



Data Migration Guide for LAN Management Solution

Software Release 2.6
CiscoWorks

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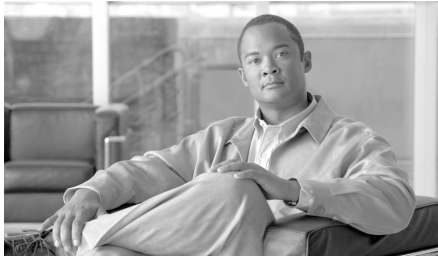
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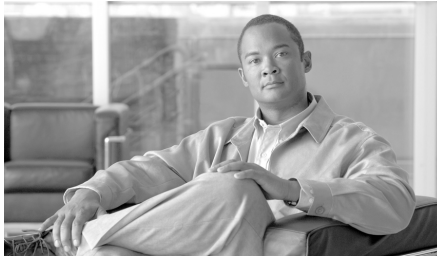
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Preface

This manual describes how to migrate data from previous versions of LAN Management Solution (LMS) to LMS 2.6.

You must use this document in conjunction with the Release Notes for important information that may affect the upgrade and data migration process. Refer the Installation Guides for details on specific applications.

Audience

This document is for anyone who installs, configures, verifies, and uses LMS software.

To use LMS, you should have a basic understanding of network management, TCP/IP, and the configuration of your network.

Conventions

This document uses the following conventions:

Item	Convention
Commands and keywords	boldface font
Variables for which you supply values	<i>italic</i> font
Displayed session and system information	screen font
Information you enter	boldface screen font
Variables you enter	<i>italic screen</i> font
Menu items and button names	boldface font
Selecting a menu item in paragraphs	Option > Network Preferences



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Product Documentation


Note

We sometimes update the printed and electronic documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

[Table 1](#) describes the product documentation that is available.

Table 1 **Product Documentation**

Document Title	Available Formats
<i>Quick Start Guide for LAN Management Solution 2.6</i>	<ul style="list-style-type: none"> On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod_installation_guides_list.html As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for CiscoWorks Common Services 3.0.5 (Includes CiscoView) on Solaris.</i>	<ul style="list-style-type: none"> On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps3996/prod_installation_guides_list.html As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for CiscoWorks Common Services 3.0.5 (Includes CiscoView) on Windows.</i>	<ul style="list-style-type: none"> On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps3996/prod_installation_guides_list.html As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for Campus Manager 4.0.6 on Solaris.</i>	<ul style="list-style-type: none"> On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps563/prod_installation_guides_list.html As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.

Table 1 **Product Documentation (continued)**

Document Title	Available Formats
<i>Installation and Setup Guide for Campus Manager 4.0.6 on Windows.</i>	<ul style="list-style-type: none"> • On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps563/prod_installation_guides_list.html • As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for Resource Manager Essentials 4.0.5 on Solaris.</i>	<ul style="list-style-type: none"> • On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod_installation_guides_list.html • As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for Resource Manager Essentials 4.0.5 on Windows.</i>	<ul style="list-style-type: none"> • On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod_installation_guides_list.html • As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for Device Fault Manager 2.0.6 on Solaris.</i>	<ul style="list-style-type: none"> • On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_installation_guides_list.html • As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
<i>Installation and Setup Guide for Device Fault Manager 2.0.6 on Windows.</i>	<ul style="list-style-type: none"> • On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_installation_guides_list.html • As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.

Table 1 **Product Documentation (continued)**

Document Title	Available Formats
<i>Installation Guide for Internetwork Performance Monitor 2.6</i>	<ul style="list-style-type: none">• On Cisco.com at this URL: http://www.cisco.com/en/US/products/sw/cscowork/ps1008/prod_installation_guides_list.html• As PDF document on the LMS 2.6 Documentation CD-ROM shipped with the product.
Context-sensitive online help	<ul style="list-style-type: none">• Select an option from the navigation tree, then click Help.• Click the Help button in the dialog box.

Related Documentation

**Note**

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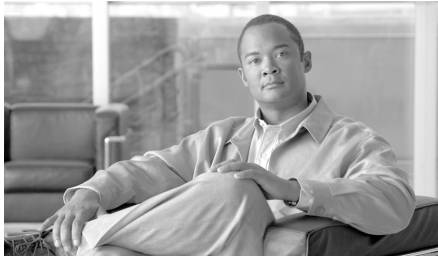
- Release Notes for CiscoWorks Common Services 3.0.5 is available at this URL:
http://www.cisco.com/en/US/products/sw/cscowork/ps3996/prod_release_notes_list.html
- Release Notes for Resource Manager Essentials 4.0.5 is available at this URL:
http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod_release_notes_list.html
- Release Notes for Campus Manager 4.0.6 is available at this URL:
http://www.cisco.com/en/US/products/sw/cscowork/ps563/prod_release_notes_list.html
- Release Notes for Device Fault Manager 2.0.6 is available at this URL:
http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_release_notes_list.html
- Release Notes for Internetwork Performance Monitor 2.6 is available at this URL:
http://www.cisco.com/en/US/products/sw/cscowork/ps1008/prod_release_notes_list.html

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CHAPTER 1

Overview

This document describes the steps involved in migrating data for CiscoWorks LAN Management Solutions (LMS) 2.6. The following migration paths are described in this document:

- LMS 2.5/ LMS 2.5.1 to LMS 2.6
- LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3 to LMS 2.6

This chapter contains:

- [Overview of Migration to LMS 2.6, page 1-1](#)
- [System Requirements, page 1-2](#)
- [Understanding Terms Used in the Data Migration Guide, page 1-3](#)
- [Scope of Data Migration, page 1-3](#)

Overview of Migration to LMS 2.6

Migration is the process of carrying over data from an older version of LMS to a newer version of LMS.

Migration involves:

1. Backing up the older version of LMS data.
2. Installing the newer version of LMS.
3. Restoring the backed up data.

You can migrate to LMS 2.6 using either of these two methods:

- Local Migration, which is the process of installing LMS 2.6 on top of the existing LMS version on the same machine and migrating the backed up data into it.

Or

- Remote Migration, which is the process of installing LMS 2.6 on a different machine and migrating the backed up data into it.

For details on migrating data for all applications to LMS 2.6, see:

- [Migrating Data to LAN Management Solution 2.6 on Solaris, page 2-1](#)
- [Migrating Data to LAN Management Solution 2.6 on Windows, page 3-1](#)

System Requirements

The following table provides details of the system requirements for LMS 2.6:

Table 1-1 **Operating System Supported for LMS 2.6**

Operating System		
Solaris	8 (2.8)	9 (2.9)
Windows 2000	Professional with SP4	Server/Enterprise Edition (Advanced Server) with SP 4
Windows 2003	Standard Edition with SP 1	Enterprise Edition with SP 1
	Standard Edition with SP 2	Enterprise Edition with SP 2
	R2 Standard Edition with SP2	R2 Enterprise Edition with SP 2

LMS 2.6 does *not* support virtual machines, such as VMware and VirtualPC.

Understanding Terms Used in the Data Migration Guide

The terms frequently used in this document are explained below:

- Backing Up—Copying data to another directory.
- Upgrading—Installing a newer software version on top of an older version (for example, installing Common Services 3.0.5 on Common Services 3.0.3).
- Migrating—Carrying over data from an older version of LMS to a newer version.
- Restoring—Bringing the backed up data into the newer version of LMS.

Scope of Data Migration

This section lists the data that is migrated for CS, CM, RME, DFM, and IPM when you upgrade to LMS 2.6.

- On both platforms, migration is supported across different NMSROOT directories, where NMSROOT is the CiscoWorks installation directory.
- Cross platform data migration is *not* supported.

This section contains the following topics:

- [CS Data Migration Scope](#)
- [CM Data Migration Scope](#)
- [RME Data Migration Scope](#)
- [DFM Data Migration Scope](#)
- [IPM Data Migration Scope](#)
- [CV Data Migration Scope](#)

CS Data Migration Scope

When you install Common Services 3.0.5, the following data gets migrated:

- CiscoWorks User information
- Single Sign-on configuration
- Cisco.com User Configuration
- Proxy user configuration
- Device and Credential Repository (DCR) configuration
- Peer Certificates and Self Signed certificates
- Peer Server Account information
- System Identity Account configuration
- Jobs and Resources data, DCR data, Groups data, and other data stored in the database

CM Data Migration Scope

When you install Campus Manager 4.0.6, the following data get migrated:

- Data Collection schedule
- Data Collection filters
- Data Collection debugging options

**Note**

The above mentioned data is applicable for Campus Manager 4.x versions and above only.

- Seed devices
- User Tracking queries and layouts
- User Tracking jobs and archives
- User Tracking administration preferences
- User Tracking usernames, notes, and entries
- SNMP community strings

- Discovery schedule
- Discovery filters
- Discovery debugging options
- Path preferences
- Job schedule
- Job archives
- Topology groups
- Topology map preferences
- Discrepancies settings
- Syslog settings

RME Data Migration Scope

Migrating RME data transfers data into the RME 4.0.5 server by providing data backups from older versions of RME (with their related IDUs) as inputs to the migration script.

When you migrate RME data:

- You can choose to migrate syslogs.
- You can trigger inventory collection for devices being migrated.

For specific details on data that are migrated and that are not migrated, see sections Data Migrated and Data Not Migrated in the chapter Installing Resource Manager Essentials of the *Installation and Setup Guide for Resource Manager Essentials 4.0.5*.

This is available at

http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod_installation_guides_list.html.

DFM Data Migration Scope

The following data is migrated for DFM:

- Device list—The migration procedure adds devices to Common Services Device and Credentials Repository (DCR) and to DFM.
- The following notification information:
 - Mail notification information
 - Mail recipient information
 - Mail sender ID
 - SMTP addresses
 - Trap forwarding addresses
 - Trap notification addresses and ports
- Some polling and threshold settings—For details, see sections Upgrading Polling Settings and Upgrading Threshold Settings in the *Installation and Setup Guide for Device Fault Manager 2.0.6*.

This is available at

http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_installation_guides_list.html.

No other data gets migrated to LMS 2.6.

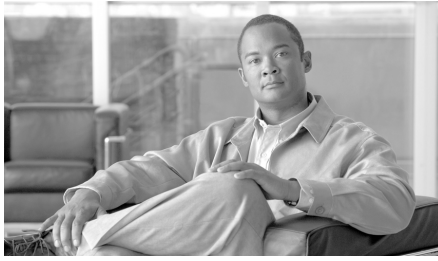
IPM Data Migration Scope

The following data is migrated for IPM:

- IPM database—contains the list of source, target, collectors, and the statistics of data collected.
- Source, target, and collector seed files.

