



## **Data Migration Guide for LAN Management Solution Software Release 3.0 CiscoWorks**

**Americas Headquarters**  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
<http://www.cisco.com>  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 527-0883

Text Part Number: OL-12175-01

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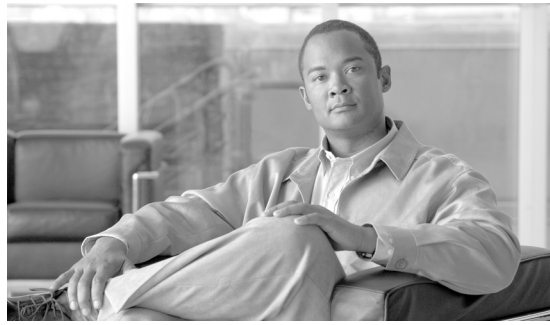
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# CONTENTS

## **Open Source License Acknowledgements** v

### **Preface** ix

Audience ix

Conventions ix

Product Documentation x

Related Documentation x

Obtaining Documentation, Obtaining Support, and Security Guidelines xi

---

## **CHAPTER 1**

### **Overview** 1-1

Overview of Migration to LMS 3.0 1-1

System Requirements 1-2

Terms Used in the Data Migration Guide 1-2

Scope of Data Migration 1-2

CS Data Migration Scope 1-3

CM Data Migration Scope 1-3

RME Data Migration Scope 1-4

DFM Data Migration Scope 1-6

IPM Data Migration Scope 1-6

CV Data Migration Scope 1-7

---

## **CHAPTER 2**

### **Migrating Data to LAN Management Solution 3.0 on Solaris** 2-1

Migrating Data From LMS 2.6 or LMS 2.5.1 2-1

Local Migration From LMS 2.6 or LMS 2.5.1 2-2

Remote Migration From LMS 2.6 or LMS 2.5.1 2-3

Migrating Data for CS, RME, CM, DFM, IPM and CV 2-3

Migrating Data From LMS 2.5 2-4

Remote Migration From LMS 2.5 2-4

Migrating Data for CS, RME, CM, DFM, IPM and CV 2-4

Migrating Data From LMS 2.2 or RWAN 1.3 2-6

Remote Migration From LMS 2.2 or RWAN 1.3 2-6

---

## **CHAPTER 3**

### **Migrating Data to LAN Management Solution 3.0 on Windows** 3-1

Migrating Data From LMS 2.6 or LMS 2.5.1 3-1

- Local Migration From LMS 2.6 or LMS 2.5.1 3-2
- Remote Migration From LMS 2.6 or LMS 2.5.1 3-3
  - Migrating Data for CS, RME, CM, DFM, IPM and CV 3-3
- Migrating Data From LMS 2.5 3-4
  - Remote Migration From LMS 2.5 3-4
    - Migrating Data for CS, RME, CM, DFM, IPM and CV 3-5
- Migrating Data From LMS 2.2 or RWAN 1.3 3-6
  - Remote Migration From LMS 2.2 or RWAN 1.3 3-6
    - Before You Begin Migration 3-6
    - Migration From LMS 2.2 or RWAN 1.3 3-7

**CHAPTER 4**

**Troubleshooting Errors in Data Migration 4-1**

- Errors From CS Data Migration 4-2
- Errors From RME Data Migration 4-3
- Errors From DFM Data Migration 4-4
- Errors From IPM Data Migration 4-5
- Frequently Asked Questions on LMS Upgrade and Data Migration 4-5

**CHAPTER 5**

**Guidelines to Post-Upgrade Activities 5-1**

- Guidelines for DFM 3.0 Post-Upgrade Activities 5-1
  - Configuring SNMP Trap Receiving and Forwarding 5-1
- Guidelines for CS 3.1 Post-Upgrade Activities 5-2
  - CS 3.1 AAA Methods 5-2
    - ACS Mode 5-3
    - Non-ACS Mode 5-3
  - Resetting the Login Module 5-3

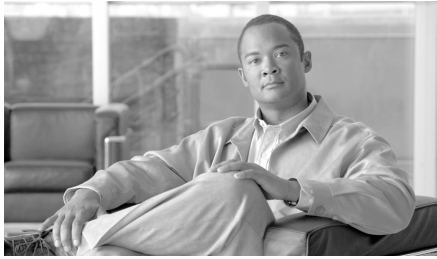
**APPENDIX A**

**Syntax and Usage for Backup Script A-1**

**APPENDIX B**

**Syntax and Usage for Restore and Backup Script B-1**

**INDEX**



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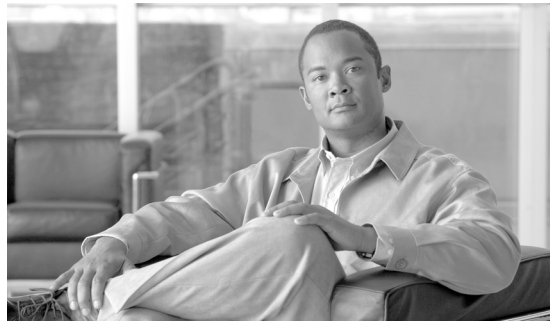
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## Preface

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This manual describes how to migrate data from earlier versions of LAN Management Solution (LMS) to LMS 3.0.

You must use this document in conjunction with the Release Notes for important information that may affect the upgrade and data migration process. See 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	<b>boldface</b> font
Variables for which you supply values	<i>italic</i> font
Displayed session and system information	<code>screen</code> font
Information you enter	<b>boldface</b> <code>screen</code> font
Variables you enter	<i>italic</i> <code>screen</code> font
Menu items and button names	<b>boldface</b> font
Selecting a menu item in paragraphs	<b>Option &gt; Network Preferences</b>



### 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
Installing and Getting Started with CiscoWorks LAN Management Solution 3.0	<ul style="list-style-type: none"> <li>On Cisco.com at this URL: <a href="http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod_installation_guides_list.html">http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod_installation_guides_list.html</a></li> <li>As PDF document on the LMS 3.0 Documentation CD-ROM shipped with the product.</li> </ul>

## Related Documentation

**Note**

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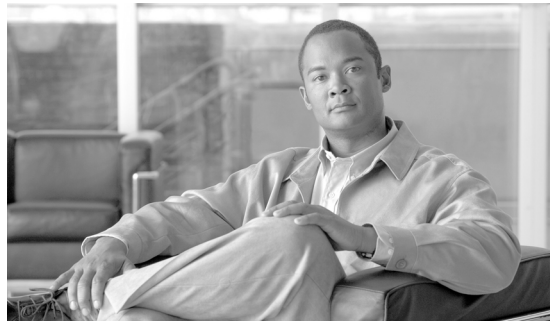
- Release Notes for CiscoWorks Common Services 3.1 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps3996/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps3996/prod_release_notes_list.html)
- Release Notes for Resource Manager Essentials 4.1 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2073/prod_release_notes_list.html)
- Release Notes for Campus Manager 5.0 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps563/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps563/prod_release_notes_list.html)
- Release Notes for Device Fault Manager 3.0 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_release_notes_list.html)
- Release Notes for Internetwork Performance Monitor 4.0 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps1008/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps1008/prod_release_notes_list.html)

# Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>





# CHAPTER 1

## Overview

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This document describes the steps involved in migrating data for CiscoWorks LAN Management Solutions (LMS) 3.0. The following migration paths are described in this document:

- LMS 2.5.1 or LMS 2.6 to LMS 3.0
- LMS 2.5 to LMS 3.0
- LMS 2.2 or RWAN 1.3 to LMS 3.0

This chapter contains:

- [Overview of Migration to LMS 3.0, page 1-1](#)
- [System Requirements, page 1-2](#)
- [Terms Used in the Data Migration Guide, page 1-2](#)
- [Scope of Data Migration, page 1-2](#)

## Overview of Migration to LMS 3.0

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 3.0 using either of these two methods:

- Local Migration, which is the process of installing LMS 3.0 on top of the existing LMS version on the same machine and migrating the data into it.

Or

- Remote Migration, which is the process of installing LMS 3.0 on a different machine and migrating the backed up data into it.

