



## **Data Migration Guide for CiscoWorks LAN Management Solution**

Software Release 3.2  
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

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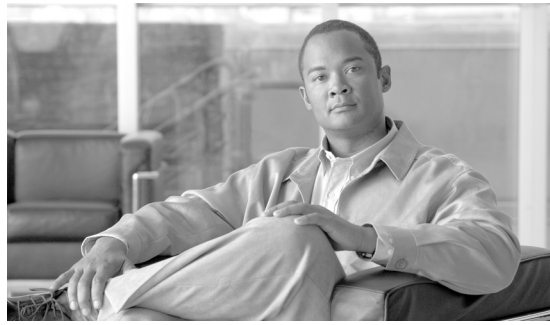
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## CONTENTS

Notices	v
OpenSSL/Open SSL Project	v
License Issues	v

<b>Preface</b>	<b>ix</b>
Audience	ix
Conventions	ix
Product Documentation	x
Related Documentation	x
Obtaining Documentation and Submitting a Service Request	xi

---

### CHAPTER 1

<b>Overview</b>	<b>1-1</b>
Overview of Migration to LMS 3.2	1-1
System Requirements	1-3
Terms Used in the Data Migration Guide	1-3
Scope of Data Migration	1-4
CS Data Migration Scope	1-4
CM Data Migration Scope	1-5
RME Data Migration Scope	1-6
DFM Data Migration Scope	1-9
IPM Data Migration Scope	1-10
CV Data Migration Scope	1-11
HUM Data Migration Scope	1-11
Portal Data Migration Scope	1-12
CiscoWorks Assistant Data Migration Scope	1-12

---

### CHAPTER 2

<b>Migrating Data to CiscoWorks LAN Management Solution 3.2 on Windows</b>	<b>2-1</b>
Migrating Data From LMS 2.6 or 2.6 SP1	2-1
Local Migration From LMS 2.6 or 2.6 SP1	2-3
Remote Migration From LMS 2.6 or 2.6 SP1	2-3
Migrating Data for CS, RME, CM, DFM, IPM and CV	2-4
Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1	2-5
Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1	2-7
Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1	2-7

Migrating Data for CS, CiscoWorks Assistant, RME, CM, DFM, IPM, HUM, Portal and CV 2-7

**CHAPTER 3**

**Migrating Data to CiscoWorks LAN Management Solution 3.2 on Solaris 3-1**

- Migrating Data From LMS 2.6 or 2.6 SP1 3-1
  - Local Migration From LMS 2.6 or 2.6 SP1 3-3
  - Remote Migration From LMS 2.6 or 2.6 SP1 3-3
    - Migrating Data for CS, RME, CM, DFM, IPM and CV 3-4
- Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 3-5
  - Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 3-7
  - Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 3-7
    - Migrating Data for CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal and CV 3-7

**CHAPTER 4**

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

- CS Data Migration Errors 4-3
- RME Data Migration Errors 4-3
- CM Data Migration Errors 4-4
- DFM Data Migration Errors 4-6
- IPM Data Migration Errors 4-7
- HUM Data Migration Errors 4-9
- Frequently Asked Questions on LMS Upgrade and Data Migration 4-9

**CHAPTER 5**

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

- Guidelines for DFM 3.2 Post-Upgrade Activities 5-1
  - Configuring SNMP Trap Receiving and Forwarding 5-1
- Guidelines for CS 3.3 Post-Upgrade Activities 5-2
  - CS 3.3 AAA Methods 5-2
    - ACS Mode 5-2
    - 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 Script B-1**



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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

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## Preface

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This manual describes how to migrate data from earlier versions of CiscoWorks LAN Management Solution (LMS) to LMS 3.2.

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 Guide 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 3.2	<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 3.2 Documentation CD-ROM shipped with the product.</li> </ul>

## Related 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.

- Release Notes for CiscoWorks Common Services (CS) 3.3 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 CiscoWorks LMS Portal (Portal) 1.2 is available at this URL:  
[http://www.cisco.com/en/US/products/ps7198/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps7198/prod_release_notes_list.html)
- Release Notes for CiscoWorks Assistant 1.2 is available at this URL:  
[http://www.cisco.com/en/US/products/ps7212/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps7212/prod_release_notes_list.html)
- Release Notes for Resource Manager Essentials (RME) 4.3 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 (CM) 5.2 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 (DFM) 3.2 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)
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[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)
- Release Notes for Health and Utilization Monitor (HUM) 1.2 is available at this URL:  
[http://www.cisco.com/en/US/products/ps9303/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps9303/prod_release_notes_list.html)
- Release Notes for CiscoView (CV) 6.1.9 is available at this URL:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps4565/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps4565/prod_release_notes_list.html)

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

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.





# CHAPTER 1

## Overview

---

This document describes the steps involved in migrating data for CiscoWorks LAN Management Solutions (LMS) 3.2. The Selective Backup feature explained in this document is limited to LMS 3.2 and it is not supported in the previous version of LMS.

The following migration paths are described in this document:

- LMS 2.6 or LMS 2.6 Service Pack (SP1) to LMS 3.2
- LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 to LMS 3.2

For more information on the applications and the version numbers, see the Overview of CiscoWorks LAN Management Solution 3.2 section in *Installing and Getting Started With CiscoWorks LAN Management Solution*.

This chapter contains:

- [Overview of Migration to LMS 3.2](#)
- [System Requirements](#)
- [Terms Used in the Data Migration Guide](#)
- [Scope of Data Migration](#)

## Overview of Migration to LMS 3.2

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 3.2 using either of these methods:

- **Local Migration.** This is installing LMS 3.2 on top of the existing LMS version, on the same machine and migrating the data into it.