CV Data Migration Scope

When you install CiscoView 6.1.5, the user's device preferences are migrated.



CHAPTER 2

Migrating Data to LAN Management Solution 2.6 on Solaris

This chapter describes the steps involved in migrating data to CiscoWorks LAN Management Solution (LMS) 2.6 on Solaris.

This chapter has the following sections:

- [Migrating Data from LMS 2.5/LMS 2.5.1](#)
- [Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)
- [Understanding LMS Backup Files Created During CS Installation](#)

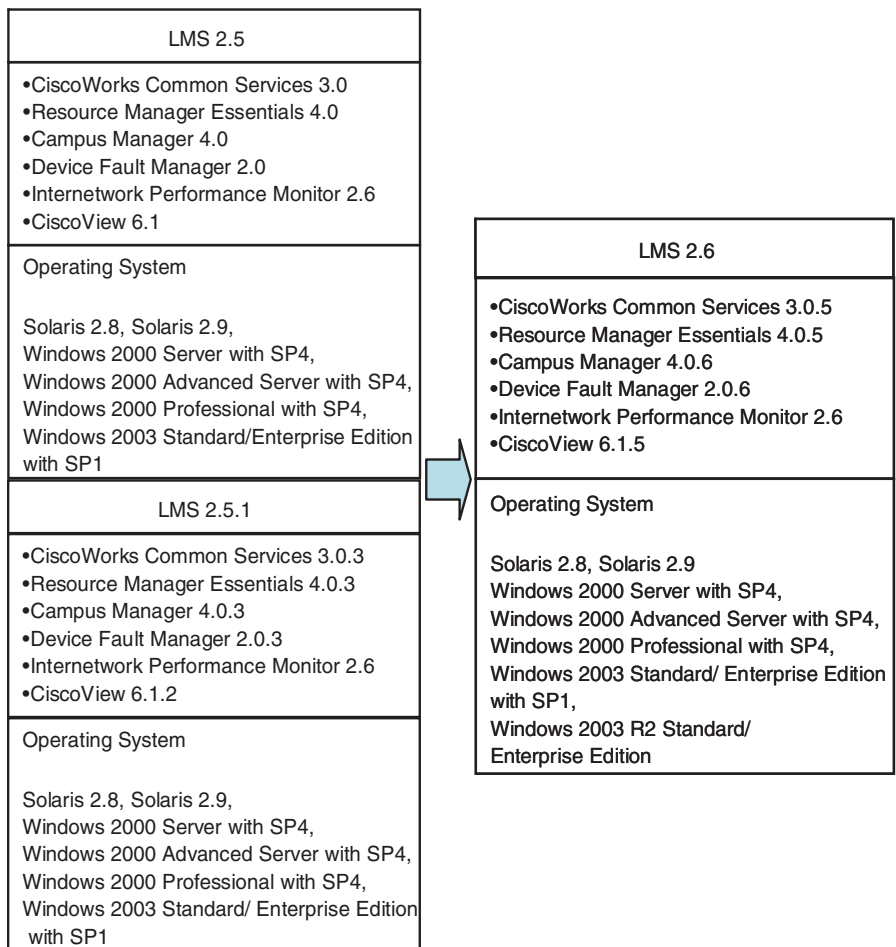
Migrating Data from LMS 2.5/LMS 2.5.1

This section explains the procedure for migrating data from LMS 2.5/LMS 2.5.1 to LMS 2.6.


Note

LMS 2.5 users have to install LMS 2.5.1, before installing LMS 2.6

Figure 2-1 Migrating Data from LMS 2.5/LMS 2.5.1



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You can migrate to LMS 2.6 in two ways:

- [Local Migration from LMS 2.5/LMS 2.5.1](#)
- [Remote Migration from LMS 2.5/LMS 2.5.1](#)

Local Migration from LMS 2.5/LMS 2.5.1

Install LMS 2.6 over LMS 2.5.1. The data from LMS 2.5.1 is automatically migrated to LMS 2.6 during installation. For details on installing LMS 2.6, see the *Quick Start Guide for LAN Management Solution 2.6 (Maintenance Kit)*.



Caution

For DFM users, if you plan to upgrade your operating system to Solaris 9 (Solaris 2.9), upgrade DFM before upgrading your operating system.

Remote Migration from LMS 2.5/LMS 2.5.1

This section explains the procedure for migrating data to a remote machine. It contains the following topics:

- [Migrating Data for CS, RME, CM, DFM and CV](#)
- [Migrating Data for IPM](#)

In this section, the machine that has LMS 2.5.1 data is referred to as Machine A and the remote machine where you need to install LMS 2.6 and restore the data, is referred to as Machine B.

Migrating Data for CS, RME, CM, DFM and CV

To migrate data to a remote machine:

-
- Step 1** Login as root into Machine A.
- Step 2** Back up CS, RME, CM and DFM data as follows:
- Using CLI:

Enter the following command:

```
NMSROOT/bin/perl NMSROOT/bin/backup.pl BKP num_generations
```

where *num_generations* is the maximum backup generations to be kept in the backup directory

If *BKP* is the backup directory, the data is stored in the directories *BKP/1*, *BKP/2*, and *BKP/3* etc., where *BKP/n* stores the data of the *n*th generation.

Data is stored in *BKP/0* if:

 - Backup is done from CLI without specifying the *num_generations*.
 - Immediate backup is done from GUI.
 - Using GUI :
 - Go to **Common Services > Server > Admin > Backup**.
 - Click **Help**, and follow the instructions to back up your data.
- Step 3** Login as root into Machine B .
- Step 4** Install LMS 2.6.
- Step 5** Copy the CS, RME, CM and DFM data from Machine A to any temporary location.
- For CV, copy the user's device preference files from Machine A. The files are available at :
- ```
NMSROOT/MDC/tomcat/webapps/CVng/WEB-INF/classes/cvuserprefs/
```
- The files have to be placed with the same directory structure in Machine B.
- Step 6** Stop the daemon manager by entering:
- ```
/etc/init.d/dmgttd stop
```

Step 7 Restore the backed up data by entering:

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory
```

For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).

Step 8 Examine the log file in the following location to verify that the database was restored.

The location is `/var/adm/CSCOpX/log/restorebackup.log`

Step 9 Start the daemon manager by entering:

```
/etc/init.d/dmgttd start
```

Migrating Data for IPM

To migrate IPM data to a remote machine:

Step 1 Login as root into Machine A.

Step 2 Back up IPM data by entering the following command:

```
IPMServer/bin/ipm dbbackup
```

The data is backed up to the following location:

```
IPMROOT/CSCOcwbS/db/CSCOipm/backup
```

where, *IPMROOT* is the directory where you installed IPM and *IPMServer* is *IPMROOT/CSCOipm*

Step 3 Login as root into Machine B.

Step 4 Copy the following seed files/directories from Machine A to Machine B:

- *IPMServer/etc/source*
- *IPMServer/etc/target*
- *IPMServer/etc/collector*
- *IPMServer/etc/ipm.env*
- *IPMServer/etc/ipmDbPref.conf*
- *IPMServer/Server/htdocs/reports*



Note Maintain the same directory structure while copying the files to Machine B.

Step 5 Copy the backed up IPM data from Machine A to the following location:

```
IPMROOT/CSCocwbs/db/CSCOipm/backup
```

Step 6 Stop the IPM Processes by entering:

```
IPMServer/bin/ipm stop
```

Step 7 Restore the IPM data by entering:

```
IPMServer/bin/ipm dbrestore
```

Step 8 Restart IPM processes by entering:

