Retype password:	Retype the password.

___**b** Provide the following information:

Service account user:	Select a local administrator user in the list.
Service account password:	Enter the password for the local administrator user.

___**4** Click Next. The Installation Summary window is displayed

___**5** Click Next. The Installing LifeCycle Manager Server window is displayed and installation is initialized.

___**6** When the task is finished, click Finish. Two Windows services, LCMADAM and LCM-Server are started and can be viewed in Computer Management > Services and Applications > Services.

Installing a LifeCycle Manager Service

4

This section contains the following:

LifeCycle Manager Service Installation Considerations

A LifeCycle Manager Service must be installed on each machine hosting an Infor product that is managed in LifeCycle Manager.

Installing a LifeCycle Manager Service on Windows

Use this procedure to install a LifeCycle Manager Service on Windows.

Important: Before installing a LifeCycle Manager Service, verify the requirements for Java version for all products that will be installed on your system. For more information, see System Requirements.

❑ Install a LifeCycle Manager Service on Windows

___**1** Go to http://*LifeCycle_Manager_Server_IP_address*:*Port#* where *Port#* is the number you specified for the LifeCycle Manager Server port, plus 2.

- If you used the default value (4060), the *Port#* is 4062.
- If you do not know the value, look in the *LCMInstallDir*\LCM-Server*lcm.properties* file for the value of http.server.port.

The LifeCycle Manager Download Area is displayed.

___**2** Click Download LifeCycle Manager Service Installation. A window is displayed asking if you want to save the installation file.

___**3** Click Save. The installLcmService.jar file is saved to a temporary folder on the Windows server.

___**4** Open a command prompt (Admin).

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd file and select Run as Administrator.

___**5** Navigate to the directory where the jar file is located.

___**6** Run the command to start the installation of the LCM service. You must type the full path to java in the bin-directory in the Java JDK installation. You must install JDK directly in the root and you must not use spaces in the directory name. For example,run the following command and press Enter:

```
"C:\jdk1.7\bin\java" –jar installLcmService.jar
```

The installation of the LifeCycle Manager Service is started

___**7** Provide the following values to install the LifeCycle Manager Service:

LCM Server IP	Type the LifeCycle Manager Server IP address or FQDN, and press Enter.
LCM Server port	Press Enter to accept the default port (4060), or type a different port number matching the setting made when installing the server, and press Enter.
LCM Server Admin	Type the name of a user who is a member of the LifeCycle Manager Administrators group, and press Enter.
LCM Server Admin Password	Specify the password for the user, and press Enter.
LCM Server HTTP update port	This port is used to fetch the LifeCycle Manager Service installation program. Press Enter to accept the default port (4062) or type the correct port number, and press Enter. **Note:** This question is only shown if the property http.server.port in the file lcm.properties has been edited.
LCM Service name	Type a name for the LifeCycle Manager Service, and press Enter. Infor recommends that you use the host name of the application server.
LCM Service IP	Type the computer IP address where the LifeCycle Manager Service must be installed. If the computer is set up to use Dynamic Host Configuration Protocol (DHCP), the Fully Qualified Domain Name (FQDN) should be typed instead of the IP address. Make sure that you specify an external IP number.

LCM Service installation path	Press Enter to accept the default value, or type the desired path where the LifeCycle Manager Service will be installed and then press Enter. Ensure that this directory does not yet exist on your system.
LCM Service port	Press Enter to accept the default value 4065 or type a desired port number, and press Enter. If the port you are trying to access is already in use, a message is displayed.
Port interval (from port - to port)	Select the range of ports that will be used when Job executing nodes are started by the LifeCycle Manager Service. New nodes are started either by requests from the system or a product handled by LifeCycle Manager that needs a specific execution node to run its job in. If the default ports 4066 - 4075 are occupied, another range must be selected.
Trust this certificate chain (Y/N)	Type Y if you trust the certificate chain.

___**8** Press Enter to finish the installation and start the LifeCycle Manager Service.

A message that the LifeCycle Manager Service was installed successfully is displayed. The LifeCycle Manager Service is installed in the directory selected in the LCM Service installation path above.

___**9** Check the Windows Services to ensure that the LifeCycle Manager Service you installed is started.

Note: To start and stop the LifeCycle Manager Service do the following:

Start: Start the Windows Service LCM-Service:*service_name*.

Stop: Stop the Windows Service LCM-Service:*service_name*.

Installing a LifeCycle Manager Service on IBMi

Use this procedure to install a LifeCycle Manager Service on IBMi.

Important: Before installing a LifeCycle Manager Service, verify the requirements for Java version for all products that will be installed on your system. For more information, see System Requirements.

❑ calcRetrieve the installLcmService.jar file

___**1** Go to http://*LifeCycle_Manager_Server_IP_address*:*Port#* where *Port#* is the number you specified for the LifeCycle Manager Server port, plus 2.

- If you used the default value (4060), the *Port#* is 4062.
- If you do not know the value, look in the *LCMInstallDir*/LCM-Server/*lcm.properties* file for the value of http.server.port.

The LifeCycle Manager Download Area is displayed.

___**2** Click Download LifeCycle Manager Service Installation. A window is displayed asking if you want to save the installation file.

___**3** Click Save. The installLcmService.jar file is saved to a temporary folder on the IBMi server, for example **\tmp**.

❑ Install a LifeCycle Manager Service on IBMi

___**1** Sign on a 5250 session as user **QSECOFR** or an equivalent user.

___**2** Type **qsh** on the command line, and press Enter to start a qshell. Place the cursor in the directory where the jar file is placed.

___**3** Run the following command, depending on JVM version, and press Enter:

For 32-bit 1.7:

```
export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/32bit
```

For 64-bit 1.7:

```
export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/64bit
```

___**4** Run the following command to start the installation of the LCM service:

```
java –jar installLcmService.jar
```

The installation of the LifeCycle Manager Service is started.

___**5** Provide the following values to install the LifeCycle Manager Service:

LCM Server IP	Type the LifeCycle Manager Server IP address or FQDN, and press Enter.
LCM Server port	Press Enter to accept the default port (4060) or type a different port number matching the setting made when installing the server, and press Enter.
LCM Server Admin	Type the name of a user who is a member of the LifeCycle Manager Administrators group, and press Enter.
LCM Server Admin password	Type the password for the user, and press Enter.