For details on migrating data for all applications to LMS 3.0, see:

- [Migrating Data to LAN Management Solution 3.0 on Solaris, page 2-1](#)
- [Migrating Data to LAN Management Solution 3.0 on Windows, page 3-1](#)

# System Requirements

The following table provides details of the system requirements for LMS 3.0:

**Table 1-1 Operating Systems Supported for LMS 3.0**

Operating System	Version
Solaris	9, 10
Windows 2003	Windows 2003 Standard and Enterprise Editions with SP1 and SP2
	Windows 2003 R2 Standard and Enterprise Editions with SP1 and SP2

LMS 3.0 does *not* support virtual machines, such as VMware and VirtualPC.

For complete information on the System Requirements, see the "System and Browser Requirements for Server and Client" section in the Prerequisites chapter of the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.0 Guide* at this location:

[http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod_installation_guides_list.html)

## 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 3.1 on Common Services 3.0.5).
- 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, IPM, and CV when you upgrade to LMS 3.0.

- On both platforms, migration is supported across different *NMSROOT* directories, where *NMSROOT* is the CiscoWorks installation directory. By default, it is:
  - */opt/CSCOpX* for Solaris
  - *C:\Program Files\CSCOpX* for Windows, where C: is the System Drive
- 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 3.1, the following data gets migrated:

- CiscoWorks User information
- Single Sign-on configuration
- Device and Credential Repository (DCR) configuration
- Peer Certificates
- Peer Server Account information
- System Identity Account configuration
- Cisco.com User Account
- Proxy Server
- System Preferences
- Home Page Settings
- Applications Registered
- Links Registered
- Common Services groups
- Jobs and Resources data, DCR data, Groups data, and other data stored in the database

## CM Data Migration Scope

When you install Campus Manager 5.0, the following data gets migrated:

- Data Collection settings
  - IP Address Filter
  - SNMP Timeouts and retries
  - Data Collection Schedule
  - Debugging Options
- Syslog settings
- Campus Manager groups



---

**Note**

The above mentioned data only applies to Campus Manager 4.x versions and above.

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- Discovery Settings:
  - Seed Devices
  - IP address Filter
  - Discovery Schedule

- SNMP Settings
  - Debugging Options
- Topology Groups-User Defined Groups
- Discrepancy setting
- Configure Discrepancy
- Configure Syslog server
- User Tracking
  - Custom Layout
  - Custom Query
  - Username and Notes in UT Report
  - UT Purge Interval
  - UT Acquisition Schedule
  - Subnet Discovery Ranges
  - Ping sweep options
  - Domain name Display
  - UT End host and IP Phone entries
  - Delete Interval
  - Acquisition settings
- Path Analysis
- Archive Trace
- Path Analysis Options
- Jobs and Archives
- UT Jobs and Archives
- Path Analysis Jobs

## RME Data Migration Scope

When you install RME 4.1, and migrate from LMS2.2 to LMS 3.0, the following data gets migrated:

- Config Archive
  - Shadow directory
  - ChangeAudit records. This includes Configuration change details
  - Archived configuration versions
- NetConfig
  - User Defined Templates (UDT)

UDT RouterUDT in RME3.5 is migrated as RouterUDTTask with the UDT template, RouterUDT in RME 4.0.5.

- Default Template Usage

By default, all templates are assigned to Admin on migration. The device-to-task mapping is not migrated.

- Config Editor
  - Editing Mode in which the files are opened. It is either Raw or Processed.
- NetShow
  - All the RME 3.5.x User Defined Command Sets and the Commands associated with those command sets are migrated to RME 4.1. The migrated Command Sets will not have any device type associated with them. You must edit them before using them in jobs.
- RME groups

When you install RME 4.1, and migrate from LMS2.5.1/LMS2.5 to LMS 3.0, the following data gets migrated:

- Archive Management :
  - All jobs
  - Label Configs
  - Custom queries
  - Baseline templates
  - Shadow directory
  - ChangeAudit records. This includes Configuration change details.
  - Archived configuration versions
- Admin:
  - Purge Policies
- Config Editor:
  - Private Configs
  - Public Configs
  - Config Editor Jobs
  - Editing mode in which the files are opened. It is either Raw or Processed.
- NetConfig:
  - Netconfig jobs
  - User-defined tasks
- NetShow:
  - NetShow jobs
  - Output Archives
  - Commandsets
- Software Mangement (Swim)
  - Swim repository images
  - All jobs in a Job Browser
- Inventory
  - Inventory jobs
  - Device details

- Inventory Collection Status
- DCA jobs
- Device Management state
- User Defined Groups

When you migrate RME data, the following syslog details get migrated:

- Automated actions
- Message Filters
- Custom reports
- Last 14 days syslog
- Report jobs and archives



**Note**

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When you migrate data from RME 3.5.x to RME 4.1, jobs will not be migrated. However, while restoring data from RME 4.1 to RME 4.1, all jobs, data, and admin setting will be migrated.

---

## DFM Data Migration Scope

When you install DFM 3.0, the following data gets migrated:

- Device list—The migration procedure adds devices to Common Services Device and Credentials Repository (DCR). To manage them in DFM, either enable Auto manage feature or manually add the devices to DFM.
- The following notification information:
  - Mail notification information
  - Mail recipient information
  - Mail sender ID
  - Syslog notification
  - SMTP addresses
  - Trap forwarding addresses
  - Trap notification addresses and ports
- DFM groups
- 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 3.0*.

*This is available at*

[http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod_installation_guides_list.html).

## IPM Data Migration Scope

When you install IPM 4.0, the following data gets migrated:

- IPM database—contains information about source devices, target devices, operations, collectors, and the statistics of data collected.
- The settings in ipm.env file

**Note**

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HTML reports available in IPM 2.6 is backed-up but not restored by running `restorebackup.pl`.

---

You can generate consolidated System Reports for the data migrated from IPM 2.6 to IPM 4.0. However, the time taken to generate the reports depends on the length of the period for which you are querying.

For example, generating reports for a period of 6 months may take a longer time, than generating reports for a period of 10 days.

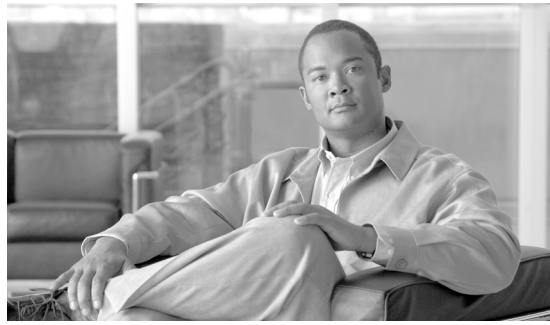
During the same version backup/restore, do not run `/NMSROOT/bin/restorebackup.pl` script from the following directories:

- Solaris  
`NMSROOT/MDC/tomcat/webapps/ipm/system_reports` and  
`/var/adm/CSCOpX/files/ipm/`
- Windows  
`NMSROOT/MDC/tomcat/webapps/ipm/system_reports` and  
`NMSROOT/CSCOpX/files/ipm/`

## CV Data Migration Scope

When you install CiscoView 6.1.6, the user's device preferences are migrated.





## CHAPTER 2

# Migrating Data to LAN Management Solution 3.0 on Solaris

---

This chapter describes how to migrate data to CiscoWorks LAN Management Solution (LMS) 3.0 on Solaris.