```
IPMServer/bin/ipm start
```

Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

To migrate data from LMS 2.1/LMS 2.2:

Step 1 Install LMS 2.5.1

LMS 2.5.1 is a prerequisite for installing LMS 2.6. For more details on installation, see Quick Start Guide for LMS 2.5.1 available on Cisco.com at:

http://www.cisco.com/en/US/docs/net_mgmt/ciscoverks_lan_management_solution/2.5.1/quickstart/guide/lms251qn.html

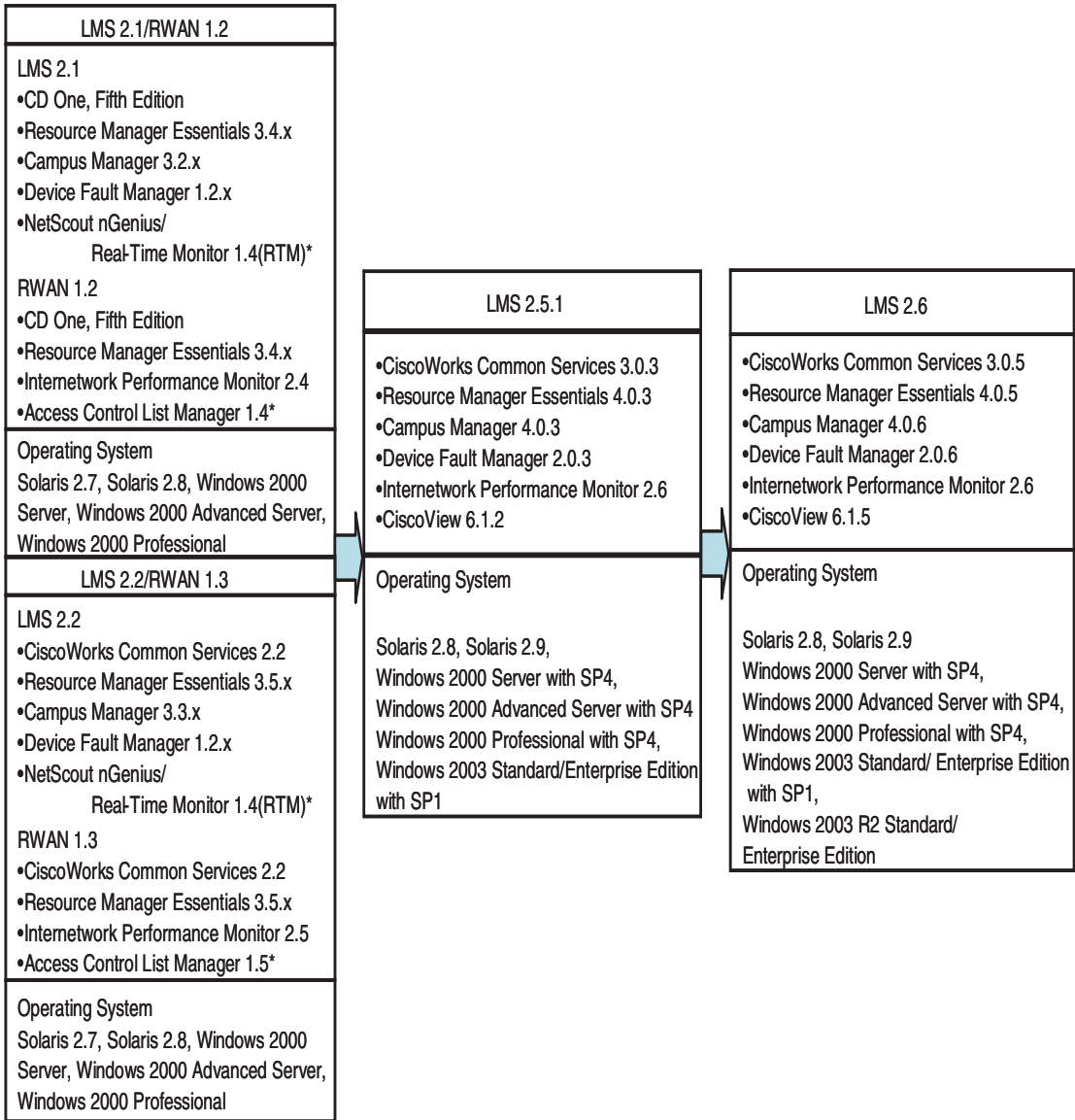
Step 2 Install LMS 2.6 and migrate data into it.

This section explains migration of data from LMS 2.1/LMS 2.2 and RWAN 1.2/RWAN 1.3 to LMS 2.6.

This section consists of:

- [Local Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)
- [Remote Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)

Figure 2-2 Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3



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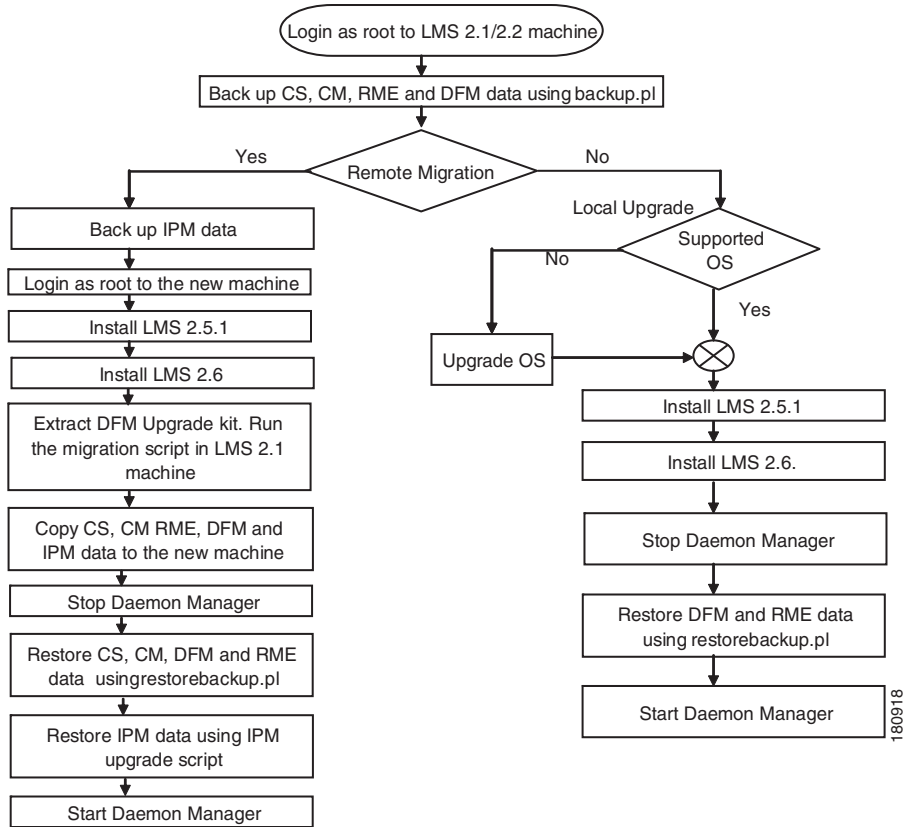
* Real-Time Monitor (RTM) and Access Control List Manager are not part of LMS 2.5.1.

You can migrate to LMS 2.5.1 in two ways—Local Migration or Remote Migration. For details, see [“Understanding Terms Used in the Data Migration Guide” section on page 1-3](#).

We recommend that you use Remote Migration to migrate to LMS 2.5.1.

[Figure 2-3](#) describes the steps involved in migration from LMS 2.1/RWAN 1.2 to LMS 2.5.1.

Figure 2-3 Steps for Migration from LMS 2.1/LMS 1.2/RWAN 1.2



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Local Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

To migrate data on the same machine:

-
- Step 1** Login as root to the machine where LMS is installed.
 - Step 2** Verify that your operating system is supported by LMS 2.6. For details on OS platforms supported by LMS 2.6, see [“System Requirements” section on page 1-2.](#)



Caution

For DFM users, if you plan to upgrade your operating system to Solaris 9 (Solaris 2.9), upgrade DFM before upgrading your operating system.

- Step 3** Install Common Services 3.0.3 which is a part of LMS 2.5.1.
CS 3.0.3 installer prompts you for a backup directory during local migration, and automatically does a backup. The automatic backup facility only backs up data for CS, RME, CM and DFM. It does not back up the data for IPM.

- Step 4** Install the other required LMS 2.5.1 applications.

We recommend that you upgrade all the applications that were in LMS 2.1/LMS2.2/RWAN 1.2/RWAN 1.3.

At the end of RME installation, the following warning message appears. You may ignore them.

```
=====- Possible Warnings/Errors Encountered - =====
WARNING: Please install/upgrade all the required apps
WARNING: in the bundle and then run the migration scripts
[...]
```

=====
Data for CS, CM, and IPM are automatically migrated when you install the respective applications. To restore RME and DFM data, you must run the `restorebackup.pl` script.

Step 5 Install LMS 2.6. The data from LMS 2.5.1 is automatically migrated to LMS 2.6 during installation. For details on installing LMS 2.6, see the *Quick Start Guide for LAN Management Solution 2.6 (Maintenance Kit)*.

Step 6 If you are upgrading RME and/or DFM, stop the daemon manager by entering:
`/etc/init.d/dmgttd stop`

Step 7 Restore LMS 2.1 data by entering:

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP -gen
generationNumber -t temporary_directory
```

For more details, see “Syntax and Usage for Restore and Backup Script” section on page B-1.

Data for all applications except IPM are migrated now. The `restorebackup.pl` script overwrites the already existing data for CS, RME, CM, and DFM.

If there is a mismatch in the applications installed and the applications in the backup archive, the following warning messages appear. You may ignore them.

```
WARNING: There is a mismatch between the list of applications
installed in this machine and the list of applications present in the
backup archive. The application data from the backup archive will get
restored only if that application is installed in this machine. Do you
want to continue the Restore operation? (y-continue or n-quit, y/n)?y
Applications to be restored are..... : [Common Services] [Campus
Manager] [Resource Manager Essentials] [Device Fault Manager]
```

Step 8 Examine the log file in the following location to verify that the database was restored.

The location is `/var/adm/CSCOpX/log/restorebackup.log`

Step 9 Start the daemon manager by entering:

```
/etc/init.d/dmgttd start
```

Remote Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

In this section, the machine that has LMS 2.1/LMS 2.2 data is referred to as Machine A and the remote machine where you need to install LMS 2.6 and restore the data, is referred to as Machine B.

To migrate data:

Step 1 Login as root into Machine A.

Step 2 Back up your LMS data. To do this you need to back up CS, RME, DFM, and CM data. You can do this either by:

- Using CLI:

- Enter the following command:

```
NMSROOT/bin/perl NMSROOT/bin/backup.pl BKP num_generations
```

where *num_generations* is the maximum backup generations to be kept in the backup directory

If *BKP* is the backup directory, the data is stored in the directories *BKP/1*, *BKP/2*, and *BKP/3* etc., where *BKP/n* stores the data of the *n*th generation.

Data is stored in *BKP/0* if:

- Backup is done from CLI without specifying the *num_generations*.
- Immediate backup is done from GUI.

Or

- Using GUI

- Using the CD One, Fifth Edition Administration GUI, go to **Server Configuration > Administration > Database Management > Back Up Data Now**.
- Click **Help**, and follow the instructions to back up your data.

If you are upgrading IPM, create the necessary backup files.

To take backup, run **rBackup.sh** from the IPM 2.6 CD-ROM root directory.

This stops all IPM servers that are running and takes a backup of the database, the seed files, the environment variables, and the version information.

While running `RBackup.sh`, you are prompted to specify the backup directory. However, the default backup directory is `/opt`. The data is compressed and the `ipmBackup.tar` file is created in the specified directory.

Step 3 Login as root into Machine B.

Step 4 Install LMS 2.5.1.

You must first install Common Services (CS 3.0.3), then the other LMS applications.

Step 5 Install LMS 2.6.

If you are upgrading to DFM 2.0.6, assemble the files needed for the DFM migration or else proceed to [Step 6](#).

a. Copy the DFM 2.0.6 Upgrade Kit from Machine B to a directory say *dir*.

The upgrade kit named `cw-dfm-20-UpgradeKit-sol.zip` is available at `NMSROOT/bin` in Machine B. It contains the `DFMMigrate.pl` script and other required files.

b. Locate your copy of the 1.2.x DFM.rps file, normally located in `NMSROOT/objects/smarts/repos/icf/`.

If you plan to use a copy of this file that was created during a backup, the file will be located in the backup directory you specified when using CiscoWorks Common Services or CiscoWorks 2000 CD One.



Caution

Do not rename the DFM.rps file, otherwise Step c will fail.

c. Use the `DFMMigrate.pl` script to create the required migration files.