LCM Server HTTP update port is	This port is used to fetch the LifeCycle Manager Service installation program. Press Enter to accept the default port (4062) or type the correct port number, and press Enter. **Note:** This question is only shown if the property http.server.port in the file lcm.properties has been edited.
LCM Service name	Type a name for the LifeCycle Manager Service, and press Enter. Infor recommends that you use the hostname of the application server.
LCM Service IP	Type the computer IP address where the LifeCycle Manager Service must be installed and press Enter. Make sure that you specify an external IP number.
LCM Service installation path	Press Enter to accept the default value, or type the desired path where the LifeCycle Manager Service will be installed. For example /LifeCycle/ServiceName, or /IASPName/LifeCycle/ServiceName, if the installation is performed in an iASP (Independent Auxiliary Storage Pool). Press Enter. Ensure that this directory does not yet exist on your system.
LCM Service port	Press Enter to accept the default value 4065 or type a desired port number, and press Enter. If the port you are trying to access is already in use, a message is displayed.
Port interval (from port - to port)	Select the range of ports that will be used when Job executing nodes are started by the LifeCycle Manager Service. New nodes are started either by requests from the system or a product handled by LifeCycle Manager that needs a specific execution node to run its job in. If the default ports 4066 - 4075 are occupied, another range must be selected.
Trust this certificate chain (Y/N)	Type Y if you trust the certificate chain.

___**6** Press Enter to finish the installation and start the LifeCycle Manager Service.

A message that the LifeCycle Manager Service was installed successfully is displayed. The LifeCycle Manager Service is installed in the directory selected in the LCM Service installation path above.

___**7** Add the following sequence to the startup program (after the start of TCP/IP) to ensure that the LifeCycle Manager Service always runs:

```
/* START LCM SERVICE  */
DLYJOB     DLY(30) /* Wait for TCP/IP */
STRSBS     SBSD(LCM/LCM) /* Start LCM Service */
MONMSG     MSGID(CPF0000)
```

It is important to use the correct subsystem name if there are several services installed. It could be named *LCM_n* where n=a number; in this case the command would be **STRSBS SBSD(LCM_n/LCM_n)**.
To find the correct subsystem name for your service, look in the *createservice.qsh* script found in the service folder.

Note: To start and stop the LifeCycle Manager Service do the following:

Start: Start the subsystem or to restart the service by using the script *restartService.qsh*.

Stop: Stop the subsystem or to restart the service by using the script *restartService.qsh*.

Installing a LifeCycle Manager Service on AIX

Use this procedure to install a LifeCycle Manager Service on AIX.

Important: Before installing a LifeCycle Manager Service, verify the requirements for Java version for all products that will be installed on your system. For more information, see System Requirements.

❑ Retrieve the installLcmService.jar file

___**1** Go to http://*LifeCycle_Manager_Server_IP_address*:*Port#* where *Port#* is the number you specified for the LifeCycle Manager Server port, plus 2.

- If you used the default value (4060), the *Port#* is 4062.
- If you do not know the value, look in the *LCMInstallDir*/LCM-Server/*lcm.properties* file for the value of http.server.port.

The LifeCycle Manager Download Area is displayed.

___**2** Click Download LifeCycle Manager Service. A window is displayed asking if you want to save the installation file.

___**3** Click Save. The installLcmService.jar file is saved to a temporary folder.

___**4** Use ftp to download the file to a temporary folder on the AIX server, for example **/tmp**.

❑ Create the user lcm and group lcmgroup

The LifeCycle Manager Service requires that the user **lcm** is available on both the Application and Database servers (if applicable).

___**1** Log on as *root*.

___**2** Verify the environment on the application server and the database server (if applicable). Check if directory **/u01/app** exists. Type

```
# mkdir –p /u01/app
```

___**3** Run the following commands:

```
# mkgroup lcmgroup
# mkuser pgrp=lcmgroup home='/u01/app/lcm' shell='/usr/bin/ksh' groups=lcmgroup lcm
# echo lcm:lcm | chpasswd -f ADMCHG
```

❑ Create the user oracle and groups dba and oinstall

On both the Application and Database servers (if applicable) where you intend to install Oracle software, you must create an account that will own the software. For Infor M3 we require the account name **oracle**.
The oracle account needs two groups **dba** and **oinstall**. Members of the dba group can administer Oracle databases. The oinstall group is often needed for organizations who have separate groups that maintain the software and the databases.

___**1** Log on as *root*.

___**2** Run the following commands:

```
# mkgroup dba
# mkgroup oinstall
# mkuser pgrp=dba home='/u01/app/oracle' shell='/usr/bin/ksh' groups=dba,oinstall oracle
# echo oracle:oracle | chpasswd –f ADMCHG
# mkdir /u01/app/oracle/tmp
# chown oracle:dba /u01/app/oracle/tmp
# chmod 775 /u01/app/oracle/tmp
```

___**3** If the user lcm is running an application that uses the Oracle binaries, the dba and oinstall groups must be added to lcm as secondary groups.

```
# chgrpmem –m + lcm dba
# chgrpmem –m + lcm oinstall
```

❑ Install a LifeCycle Manager Service on AIX

___**1** Log on as *root*.

___**2** Run the following command to make sure that the file is readable:

`# chmod ug+r /tmp/installLcmService.jar`

___**3** Run the command to start the installation of the LCM service. You must type the full path to java in the **bin** directory of the Java installation. For example, run the following command and press Enter:

`# /usr/java7_64/bin/java –jar /tmp/installLcmService.jar`

The installation of the LifeCycle Manager Service is started.

___**4** Provide the following values to install the LifeCycle Manager Service:

LCM Server IP Type the LifeCycle Manager Server IP address or FQDN, and press Enter.

LCM Server port	Press Enter to accept the default port (4060) or type a different port number matching the setting made when installing the server, and press Enter.
LCM Server Admin	Type the name of a user who is a member of the LifeCycle Manager Administrators group, and press Enter.
LCM Server Admin password	Specify the password for the user, and press Enter.
LCM Server HTTP update port	This port is used to fetch the LifeCycle Manager Service installation program. Press Enter to accept the default port (4062) or type the correct port number, and press Enter. **Note:** This question is only shown if the property http.server.port in the file lcm.properties has been edited.
LCM Service name	Type a name for the LifeCycle Manager Service, and press Enter. Infor recommends that you use the hostname of the application server .
LCM Service IP	Type the server IP address where the LifeCycle Manager Service must be installed and press Enter. Make sure that you specify an external IP number.
LCM Service installation path	It refers to the installation path where the LifeCycle Manager Service will be installed. This directory must not be existing on your system. Press Enter to accept the default value or type the desired path, and press Enter.
LCM Service Port	Press Enter to accept the default value 4065 or type a desired port number, and press Enter. If the port you are trying to access is already in use, a message is displayed.
Port interval (from port - to port)	Select the range of ports that will be used when Job executing nodes are started by the LifeCycle Manager Service. New nodes are started either by requests from the system or a product handled by LifeCycle Manager that needs a specific execution node to run its job in. If the default ports 4066 - 4075 are occupied, another range must be selected.
Trust this certificate chain (Y/N)	Type Y if you trust the certificate chain.

___**5** Press Enter to finish the installation and start the LifeCycle Manager Service.

A message that the LifeCycle Manager Service was installed successfully is displayed. The LifeCycle Manager Service is installed in the directory selected in the LCM Service installation path above.