This chapter has the following sections:

- [Migrating Data From LMS 2.6 or LMS 2.5.1](#)
- [Migrating Data From LMS 2.5](#)
- [Migrating Data From LMS 2.2 or RWAN 1.3](#)

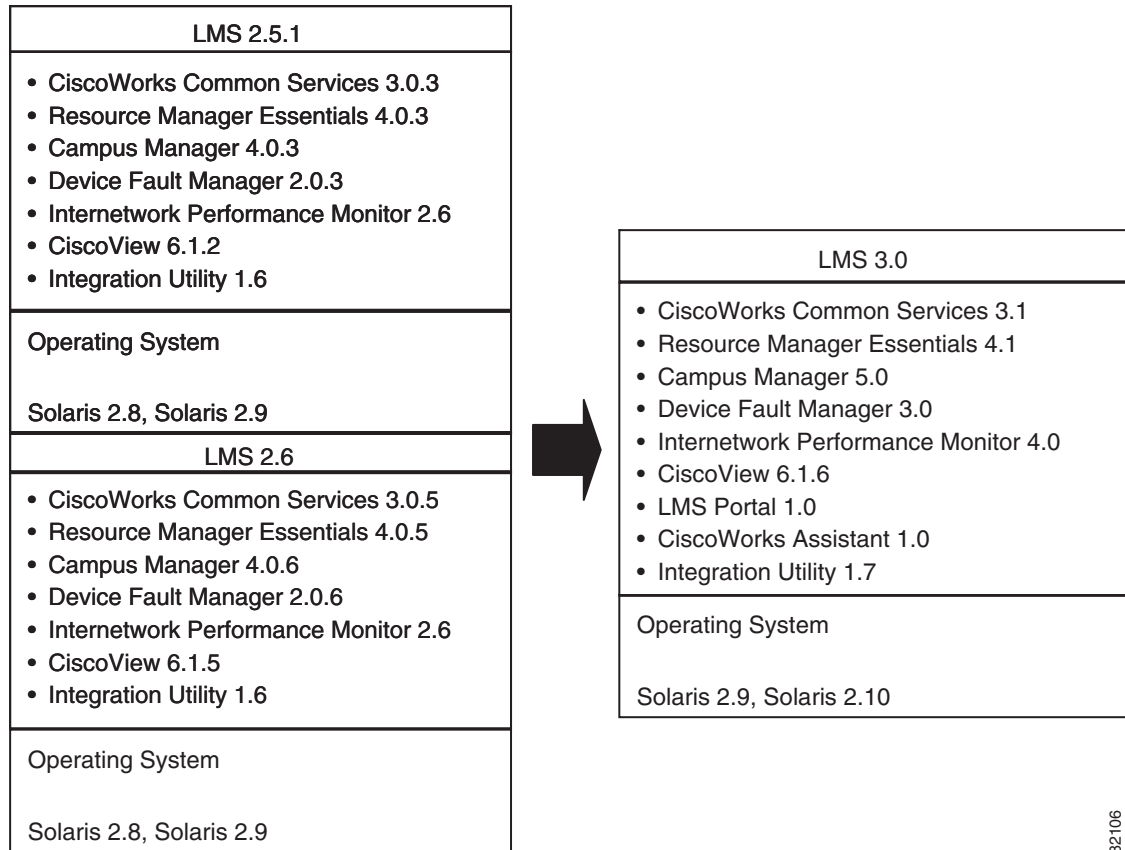
## Migrating Data From LMS 2.6 or LMS 2.5.1

This section explains how to migrate data from LMS 2.6 or LMS 2.5.1 to LMS 3.0.

You can migrate to LMS 3.0 in two ways:

- [Local Migration From LMS 2.6 or LMS 2.5.1](#)
- [Remote Migration From LMS 2.6 or LMS 2.5.1](#)

Figure 2-1 Migrating Data From LMS 2.6 or LMS 2.5.



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## Local Migration From LMS 2.6 or LMS 2.5.1

Install LMS 3.0 over LMS 2.6 or LMS 2.5.1. The data for CS, RME, CM, DFM, and CV is automatically migrated during installation.

For IPM, run the following command:

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP [-t temporary_directory]
```

where *BKP* is the backup directory. It is created either by running the `wrapper.pl` or during inline upgrade.

You must give the complete path for *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.

For details on installing LMS 3.0, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.0 (Maintenance Kit)*.


## Remote Migration From LMS 2.6 or LMS 2.5.1

This section explains the procedure of [Migrating Data for CS, RME, CM, DFM, IPM and CV](#) to a remote machine.

In this section, the machine that has LMS 2.6 or LMS 2.5.1 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

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

To migrate data to a remote machine:

- 
- Step 1** Login as root into Machine A.
- Step 2** From the LMS 3.0 DVD, locate the *SolarisLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*SolarisLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains *wrapper.pl* and other required files.
- Step 4** Untar the file to get *wrapper.pl*
- Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.  
**To do this using CLI**, enter the following command:  
*NMSROOT/bin/perl dir1/wrapper.pl BKP*  
where *BKP* is the backup directory and *dir1* is the directory containing *wrapper.pl*.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.
- Step 6** Login as root into Machine B.
- Step 7** Install LMS 3.0.
- Step 8** Copy the backup directory *BKP* that contains the CS, RME, CM, IPM, DFM, and CV data from Machine A to any temporary location.
- 
-  **Note** You can preserve the time stamp of the files by entering the option **-p** with the copy command: `cp -r -p <source> <destination>`.
- 
- Step 9** Stop the daemon manager by entering:  
*/etc/init.d/dmgt d stop*
- Step 10** Restore the backed up data by entering:  
*NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP [-t temporary\_directory]*  
where *BKP* is the backup directory.  
You must give the complete path for *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.  
For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).
- Step 11** Examine the log files in the following location to verify that the database was restored. The files are:
- /var/adm/CSCOpX/log/restorebackup.log
  - /var/adm/CSCOpX/log/migration.log
  - /var/adm/CSCOpX/log/rme\_base.log

- /var/adm/CSCOPx/log/ipm\_base.log

**Note**

Migration.log will be created only when either RME or IPM is migrated.

**Step 12** Start the daemon manager by entering:

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

## Migrating Data From LMS 2.5

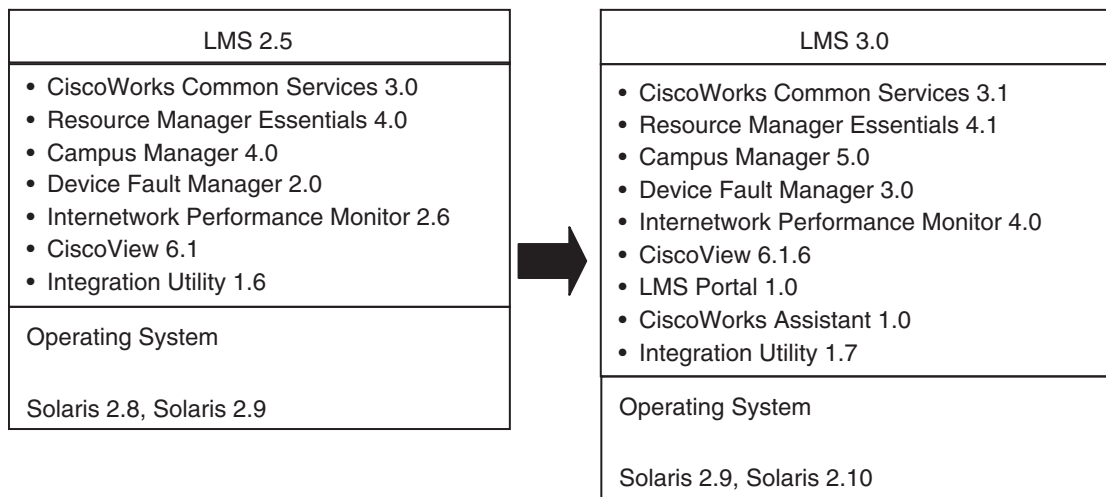
This section explains how to migrate data from LMS 2.5 to LMS 3.0.

You can migrate to LMS 3.0 only through [Remote Migration](#).

**Note**

Local Migration of data from LMS 2.5 to LMS 3.0 is not supported.

**Figure 2-2** *Migrating Data From LMS 2.5*



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## Remote Migration From LMS 2.5

This section explains the procedure of [Migrating Data for CS, RME, CM, DFM, IPM and CV](#) to a remote machine.

In this section, the machine that has LMS 2.5 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

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

To migrate data to a remote machine:

- 
- Step 1** Login as root into Machine A.
- Step 2** From the LMS 3.0 DVD, locate the *SolarisLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*SolarisLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains **wrapper.pl** and other required files.
- Step 4** Untar the file to get **wrapper.pl**
- Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.  
To do this **using CLI**, enter the following command:  
***NMSROOT/bin/perl dir1/wrapper.pl BKP***  
where *BKP* is the backup directory and *dir1* is the directory containing **wrapper.pl**.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.
- Step 6** Login as root into Machine B.
- Step 7** Install LMS 3.0.
- Step 8** Copy the backup directory *BKP* that contains the CS, RME, CM, IPM, DFM, and CV data from Machine A to any temporary location.




---

**Note** You can preserve the time stamp of the files by entering the option **-p** with the copy command: **cp -r -p <source> <destination>**.

---

- Step 9** Stop the daemon manager by entering:  
***/etc/init.d/dmgt d stop***
- Step 10** Restore the backed up data by entering:  
***NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP [-t temporary\_directory]***  
where *BKP* is the backup directory.  
You must give the complete path for *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.  
For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).
- Step 11** Examine the log files in the following location to verify that the database was restored. The files are:
- /var/adm/CSCOpX/log/restorebackup.log
  - /var/adm/CSCOpX/log/migration.log
  - /var/adm/CSCOpX/log/rme\_base.log
  - /var/adm/CSCOpX/log/ipm\_base.log




---

**Note** Migration.log will be created only when either RME or IPM is migrated.

---

- Step 12** Start the daemon manager by entering:  
***/etc/init.d/dmgt d start***
-

# Migrating Data From LMS 2.2 or RWAN 1.3

This section explains how to migrate data from LMS 2.2 or RWAN 1.3 to LMS 3.0.

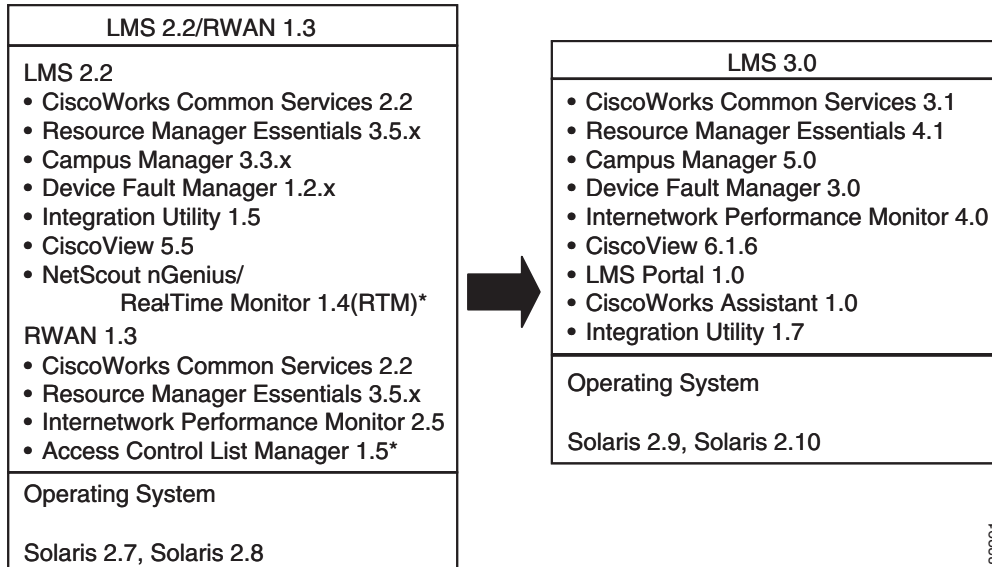
You can migrate to LMS 3.0 only through [Remote Migration](#).



**Note**

Local Migration of data from LMS 2.2 or RWAN 1.3 to LMS 3.0 is not supported.

**Figure 2-3 Migrating Data From LMS 2.2 or RWAN 1.3**

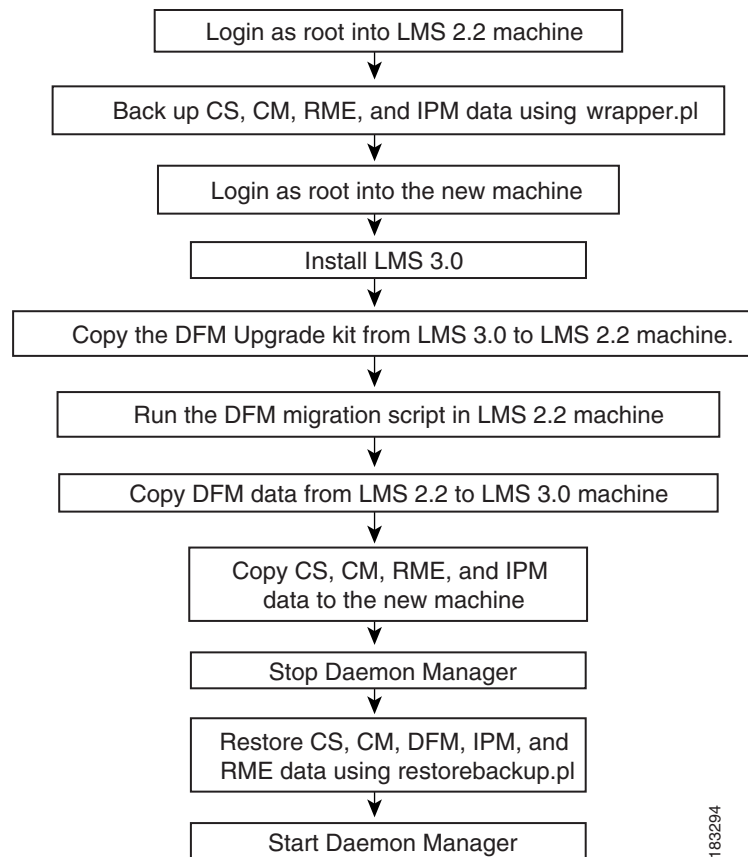


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## Remote Migration From LMS 2.2 or RWAN 1.3

In this section, the machine that has LMS 2.2 or RWAN 1.3 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

[Figure 2-4](#) describes the procedure to migrate from LMS 2.2 or RWAN 1.3.

**Figure 2-4 Steps for Migration From LMS 2.2 or RWAN 1.3**

To migrate data:

- 
- Step 1** Login as root into Machine A.
- Step 2** From the LMS 3.0 DVD, locate the *SolarisLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*SolarisLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains `wrapper.pl` and other required files.
- Step 4** Untar the file to get `wrapper.pl`
- Step 5** Back up CS, RME, IPM, and CM data.  
To do this using CLI, enter the following command:  
`NMSROOT/bin/per15 dir1/wrapper.pl BKP`  
where *BKP* is the backup directory and *dir1* is the directory containing `wrapper.pl`.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under */opt*, give the path as */opt/BKP*.
- Step 6** Login as root into Machine B.
- Step 7** Install LMS 3.0.

If you are upgrading to DFM 3.0, assemble the files needed for the DFM migration or else proceed to [Step 8](#).

- a. Copy the DFM 3.0 Upgrade Kit from Machine B to a directory say *dir* in Machine A.  
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 in Machine A, normally located in `NMSROOT/objects/smarts/repos/icf/`.  
If you want to use a copy of this file that was created during a backup, the file is located in the backup directory that you specified when using CiscoWorks Common Services or CiscoWorks 2000 CD One.



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* in Machine A, 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, <code>/opt/CSCOpX</code> ).
<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 <code>NMSROOT/objects/smarts/repos/icf/</code> .

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 8** Copy the LMS data from Machine A to any temporary location in Machine B as follows:

- a. For CS, CM, RME, and IPM copy the *BKP* directory that you created in [Step 5](#)



**Note** You can preserve the time stamp of the files by entering the option `-p` with the copy command: `cp -r -p <source> <destination>`.

- b. For DFM, copy the following files:

File Name	Location in LMS 2.2	Copy into this location in LMS 3.0
ICseed.txt	<i>dir/cw-dfm-20-UpgradeKit-sol/smarts/conf</i>	<i>NMSROOT/objects/smarts/conf</i>
ICinventory.txt		
ICptm.xml		
mail_notify.conf	<i>NMSROOT/objects/smarts/conf/notifier</i>	<i>NMSROOT/objects/smarts/conf/notifier</i>
trap_notify.conf		



**Note** For CV, no data is migrated from LMS 2.2 or RWAN 1.3 to LMS 3.0.

**Step 9** Stop the daemon manager by entering:

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

**Step 10** Restore CS, CM, DFM, IPM, and RME data by entering:

```
NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d BKP [-t temporary_directory]
```

where *BKP* is the backup directory.

You must give the complete path for *BKP*. For example, if *BKP* is under /opt, give the path as /opt/BKP.

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

**Step 11** Examine the log files in the following location to verify that the database was restored. The files are:

- /var/adm/CSCOpX/log/restorebackup.log
- /var/adm/CSCOpX/log/migration.log
- /var/adm/CSCOpX/log/rme\_base.log
- /var/adm/CSCOpX/log/ipm\_base.log

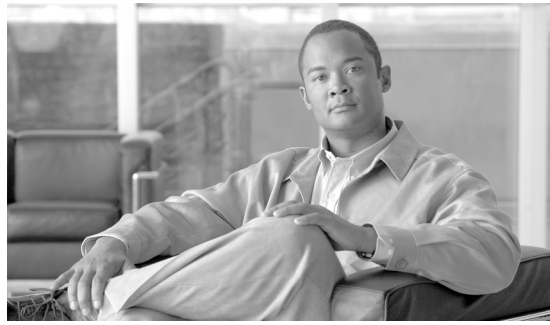


**Note** Migration.log will be created only when either RME or IPM is migrated.

**Step 12** Start the daemon manager by entering:

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





## CHAPTER 3

# Migrating Data to LAN Management Solution 3.0 on Windows

---

This chapter describes how to migrate data to CiscoWorks LAN Management Solution (LMS) 3.0 on Windows.

This chapter has the following sections:

- [Migrating Data From LMS 2.6 or LMS 2.5.1](#)
- [Migrating Data From LMS 2.5](#)
- [Migrating Data From LMS 2.2 or RWAN 1.3](#)

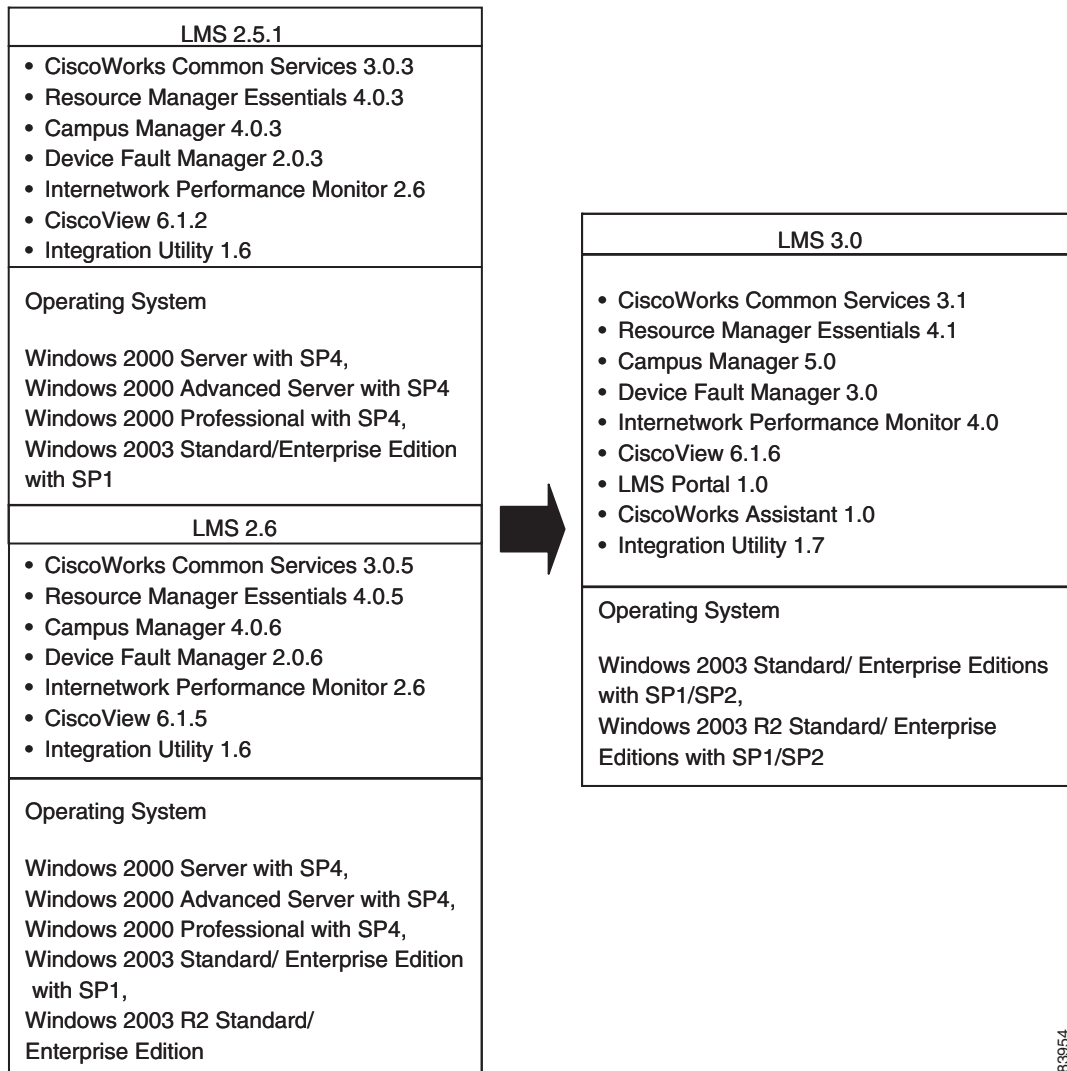
## Migrating Data From LMS 2.6 or LMS 2.5.1

This section explains how to migrate data from LMS 2.6 or LMS 2.5.1 to LMS 3.0.

You can migrate to LMS 3.0 in two ways:

- [Local Migration From LMS 2.6 or LMS 2.5.1](#)
- [Remote Migration From LMS 2.6 or LMS 2.5.1](#)

Figure 3-1 Migrating Data From LMS2.6 or LMS 2.5.1



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## Local Migration From LMS 2.6 or LMS 2.5.1

Install LMS 3.0 over LMS 2.6 or LMS 2.5.1. The data for CS, RME, CM, DFM, and CV is automatically migrated during installation.

For IPM, run the following command:

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP [-t temporary_directory]
```

where *BKP* is the backup directory. It is created either by running the `wrapper.pl` or during inline upgrade.

You must give the complete path for *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.

Before upgrading LMS, make sure to upgrade to the supported version of the OS.

For details on Supported OS, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.0 (Maintenance Kit)*.


## Remote Migration From LMS 2.6 or LMS 2.5.1

This section explains the procedure of [Migrating Data for CS, RME, CM, DFM, IPM and CV](#) to a remote machine.

In this section, the machine that has LMS 2.6 or LMS 2.5.1 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

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

To migrate data to a remote machine:

- 
- Step 1** Login as administrator into Machine A.
- Step 2** From LMS 3.0 DVD, locate the *WindowsLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*WindowsLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains *wrapper.pl* and other required files.
- Step 4** Untar the file to get *wrapper.pl*
- Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.  
To do this **using CLI**, enter the following command:  
*NMSROOT\bin\perl dir1\wrapper.pl BKP*  
where *BKP* is the backup directory and *dir1* is the directory containing *wrapper.pl*.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.
- Step 6** Login as administrator into Machine B.
- Step 7** Install LMS 3.0.
- Step 8** Copy the backup directory *BKP* that contains the CS, RME, CM, IPM and DFM data from Machine A to any temporary location.
- 
-  **Note** You can preserve the time stamp of the files by entering the option **-p** with the copy command: `cp -r -p <source> <destination>`.
- 
- Step 9** Stop the daemon manager by entering:  
`net stop crmdmgt`
- Step 10** Restore the backed up data by entering:  
*NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP [-t temporary\_directory]*  
where *BKP* is the backup directory.  
You must give the complete path for *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.  
For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).
- Step 11** Examine the log files in the following location to verify that the database was restored. The files are:  
*NMSROOT\log\restorebackup.log*  
*NMSROOT\log\migration.log*  
*NMSROOT\log\rme\_base.log*

*NMSROOT\log\ipm\_base.log*

**Note**

Migration.log will be created only when either RME or IPM is migrated.