Or

- **Remote Migration.** This is installing LMS 3.2 on a different machine and migrating the backed up data into it.

**Note**

On Solaris machine, the backed up folder must be compressed and transferred. If not, the restore may fail due to the changes in the file name and checksum, as the file name changes from the upper case to the lowercase.

**Notes for Remote Migration**

The application list in the backed up data should exactly match the application list in the machine where it is restored except for CiscoWorks Assistant and Portal. If there is a difference, the behavior of the applications after upgrade will be unpredictable.

[Table 1-1](#) is an example of a scenario when the behavior of the application is unpredictable.

**Table 1-1 Remote Migration Scenario**

Example No	Applications in the Backup Archive	Applications in the Restore Machine	Explanation
Example 1	CS 3.2 RME 4.2 CM 5.1 DFM 3.1	CS 3.3 RME 4.3 CM 5.2 DFM 3.2	This is a supported combination for remote migration.
Example 2	CS 3.2 CM 5.1 IPM 4.1 HUM 1.1	CS 3.3 RME 4.3 CM 5.2 DFM 3.2 IPM 4.2 HUM 1.2	This is not a supported combination for remote migration.  When you try to migrate this backup data on a remote machine, the behavior of the applications may be unpredictable and few features in the CiscoWorks applications may not work properly
Example 3	CS 3.2 CM 5.1 RME 4.2 IPM 4.1 HUM 1.1 DFM 3.1	CS 3.3 CM 5.2 IPM 4.2 HUM 1.2	unpredictable and few features in the CiscoWorks applications may not work properly

For details on migrating data for all applications to LMS 3.2, see:

- [Migrating Data to CiscoWorks LAN Management Solution 3.2 on Solaris](#)
- [Migrating Data to CiscoWorks LAN Management Solution 3.2 on Windows](#)

# System Requirements

Table 1-2 provides details of the system requirements for LMS 3.2 servers:

**Table 1-2**      *Operating Systems Supported for LMS 3.2 Servers*

Operating System	Version
Solaris	9, 10
Windows	Windows 2003 Standard and Enterprise Editions with SP1 and SP2
	Windows 2003 R2 Standard and Enterprise Editions with SP1 and SP2
	Windows 2008 Standard and Enterprise Editions with SP1
	<b>Note</b> Both 32 bit and 64 bit operating systems are supported on these versions.

LMS 3.2 supports virtualization systems: VMware ESX Server 3.0.x, VMware ESX Server 3.5.x, VMware ESXi 3.5 Update 2, Hyper-V, Zone based Virtualization in Solaris 10 and Logical domains (LDoms) in Solaris 10.

For complete information on the System Requirements, see the "System and Browser Requirements for Server and Client" section in the Prerequisites chapter in the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2* 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:

- Copying —Copying the LMS Data in a directory.
- Upgrading—Installing a newer software version on top of an older version (For example, installing LMS 3.2 on LMS 3.1).
- 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, CiscoWorks Assistant, CM, RME, DFM, IPM, CV, HUM and Portal when you upgrade to LMS 3.2.

- 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](#)
- [Portal Data Migration Scope](#)
- [CiscoWorks Assistant Data Migration Scope](#)
- [CV Data Migration Scope](#)
- [HUM Data Migration Scope](#)

Data Migration for LMS 3.2 application can be done using the following methods:

- Normal Backup - Process by which all the configuration files and collected data can be backed up from application database.
- Selective Backup - Process by which only required system configurations and data can be backed up.

## CS Data Migration Scope

The Common Services (CS) data can be backed up using either the Normal or the Selective mode.

### Normal Backup

The following data gets migrated when you upgrade to Common Services 3.3:

- CiscoWorks User information
- Single Sign-on configuration
- Device and Credential Repository (DCR) configuration
- Peer Certificates and Self Signed Certificates
- Peer Server Account information
- Login Module settings
- Software Center map files
- License data
- Core Client Registry
- System Identity Account configuration

- Cisco.com User configuration
- Proxy User configuration
- Jobs and Resources data, DCR data, Groups data, and other data stored in the database
- Discovery settings and Scheduled jobs
- ACS Credentials
- Local User Policy Setup
- System Preferences
- Multiple Default Credentials— Multiple Default Credentials are migrated only when you restore data from LMS 3.2.
- Policy Configuration— Policy Configuration are migrated only when you restore data from LMS 3.2.
- Logrot Configuration— Logrot Configuration are migrated only when you restore data from LMS 3.2.
- DCR Exclude list— DCR Exclude list are migrated only when you restore data from LMS 3.2.
- Unreachable Device Polling Settings— Unreachable Device Polling Settings are migrated only when you restore data from LMS 3.2.
- LDAP Configuration— LDAP Configuration are migrated only when you restore data from LMS 3.2.

**Note**

CS Discovery configuration data and Discovery jobs will be migrated only from LMS 3.0 December 2007 Update and LMS 3.1.

**Selective Backup**

When you run a selective data backup from CLI, all the data mentioned above gets backed up except:

- Software Center map files
- Completed jobs data

## CM Data Migration Scope

The Campus Manager (CM) data can be backed up using either the Normal or the Selective mode.

**Normal Backup**

The following data gets migrated when you upgrade to Campus Manager 5.2:

- SNMP Settings
- CM Homepage Settings
- Data Collection Scheduled Details
- User Defined Groups
- RME Credentials
- Data Purge Settings
- Trap Configuration Settings
- Custom Reports and Layouts

- Topo Map Preferences— This is applicable only for upgrade.
- Topology Layouts— Manually changed topology layouts will not be migrated in both upgrade and backup/restore scenarios.
- MAC Detection Settings.
- Device Details
- Port and VLAN Details
- Campus Jobs and Archives
- User Tracking Jobs and Archives
- VNM Settings, Jobs and Archives— VNM Settings Jobs and Archives are migrated only when you restore data from LMS 3.2.