Note: The following two commands are now created for user **lcm**:

startlcm – The command used to start the LifeCycle Manager Service

stoplcm – The command used to stop the LifeCycle Manager Service

Installing a LifeCycle Manager Client

5

This section contains the following:

Installing a LifeCycle Manager Client

Use this procedure to install a LifeCycle Manager Client. This version of LifeCycle Manager Client is not compatible with LifeCycle Manager Server 10.1.1.0 or earlier versions.

Important: Installing the new LifeCycle Manager Server requires that a new LCM Client 10.1.x is installed. The LifeCycle Manager Client is delivered in the LCM Server having a minimum version of 10.1.0.0. In LifeCycle Manager version 10.1.2.0, it is possible to update your LCM Client 10.1.X to a newer version of the LCM Server. However, once updated, it can not be used against earlier versions of LCM Server (10.1.1.0 or earlier). It is possible to have both old and new versions of the LifeCycle Manager Client installed on the same computer.

❑ Install a LifeCycle Manager Client

___**1** Go to http://*LifeCycle_Manager_Server_IP_address*:*Port#* where *Port#* is the number you specified for the LifeCycle Manager Server port, plus 2.

- If you used the default value (4060), the *Port#* is 4062.
- If you do not know the value, look in the *LCMInstallDir*\LCM-Server*lcm.properties* file for the value of http.server.port.

The LifeCycle Manager Download Area is displayed.

___**2** Click Download LifeCycle Manager Client. A window is displayed asking if you want to save the installation file.

___**3** Click Save. The file LifeCycleManagerClient.jar is saved to a temporary folder on your local machine.

___**4** Open a command prompt.

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd file and select Run as Administrator.

___**5** Navigate to the directory where the .jar file is located.

___**6** Run the command to start the installation of the LCM Client.

If no default Java JDK is installed, you must type the full path to Java in the bin directory in the Java JDK installation. For example, run the following command and press Enter:

```
"C:\jdk1.7\bin\java" -jar LifeCycleManagerClient.jar
```

The LifeCycle Manager Client Setup window is displayed.

___**7** Click Next.

___**8** Select to Install a new client.

___**9** Enter a name for the new client. This name will be the name of the shortcut created and the name of the folder where this client will be installed.

___**10** Click Next. The Installation Directory window is displayed.

___**11** Select the destination folder or browse to another location. Make sure that the selected destination folder does not contain any folder with the same name as your LCM Client (for example, LCM-Client).

___**12** Consider the following scenarios before selecting the Installation Directory:

- If you install the LifeCycle Manager Client in the Program Files directory and User Account Control (UAC) is enabled, it is required that you start the LifeCycle Manager Client using an Administrator account. It is recommended to change the compatibility level first before starting the application. For more information, see "Changing the Compatibility Level " on page 37.
- If you install the LifeCycle Manager Client in the Program Files directory and User Account Control (UAC) is enabled, but you do not want to change the compatibility level, you must start the LifeCycle Manager Client by selecting the Run as administrator option. For more information, see "Logging on to the LifeCycle Manager Client" on page 38.
- If you install the LifeCycle Manager Client in a folder that does not require administrative rights, no further steps are needed to start and run the LifeCycle Manager Client.

___**13** Click Next. The Installation Summary window is displayed.

___**14** Click Next. The Installing LifeCycle Manager Client window is displayed and installation is initialized.

___**15** When the task is finished, click Finish.

Post-installation

6

This section contains the following:

Testing LDAP Connection

Use this procedure to test LDAP connection to determine if a user can log on to LifeCycle Manager and is permitted to install a LifeCycle Manager Service.

❑ Test LDAP connection

___**1** Go to the script folder in the LifeCycle Manager Server installation path.

___**2** Run one of the following commands:

Command	Tests performed
`ldapTest`	• Validate the connection to the LDAP server. • Validate the password of the bind user against the LDAP registry.

ldapTest *user*	• Validate the connection to the LDAP server. • Validate the password of the bind user against the LDAP registry. • Verify that the user exists in the LDAP registry. • Verify if the user is allowed to log on to LifeCycle Manager (member of the LifeCycle Manager user group, if such a group is defined). • Verify if the user is a member of the LifeCycle Manager administrator group (required if you want to use it to install a LifeCycle Manager Service).
ldapTest *user password*	• Validate the connection to the LDAP server. • Validate the password of the bind user against the LDAP registry. • Verify that the user exists in the LDAP registry. • Verify if the user is allowed to log on to LifeCycle Manager (member of the LifeCycle Manager user group, if such a group is defined). • Verify if the user is a member of the LifeCycle Manager administrator group (required if you want to use it to install a LifeCycle Manager Service). • Validate the user's password against the LDAP registry.

Changing the Compatibility Level

Use this procedure to change compatibility level for the file LifeCycle Manager.exe. This is required if you installed the LifeCycle Manager Client under the Program Files folder and has User Account Control (UAC) enabled. You must perform this procedure before starting the LifeCycle Manager Client for the first time. This will ensure that you always start the LifeCycle Manager Client with the required permissions.

❑ Change the compatibility level

___**1** Navigate to the LifeCycle Manager Client installation folder and locate the file LifeCycle Manager.exe.

___**2** Right click the file and select Properties.

___**3** Click the Compatibility tab then select Change settings for all users.

___**4** When prompted, specify the Administrator User name and password.

___**5** In the Privilege level, select Run this program as an administrator.

___**6** Click OK twice to save new settings.

Important: If you installed the LifeCycle Manager Client under the Program Files folder and changed the compatibility level for the file LifeCycle Manager.exe, you will be prompted for an Administrator User name and password. This happens when you start the LifeCycle Manager Client. and you do not login using the built-in Administrators account.

Logging on to the LifeCycle Manager Client

Use this procedure to log on to the LifeCycle Manager Client.

❑ Log on to the LifeCycle Manager Client

___**1** On the Start menu, click the LCM-Client shortcut. It will have the name provided during the installation.

Important: If you installed the LifeCycle Manager Client under the Program Files folder and have User Account Control (UAC) enabled and did not change the compatibility level for the LifeCycle Manager.exe file, then you must right-click the LifeCycle Manager Client shortcut (for example, LCM-Client) and select Run as administrator from the menu.

The LifeCycle Manager login page is displayed.

___**2** Provide necessary information. Consider the following fields:

User	Specify your LifeCycle Manager user name.
Password	Specify the corresponding password for the user.
Server	Specify the IP address or domain name of the LifeCycle Manager Server.
Port	Specify the LifeCycle Server port number. The default value is 4060.
Workspace	Accept default path to the workspace, or click the Browse button to select a different workspace location.

___**3** Click Log On. The server certification information window is displayed when the LifeCycle Manager Client connects to a server for the first time.

___**4** Click Yes to accept the certificate. A message is displayed asking you to update the client.

___**5** Click Yes then click OK to restart LifeCycle Manager. The LifeCycle Manager login page is displayed.

___**6** Specify the required information and click Log On. LifeCycle Manager is now started. A dialog box is displayed if a new Java configuration file for Grid applications is available on the CCSS server.