**Step 12** Start the daemon manager by entering:

```
net start crmdmgt
```

## Migrating Data From LMS 2.5

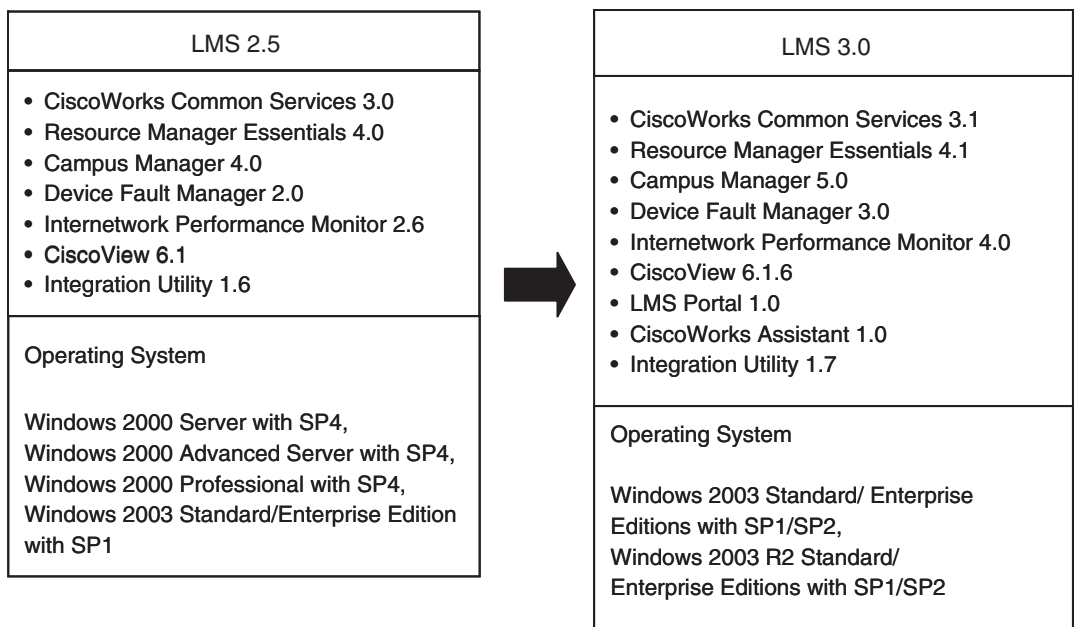
This section explains how to migrate data from LMS 2.5 to LMS 3.0.

You can migrate to LMS 3.0 only through [Remote Migration](#).

**Note**

Local Migration of data from LMS 2.5 to LMS 3.0 is not supported.

**Figure 3-2** Migrating Data From LMS 2.5



## Remote Migration From LMS 2.5

This section explains the procedure of [Migrating Data for CS, RME, CM, DFM, IPM and CV](#) to a remote machine.

In this section, the machine that has LMS 2.5 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

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

To migrate data to a remote machine:

- 
- Step 1** Login as administrator into Machine A.
- Step 2** From LMS 3.0 DVD, locate the *WindowsLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*WindowsLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains **wrapper.pl** and other required files.
- Step 4** Untar the file to get **wrapper.pl**
- Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.  
To do this **using CLI**, enter the following command:  
**NMSROOT\bin\perl dir1\wrapper.pl BKP**  
where *BKP* is the backup directory and *dir1* is the directory containing **wrapper.pl**.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.
- Step 6** Login as administrator into Machine B.
- Step 7** Install LMS 3.0.
- Step 8** Copy the backup directory *BKP* that contains the CS, RME, CM, IPM, DFM, and CV data from Machine A to any temporary location.




---

**Note** You can preserve the time stamp of the files by entering the option **-p** with the copy command: **cp -r -p <source> <destination>**.

---

- Step 9** Stop the daemon manager by entering:  
**net stop crmdmgt**
- Step 10** Restore the backed up data by entering:  
**NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP [-t temporary\_directory]**  
where *BKP* is the backup directory.  
You must give the complete path for *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.  
For more details, see [Syntax and Usage for Restore and Backup Script, page B-1](#).
- Step 11** Examine the log files in the following location to verify that the database was restored. The files are:
- *NMSROOT\log\restorebackup.log*
  - *NMSROOT\log\migration.log*
  - *NMSROOT\log\rme\_base.log*
  - *NMSROOT\log\ipm\_base.log*




---

**Note** Migration.log will be created only when either RME or IPM is migrated.

---

- Step 12** Start the daemon manager by entering:

```
net start crmdmgt
```

## Migrating Data From LMS 2.2 or RWAN 1.3

This section explains how to migrate data from LMS 2.2 or RWAN 1.3 to LMS 3.0.

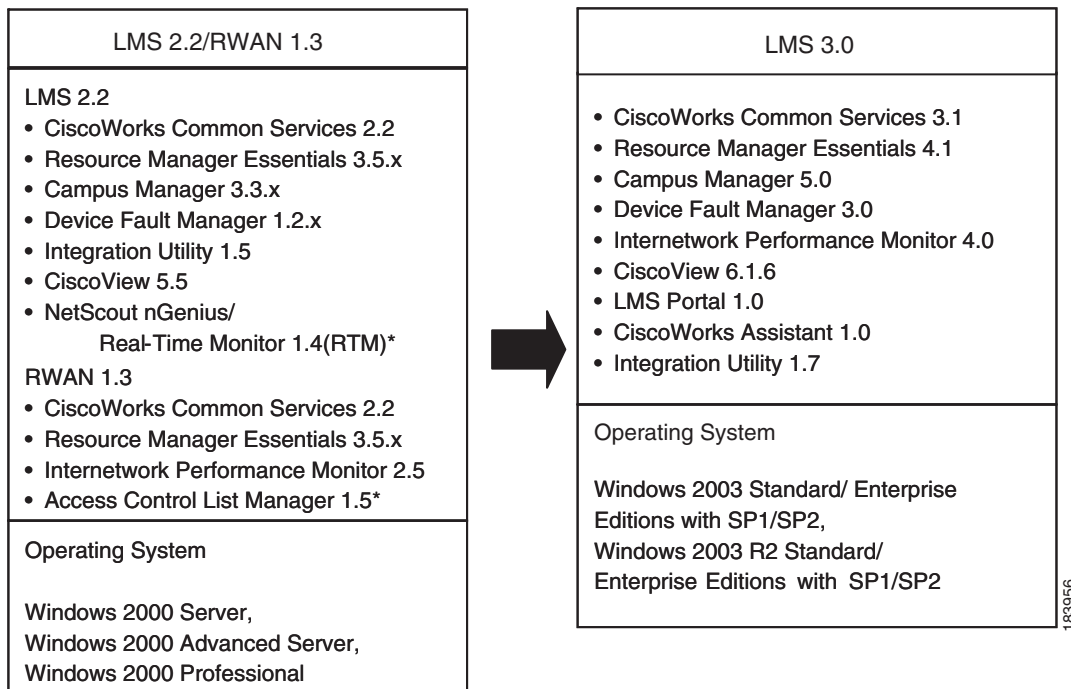
You can migrate to LMS 3.0 only through [Remote Migration](#).



### Note

Local Migration of data from LMS 2.2 or RWAN 1.3 to LMS 3.0 is not supported.