- Move to the directory *dir* into which you copied the `cw-dfm-20UpgradeKit-sol.zip` file.
- Unzip the file. It creates a directory called `cw-dfm-20-UpgradeKit-sol`.
- Change to the directory where `DFMMigrate.pl` is located. In this case, it is `dir/cw-dfm-20-UpgradeKit-sol/smarts/`
- Run the `DFMMigrate.pl` script:

```
NMSROOT/bin/perl dir/cw-dfm-20-UpgradeKit-sol/smarts/
DFMMigrate.pl -n NMSROOT -o DFM.rps_directory
```

The command variables are:

<i>NMSROOT</i>	CiscoWorks installation directory (by default, /opt/CSCOpX).
<i>DFM.rps_directory</i>	Full pathname of directory containing DFM 1.2.x DFM.rps file. For DFM 1.2.x installations, this file is located in <i>NMSROOT</i> /objects/smarts/repos/icf/.

For example (the following command is one line):

```
/opt/CSCOpX/bin/perl dir/cw-dfm-20-UpgradeKit-sol/smarts/
DFMMigrate.pl -n /opt/CSCOpX -o /opt/CSCOpX/objects/smarts/repos/
icf/
```

This creates the text files ICseed.txt, ICinventory.txt, and ICptm.xml and places them in *dir/cw-dfm-20-UpgradeKit-sol/smarts/conf*.

- Step 6** Copy the LMS data from Machine A to any temporary location in Machine B as follows:
- For CS,CM, RME, and DFM, copy the *BKP* directory that you created in Step 2a.
 - For IPM, copy the ipmBackup.tar file that you created in Step 2b.
 - For DFM, copy the following files :

File Name	Location in LMS 2.1	Copy into this location in LMS 2.5.1
ICseed.txt	<i>dir/cw-dfm-20-UpgradeKit-sol/smarts/conf</i>	<i>NMSROOT</i> /objects/smarts/conf
ICinventory.txt		
ICptm.xml		
mail_notify.conf	<i>NMSROOT</i> /objects/smarts/conf/notifier	<i>NMSROOT</i> /objects/smarts/conf/notifier
trap_notify.conf		



Note

For CV, no data is migrated from LMS 2.1/LMS 2.2 to LMS 2.6

- Step 7** Stop the daemon manager by entering:

```
/etc/init.d/dmgttd stop
```

Step 8 Restore CS, CM, DFM, and RME data by entering:

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory
```

For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).

If you created IPM backup data, restore it now.

- a. Copy ipmBackup.tar to the IPM 2.6 root directory.
- b. Change your working directory to the bin directory of the IPM server.
- c. Make sure that the License Server process of Common Services, called LicenseServer, is up and running. (**Server Configuration > Administration > Process Management > Process Status**)
- d. Run `ipm upgrade` at the command prompt.

IPM data is now migrated.

Step 9 Examine the log file in the following location to verify that the database was restored.

The location is `/var/adm/CSCOpX/log/restorebackup.log`

Step 10 Start the daemon manager by entering:

```
/etc/init.d/dmgttd start
```

Understanding LMS Backup Files Created During CS Installation

If *DB_BKP* is the directory you gave during the CS installation process, the location of the backup directory and structures are:

- *DB_BKP/automaticbackup/cmfbbackup*
- *DB_BKP/automaticbackup/mcbackup*

The *DB_BKP/automaticbackup/cmfbbackup* directory and the *DB_BKP/automaticbackup/mcbackup* directory are used to store LMS backup data and VMS backup data, respectively.

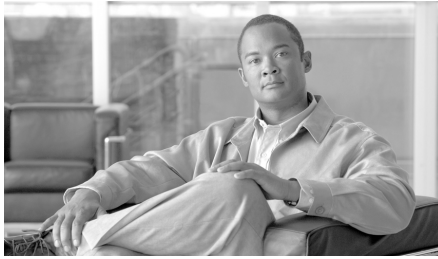
VMS is another solutions bundle available from Cisco. VMS applications are sometimes known as MC or Monitoring Center applications, hence the **mc** in the directory name.

If the *DB_BKP/automaticbackup/mcbackup* directory is empty, there are no VMS based applications installed in the machine.

To restore data on LMS 2.5.1 Server, you should specify *DB_BKP/automaticbackup/cmfbbackup* as the backup directory.

Table 2-1 Restoring LMS Data from Backup

To restore...	Enter...
The most recent version of LMS backup data	<i>NMSROOT/bin/perl</i> <i>NMSROOT/bin/restorebackup.pl -d</i> <i>DB_BKP/automaticbackup/cmfbbackup</i>
The nth generation of LMS backup data	<i>NMSROOT/bin/perl</i> <i>NMSROOT/bin/restorebackup.pl -d</i> <i>DB_BKP/automaticbackup/cmfbbackup -gen n</i>
The 1st generation of LMS backup data	<i>NMSROOT/bin/perl</i> <i>NMSROOT/bin/restorebackup.pl -d</i> <i>DB_BKP/automaticbackup/cmfbbackup -gen now</i>
The 3rd generation of LMS backup data	<i>NMSROOT/bin/perl</i> <i>NMSROOT/bin/restorebackup.pl -d</i> <i>DB_BKP/automaticbackup/cmfbbackup -gen 3</i>



CHAPTER **3**

Migrating Data to LAN Management Solution 2.6 on Windows

This chapter describes the steps involved in migrating data for CiscoWorks LAN Management Solution (LMS) 2.6 on Windows.

This chapter has the following sections:

- [Migrating Data from LMS 2.5/LMS 2.5.1](#)
- [Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)
- [Understanding LMS Backup Files Created During CS Installation](#)

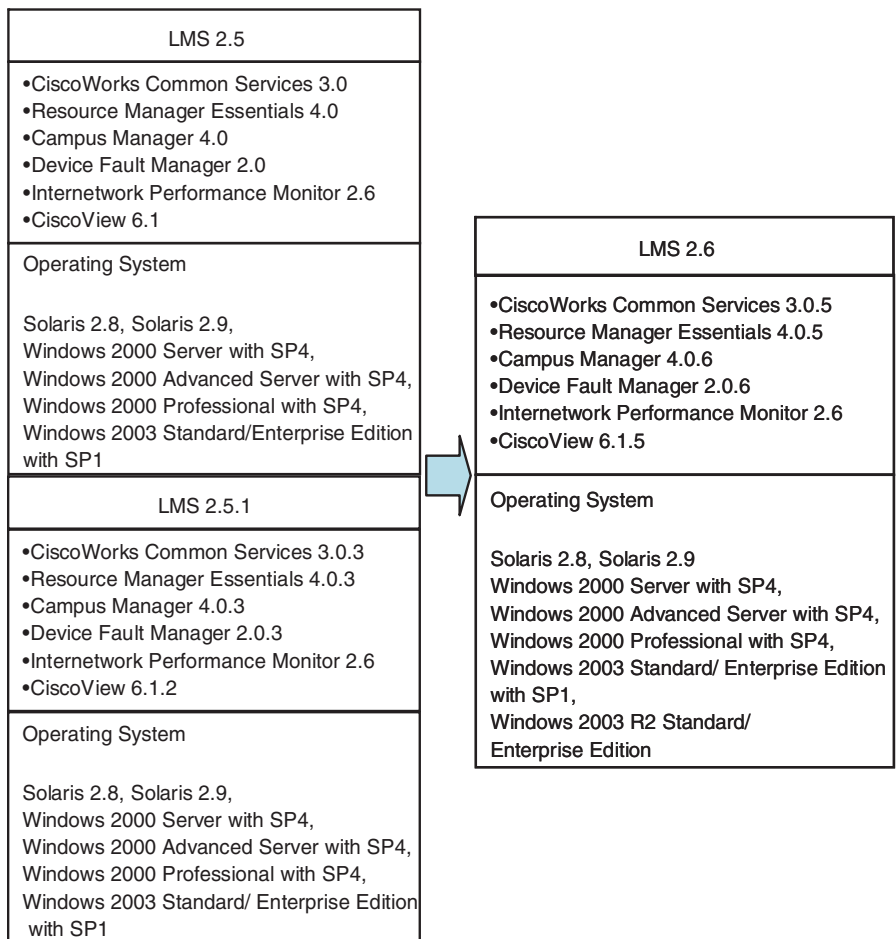
Migrating Data from LMS 2.5/LMS 2.5.1

This section explains the procedure for migrating data from LMS 2.5/LMS 2.5.1 to LMS 2.6.


Note

LMS 2.5 users have to install LMS 2.5.1, before installing LMS 2.6

Figure 3-1 *Migrating Data from LMS 2.5.1*



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You can migrate to LMS 2.6 in two ways:

- [Local Migration from LMS 2.5/LMS 2.5.1](#)
- [Remote Migration from LMS 2.5/LMS 2.5.1](#)

Local Migration from LMS 2.5/LMS 2.5.1

Install LMS 2.6 over LMS 2.5.1. The data from LMS 2.5.1 is automatically migrated to LMS 2.6 during installation. For details on installing LMS 2.6, see the *Quick Start Guide for LAN Management Solution 2.6 (Maintenance Kit)*.

Remote Migration from LMS 2.5/LMS 2.5.1

This section explains the procedure for migrating data to a remote machine. It contains the following topics:

- [Migrating Data for CS, RME, CM ,DFM and CV](#)
- [Migrating Data for IPM](#)

In this section, the machine that has LMS 2.5.1 data is referred to as Machine A and the remote machine where you need to install LMS 2.6 and restore the data, is referred to as Machine B.

Migrating Data for CS, RME, CM ,DFM and CV

To migrate data to a remote machine:

-
- Step 1** Login as administrator into Machine A.
- Step 2** Back up CS, RME, CM and DFM data as follows:
- Using CLI:

Enter the following command:

```
NMSROOT\bin\perl NMSROOT\bin\backup.pl BKP num_generations
```

where *num_generations* is the maximum backup generations to be kept in the backup directory

If *BKP* is the backup directory, the data is stored in the directories *BKP/1*, *BKP/3*, and *BKP/3* etc., where *BKP/n* stores the data of the *n*th generation.

Data is stored in *BKP/0* if:

 - Backup is done from CLI without specifying the *num_generations*.
 - Immediate backup is done from GUI.
 - Using GUI :
 - Go to **Common Services > Server > Admin >Backup**.
 - Click **Help**, and follow the instructions to back up your data.
- Step 3** Login as administrator into Machine B.
- Step 4** Install LMS 2.6.
- Step 5** Copy the CS, RME, CM and DFM data from Machine A to any temporary location.
- For CV, copy the user's device preference files from Machine A. The files are available at :
- ```
NMSROOTMDC\tomcat\webapps\CVng\WEB-INF\classes\cvuserprefs\
```
- The files have to be placed with the same directory structure in Machine B.
- Step 6** Stop the daemon manager by entering:
- ```
net stop crmdmgtd
```

Step 7 Restore the backed up data by entering:

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory
```

For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).