### Selective Backup

When you run a selective data backup from CLI, all the data mentioned above gets backed up except:

- Device Details
- Port and VLAN Details
- Campus Archives, UT Archives and VNM Archives



#### Note

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Discovery settings will be migrated for LMS 3.0 or lower versions.

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## RME Data Migration Scope

The Resource Manager Essentials (RME) data can be backed up using either the Normal or the Selective mode.

### Normal Backup

The following data gets migrated when you upgrade to RME 4.3:

- Change Audit
  - Set Purge Policy
  - Force Purge
  - Config Change Filter
- Config Management
  - Transport Settings
  - Archive Settings
  - Collection Settings
  - Purge Settings
  - Exclude Commands
  - Fetch Settings
  - Config Editor
  - Config Job Policies

- Device Management
  - Device Management Settings
  - Device Credential Verification Settings
- Reports
  - Archive Settings
  - PSIRT/EOS/EOL Reports
- Config Archive
  - Shadow directory
  - ChangeAudit records. This includes Configuration change details
  - Archived configuration versions
- NetConfig
  - User-defined Templates (UDT)
  - Default Template Usage
    - By default, all templates are assigned to Admin on migration. The device-to-task mapping is not migrated.
- RME groups
  - 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. This includes Device based jobs, Port based jobs and Module based jobs. Port and Module based jobs are migrated only when you restore data from LMS 3.2.
  - User-defined tasks
- NetShow:
  - NetShow jobs
  - Output archives
  - Commandsets

- Software Management
  - View/Edit Preferences
  - Update Upgrade Information
  - Software Management repository images
  - All jobs in a Job Browser
- System Preferences
  - Application Log Level Settings
  - Job Purge
  - RME Device Attributes
  - RME Secondary Credentials
  - Collection Failure Notification
- Inventory
  - Inventory Change Filter
  - System Job Schedule
  - Cisco.com Fetch Interval
  - Inventory jobs
  - Device details
  - Inventory Collection status
  - DCA jobs
  - Device Management state
  - User -defined groups
- Syslog details
  - Set Backup Policy
  - Set Purge Policy
  - Force Purge
  - Automated actions
  - Message filters
  - Custom reports
  - Syslog messages for the past 14 days
  - Report jobs and archives
- Port and Module group administration— Port and Module group administration are migrated only when you restore data from LMS 3.2.
  - Port groups
  - Module groups

**Note**

---

While restoring data from RME 4.2 to RME 4.3, all jobs, data and admin settings will be migrated.

---

### Selective Backup

When you run a selective data backup from CLI, all the data mentioned above gets backed up except:

- SWIM Images
- Common Reporting Infrastructure archives
- Config editor data
- Syslog data

## DFM Data Migration Scope

The Device Fault Manager (DFM) data can be backed up using either the Normal or the Selective mode.

### Normal Backup

The following data gets migrated when you upgrade to DFM 3.2:

- 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
- AAD page
- Data Purge settings— Data Purge settings are migrated only when you restore data from LMS 3.0 December 2007 Update or LMS 3.1.
- Log settings—Log settings are migrated only when you restore data during a Local Migration.
- Some polling and threshold settings
- Device details
- Trap forward settings
- Notification settings (group, email, trap and syslog settings)
- Notification customization changes
- Event sets
- AAD views, user defined and customizable groups
- JRM Jobs
- Alerts and Events details

- Fault History details
- SNMP Settings—SNMP Settings are migrated only when you restore data from LMS 3.2.
- Email Subject customization settings—Email Subject customization settings are migrated only when you restore data from LMS 3.2.

### Selective Backup

When you run a selective data backup from CLI, all the data mentioned above gets backed up except:

- Alerts and Events details
- Fault History details

## IPM Data Migration Scope

The Internetwork Performance Manager (IPM) data can be backed up using either the Normal or the Selective mode.

### Normal Backup

The following data gets migrated when you upgrade to IPM 4.2:

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



#### Note

---

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

---

You can generate consolidated System Reports for data migrated from IPM 2.6 to IPM 4.2. 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`
  - `/var/adm/CSCOpX/files/ipm/` and
  - `NMSROOT/CSCOpX/MDC/tomcat/webapps/ipm/archive_charts`
- Windows
  - `NMSROOT\MDC\tomcat\webapps\ipm\system_reports`
  - `NMSROOT\CSCOpX\files\ipm\` and
  - `NMSROOT\CSCOpX\MDC\tomcat\webapps\ipm\archive_charts`

When you install IPM 4.2, and migrate from LMS 3.0 or LMS3.0 December 2007 Update or LMS 3.1 to LMS 3.2, the following data gets migrated:

- IPM database—contains information about source devices, target devices, operations, collectors, admin settings and the statistics of data collected.
- Settings in IPM properties.
- Log Settings.
- System Reports
- Report Jobs and archives.
- Exported data (Statistics and Collectors).

#### **Selective Backup**

When you run a selective data backup from CLI, all the data mentioned above gets backed up except the statistical table available in database.

## **CV Data Migration Scope**

The CiscoView (CV) data can be backed up using the Normal mode. When you upgrade to CiscoView 6.1.9, the user's device preferences are migrated.

## **HUM Data Migration Scope**

The Health and Utilization Monitor (HUM) data can be backed up using either the Normal or the Selective mode.