___**7** Click Yes to review the changes. A compare window is displayed.

___**8** Click Apply New Version to apply the new configuration file.

Note: For more information regarding Retrieving Grid Java Configuration see the *LifeCycle Manager Administration Guide*.

Important: If you attempt to log on to a version of LifeCycle Manager Server earlier than 10.1.2.0 using your newly installed client, a message is displayed informing you that an earlier version of LifeCycle Manager Client is required to connect to that server.

Installing the M3 Technology Documentation Infocenter

Infor M3 Technology product documentation is delivered in a infocenter, a web application installed using LifeCycle Manager.

❑ (Optional) Remove previous Infocenter version

If you have installed a previous version of an infocenter and want to replace it with the latest documentation, you can remove the older infocenter.

Note: You may wish to keep the infocenter for the previous version until you have completed upgrade activities.You can remove older infocenters at any time.

- In the LifeCycle Manager Client, click Admin > Upload Products.
- On the Manage Products page, select the Infocenter in the list of Registered Products. Select the Infocenter file in the list of Registered Components and click Unregister.
- In the Confirm unregistration window, click Yes to unregister the Infocenter from LifeCycle Manager
- When the file has been successfully unregistered, a dialog appears. Click OK.

❑ Download the infocenter

M3 Technology documentation infocenters are delivered on the Foundation product download record under System Foundation-M3 <*Version*>.

___**1** Locate the product download record for the version and platform of Foundation that you use.

___**2** Download the M3 Technology infocenter .zip file to a temporary location on your desktop machine.

❑ Install the infocenter

___**1** In the LifeCycle Manager Client, click Admin > Upload Products.

___**2** On the Manage Products page, click the Upload button. Browse to select the infocenter .zip file and click Open.

A dialog appears showing the file upload progress. The upload may take several minutes.

When the file has been successfully uploaded, a message appears indicating that the certificate is trusted.

___**3** In the Verifying Package window, click Yes to register the package in LifeCycle Manager

___**4** When the file has been successfully registered, a dialog box appears. Click OK.

❑ Verify the infocenter installation

___**1** In the LifeCycle Manager Client, click Help > Open Infocenter

The Documentation Portal page appears.

___**2** On the Documentation page, click the link to launch the infocenter you installed.

___**3** Verify that the version and platform match your configuration.

Note: The Documentation page can also be accessed from a URL in the format

http://<*LifeCycle_Manager_Server_IP_address*>:<*Port#* >

where *Port#* is the number you specified for the LifeCycle Manager Server port, plus 2.

- If you used the default value (4060), the *Port#* is 4062.
- If you do not know the value, look in the <*LCMInstallDir*>\LCM-Server\lcm.properties file for the value of http.server.port.

Upgrading LifeCycle Manager

7

This section contains the following:

Upgrade Considerations

Because of the changes in the current version of the LifeCycle Manager architecture, the following compatibility issues should be considered when upgrading LifeCycle Manager:

- This version of the LifeCycle Manager Server does not support upgrading from version 9.1.x or earlier versions.
- This version of the LifeCycle Manager Server only supports upgrading from version 10.1.0.0 or later versions.
- Installing this version of the LifeCycle Manager Server requires that LifeCycle Manager Client 10.1.x.x or later is also installed.
- LifeCycle Manager Client 10.1.2.0 and later versions are not compatible with LifeCycle Manager Server 10.1.1.0 and earlier.
- Earlier versions of the LifeCycle Manager Client are not compatible with this version of the LifeCycle Manager Server.
- It is possible to have both old and new versions of the LifeCycle Manager Client installed on the same computer.

Upgrading from an Earlier Version

Use the following procedures to upgrade from an earlier version of LifeCycle Manager.

Before you start Perform a full backup of the LifeCycle Manager Server before starting the upgrade.

❑ Prepare for installation

___**1** Log in as Windows built-in local Administrator.

Note: If User Account Control (UAC) is enabled, it is not sufficient to log on as a member of the built-in Administrators group.

___**2** Create a temporary directory for the installation file.

___**3** Download the required file LifeCycleManagerServer_<*version*>.jar from the Infor Download Center to the temporary directory.

❑ Upgrade LifeCycle Manager

___**1** Open a command prompt.

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd file and select Run as Administrator.

___**2** Navigate to the directory where the .jar file is located.

___**3** Run the command to start the installation of the LCM Server.

If no default Java is installed, you must type the full path to Java in the bin directory in the Java JDK installation. For example, run the following command and press Enter:

```
"C:\jdk1.7_07_64bit\bin\java" -jar LifeCycleManagerServer_10.1.x.x.jar
```

The LifeCycle Manager Server Setup window is displayed.

___**4** Click Next.

___**5** Select to Update an existing server.

___**6** Click Next. The Select the desired install option window is displayed.

___**7** Select to Update LifeCycle Manager Server.

___**8** Click Next. The Installation Summary window is displayed.

___**9** Click Next. The Installing LifeCycle Manager Server window is displayed and installation is initialized.

___**10** When the task is finished, click Finish. The Windows service LCM-Server is automatically restarted.

Certificate Problems

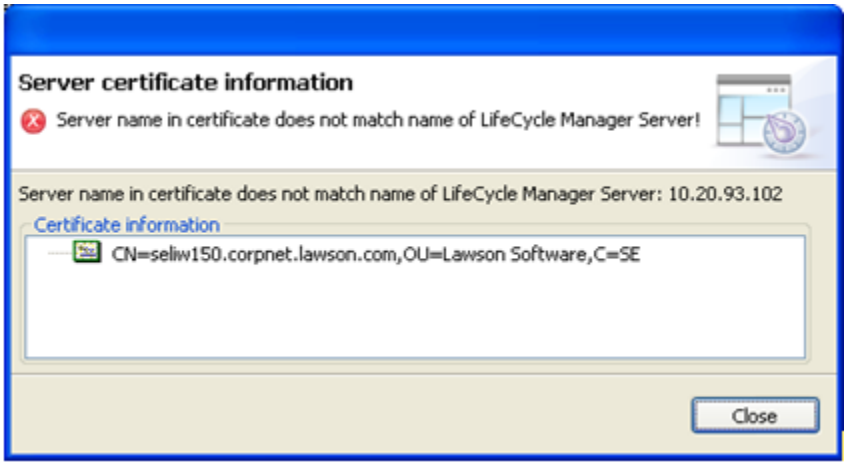
A certificate policy has been implemented to ensure that the LifeCycle Manager Clients and Services always are connected to an authentic LifeCycle Manager Server. This can cause problems when upgrading from earlier versions of LifeCycle Manager if name resolution is not working perfectly on your network.