Step 8 Examine the log file in the following location to verify that the database was restored.

The location is *NMSROOT\log\restorebackup.log*

Step 9 Start the daemon manager by entering:

```
net start crmdmgtd
```

Migrating Data for IPM

To migrate IPM data to a remote machine:

Step 1 Login as administrator into Machine A.

Step 2 Back up IPM data by entering the following command:

```
IPMServer\bin\ipm dbbackup
```

The data is backed up to the following location:

```
IPMServer\sybase\Backup1
```

where, *IPMServer* is *IPMROOT\server* and *IPMROOT* is the directory where you installed IPM.

Step 3 Login as administrator into Machine B.

Step 4 Copy the following seed files/directories from Machine A to Machine B:

- *IPMServer\etc\source*
- *IPMServer\etc\target*
- *IPMServer\etc\collector*
- *IPMServer\etc\ipm.env*
- *IPMServer\etc\ipmDbPref.conf*
- *IPMServer\server\htdocs\reports*



Note Maintain the same directory structure while copying the files to Machine B.

Step 5 Copy the backed up IPM data from Machine A to the following location:

```
IPMServer\sybase\Backup1
```

Step 6 Stop the IPM Processes by entering:

```
IPMServer\bin\ipm stop
```

Step 7 Restore the IPM data by entering:

```
IPMServer\bin\ipm dbrestore
```

Step 8 Restart IPM processes by entering:

```
IPMServer\bin\ipm start
```

Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

To migrate data from LMS 2.1/LMS 2.2:

Step 1 Install LMS 2.5.1

LMS 2.5.1 is a prerequisite for installing LMS 2.6. For more details on installation, see Quick Start Guide for LMS 2.5.1 available on Cisco.com at:

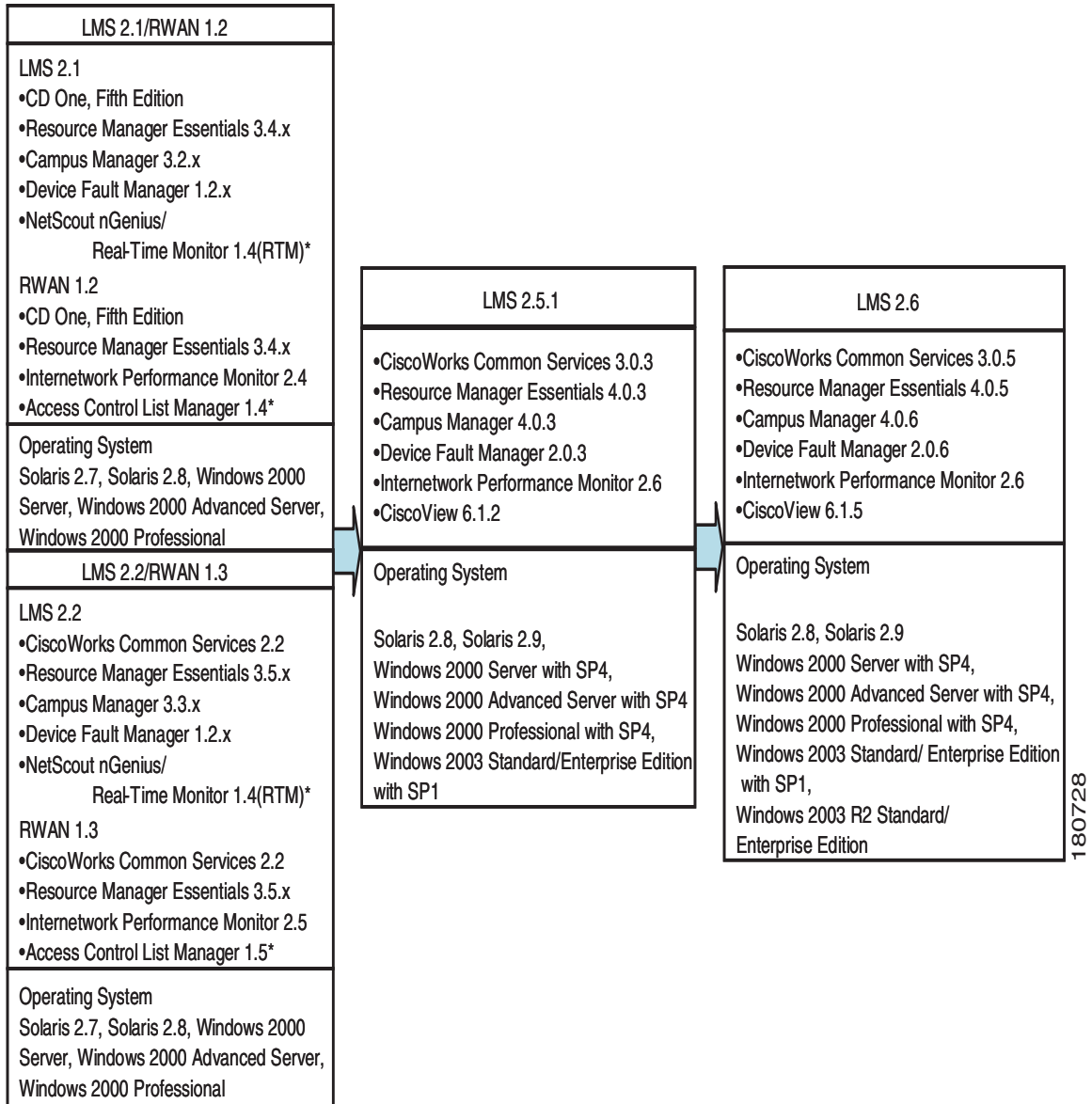
http://www.cisco.com/en/US/docs/net_mgmt/ciscoverks_lan_management_solution/2.5.1/quickstart/guide/lms251qn.html

Step 2 Install LMS 2.6 and migrate data into it.

This section explains migration of data from LMS 2.1/LMS 2.2 and RWAN 1.2 and RWAN 1.3 to LMS 2.6. It contains the following topics:

- [Before You Begin Migration](#)
- [Local Migration from LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)
- [Remote Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3](#)

Figure 3-2 Migrating Data From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3



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* Real-Time Monitor (RTM) and Access Control List Manager are not part of LMS 2.5.1.

You can migrate to LMS 2.5.1 in two ways—Local Migration or Remote Migration. For more details, see [“Understanding Terms Used in the Data Migration Guide”](#) section on page 1-3.

We recommend that you use Remote Migration to migrate to LMS 2.5.1.

Before You Begin Migration

When you attempt to restore your data during remote or local migration, you may see the following error message, and must follow the instructions in the message:

```
"ERROR: Unable to copy from backup archive folder to temporary folder  
POSSIBLE REASON:
```

```
Some files in the backup archive might not have enough permissions to  
read and copy.
```

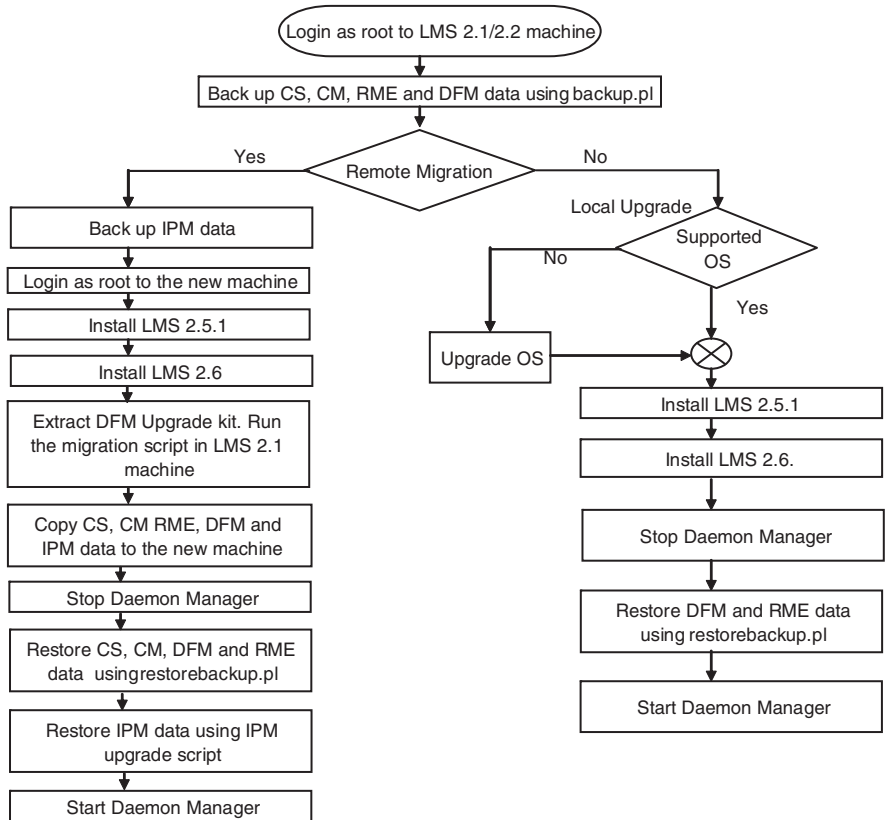
```
SUGGESTION TO RESOLVE:
```

1. Open 'Windows Explorer'.
2. Right click on the generation folder (DB_BKP\0) and select 'Properties'
3. Click the 'Security tab'
4. Select/De-Select the allow/deny boxes so that you have permission to read
5. Click the 'Advanced button'
6. Enable the 'Reset permissions on all child objects.....' check boxes.
7. Click 'Apply', and 'OK' Button

```
Try doing the restore again, you should succeed."
```

[Figure 3-3](#) describes the steps involved in local migration from LMS 2.1/LMS 1.2/RWAN 1.2.