#### **Normal Backup**

The following data gets migrated when you upgrade to HUM 1.2:

- Configuration Data
- Threshold Violation Scripts
- Reports
- Template Configuration
- Database
  - Poller Configuration
  - Threshold Configuration
  - Admin Settings
  - Polled data
  - Threshold Violation data
  - Summarization data
  - Job information.
  - Trendwatch Configurations— Trendwatch Configurations are migrated only when you restore data from HUM 1.2.
  - TrendWatch Violation data— TrendWatch Violation data are migrated only when you restore data from HUM 1.2.

- Trap Receiver Groups— Trap Receiver Groups are migrated only when you restore data from HUM 1.2.
- Syslog Receiver Groups— Syslog Receiver Groups are migrated only when you restore data from HUM 1.2.

**Selective Backup**

When you run a selective data backup from CLI, all the data mentioned above gets backed up except the Polled data and completed reports.

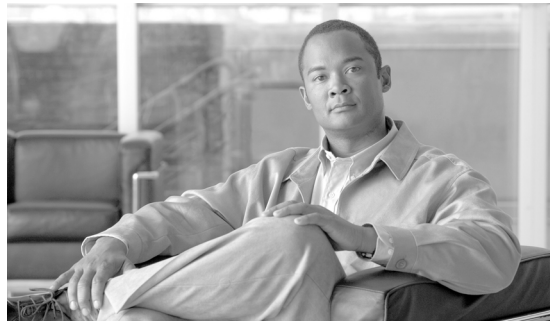
HUM will not backup old reports and immediate reports as part of selective backup. HUM will backup periodic reports.

## Portal Data Migration Scope

The LMS Portal data can be backed up using the Normal mode. The CiscoWorks Portal configuration or settings get migrated when you upgrade to Portal 1.2. All the private page customization in the earlier LMS version (3.0/3.0.1/3.1) will be migrated to the My portal page after upgrade.

## CiscoWorks Assistant Data Migration Scope

No data gets migrated when you upgrade to CiscoWorks Assistant 1.2.



## CHAPTER 2

# Migrating Data to CiscoWorks LAN Management Solution 3.2 on Windows

---

This chapter describes how to migrate data to CiscoWorks LAN Management Solution (LMS) 3.2 on Windows.

This chapter has the following sections:

- [Migrating Data From LMS 2.6 or 2.6 SP1](#)
- [Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)

## Migrating Data From LMS 2.6 or 2.6 SP1

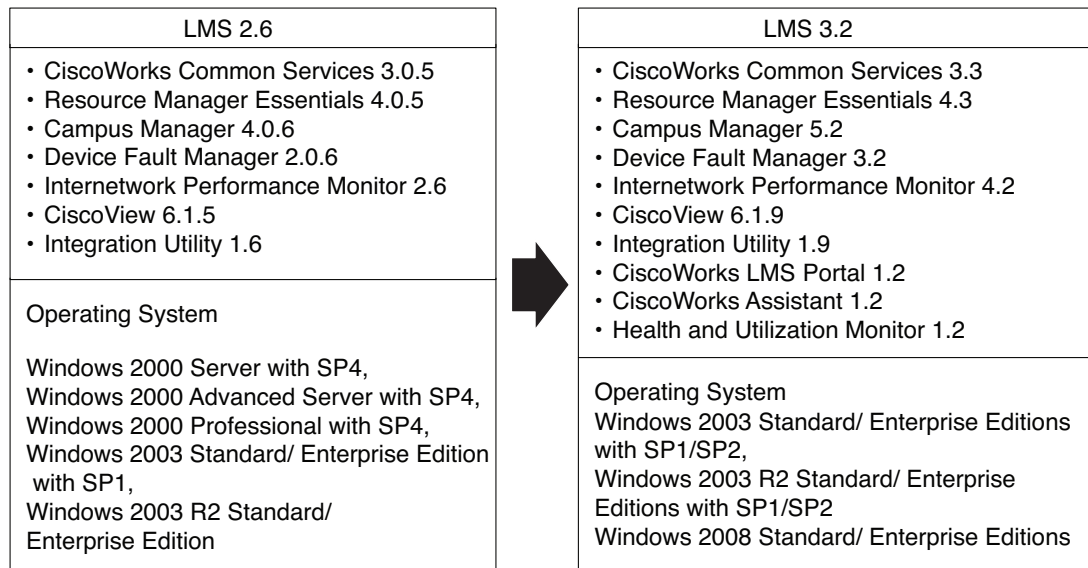
This section explains how to migrate data from LMS 2.6 or 2.6 SP1 to LMS 3.2

You can migrate to LMS 3.2 in two ways:

- [Local Migration From LMS 2.6 or 2.6 SP1](#)
- [Remote Migration From LMS 2.6 or 2.6 SP1](#)

Figure 2-1 shows the migration of data from LMS 2.6 to LMS 3.2.