In this version of LifeCycle Manager, the IP address or server name that is specified during installation of the LifeCycle Manager Server and stored in the server.host property in the lcm.properties file, will be written in the LifeCycle Manager Server's certificate. All clients and services connecting to the LifeCycle Manager Server must be able to connect to the server using this IP address or server name.

However, if you are upgrading from earlier versions of LifeCycle Manager, there is already a certificate generated, and this certificate contains the server name. This means that if any clients and services are not able to ping this server name, they will no longer be able to communicate with the LifeCycle Manager Server.

Detecting a Certificate Problem

You can detect that there is a certificate problem on the LifeCycle Manager Client when you get the following error message when logging on to the LifeCycle Manager Server:



If there is a problem with certificates on a LifeCycle Manager Service, the Server cannot contact the Service even though it is started. A red icon also is displayed in the navigation tree in the Client. In the service log, you will get following error message:

`Server name in certificate does not match name of LifeCycle Manager Server`

Solving a Certificate Problem

Use this procedure to solve a certificate problem.

❑ Solve a certificate problem

___**1** Make sure that the server.host property in the lcm.properties file is set to an IP address or server name that can be pinged by all clients and services.

___**2** Stop the LifeCycle Manager Server service.

___**3** Backup and delete the original servercert file located in the JSSE directory of the LifeCycle Manager Server installation.

___**4** Start the LifeCycle Manager Server. This will regenerate the fileservercert with a new certificate, containing the value of the server.host property as the server name.

___**5** Run the script **`updateCertificate`** on all LifeCycle Manager Services.

Uninstalling LifeCycle Manager Services

8

This section contains the following:

Uninstalling a LifeCycle Manager Service on Windows

Use this procedure to uninstall a LifeCycle Manager Service on Windows.

Before you start Make sure that all products and middleware are uninstalled or unregistered from the LifeCycle Manager Service before you uninstall the Service.

❑ Uninstall a LifeCycle Manager Service on Windows

___**1** In the LifeCycle Manager Client Hosts tab, right-click the server where the LifeCycle Manager Service is installed.

___**2** Select Host > Unregister Host.

___**3** Click OK or View log.

___**4** Open a command prompt window and navigate to the folder **LCM_service_installation_path\script**.

___**5** Run the command **`uninstallLcmService.cmd`**.

___**6** Open Computer Management > Services and Applications > Services to verify that the Windows service is removed. You should not find the service LCM-Service *service_name* in the list.

___**7** Open the services file located in the %windir%\system32\drivers\etc folder and verify that ports reserved for LifeCycle Manager Service are removed from the file.

Uninstalling a LifeCycle Manager Service on IBM i

Use this procedure to uninstall a LifeCycle Manager Service on IBM i.

Before you start Make sure that all products and middleware are uninstalled or unregistered from the LifeCycle Manager Service before you uninstall the Service.

❏ Uninstall a LifeCycle Manager Service on IBM i

___**1** In the LifeCycle Manager Client Hosts tab, right-click the server where the LifeCycle Manager Service is installed.

___**2** Select Host > Unregister Host.

___**3** Click OK or View log.

___**4** Sign on a 5250 session as **QSECOFR** or equivalent user.

___**5** Type **qsh** on the command line and press Enter to start a qshell.

___**6** Go to the folder **LCM_service_installation_path\script**.

___**7** Run the command **`uninstallLcmService.qsh`**.

___**8** Run the command **`wrkactjob`** in the qshell to verify that the service is removed. The LifeCycle Manager Service should not appear in the list.

___**9** Run the command **`wrksrvtble`** in the qshell to verify that all ports assigned to the LifeCycle Manager are no longer in use.

Uninstalling a LifeCycle Manager Service on AIX

Use this procedure to uninstall a LifeCycle Manager Service on AIX. A script is created to uninstall an LifeCycle Manager Service, and clean the AIX environment accordingly.

Before you start Make sure that all products and middleware are uninstalled or unregistered from the LifeCycle Manager Service before you uninstall the Service.

❏ Uninstall a LifeCycle Manager Service on AIX

___**1** In the LifeCycle Manager Client Hosts tab, right-click the server where the LifeCycle Manager Service is installed.

___**2** Select Host > Unregister Host.

___**3** Click OK or View log.

___**4** Log on to the AIX server as user root.

___**5** Navigate to the folder **LCM_service_installation_path/script**.

___**6** Run the command **`uninstallLcmService.ksh`**

___**7** Run the command **`cat /u01/app/LCM10/lcmservices.txt`** to verify that the service is removed. The LifeCycle Manager Service should not appear in the list.

___**8** Open the file /etc/services and verify that ports reserved for the LifeCycle Manager Service are removed from the file.

___**9** If only one service is installed:

___**a** Go to the folder **/u01/app/LCM10/** and remove the contents.

___**b** Remove the files:

```
/etc/rc.d/init.d/lcm10
/etc/rc.d/init.d/lcm10-services
```

___**c** In the file /u01/app/lcm/.profile, there are two generated functions called startlcm and stoplcm. Remove everything from **`#Start of Generated functions for LifeCycleManager (LCM)`** until **`#End of Generated functions for LifeCycleManager (LCM)`**.

Uninstalling a LifeCycle Manager Client 9

This section contains the following:

Uninstalling a LifeCycle Manager Client

Use this procedure to uninstall a LifeCycle Manager Client.

❑ Uninstall a LifeCycle Manager Client

___**1** Open a command prompt.

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd file and select Run as Administrator.

___**2** Navigate to the directory where the installation .jar file is located.

___**3** Run the command to start the installation of the LCM Client.

If no default Java is installed, you must enter the full path to Java in the bin directory of the Java JDK installation. For example, run the following command and press Enter:

```
"C:\jdk1.7_07_64bit\bin\java" -jar LifeCycleManagerClient.jar
```

The LifeCycle Manager Client Setup window is displayed.

___**4** Click Next.

___**5** Select to Update an existing client.

___**6** Select the name of the client to be uninstalled in the list of available clients.

___**7** Click Next. The Select the desired install option window is displayed.

___**8** Select to Uninstall LifeCycle Manager Client.

___**9** Click Next. The Deletion Summary window is displayed.

___**10** Click Next. The Uninstalling LifeCycle Manager Client window is displayed and the uninstallation is initialized.

___ **11** When the task is finished, click Finish.

___ **12** Remove the remaining LCM-Client folder in the path where the LifeCycle Manager Client was installed. For example, **C:\Infor\LifeCycle Manager**.

Uninstalling a LifeCycle Manager Server 10

This section contains the following:

Uninstalling a LifeCycle Manager Server

Use this procedure to uninstall a LifeCycle Manager Server.

❑ Uninstall a LifeCycle Manager Server

___**1** Open a command prompt.

If you are not using the Windows built-in local Administrator account and User Account Control (UAC) is enabled, then you must start the command prompt with the option to Run as Administrator. Right-click the cmd file and select Run as Administrator.