**Figure 3-3** Migrating Data From LMS 2.2 or RWAN 1.3



## Remote Migration From LMS 2.2 or RWAN 1.3

This section explains the remote migration of data from LMS 2.2 or RWAN 1.3 to LMS 3.0. It contains the following topics:

- [Before You Begin Migration](#)
- [Migration From LMS 2.2 or RWAN 1.3](#)

### Before You Begin Migration

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

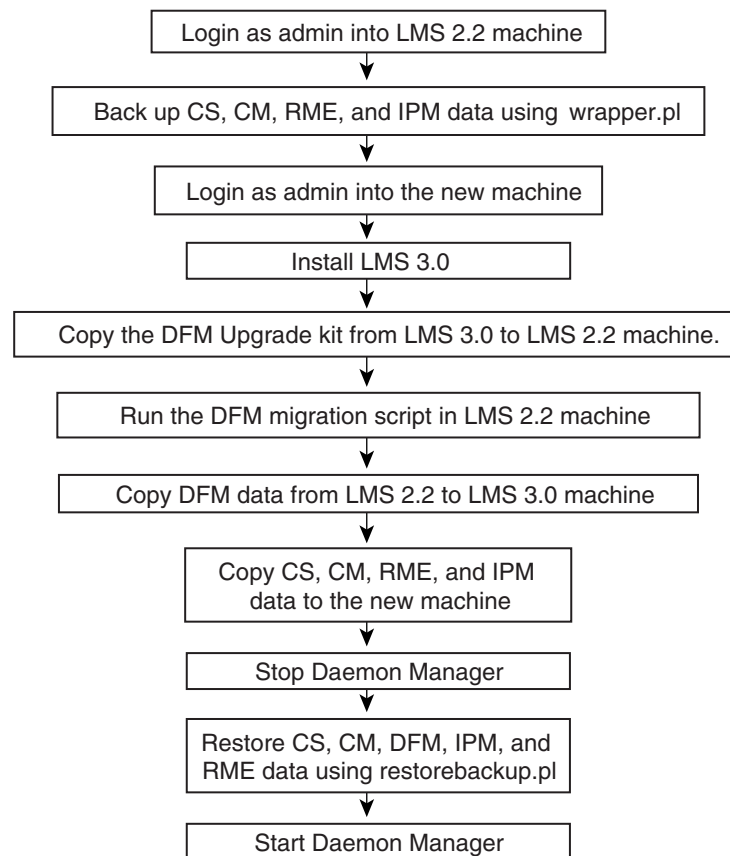
"ERROR: Unable to copy from backup archive folder to temporary folder POSSIBLE REASON:  
Some files in the backup archive might not have enough permissions to read and copy.  
SUGGESTION TO RESOLVE:

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 3-4 describes the procedure to migrate from LMS 2.2 or RWAN 1.3.

**Figure 3-4 Steps for Migration From LMS 2.2 or RWAN 1.3**



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## Migration From LMS 2.2 or RWAN 1.3

In this section, the machine that has LMS 2.2 or RWAN 1.3 data is referred to as Machine A and the remote machine where you need to install LMS 3.0 and restore the data, is referred to as Machine B.

To migrate data:

- 
- Step 1** Login as administrator into Machine A.
- Step 2** From LMS 3.0 DVD, locate *WindowsLMSBackup.tar* file under disk 1 directory.
- Step 3** Copy the file (*WindowsLMSBackup.tar*) to a directory (*dir1*) in the local server.  
The *tar* file contains **wrapper.pl** and other required files.
- Step 4** Untar the file to get **wrapper.pl**
- Step 5** Set the permissions of the backup folder as described in “[Before You Begin Migration](#)” section on [page 3-6](#).
- Step 6** Back up CS, RME, CM, and IPM data.  
To do this **using CLI**, enter the following command:  
`NMSROOT\bin\perl dir1\wrapper.pl BKP`  
where *BKP* is the backup directory and *dir1* is the directory containing **wrapper.pl**.  
You must give the complete path for *dir1* and *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.  
For details, see “[Syntax and Usage for Backup Script](#)” section on [page A-1](#).
- Step 7** Login as administrator into Machine B.
- Step 8** Install LMS 3.0.  
If you are upgrading to DFM 3.0, assemble the files needed for DFM migration or else go to [Step 9](#).
- Copy the DFM 3.0 Upgrade Kit from Machine B to a directory say *dir* in Machine A.  
The upgrade kit named **cw-dfm-20-UpgradeKit-win.zip** is available at `NMSROOT\bin\` in **Machine B**. It contains the **DFMMigrate.pl** script and other required files.
  - Locate your copy of the 1.2.x DFM.rps file in Machine B. 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.

---

- Use the DFMMigrate.pl script to create the required migration files.
  - Move to the directory *dir* in Machine A, 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), where <i>C</i> is the System drive.
<i>DFM.rps_dir</i> <i>ctory</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):

```
C:\Progra~1\CSCOpX\bin\perl dir\cw-dfm-20-UpgradeKit-win\smarts\
DFMigrate.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 9** Copy the LMS data from Machine A to any temporary location in Machine B as follows:
- For CS, CM, RME, IPM, and DFM, copy the *BKP* directory that you created in [Step 6](#).



**Note**

You can preserve the time stamp of the files by entering the option **-p** with the copy command: `cp -r -p <source> <destination>`.

- For DFM, copy the following files, also.

File Name	Location in LMS 2.2	Copy into this location in LMS 3.0
ICseed.txt	<i>dir\cw-dfm-20-UpgradeKit-win\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 will be migrated from LMS 2.2 or RWAN 1.3 to LMS 3.0

- Step 10** Stop the daemon manager by entering:

```
net stop crmdmgt
```

- Step 11** Restore CS, CM, IPM, DFM, and RME data by entering:

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP [-t temporary_directory]
```

where *BKP* is the backup directory.

You must give the complete path for *BKP*. For example, if *BKP* is under C:\, give the path as C:\BKP.

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

- Step 12** Examine the log files in the following location to verify that the database was restored. The files are:

- NMSROOT*\log\restorebackup.log
- NMSROOT*\log\migration.log

- *NMSROOT*\log\rme\_base.log
- *NMSROOT*\log\ipm\_base.log

**Note**

---

Migration.log will be created only when either RME or IPM is migrated.

---

**Step 13** Start the daemon manager by entering:

```
net start crmdmgt
```

---



## 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 4-2](#)
- [Errors From RME Data Migration, page 4-3](#)
- [Errors From DFM Data Migration, page 4-4](#)
- [Errors From IPM Data Migration, page 4-5](#)
- [Frequently Asked Questions on LMS Upgrade and Data Migration, page 4-5](#)

You must:

- Make sure that the server configuration and OS versions are compatible with LMS 3.0. 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

You can migrate data without performing inventory collection during LMS 2.2 data migration.

If there are many devices in the backup, you can trigger inventory 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/dmgtld stop
```
- On Windows

```
net stop crmdmgtld
```

**Step 2** Run the following commands:

- On Solaris

```

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

rm -fr NMSROOT/tempBackupData

```

- On Windows

```

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

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
```

- 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 helps 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 3.0. 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.

Sometimes, RME Migration may fail and display 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=rmeng dmprefix=RME opt=Y
```

- Windows

```
NMSROOT\bin\perl NMSROOT\bin\dbRestoreOrig.pl dsn=rmeng dmprefix=RME opt=Y
```



### Note

For the above commands, stop the daemons before entering the commands. Start the daemons after entering the commands.

## Errors From DFM Data Migration

If you encounter errors during DFM data migration:

- Check logs. The relevant log files are:
  - Solaris
    - /var/adm/CSCOpX/log/restorebackup.log
  - Windows
    - *NMSROOT*\log\restorebackup.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

## Errors From IPM Data Migration

- If you encounter errors during IPM data migration, please check the following logs:

- restorebackup.log
- migration.log
- ipmclient.log
- ipmprocess.log

The logs are available at :

- Solaris

*/var/adm/CSCOpX/log*

- Windows

*NMSROOT\log*

- If Custom operations are not migrated properly, check whether:
  - ipm2.x backup DB contains custom operations.
  - Predefined or custom SNA Operations are migrated.
  - Alerts of NMVT type are changed to none.
  - Alerts of NMVT and SNMP trap are changed to 'snmp trap'.
- If Collectors are not migrated, make sure:
  - Source, target devices, and operations are properly migrated.
  - Collectors configured with SNA operations are migrated.
- If Collectors are not moved into running state, check whether:
  - Devices are SNMP reachable from IPM4.0.
  - There is sufficient memory in the router to configure probes. If not, remove some probes on the router cli.
- If devices are not migrated, make sure that the IPM2.x backup database contains source and target devices.
- If backup directory of IPM2.5 or IPM2.6 does not contain all required files, make sure it contains at least the following files:
  - ipmdb.db
  - .dbPassword
  - ipmdb.tmpl
  - ipm.env