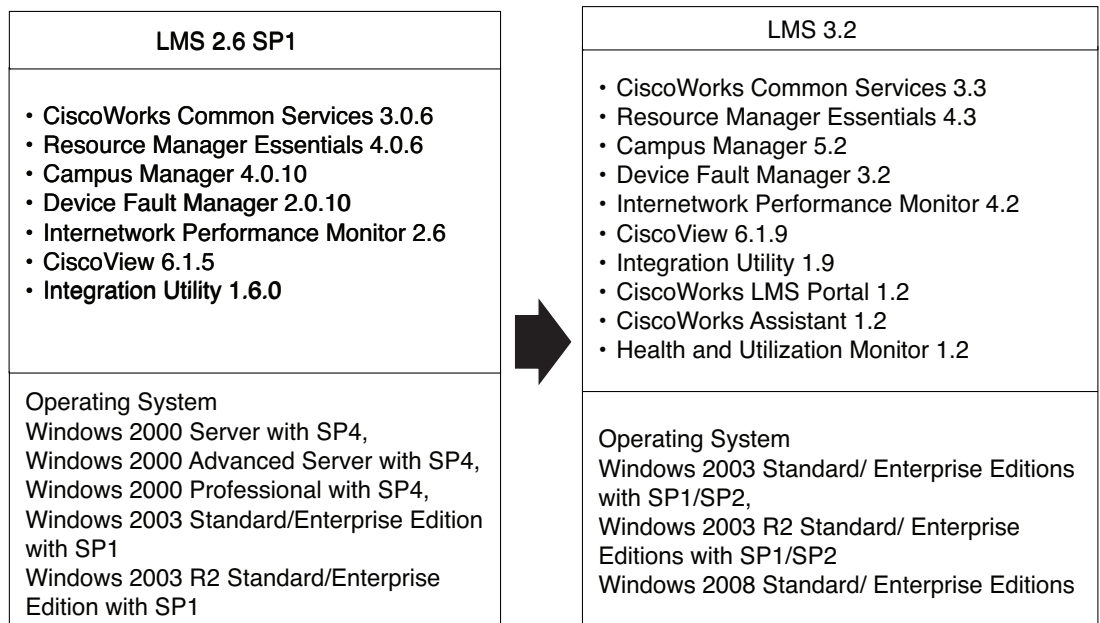
**Figure 2-1 Migrating Data from LMS 2.6 to LMS 3.2**



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Figure 2-2 shows the migration of data from LMS 2.6 SP1 to LMS 3.2.

**Figure 2-2 Migrating Data from LMS 2.6 SP1 to LMS 3.2**



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## Local Migration From LMS 2.6 or 2.6 SP1

Install LMS 3.2 over LMS 2.6 or 2.6 SP1. The data for CS, RME, CM, DFM, and CV is automatically migrated during installation.

**Note**

You must install LMS 3.2 without HUM 1.2. HUM 1.2 installation should be initiated only after LMS 3.2 installation and data migration are completed. This note is applicable only if HUM 1.2 is a part of LMS 3.2 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 enter the absolute path for *BKP*. For example, if *BKP* is under C:\, enter the path as `NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d C:\BKP`.

**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

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 3.2 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)

## Remote Migration From LMS 2.6 or 2.6 SP1

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 2.6 SP1 data is referred to as Machine A and the remote machine where you need to install LMS 3.2 and restore the data, is referred to as Machine B.

**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

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

To migrate data to a remote machine:

**Step 1** Log in as administrator into Machine A.

**Step 2** From LMS 3.2 DVD, locate the *WindowsLMSBackup.tar* file under disk 1/install directory.

For the LMS 3.2 evaluation image downloaded from CCO, the *WindowsLMSBackup.tar* file is available in a directory under the %temp% directory. The name of the %temp% directory will vary as it is randomly created for every installation.

For example, the randomly created directory name can be  
C:\DOCUME~1\pdandapa\LOCALS~1\Temp\{58D59C97-B4FA-4022-AA54-5191C2642C66}.

To view the temp directory:

- a. From the Taskbar, choose **Start > Run** and enter %temp%.
- b. Click **OK** button.
- c. Search for the *WindowsLMSBackup.tar* file in the above temp 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*



**Note**

If you are about to backup DFM 2.0.10, install DFM 2.0.11 before taking the backup. If not, the backup will fail.

**Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.

To do this using CLI, go to the location of *wrapper.pl* and enter the following command:

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

where *BKP* is the backup directory.

For example, if *BKP* is under C:\, enter the path as *NMSROOT\bin\perl wrapper.pl C:\BKP*.

**Step 6** Log in as administrator into Machine B.

**Step 7** Install LMS 3.2.



**Note**

You must install LMS 3.2 without HUM 1.2. HUM 1.2 installation should be initiated only after LMS 3.2 installation and data restoration are completed. This note is applicable only if HUM 1.2 is a part of LMS 3.2 installation.

**Step 8** Copy the backup directory *BKP* that contains the CS, RME, CM, IPM, CV and DFM data from Machine A to any temporary location.

**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 enter the absolute path for *BKP*. For example, if *BKP* is under *C:\*, enter the path as *NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d C:\BKP*.

For more details, see [Syntax and Usage for Restore Script](#).

The application list in the backed up data should exactly match the application list in the machine where it is restored except for CiscoWorks Assistant and Portal. If there is a difference then the behavior of the applications after upgrade will be unpredictable.

For more information, see [Notes for Remote Migration](#).

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

*NMSROOT\log\restorebackup.log*

*NMSROOT\log\migration.log*

*NMSROOT\log\rme\_base.log*

*NMSROOT\log\ipm\_base.log*

**Note**

The *migration.log* will be created only when either RME or IPM is migrated. However, the *rme\_base.log* and *ipm\_base.log* are created only when RME and IPM are migrated.