___**2** Navigate to the directory where the installation .jar file is located.

___**3** Run the command to start the installation of the LCM Server.

If no default Java is installed, you must enter the full path to Java in the bin directory of the Java JDK installation. For example, run the following command and press Enter:

```
"C:\jdk1.7_07_64bit\bin\java" -jar LifeCycleManagerServer_10.1.x.x.jar
```

The LifeCycle Manager Server Setup window is displayed.

___**4** Click Next.

___**5** Select to Update an existing server.

___**6** Click Next. The Select the desired install option window is displayed.

___**7** Select to Uninstall LifeCycle Manager Server.

___**8** Click Next. The Installation Summary window is displayed.

___**9** Click Next. The Installing LifeCycle Manager Server window is displayed and the uninstallation is initialized.

__ **10** When the task is finished, click Finish.

__ **11** Remove the remaining LCM-Server folder in the path where the LifeCycle Manager Server was installed. For example, **C:\Infor\LifeCycle Manager**.

Moving a LifeCycle Manager Server

11

This section contains the following:

Moving the LifeCycle Manager Server

If you need to move the LCM server to a new server (because of upgrades or to increase performance etc.) use this procedure to ensure that correct information is copied from the source.

Note: Please note that moving the LCM Server is a fairly complex Administrator task, and it should be done with consideration and care.

❑ Move the LCM Server

___**1** Install the LCM Server on the target server.

Note: It is important to have the same LCM Server version installed on both source and target servers. If you plan to upgrade to a new version of LifeCycle Manager Server SW, install this on the target server and upgrade the source server before performing the steps below.

Important: It is important to install the new server in the same path as the source.

There is no need to supply information about LDAP configuration during the install, except if a local AD LDS instance is used for LDAP.

___**2** Stop the LCM server on the target server.

___**3** Copy the LDAP configuration section from lcm.properties on the source server to lcm.properties on the target server.

(lcm.properties is found in ...\Infor\LifeCycle Manager\LCM-Server)

Note: The path above is the default path. The path may differ depending on where your LifeCycle Manager Server was installed on the source server.

___**4** On the target server, start the LCM Server service.

___**5** Start the LifeCycle Manager client and log-on to the target LCM Server. When verified, close the LCM client.

___**6** On the target server, stop the LCM Server service.

___**7** On the source server, stop the LCM Server service.

___**8** Copy the following directories from the source server to the target server:

- ...\Infor\LifeCycle Manager\LCM-Server\log
- ...\Infor\LifeCycle Manager\LCM-Server\lcmdb
- ...\Infor\LifeCycle Manager\LCM-Server\client
- ...\Infor\LifeCycle Manager\LCM-Server\products
- ...\Infor\LifeCycle Manager\LCM-Server\rss
- ...\Infor\LifeCycle Manager\LCM-Server\war
- ...\Infor\LifeCycle Manager\LCM-Server\grid (will only exist if a Grid is installed)
- ...\Infor\LifeCycle Manager\LCM-Server\http
- ...\Infor\LifeCycle Manager\LCM-Server\synch

Note: The paths above are the default paths. The paths may differ depending on where your LifeCycle Manager Server was installed on the source server.

___**9** On the target server, start the LCM Server service.

___**10** Start LifeCycle Manager client and log-on to LCM server on the target server. Verify that all LCM Services configured on your LCM domain can now be seen in the client. The LCM Services will still be in status 'Stopped'. Close the LCM Client.

___**11** Stop all LifeCycle Manager services by performing one of the following actions depending on the applicable platform:

Platform	Action
Windows	Stop the Windows Service LCM-Service:*service_name*.
IBM i	Stop the subsystem.
AIX	Run the command **`stoplcm`** as user lcm.

___**12** Run the script **`updateCertificate`** located in the script folder of the LifeCycle Manager Service installation path. This script updates the keystore on the LCM Services. Running this script will prompt you for the new LCM Server IP address.

___**13** Restart the LifeCycle Manager Service by performing one of the following actions depending on the applicable platform:

Platform	Action
Windows	Start the Windows Service LCM-Service:*service_name*.

IBM i	Start the service by using the script **`restartService.qsh`**.
AIX	Run the command **`startlcm`** as user lcm.

___**14** Start a LCM Client and log-on to your new LCM Server. It should now be possible to administer your products again.

Important: The source server can no longer be used to manage your products. There can be only one LifeCycle Manager master server.

LDAP Settings

12

This section contains the following:

LDAP Properties

LDAP settings are stored in the lcm.properties file, located in the LifeCycle Manager Server installation folder. This table describes each property in the LDAP section of the lcm.properties file.

Property	Description
ldap.validation	LDAP validation enabled/disabled. If set to false, no validation against LDAP is performed (not recommended for production environments). Example: **`true/false`**
ldap.server.x	LDAP server number x Example: **`ldap.company.com`** **`10.20.30.40`**
ldap.port.x	LDAP port for LDAP server number x Example: **`389 (LDAP)`** **`636 (LDAPS)`**
ldap.bind.user.x	Bind user (distinguished name) for LDAP server number x Example: **`CN=User,OU=Users,DC=company,DC=com`**

Property	Description
ldap.bind.password.x	Password for the bind user for LDAP server number x. This password will be automatically encrypted when the LifeCycle Manager Server is started. Example: **password** **Important:** The bind user password cannot end with @.
ldap.ssl.enabled.x	SSL (LDAPS) enabled/disabled for LDAP server number x Example: **true / false**
ldap.trust.store	Path to Java keystore where the public server certificate of the LDAP server (or its certificate authority) is stored. Only needed if SSL is enabled. Example: **C:\\cert\\keystore.jks**
ldap.trust.store.password	Password for the Java keystore. Only needed if SSL is enabled. Example: **password** **Important:** The trust store password cannot end with @.
ldap.user.prefix	The attribute that LifeCycle Manager will use to display the user name of users in the directory service. Example: **sAMAccountName** **cn** **displayName**
ldap.group.prefix	The attribute that LifeCycle Manager will use to display the group name of groups in the directory service. Example: **sAMAccountName** **cn** **name**

Property	Description
ldap.user.suffix	The base distinguished name which indicates the starting point for LDAP searches of users in the directory service. Example: **OU=Users,DC=company,DC=com**
ldap.group.suffix	The base distinguished name which indicates the starting point for LDAP searches of groups in the directory service. Example: **OU=Groups,DC=company,DC=com**
ldap.group.member.attr	The attribute for groups in the directory service that LifeCycle Manager will use to determine which users are members of that group. Example: **member**
ldap.user.filter	LDAP filter that searches the user registry for users. Example: **(&(|(cn=%v)(sAMAccountName=%v))(objectClass=user))**
ldap.group.filter	LDAP filter that searches the user registry for groups. Example: **(&(cn=%v)(objectClass=group))**
ldap.lcm.admin.group	The LifeCycle Manager administrators group. Example: **LCMAdmins**
ldap.lcm.user.group	The LifeCycle Manager user group. If this property is left blank, all users in LDAP (that can be found with an LDAP search using the user search filter) are allowed to log on to LifeCycle Manager. Example: **LCMUsers**
ldap.days.before.password .expiration	The number of days in advance that LifeCycle Manager will warn before the password of the LDAP bind user expires. The default is 14 days. Only used if Active Directory is used. Example: **14**

For more information about how to change passwords, see *LifeCycle Manager Administration Guide*.