Figure 3-3 Steps for Migration from LMS 2.1/LMS 2.2/RWAN 1.2/ RWAN 1.3



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Local Migration from LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

To migrate data on the same machine:

-
- Step 1** Login as administrator to the machine where LMS is installed.
- Step 2** Set the permissions on the backup folder as described in “[Before You Begin Migration](#)” section on page 3-9.
- Step 3** Verify that your operating system is supported for LMS 2.6. For details on OS platforms supported by LMS 2.6, see “[System Requirements](#)” section on page 1-2.
- Step 4** Install Common Services 3.0.3 which is a part of LMS 2.5.1.
CS 3.0.3 installer prompts you for a backup directory during local migration, and automatically does a backup. The automatic backup facility only backs up data for CS, RME, CM, and DFM. It does not back up the data for IPM.
- Step 5** Install one or more of the required LMS 2.5.1 applications.
We recommend that you upgrade all the applications that were in LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3.
At the end of RME installation, the following warning message appears. You may ignore them.
- ```

===== Possible Warnings/Errors Encountered - =====
WARNING: Please install/upgrade all the required apps
WARNING: in the bundle and then run the migration scripts
[...]
=====

```
- Data for CS, CM, and IPM are automatically migrated when you upgrade the respective applications.
- Step 6** Install LMS 2.6. The data from LMS 2.5.1 is automatically migrated to LMS 2.6 during installation. For details on installing LMS 2.6, see the *Quick Start Guide for LAN Management Solution 2.6 (Maintenance Kit)*.
- Step 7** If you are upgrading RME and/or DFM, stop the daemon manager by entering:
- ```
net stop crmdmgt
```

Step 8 Restore the LMS data by entering:

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP -gen
generationNumber -t temporary_directory
```

For more details, see “Syntax and Usage for Restore and Backup Script” section on page B-1.

Data for all applications except IPM are migrated now. The `restorebackup.pl` script overwrites the already existing data for CS, CM, RME, and DFM.

If there is a mismatch in the applications installed and the applications in the backup archive, the following warning messages appear:

```
WARNING: There is a mismatch between the list of applications
installed in this machine and the list of applications present in the
backup archive. The application data from the backup archive will get
restored only if that application is installed in this machine. Do you
want to continue the Restore operation? (y-continue or n-quit, y/n)?y
Applications to be restored are..... : [Common Services] [Campus
Manager] [Resource Manager Essentials] [Device Fault Manager]
```

Step 9 Examine the log file in the following location to verify that the database was restored.

The location is `NMSROOT\log\restorebackup.log`

Step 10 Start the daemon manager by entering:

```
net start crmdmgt
```

Remote Migration From LMS 2.1/LMS 2.2/RWAN 1.2/RWAN 1.3

In this section, the machine that has LMS 2.1/LMS 2.2 data is referred to as Machine A and the remote machine where you need to install LMS 2.6 and restore the data, is referred to as Machine B.

To migrate data:

-
- Step 1** Login as administrator into Machine A.
- Step 2** Set the permissions of the backup folder as described in “[Before You Begin Migration](#)” section on page 3-9.
- Step 3** Back up your LMS data. To do this you need to back up CS, RME, DFM, and CM data. You can do this either by:

- Using CLI:

- Enter the following command:

```
NMSROOT\bin\perl NMSROOT\bin\backup.pl BKP num_generations
```

For details, see “[Syntax and Usage for Backup Script](#)” section on page A-1.

where *num_generations* is the maximum backup generations to be kept in the backup directory

If *BKP* is the backup directory, the data is stored in the directories *BKP\1*, *BKP\2*, and *BKP\3* etc., where *BKP\n* stores the data of the *n*th generation.

Data is stored in *BKP/0* if:

- Backup is done from CLI without specifying the *num_generations*.
- Immediate backup is done from GUI.

Or

- Using GUI:
 - Using the CD One, Fifth Edition Administration GUI go to **Server Configuration > Administration > Database Management > Back Up Data Now**.
 - Click **Help**, and follow the instructions to back up your data.

If you are upgrading IPM, create the necessary backup files.

To take a backup, run `rbackup.exe` from the IPM 2.6 CD-ROM root directory.

This stops all IPM servers that are running and takes a backup of the database, the seed files, the environment variables, and the version information.

While running `rbackup.exe`, the default backup directory is the `backup` directory under the IPM installation root directory. However, you can specify any directory.

When using a custom directory, some of the files do not have proper permissions. While you move these files to remote machine, you need to manually modify their permissions.

Step 4 Login as administrator into Machine B.

Step 5 Install LMS 2.5.1.

You must first install Common Services (CS 3.0.3), then optionally install one or more of the required LMS applications.

Step 6 Install LMS 2.6.

If you are upgrading to DFM 2.0.6, assemble the files needed for DFM migration or else proceed to [Step 7](#).

a. Copy the DFM 2.0.6 Upgrade Kit from Machine B to a directory say *dir*.

The upgrade kit named `cw-dfm-20-UpgradeKit-win.zip` is available at `NMSROOT\bin\` in Machine B. It contains the `DFMigrate.pl` script and other required files.

b. Locate your copy of the 1.2.x DFM.rps file. It is normally located in `NMSROOT\objects\smarts\repos\icf\`.

If you plan to use a copy of this file that was created during a backup, the file will be located in the backup directory you specified when using CiscoWorks Common Services or CiscoWorks 2000 CD One.



Caution

Do not rename the DFM.rps file, otherwise Step c will fail.

- c. Use the DFMMigrate.pl script to create the required migration files.
 - Move to the directory *dir*, into which you copied the cw-dfm-20UpgradeKit-win.zip file.
 - Unzip the file. It creates a directory called cw-dfm-20-UpgradeKit-win.
 - Change to the directory where DFMMigrate.pl is located. In this case, it is *dir\cw-dfm-20-UpgradeKit-win\smarts*
 - Run the DFMMigrate.pl script:

```
NMSROOT\bin\perl dir\cw-dfm-20-UpgradeKit-win\smarts\
DFMMigrate.pl -n NMSROOT -o DFM.rps_directory
```

The command variables are:

<i>NMSROOT</i>	CiscoWorks installation directory (by default, C:\Program Files\CSCOPx).
<i>DFM.rps_directory</i>	Full pathname of directory containing DFM 1.2.x DFM.rps file. For DFM 1.2.x installations, this file is located in <i>NMSROOT\objects\smarts\repos\icf\</i>

For example (the following command is one line):

```
C:\Progra-1\CSCOPx\bin\perl dir\cw-dfm-20-UpgradeKit-win\smarts\
DFMMigrate.pl -n C:\Progra-1\CSCOPx -o C:\Progra-1\CSCOPx\objects\
smarts\repos\icf\
```

This creates the text files ICseed.txt, ICinventory.txt, and ICptm.xml and places them in *dir\cw-dfm-20-UpgradeKit-win\smarts\conf*.

- Step 7** Copy the LMS data from Machine A to any temporary location in Machine B as follows:
- a. For CS,CM, RME, and DFM, copy the *BKP* directory that you created in Step 3a.
 - b. For IPM, copy the *backup* directory that you created in Step 3b.

- c. For DFM, copy the following files .

File Name	Location in LMS 2.1	Copy into this location in LMS 2.5.1
ICseed.txt	dir\cw-dfm-20-UpgradeKit-win\ smarts\conf	NMSROOT\objects\smarts\conf
ICinventory.txt		
ICptm.xml		
mail_notify.conf	NMSROOT\objects\smarts\conf\ notifier	NMSROOT\objects\smarts\conf\notifier
trap_notify.conf		

**Note**

For CV, no data will be migrated from LMS 2.1/LMS 2.2 to LMS 2.6

- Step 8** Stop the daemon manager by entering:

```
net stop crmdmgt
```

- Step 9** Restore CS, CM, DFM, and RME data by entering:

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory
```

For more details, see [“Syntax and Usage for Restore and Backup Script” section on page B-1.](#)

If you created IPM backup data, restore it as follows:

- Copy the entire contents in this directory to the backup directory under the directory where you have installed IPM 2.6.
- Change your working directory to the bin directory of the IPM server.
- Make sure that the License Server process (called LicenseServer) is up and running. (**Server Configuration > Administration > Process Management > Process Status**)
- Run `ipm upgrade` at the command prompt.

IPM data is now migrated.

Step 10 Examine the log file in the following location to verify that the database was restored.

The location is *NMSROOT*\log\restorebackup.log

Step 11 Start the daemon manager by entering:

```
net start crmdmgtd
```

Understanding LMS Backup Files Created During CS Installation

If *DB_BKP* is the directory you gave during the CS installation process, the location of the backup directory and structures are as follows:

- *DB_BKP*\automaticbackup\cmfbackup
- *DB_BKP*\automaticbackup\mcbackup

The *DB_BKP*\automaticbackup\cmfbackup directory and the *DB_BKP*\automaticbackup\mcbackup directory are used to store LMS backup data and VMS backup data respectively.

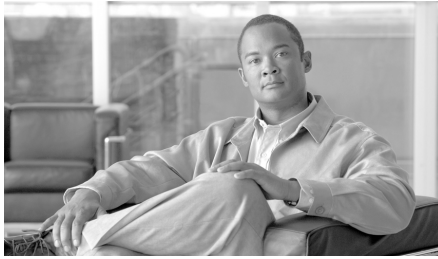
VMS is another solutions bundle available from Cisco. VMS applications are sometimes known as MC or Monitoring Center applications, hence the **mc** in the directory name.

If the *DB_BKP*\automaticbackup\mcbackup directory is empty, there are no VMS based applications installed in the machine.

To restore data on LMS 2.5.1 Server, you should specify `DB_BKP\automaticbackup\cmfbackup` as the backup directory.

Table 3-1 Restoring LMS Data from Backup

To restore...	Enter...
The most recent version of LMS backup data	<code>NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d DB_BKP\automaticbackup\ cmfbackup</code>
The nth generation of LMS backup data	<code>NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d DB_BKP\automaticbackup\ cmfbackup -gen n</code>
The 1st generation of LMS backup data	<code>NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d DB_BKP\automaticbackup\ cmfbackup -gen now</code>
The 3rd generation of LMS backup data	<code>NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d DB_BKP\automaticbackup\ cmfbackup -gen 3</code>



CHAPTER 4

Troubleshooting Errors in Data Migration

This chapter describes the errors that you might encounter during data migration and guidelines on troubleshooting those errors.

This chapter contains:

- [Errors From CS Data Migration, page 4-3](#)
- [Errors From RME Data Migration, page 4-4](#)
- [Errors From DFM Data Migration, page 4-6](#)
- [Frequently Asked Questions on LMS Upgrade and Data Migration, page 4-8](#)

You must:

- Make sure that the server configuration and OS versions are compatible with LMS 2.6. Also, make sure the server has enough space to do the DB backup and restore.
- Check migration logs. The logs (migration.log, restorebackup.log, rme_base.log) are available under:

Solaris: `/var/adm/CSCOPx/log`

Windows: `NMSROOT\log`

- Note that time taken to collect inventory is directly proportional to the number of devices and the network response time

There is another way of migrating data, where you do not have to perform inventory collection during migration. This is if there are many devices in the backup. Inventory can be triggered from the UI after the data migration of other applications have completed.