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

```
net start crmdmgt
```

## Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

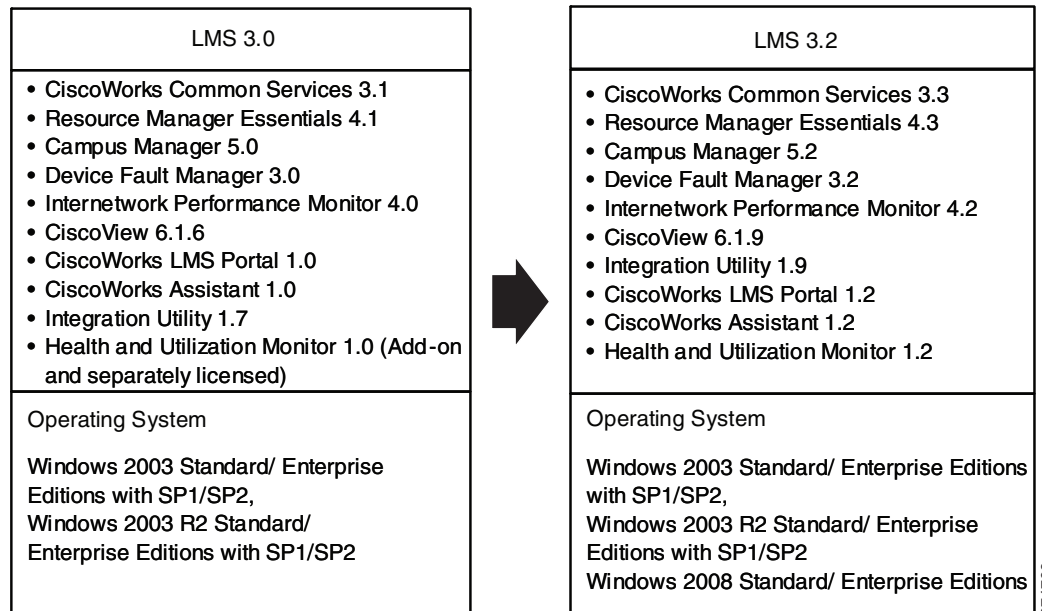
This section explains how to migrate data from LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 to LMS 3.2.

You can migrate to LMS 3.2 in two ways:

- [Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)
- [Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)

Figure 2-3 shows the migration of data from LMS 3.0 to LMS 3.2.

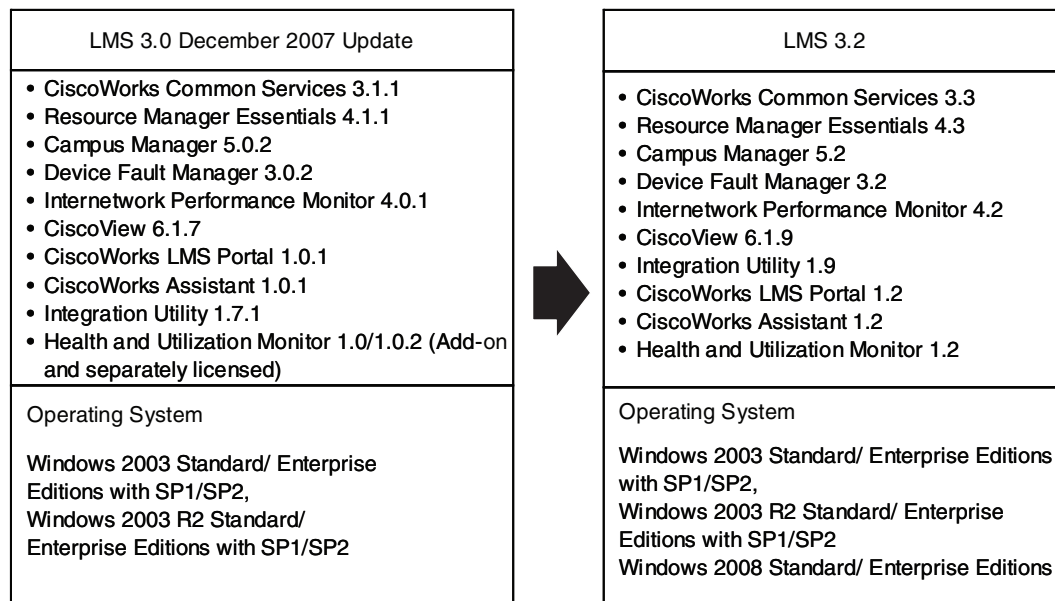
**Figure 2-3 Migrating Data from LMS 3.0 to 3.2**



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Figure 2-4 shows the migration of data from LMS 3.0 to LMS 3.2.

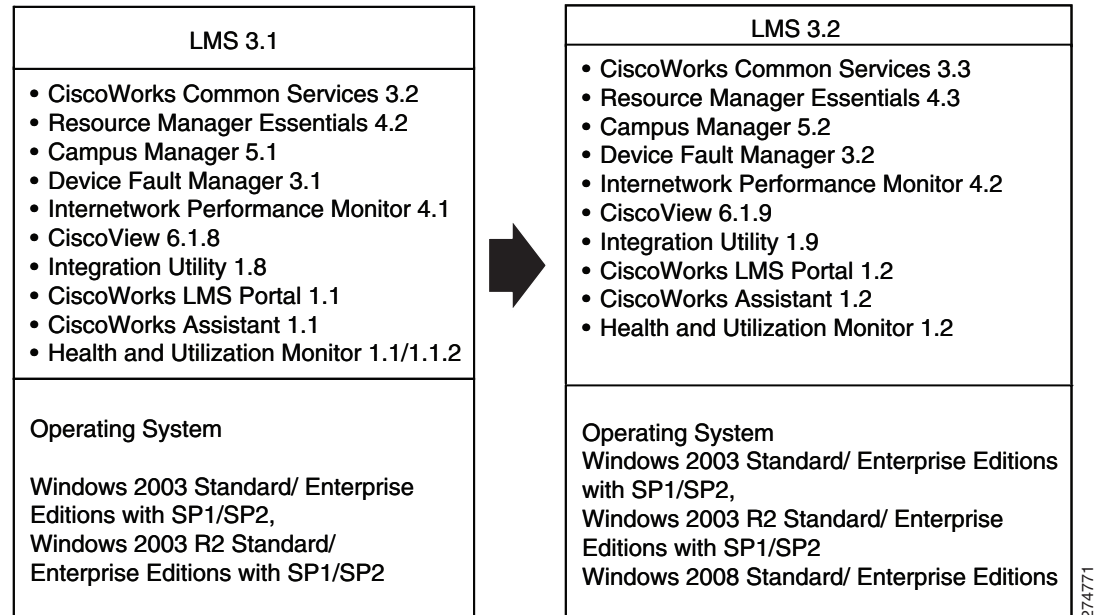
**Figure 2-4 Migrating Data from LMS 3.0 December 2007 Update to LMS 3.2**



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Figure 2-5 shows the migration of data from LMS 3.1 to LMS 3.2.