Multiple LDAP Domain Controllers

If you have multiple domain controllers, you can configure a failover solution for LifeCycle Manager. If one of the servers goes down, LifeCycle Manager will try to contact the other instead.

However, in this version, LifeCycle Manager does not support LDAP validation against multiple domains.

To configure LDAP validation against multiple domain controllers, replace x in the properties described above with a number. The default LDAP server that was configured during the installation of the LifeCycle Manager Server has number 0. Copy these properties and replace 0 with 1, 2, and 3 and so on.

This is an example:

```
ldap.server.0=ldap.company.com
ldap.port.0=389
ldap.bind.user.0=CN=User,OU=Users,DC=company,DC=com
ldap.bind.password.0=password
ldap.ssl.enabled.0=false
ldap.server.1=10.20.30.40
ldap.port.1=636
ldap.bind.user.1=CN=User,OU=Users,DC=company,DC=com
ldap.bind.password.1=password
ldap.ssl.enabled.1=true
```

Installation Worksheets

This section contains the following:

LDAP Installation Values

Determine the following LDAP values. Refer to this worksheet when you install LifeCycle Manager.

Prompt	Your Value
LDAP server Specifies the host ID (DNS name or IP address) of the LDAP server. **Example** ldap.company.com 10.20.30.40	
LDAP port Specifies the host port of the LDAP server. **Example** 389 (LDAP) or 636 (LDAPS)	
Bind user (distinguished name) Specifies the distinguished name for the LifeCycle Manager Server to use when binding to the directory service. **Example** cn=root	

Bind user password

Password for the bind user.

Important: The bind user password must not end with @.

SSL enabled

Optional. Specifies whether secure socket communication is enabled to the LDAP server.

Trust store

Optional: required only if SSL is enabled. Specifies the path to a JKS keystore where the public server certificate of the LDAP server (or its certificate authority) is stored.

Trust store password

Type the password for the keystore.

Important: The trust store password must not end with @.

User prefix

Specifies the attribute that LifeCycle Manager will use to display the user name of users in the directory service.

Tivoli or ADAM Example

cn

Active Directory Example

sAMAccountName

Group prefix

Specifies the attribute that LifeCycle Manager will use to display the group name of groups in the directory service.

Example

cn

User suffix

Specifies the base distinguished name which indicates the starting point for LDAP searches of users in the directory service.

Example

OU=Users,DC=company,DC=com

Group suffix

Specifies the base distinguished name which indicates the starting point for LDAP searches of groups in the directory service.

Example

OU=Groups,DC=company,DC=com

Group member attribute

Specifies the attribute for groups in the directory service that LifeCycle Manager will use to determine which users are members of that group.

Example

member

User search filter

Specifies the LDAP user filter that searches the user registry for users.

If you are installing LifeCycle Manager in an LDAP bind configuration, this search must be able to locate the same users as the search base provided during the LDAP bind procedure.

Tivoli Example

(&(uid=%v)(objectclass=inetOrgPerson))

ADAM Example

(&(cn=%v)(objectclass=inetOrgPerson))

Active Directory Example

(&(|(cn=%v)(sAMAccountName=%v))
(objectClass=user))

Group search filter

Specifies the LDAP user filter that searches the user registry for groups.

Tivoli Example

(&(cn=%v)(objectclass=groupOfUniqueNames))

ADAM Example

(&(cn=%v)(objectclass=groupOfUniqueNames))

Active Directory Example

(&(cn=%v)(objectClass=group))

LCM admin group

Specifies a group name in the user registry that point out the LifeCycle Manager Administrators group. Members of this group are allowed to perform all tasks in LifeCycle Manager.

LifeCycle Manager must be able to find this group with an LDAP search using the group search filter (specified above).

LCM user group

Specifies a group name in the user registry that point out the LifeCycle Manager user group. Members of this group are allowed to log on to LifeCycle Manager.

If this field is left blank, all users in LDAP (that can be found with an LDAP search using the user search filter, specified above) are allowed to log on to LifeCycle Manager. LifeCycle Manager must be able to find this group with an LDAP search using the group search filter (specified above).

AD LDS in LifeCycle Manager

B

This section contains the following:

AD LDS Users and Groups

LifeCycle Manager delivers a pre-configured AD LDS (Active Directory Lightweight Directory Services) solution in the LifeCycle Manager Server installation to simplify the LDAP-setup.

Five user accounts and two groups are created during LifeCycle Manager Server installation if AD LDS is chosen as the LDAP-strategy. After the LifeCycle Manager Server installation is finished, use Windows Services console to verify that the LCMADAM service is running.

The following users and groups are created:

Users	
admin	has all permissions to administer the LCMADAM instance
binduser	use this account to bind to the LCMADAM instance
LCMAdmin	use this account to administer LifeCycle Manager
LCMProduser	use this account to administer a product in LifeCycle Manager (Product User)
LCMViewer	use this account to view status of products installed in LifeCycle Manager
Groups	
LCMAdmins	consists of one user account - LCMAdmin
LCMProd	consists of one user account - LCMProduser

The users created during the AD LDS instance installation have the default password ChangeMe123. This password should be reset.

❑ Add user to LCMAdmins group

___**1** Start a command prompt console.

___**2** Navigate to the following directory:

*LCMInstallDir***LCM-Server\adam\manage**

___**3** Run the script **`new_lcmadmin.cmd`** *`name_of_new_user`*. The user created will have the default password ChangeMe123. This password should be reset.

❑ Create new user group in AD LDS

___**1** Start a command prompt console.

___**2** Navigate to the following directory:

*LCMInstallDir***LCM-Server\adam\manage**

___**3** Run the script **`new_group.cmd`** *`name_of_new_group`*.

❑ Create a new user and add the user to an existing user group in AD LDS

___**1** Start a command prompt console.

___**2** Navigate to the following directory:

*LCMInstallDir***LCM-Server\adam\manage**.

___**3** Run the script **`new_lcmuser.cmd`** *`name_of_new_user name_of_LCMgroup`*.

❑ Change password using ADAM ADSI tool

___**1** Select Start > Run and enter adsiedit.msc to start the ADSI Edit tool.

Note: The ADSI Edit tool is included when installing the AD LDS Snap-Ins and Command-Line Tools feature.

___**2** Select Action > Connect to...

___**3** Enter a name for the connection.

___**4** Select the "Select or type a Distinguished Name or Naming Context" radio button and enter **dc=lcmadam,dc=net** .