## Frequently Asked Questions on LMS Upgrade and Data Migration

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

- ❑. 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.** Where can I find the logfiles for LMS 3.0?
- 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.
- 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.
- Q.** I have LMS 2.2 applications installed on different servers. Can I migrate data from these multiple servers to one LMS 3.0 server?
- A.** No, this option is not supported.
- Q.** I have LMS 2.2 installed on Windows 2000 Server. I want to upgrade the OS to Windows 2003 Server, and also upgrade to LMS 3.0. In what order should I perform these upgrades?
- A.** You must:
- Upgrade LMS 2.2 to LMS 2.5.1 on Windows 2000 Server.
  - Upgrade your operating system to Windows 2003 Server.
  - Upgrade LMS 2.5.1 to LMS 3.0 on Windows 2003 Server.
- Q.** I have been running LMS 3.0 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 3.0 Post-Upgrade Activities, page 5-1](#)
- [Guidelines for CS 3.1 Post-Upgrade Activities, page 5-2](#)
- [Resetting the Login Module, page 5-3](#)

## Guidelines for DFM 3.0 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 is completed, see *Installing and Getting Started with CiscoWorks LAN Management Solution 3.0 (Maintenance Kit)* to:

- Familiarize yourself with new device management procedures in the Performing Device Management section
- Verify discovery status in the Verifying Devices Added to DFM section
- Complete basic configuration steps in the Configuring SNMP Trap Receiving and Forwarding section
- Start using DFM to monitor the network in Viewing Alerts section, and What Next? section

The *Installing and Getting Started with CiscoWorks LAN Management Solution 3.0 (Maintenance Kit)* is available at this URL:

[http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2425/prod_installation_guides_list.html)

## Configuring SNMP Trap Receiving and Forwarding

To use HPOV or NetView adapters on a remote system with Device Fault Manager 3.0 on a local system, make sure:

- 
- Step 1** The system running DFM is registered with DNS.
  - Step 2** To upgrade all remote adapters as described in Installation and Setup guide for DFM, in the section “Installing and Upgrading HPOV-NetView Adapters”. It is available at:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps2421/prod\\_installation\\_guides\\_list.html](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 LMS 3.0 Portal Home Page 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 LMS 3.0 Portal 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**.

**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](#).

## Guidelines for CS 3.1 Post-Upgrade Activities

This section contains the CS 3.1 AAA methods.

### CS 3.1 AAA Methods

CS 3.1 supports two AAA modes:

- [ACS Mode](#)
- [Non-ACS Mode](#)



**Note**

---

If you had configured ACS mode in CS3.0, it will be automatically preserved in CS3.1.

---

## ACS Mode

If you select ACS mode, the CS 3.1 server uses both authentication and authorization from the CiscoSecure ACS server. Since authorization is based on the roles of the user in the CS 3.1 server, note the following:

- CS 3.1 only supports ACS 3.2, 3.2.3, 3.3.2, 3.3.3, 3.3.4, 4.0(1), and 4.1
- CS 3.1 does not support Kerberos PAM when configured in ACS mode
- 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-acis.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
  - To ensure that the system identity user must be available in ACS with full privilege

## Non-ACS Mode

CS 3.1 server supports the following Login Modules in Non-ACS mode:

- CiscoWorks Local
- IBM SecureWay Directory
- KerberosLogin
- Local NT System
- MS Active Directory
- Netscape Directory
- RADIUS
- TACACS+

By default, CS 3.1 uses CiscoWorks server authentication (CiscoWorks Local) to authenticate users and authorize them to access CiscoWorks applications. If you select CiscoWorks local mode, CS 3.1 performs the authentication and authorization.

However, if you select a Login Module other than CiscoWorks Local, you can only do authentication and not authorization. Authorization can be done only through CiscoWorks Local.

## 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 crmdmgt
```

**Step 2** Run the following script:

On Solaris:

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

On Windows:

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

**Step 3** Start the LMS system by entering:

On Solaris:

```
/etc/init.d/dmgt start
```

On Windows:

```
net start crmdmgt
```

---



# APPENDIX **A**

## Syntax and Usage for Backup Script

---

You can use the `wrapper.pl` script to manually backup LMS 2.2 and LMS 2.5 data.

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

### Solaris

```
NMSROOT/bin/perl dir1/wrapper.pl BKP Logfile
```

### Windows

```
NMSROOT\bin\perl dir1\wrapper.pl BKP Logfile
```

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).
- *dir1* is the directory where you have extracted `wrapper.pl`.
- *BKP* is the backup directory, where you have backed up CS, RME, CM, IPM, DFM, and CV data using `wrapper.pl`.



### Note

---

DFM and CV data will be migrated only from LMS 2.5 and its later versions.

---

On LMS 3.0, the backup directory must exist before running `wrapper.pl`, otherwise you will see an error.

### Example

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

On Solaris:

```
opt/CSCOpX/bin/perl opt/CSCOpX/dir1/wrapper.pl/backup
```

On Windows:

```
C:\Progra~1\CSCOpX\bin\perl C:\Progra~1\CSCOpX\dir1\wrapper.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 [-t temporary_directory] -h
```

### Windows

```
NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d BKP [-t temporary_directory] -h
```

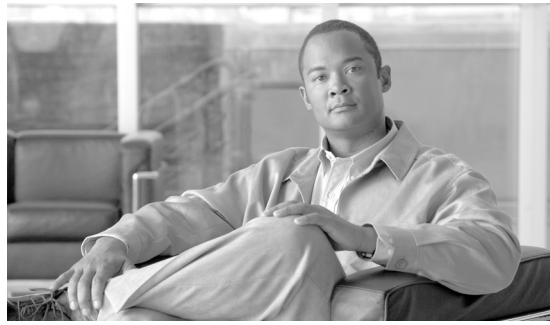
where:

- `NMSROOT`—(Required) 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`.
- `-d BKP`—(Required) The backup directory to use.
- `-h`—(Optional) Provides help. When used with `-d BackupDirectory`, show s 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	<pre><code>opt/CSCOpX/bin/perl opt/CSCOpX/bin/restorebackup.p l -d BKP</code></pre>	<pre><code>C:\Progra~1\CSCOpX\bin\perl C:\Progra~1\CSCOpX\bin\ restorebackup.pl -d BKP</code></pre>

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



## INDEX

---

### A

- AAA methods [5-2](#)
- audience for this document [i-ix](#)

---

### C

- CAM debugging [4-2](#)
- cautions
  - significance of [i-x](#)
- CM data migration scope [1-3](#)
- CS 3.1 AAA Methods [5-2](#)
- CS Data Migration Scope [1-3](#)

---

### D

- DFM data migration scope [1-6](#)
- documentation [i-x](#)
  - audience for this [i-ix](#)
  - related to this product [i-x](#)
  - typographical conventions in [i-ix](#)

---

### E

- errors from CS data migration [4-2](#)
- errors from DFM data migration [4-4](#)
- errors from IPM data migration [4-5](#)
- errors from RME data migration [4-3](#)

---

### F

- FAQ on data migration [4-5](#)

---

### I

- IPM data migration scope [1-6](#)

---

### L

- local migration
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Solaris) [2-2](#)
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Windows) [3-2](#)

---

### M

- migrating data
  - LMS 2.2/RWAN 1.3 to LMS 3.0 (Solaris) [2-6](#)
  - LMS 2.2/RWAN 1.3 to LMS 3.0 (Windows) [3-6](#)
  - LMS 2.5 to LMS 3.0 (Solaris) [2-4](#)
  - LMS 2.5 to LMS 3.0 (Windows) [3-4](#)
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Solaris) [2-1](#)
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Windows) [3-1](#)
- migration
  - before you begin on Windows [3-6](#)

---

### R

- remote migration
  - LMS 2.2/RWAN 1.3 to LMS 3.0 (Solaris) [2-6](#)
  - LMS 2.2/RWAN 1.3 to LMS 3.0 (Windows) [3-6](#)
  - LMS 2.5 to LMS 3.0 (Solaris) [2-4](#)
  - LMS 2.5 to LMS 3.0 (Windows) [3-4](#)
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Solaris) [2-3](#)
  - LMS 2.6/LMS 2.5.1 to LMS 3.0 (Windows) [3-3](#)
- RME data migration scope [1-4](#)

---

## S

scope of data migration [1-2](#)

selftest tool [4-2](#)

syntax of restorebackup.pl [B-1](#)

syntax of wrapper.pl [A-1](#)

system requirements, operating system supported [1-2](#)

---

## T

typographical conventions in this document [i-ix](#)