**Figure 2-5 Migrating Data from LMS 3.1 to 3.2**



## Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

Install LMS 3.2 over LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1. The data for CS, CiscoWorks Assistant, RME, CM, IPM, DFM, HUM, CV, and Portal are automatically migrated during installation. HUM is a add-on application and it is optional.



**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

For details on Supported OS, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2 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)

## Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

This section explains the remote migration of data from LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1.

This section explains the procedure of [Migrating Data for CS, CiscoWorks Assistant, RME, CM, DFM, IPM, HUM, Portal and CV](#) to a remote machine. HUM is a add-on application and it is optional.

In this section, the machine that has LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 data is referred to as Machine A and the remote machine where you need to install LMS 3.2 and restore the data, is referred to as Machine B.

**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

## Migrating Data for CS, CiscoWorks Assistant, RME, CM, DFM, IPM, HUM, Portal and CV

To migrate data to a remote machine:

**Step 1** Log in as administrator into Machine A.

**Step 2** Back up CS, CiscoWorks Assistant, RME, CM, DFM, IPM, HUM, Portal, and CV data.

To do this using CLI, enter the following command:

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

where *BKP* is the backup directory.

You must enter the absolute path for *BKP*. For example, if *BKP* is under C:\, enter the path as `NMSROOT\bin\perl NMSROOT\bin\backup.pl C:\BKP`.

**Step 3** Log in as administrator into Machine B.

**Step 4** Install LMS 3.2.

**Step 5** Copy the backup directory *BKP* that contains the CS, CiscoWorks Assistant, RME, CM, DFM, IPM, HUM, Portal and CV data from Machine A to any temporary location.

**Step 6** Stop the daemon manager by entering:

```
net stop crmdmgt
```

**Step 7** 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 enter the absolute path for *BKP*. For example, if *BKP* is under C:\, enter the path as `NMSROOT\bin\perl NMSROOT\bin\restorebackup.pl -d C:\BKP`.

For more details, see [Syntax and Usage for Restore Script](#).

The application list in the backed up data should exactly match the application list in the machine where it is restored. If there is a difference then the behavior of the applications after upgrade will be unpredictable.

For more information, see [Notes for Remote Migration](#).

You can also restore data from CiscoWorks LMS 3.1 to the CiscoWorks LMS 3.2 server with Symantec Veritas implementation.

For details on High Availability (HA) implementation, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2* 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)

**Note**

Ensure that the passwords, HTTPS port and SMTP server details are same in both LMS 3.1 server and LMS 3.2 server with Symantec Veritas implementation, while migrating data from non-HA to HA environment.

**Step 8** Examine the log files in the following location to verify that the data was restored. The files are:

- `NMSROOT\log\restorebackup.log`

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



---

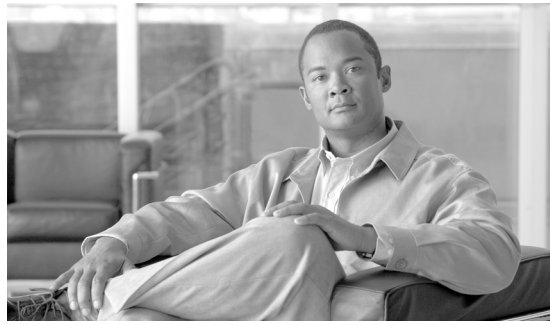
**Note** The migration.log and rme\_base.log will be created only when RME is migrated.

---

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

```
net start crmdmgtd
```





## CHAPTER 3

# Migrating Data to CiscoWorks LAN Management Solution 3.2 on Solaris

---

This chapter describes how to migrate data to CiscoWorks LAN Management Solution (LMS) 3.2 on Solaris.

This chapter has the following sections:

- [Migrating Data From LMS 2.6 or 2.6 SP1](#)
- [Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)

## Migrating Data From LMS 2.6 or 2.6 SP1

This section explains how to migrate data from LMS 2.6 or 2.6 SP1 to LMS 3.2.

You can migrate to LMS 3.2 in two ways:

- [Local Migration From LMS 2.6 or 2.6 SP1](#)
- [Remote Migration From LMS 2.6 or 2.6 SP1](#)

Figure 3-1 shows the migration of data from LMS 2.6 to LMS 3.2.