___**5** Select the "Select or type a domain or server" radio button and enter the Server IP address.

___**6** Click OK.

___**7** In the left pane, expand *The connection name* > dc=lcmadam,dc=net.

___**8** Click on OU=LCM.

___**9** Right-click on a user, and choose Reset Password. Make sure to use complex passwords.

Important:

- The password cannot end with @.
- The password for binduser in the file lcm.properties needs to be updated when password is changed (ldap.bind.password.0=). The password will be encrypted the next time the LifeCycle Manager Server is restarted.

Adding User Management Permissions to the LCMADAM instance

Full access to all AD LDS partitions created during LifeCycle Manager server installation is by default restricted to the user who installed the LifeCycle Manager server. Therefore, by default, only this user has permissions to create new users and groups in the LCMADAM instance.

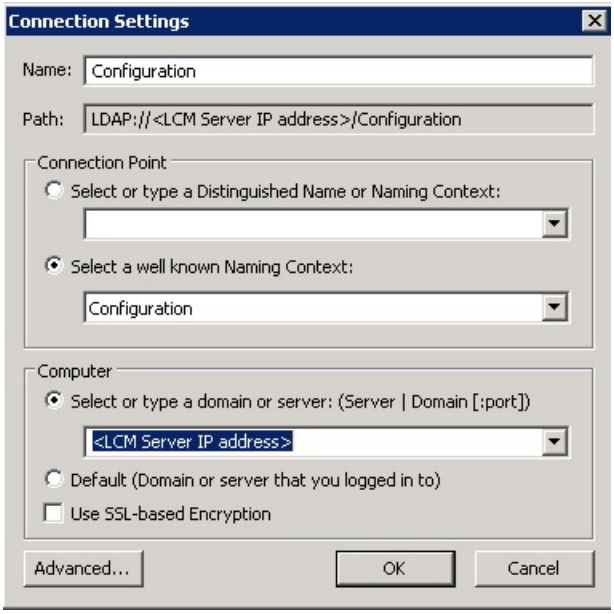
If for some reason the original install user can't log into the server, the LCMADAM instance can't be managed. Therefore, Infor recommends that you grant this permission to other users.

___**1** Log in to the LifeCycle Manager server machine using the same account which installed LifeCycle Manager.

___**2** Run ADSI Edit.

___**3** Click on Action->Connect to.

___**4** Connect to Configuration Naming Context.



___**5** In the left pane, expand Configuration->CN=Configuration,CN=…->CN=Roles.

___**6** In the right pane, double click on CN=Administrators.

___**7** Scroll down to the member attribute and click Edit.

___**8** Click Add Windows Account.

___**9** Enter the groups or users you want to have permissions to manage the LCMADAM instance.

___**10** Click OK->OK.

___**11** Exit ADSI Edit tool.

___**12** Restart the LCMADAM Windows service.

___**13** Restart the LCM Server service.

Now, the members of groups/users added to the Configuration Naming Context Administrators Role can manage the AD LDS LCMADAM instance.

Configuring LCM Server to use SSL for AD LDS

Use this procedure to configure SSL for AD LDS. This procedure is an example of requesting and installing a server certificate from a Certificate Authority configured on MS Windows 2008.

Before you start Be sure that the CA website is configured to use SSL.

If you are running AD LDS on Windows 2012 and use Internet Explorer 10 as the internet browser, you have to add FQDN of your CA to the Compatibility View Settings (Page > Compatibility View Settings). You have to obtain a certificate for the server hosting an AD LDS instance before configuring the instance to use LDAP(s). The certificate must be issued for server authentication.

❑ Enable SSL on AD LDS

___ Follow the steps described in http://technet.microsoft.com/en-us/library/cc725767(WS.10).aspx to enable SSL on AD LDS.

❑ Validate that LDAP(s) can be used to access AD LDS

___**1** Use a LDAP browser, for example ldp.exe.

Note: You have to enable the AD LDS Snap-Ins and Command-Line Tools feature to be able to run ldp.

___**2** Connect and bind to AD LDS using port 636 and SSL.

❑ Import CA certificate to a LifeCycle Manager keystore

The CA certificate must be imported before LDAPs can be enabled for communication between AD LDS and the LifeCycle Manager Server and AD LDS.

___**1** Verify that the folder for the keystore exists.

___**2** Create the keystore and import the CA certificate. For example, use the following command:

```
D:\jdk1.7.0_7_64bit\bin>keytool -import -file c:/dc5.cer -keystore
"D:\Infor\LifeCycle Manager\LCM-Server\adam\ADAM_SSL/dc5" - storepass
ChangeMe123 -storetype jks
```

You must replace ChangeMe123 with your password.

Important: The Trust store password cannot end with @.

___**3** Edit the following parameters in the lcm.properties file. The passwords for bind user and trust store will be encrypted the next time the LifeCycle Manager Server is restarted.

```
# LDAP configurations
ldap.validation=true
ldap.server.0=seliw031.infor.com
ldap.port.0=636
ldap.bind.user.0=cn=binduser,ou=lcm,dc=lcmadam,dc=net
ldap.bind.password.0=##01WQ8/QAEA0iSnuVPKMIpkRQ==
ldap.ssl.enabled.0=true
ldap.trust.store=D:/Infor/LifeCycle Manager/LCM-Server/adam/ADAM_SSL/dc5
ldap.trust.store.password=
```

❑ Validate that LDAPs can be used to access AD LDS instance

___**1** Run an LDAP browser. For example, ldp installed with AD LDS.

___**2** Connect and bind to AD LDS using port 636 and SSL.

Service Account for LifeCycle Manager Server

C

This section contains the following:

Service Account for LifeCycle Manager Server on Windows

For LifeCycle Manager Server, it is required to run the windows service using a dedicated local server user account.

Creating and Reconfiguring a Service Account

Use this procedure to create and reconfigure a service account.

Assign complex password for the service user. Domain password policy may force you to change service user password according to "Maximum password age" policy. Do remember to change password for the service user or the service fails to start.

❑ Create a service account

___**1** Create a new local user using Administrative Tools > Computer Management console.

Tip: You can consider selecting the "Password never expires" option.

___**2** Add the user to the local Administrators group.

___**3** Start Administrative Tools > Local Security Policy.

___**4** Navigate to Local Policies, User Rights Assignment.

___**5** Add the service user to the list of users or groups in the Local Security Settings for following policies:

- Log on as a service
- Deny access to this computer from the network
- Deny logon locally
- Deny log on through Remote Desktop Services

  (or, for earlier Windows versions, use Deny logon through Terminal Services)

❑ Reconfigure a service account

___**1** Start Administrative Tools > Services. Locate and open properties for the service that controls the LifeCycle Manager Server or LifeCycle Manager Service.

___**2** Click on Log On tab and change Log on as: from Local System Account to the created service user.

___**3** Click on OK to new save settings.

___**4** Restart the service.