If you encounter problems during the data migration process, do the following to clean up the temporary files and go back to the initial state:

Step 1 Stop the LMS system by entering,

On Solaris

```
/etc/init.d/dmgt stop
```

On Windows

```
net stop crmdmgt
```

Step 2 Run the following commands:

```
NMSROOT/bin/perl
```

```
NMSROOT/objects/db/conf/configureDb.pl action=unreg dsn=rme  
dmprefix=Essentials
```

```
NMSROOT/bin/perl
```

```
NMSROOT/objects/db/conf/configureDb.pl action=uninstall dsn=rme
```

On Solaris

```
rm -fr NMSROOT/tempBackupData
```

On Windows

```
rmdir NMSROOT/tempBackupData
```

Errors From CS Data Migration

If you encounter errors during CS data migration, the following options are useful for troubleshooting:

- CAM (Core Admin Module) debugging:

You can enable CAM debugging by entering:

```
NMSROOT/MDC/bin/ccraccess -updateLog Core cam DEBUG
```

You can disable CAM debugging by entering:

```
NMSROOT/MDC/bin/ccraccess -updateLog Core cam WARN
```

Daemon Manager restart is necessary.

- CAM debug details:

CAM debug details are logged at:

```
NMSROOT/MDC/log/core-MM-DD-YYYY.log
```

- Sybase version:

Solaris: 9.0.0.1364

You can get the Sybase version by entering:

```
NMSROOT/objects/db/bin/dbversion
```

Windows: 9.0.0.1383

You can get the Sybase version by entering:

```
NMSROOT\objects\db\win32\dbeng9 -v
```

- Server information:

To collect server information, select **Common Services > Server > Admin > Collect Server Information** from the CiscoWorks Home Page.

This allows you to quickly collect all information about the state of the system. You can use this report to send to TAC for troubleshooting.

This report provides information about System configuration, environment settings, application configuration details, process status, and product log files.

- SelfTest tool:

You can select **Common Services > Server > Admin > SelfTest** from the LMS Home Page to invoke the SelfTest tool.

The SelfTest tool checks the integrity and health of the system for some of the Common Services components.

This tool is useful to debug issues of corrupted files and issues related to failure of some basic components. It runs PERL scripts that provide outputs that indicate whether the test has passed.

Errors From RME Data Migration

If you encounter errors during RME data migration, do the following:

- Make sure that the server configuration and OS version are compatible with LMS 2.6. Also, make sure the server has enough space to do the DB backup and restore.
- Check migration logs. The logs (migration.log, restorebackup.log, rme_base.log) are available at

Solaris

`/var/adm/CSCOPx/log`

Windows

`NMSROOT\log`

- If you get the OutOfMemoryError message, you can try to increase the available JVM (Java Virtual Machine) heap size to work around the problem.

The JVM heap size can be configured in:

Solaris

`NMSROOT/MDC/tomcat/webapps/rme/WEB-INF/classes/com/cisco/nm/rmeng/migration/migration.properties`

Windows

`NMSROOT\MDC\tomcat\webapps\rme\WEB-INF\classes\com\cisco\nm\rmeng\migration\migration.properties`

The migration.properties file has the following parameters:

Parameter	Purpose	Default Value
VM_MIN_HEAP	Minimum JVM heap size	128
VM_MAX_HEAP	Maximum JVM heap size	512
RETRIES	Number of retries for starting the daemon	15

You can increase the JVM heap size as much as possible (up to the available RAM). However, do not exceed real system memory or your application will stop responding.

- Time taken to collect inventory is directly proportional to the number of devices and the network response time.

There is another way of migrating data, where you can skip inventory collection during migration. That is, if there are many devices in the backup. You can trigger Inventory Collection from the UI after you complete the data migration for other applications.

Sometimes, RME Migration may fail with a message in the logfile migration.log that DCRServer could not be started. You can work around this problem by running the following command before performing migration:

Solaris

```
NMSROOT/bin/perl NMSROOT/bin/dbRestoreOrig.pl dsn=cmf
dmprefix=Cmf opt=Y
```

Windows

```
NMSROOT\bin\perl NMSROOT\bin\dbRestoreOrig.pl dsn=cmf
dmprefix=Cmf opt=Y
```

Errors From DFM Data Migration

If you encounter errors during DFM data migration:

- Check logs. The relevant log files are:

Solaris

- `/var/tmp/Ciscoworks_install_yyyymmdd_xxx.log`

where `xxx` is the running number for the last CiscoWorks application installed.

- `/var/adm/CSCOPx/log/dbbackup.log`

Windows

- `SystemDrive:\Ciscoworks_install_yyyymmdd_xxx.log`, where *SystemDrive* is the drive where your operating system is installed and `xxx` is the running number for the last CiscoWorks application installed.

- `NMSROOT\log\dbbackup.log`

- Check the contents of the backup data file `filebackup.tar`. Note that the following is the list of DFM related files or databases that are backed up during the backup into the user-defined backup directory.

Contents of the following folders are backed up as `filebackup.tar` under specified backup directory.

Solaris:

- `NMSROOT/objects/smarts/conf`
- `NMSROOT/objects/smarts/local/repos`
- `NMSROOT/objects/smarts/local/logs`
- `NMSROOT/objects/smarts/local/conf`
- `NMSROOT/setup/dfm.info`

Windows:

- *NMSROOT*\objects\smarts\conf
- *NMSROOT*\objects\smarts\local\repos
- *NMSROOT*\objects\smarts\local\logs
- *NMSROOT*\objects\smarts\local\conf
- *NMSROOT*\setup\dfm.info

The following database files along with corresponding database transaction log files are backed up:

- dfmEpm.db—Contains the data of the DFM Event Promulgation Module
- dfmInv.db—Contains the data of the DFM Inventory
- dfmFh.db—Contains the data of the DFM Fault History

These files are located at:

Solaris

- *NMSROOT*/databases/dfmEpm/dfmEpm.db
- *NMSROOT*/databases/dfmInv/dfmInv.db
- *NMSROOT*/databases/dfmFh/dfmFh.db

Windows

- *NMSROOT*\databases\dfmEpm\dfmEpm.db
- *NMSROOT*\databases\dfmInv\dfmInv.db
- *NMSROOT*\databases\dfmFh\dfmFh.db

Frequently Asked Questions on LMS Upgrade and Data Migration

This section lists the frequently asked questions and answers/solutions to them.

- Q.** Can I uninstall applications from the LMS server in any order?
- A.** You can uninstall applications in any order, but we recommend that you uninstall in the reverse order in which you installed them.
- Q.** I tried to install LMS 2.5.1 and the installation failed. How do I clean up the installation completely?
- A.** If the installation failed because some basic prerequisites were not met, then you need not do any additional cleanup. The installation process cleans up on its own and exits gracefully.

If the installation failed because of some abnormal condition (such as aborting accidentally), we recommend the following procedure for cleaning up the installation:

For Windows

- Delete CSCOpX folder
- Delete SystemDrive\CMF.LOCK file
- Delete the registry keys

Go to the Registry editor and remove the *ResourceManager* folder in the following path : **HKEY_LOCAL_MACHINE > SOFTWARE > Cisco**

- Restart Machine

For Solaris

You must run the clean_system.sh script. Go to the URL:

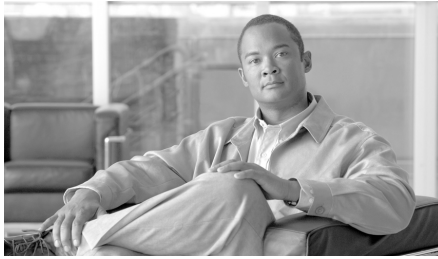
http://www.cisco.com/en/US/products/sw/cscowork/ps2425/products_configuration_example09186a0080133f4f.shtml#uninstallSol



Note

If LMS 2.6 installation fails, install it again.

- Q.** Where can I find the logfiles for LMS 2.6?
- A.** On Solaris, if errors occur during installation, check the installation log file `/var/tmp/Ciscoworks_install_yyyymmdd_xxx.log`, where `xxx` is the running number for the last CiscoWorks application installed.
- For IPM, the installation log file is `/var/tmp/cisco_ipm_install.log`.
- On Windows, if errors occur during installation, check the installation log in the root directory on the drive where the operating system is installed. Each installation creates a new log file.
- For example, the CiscoWorks Common Services installation creates `SystemDrive:\Ciscoworks_install_yyyymmdd_xxx.log`, where `xxx` is the running number for the last CiscoWorks application installed.
- For IPM, there is no installation log file on Windows.
- Q.** I have LMS 2.x applications installed on different servers. Can I migrate data from these multiple servers to one LMS 2.6 server?
- A.** No, this option is not supported.
- Q.** I have LMS 2.1/LMS 2.2 installed on Windows 2000 Server. I want to upgrade the OS to Windows 2003 Server, and also upgrade to LMS 2.6. In what order should I perform these upgrades?
- A.** You must do the following:
- a.** Upgrade LMS 2.1/LMS 2.2 to LMS 2.6 on Windows 2000 Server.
 - b.** Upgrade your operating system to Windows 2003 Server.
- Q.** I have been running LMS 2.6 for sometime, and have collected a lot of data. I would like to restore an older LMS 2.x backup, and merge the data from the current system and the backup. Is this possible?
- A.** No. After a backup is restored, all the data that is currently in the running system is replaced with the data from the backup.



CHAPTER 5

Guidelines to Post-Upgrade Activities

This chapter contains:

- [Guidelines for DFM 2.0.3 Post-Upgrade Activities, page 5-1](#)
- [Guidelines for CS 3.0.5 Post-Upgrade Activities, page 5-3](#)
- [Resetting the Login Module, page 5-6](#)

Guidelines for DFM 2.0.3 Post-Upgrade Activities

After the upgrade script completes, DFM discovers devices and updates its managed inventory. DFM might take some time to complete this task. After the task completes:

- Familiarize yourself with new device management procedures; see [Installation and Setup guides for DFM](#), “Performing Device Management” section in Chapter 4, “Getting Started”.
- Verify discovery status; see [Installation and Setup guides for DFM](#), “Verifying Devices Added to DFM” section in Chapter 4, “Getting Started”.
- Complete basic configuration steps; see [Configuring SNMP Trap Receiving and Forwarding](#).
- Start using DFM to monitor the network; see [Installation and Setup guides for DFM](#), “Viewing Alerts” section, and “What Next?” section in Chapter 4, “Getting Started”.

Configuring SNMP Trap Receiving and Forwarding

If you plan to use HPOV or NetView adapters on a remote system with Device Fault Manager 2.0.3 on a local system:

-
- Step 1** Make sure the system running DFM is registered with DNS.
- Step 2** Upgrade all remote adapters as described in Installation and Setup guide for DFM, Section “Installing and Upgrading HPOV-NetView Adapters”, available at http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_installation_guides_list.html
-

By default, DFM receives SNMP traps on port 162 (or, if port 162 is occupied, port 9000). If you need to change the port:

-
- Step 1** Go to CiscoWorks homepage and select **DFM > Configuration > Other Configurations > SNMP Trap Receiving**.
- The configuration page for SNMP trap receiving is launched.
- Step 2** Enter the port number in the Receiving Port entry box.
- Step 3** Click **Apply**.
-

If you want DFM to forward traps to a remote NMS:

-
- Step 1** Go to CiscoWorks home page and select **DFM > Configuration > Other Configurations > SNMP Trap Forwarding**.
- The configuration page for SNMP trap forwarding is launched.
- Step 2** Enter these for each host:
- An IP address or DNS name for the hostname.
 - A port number on which the host can receive traps.
- Step 3** Click the **Apply** button.

- Step 4** Make sure the NMS is configured to receive traps at the port you specified in Step 2. See the appropriate documentation for the NMS.
-

If a local version of HP OpenView or NetView is already installed, CiscoWorks automatically configures the adapters to forward SNMP traps to DFM.

To configure remote versions of HP OpenView and NetView to forward SNMP traps to DFM, you must install the HPOV-NetView adapters on the remote systems.

For more details on Basic configuration steps, see [Installation and Setup guides for DFM](#), “Configuring SNMP Trap Receiving and Forwarding” section in Chapter 4, “Getting Started”.

Guidelines for CS 3.0.5 Post-Upgrade Activities

This section contains:

- [Pre-CS 3.0 AAA Methods, page 5-3](#)
- [CS 3.0.5 AAA Methods, page 5-4](#)

Pre-CS 3.0 AAA Methods

Before CS 3.0:

- The CiscoWorks server supported two types of authentication methods. One method used an external PAM (Pluggable Authentication Module) and the other was the CiscoWorks local method.
- Both CiscoSecure ACS (Access Control Server) and third party AAA (Authentication, Authorization, Accounting) servers were treated as external PAMs.
- If you selected an external authentication method using a PAM, the CiscoWorks server would only perform authentication. It would not perform authorization against either the CiscoSecure ACS or the third party AAA server that you selected.

- Authorization was done by the CiscoWorks server, regardless of the authentication method.
- If you selected the CiscoWorks local authentication method, both authentication and authorization were done by the CiscoWorks server.

CS 3.0.5 AAA Methods

CS 3.0.5 supports two AAA modes:

- [ACS Mode, page 5-4](#)
- [Non-ACS Mode, page 5-5](#)

ACS Mode

If you select ACS mode, the CS 3.0.5 server uses both authentication and authorization from the CiscoSecure ACS server. Since authorization is based on the roles of the user in the CS 3.0.5 server, note the following:

- CS 3.0.5 only supports ACS 3.2, 3.2.3, 3.3.2, and 4.0(1)
- CS 3.0.5 does not support Kerberos PAM
- We recommend that you install the Admin HTTPS PSIRT patch (on ACS 3.2.3). The patch is available at:
<http://www.cisco.com/kobayashi/sw-center/ciscosecure/cs-accs.shtml>
- AAA is done by sending a query to ACS using TACACS+ protocol
- To configure the CiscoWorks server to use CiscoSecure ACS, you need:
 - The ACS Administrator username and password
 - To add the CiscoWorks server as a AAA client (in ACS)
 - To configure the secret key to be used (at AAA Mode setup in CS and in ACS)
 - To ensure that the login user in CiscoWorks is a valid user in ACS

Non-ACS Mode

CS 3.0.5 supports two types of non-ACS modes: CiscoWorks local and non-CiscoWorks local.

By default, CS 3.0.5 uses CiscoWorks server authentication (CiscoWorks local) to authenticate users and authorize them to access CiscoWorks applications. If you select CiscoWorks local mode, CS 3.0.5 performs the authentication and authorization.

However, you can use a third party AAA server (non-CiscoWorks local) to do authentication (not authorization). If you use a third party AAA server, you can only use it for authentication, not authorization.

Modifying User Information in CiscoWorks Local Mode

The information for parsing and verifying the password / role of a user are present in the `cwpass` file. This file is located at:

Solaris:

```
NMSROOT/lib/classpath/com/cisco/nm/cmfservlet
```

Windows:

```
NMSROOT\lib\classpath\com\cisco\nm\cmfservlet
```

Resetting the Login Module

You can run the following commands to reset the Login Module to CiscoWorks local mode:

Step 1 Stop the LMS system by entering:

On Solaris:

```
/etc/init.d/dmgttd stop
```

On Windows:

```
net stop crmdmgttd
```

Step 2 Run the following script:

On Solaris:

```
NMSROOT/bin/perl ResetLoginModule.pl
```

On Windows:

```
NMSROOT\bin\perl ResetLoginModule.pl
```

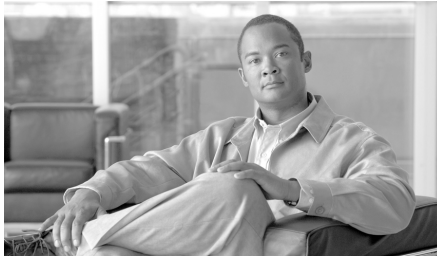
Step 3 Start the LMS system by entering:

On Solaris:

```
/etc/init.d/dmgttd start
```

On Windows:

```
net start crmdmgttd
```



APPENDIX **A**

Syntax and Usage for Backup Script

You can use the `backup.pl` script to manually backup LMS data.

The syntax for `backup.pl` is as follows:

Solaris

```
NMSROOT/bin/perl NMSROOT/bin/backup.pl BKP Logfile  
num_generations
```

Windows

```
NMSROOT\bin\perl NMSROOT\bin\backup.pl BKP Logfile  
num_generations
```

Where:

- *NMSROOT* is the environment variable that contains the full pathname of Common Services installation directory (by default, `/opt/CSCOpX` for Solaris, and `C:\Program Files\CSCOpX` for Windows, where C: is the System Drive).
- *BKP* is the backup directory, where you have used `backup.pl` to back up data for Campus Manager, RME, and DFM at the same time.

The data is stored in the directories *BKP/1*, *BKP/2*, and *BKP/3* etc., where *BKP/n* stores the data of the *n*th generation. If generations 1 through 5 exist, then 5 will be the latest.

On LMS 2.1, the backup directory must exist before running `backup.pl`, otherwise you will see an error.

Example

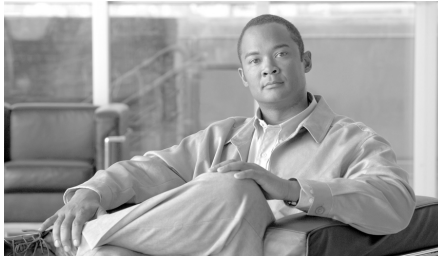
To backup data in the *backup* directory, enter:

On Solaris:

```
opt/CSCOpx/bin/perl opt/CSCOpx/bin/backup.pl /backup
```

On Windows:

```
C:\Progra~1\CSCOpx\bin\perl C:\Progra~1\CSCOpx\bin\backup.pl C:\backup
```



APPENDIX **B**

Syntax and Usage for Restore and Backup Script

You can use the `restorebackup.pl` script to restore the LMS data you have backed up.

You must stop all services and processes before running `restorebackup.pl`.



Note

Cross platform restore is *not* supported. That is, you cannot restore data from a Solaris installation of LMS to a Windows installation and vice-versa.

The syntax for `restorebackup.pl` is as follows:

Solaris

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory -h
```

Windows

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP -gen  
generationNumber -t temporary_directory -h
```

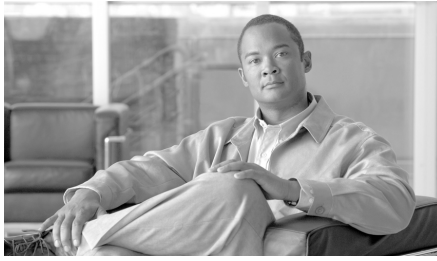
where:

- *NMSROOT*—Environment variable containing full pathname of Common Services installation directory (by default, `/opt/CSCOpX` in Solaris, and `C:\Program Files\CSCOpX` in Windows where C: is the System Drive).

- **-t** *temporary_directory*—(Optional) This is the directory or folder used by the restore program to store its temporary files. By default this directory is *NMSROOT/tempBackupData*. You can customize this by specifying your own temporary directory to avoid overloading *NMSROOT*.
- **-gen** *generationNumber*—(Optional) By default, this is the latest generation. If generations 1 through 5 exist, then 5 is the latest.
- **-d** *BKP*—(Required) The backup directory to use.
- **-h**—(Optional) Provides help. When used with **-d** *BackupDirectory*, shows correct syntax along with available suites and generations.

Examples

To restore...	Enter this command in Solaris	Enter this command in Windows
The latest version of data	<code>opt/CSCOpX/bin/perl opt/CSCOpX/bin/restorebackup.pl -d BKP -gen now</code>	<code>C:\Progra~1\CSCOpX\bin\perl C:\Progra~1\CSCOpX\bin\ restorebackup.pl -d BKP -gen now</code>
The 12th generation of data	<code>opt/CSCOpX/bin/perl opt/CSCOpX/bin/restorebackup.pl -d BKP -gen 12</code>	<code>C:\Progra~1\CSCOpX\bin\perl C:\Progra~1\CSCOpX\bin\ restorebackup.pl -d BKP -gen 12</code>
Data from the forced auto backup during the CS upgrade process	<code>opt/CSCOpX/bin/perl opt/CSCOpX/bin/restorebackup.pl -d DB_BKP/automaticbackup/cmfb backup -gen now</code>	<code>C:\Progra~1\CSCOpX\bin\perl C:\Progra~1\CSCOpX\bin\ restorebackup.pl -d DB_BKP\automaticbackup\cmfb backup -gen now</code>



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