**Figure 3-1 Migrating Data from LMS 2.6 to LMS 3.2**

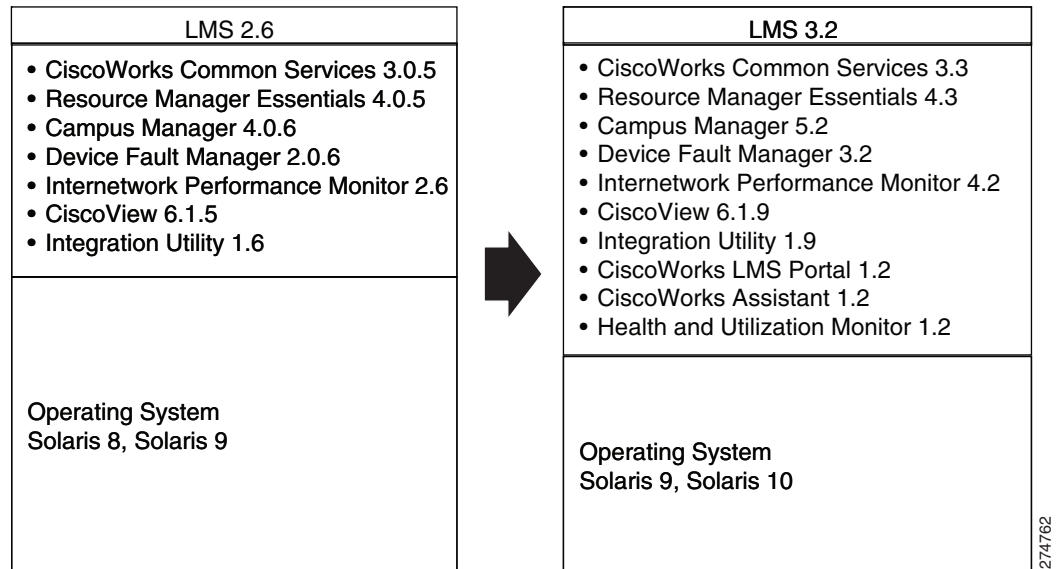
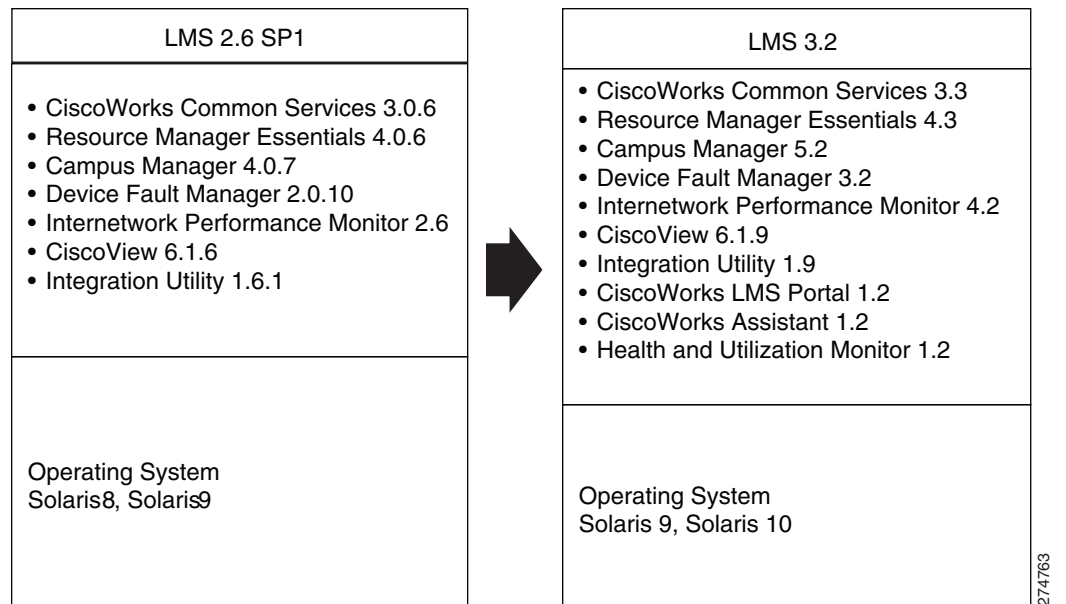


Figure 3-2 shows the migration of data from LMS 2.6 SP1 to LMS 3.2

**Figure 3-2 Migrating Data from 2.6 SP1 to 3.2**



## Local Migration From LMS 2.6 or 2.6 SP1

Install LMS 3.2 over LMS 2.6 or 2.6 SP1. The data for CS, RME, CM, DFM, and CV is automatically migrated during installation.

**Note**

You must install LMS 3.2 without HUM 1.2. HUM 1.2 installation should be initiated only after LMS 3.2 installation and data migration are completed. This note is applicable only if HUM 1.2 is a part of LMS 3.2 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 enter the absolute path for *BKP*. For example, if *BKP* is under /opt, enter the path as *NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d /opt/BKP*.

**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

For details on installing LMS 3.2, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2*.

## Remote Migration From LMS 2.6 or 2.6 SP1

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 2.6 SP1 data is referred to as Machine A and the remote machine where you need to install LMS 3.2 and restore the data, is referred to as Machine B.

**Note**

We recommend you to stop the daemon manager, before you take the backup of LMS data.

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

To migrate data to a remote machine:

- 
- Step 1** Log in as root into Machine A.
- Step 2** From the LMS 3.2 DVD, locate the *SolarisLMSBackup.tar* file under `disk1/install` 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`



**Note**

If you need to backup DFM 2.0.10, install DFM 2.0.11 before taking the backup. If not, the backup will fail.

- Step 5** Back up CS, RME, CM, IPM, DFM, and CV data.

To do this using CLI, go to the location of `wrapper.pl` and enter the following command:

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

where *BKP* is the backup directory.

For example, if *BKP* is under `/opt`, enter the path as `NMSROOT/bin/perl wrapper.pl /opt/BKP`

- Step 6** Log in as root into Machine B.

- Step 7** Install LMS 3.2.



**Note**

You must install LMS 3.2 without HUM 1.2. HUM 1.2 installation should be initiated only after LMS 3.2 installation and data restoration are completed. This note is applicable only if HUM 1.2 is a part of LMS 3.2 installation.

- 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 -rp source destination`.

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

```
/etc/init.d/dmgttd 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 absolute path for *BKP*. For example, if *BKP* is under `/opt`, give the path as `NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d /opt/BKP`.

For more details, see [Syntax and Usage for Restore Script](#).

The application list in the backed up data should exactly match the application list in the machine where it is restored except for CiscoWorks Assistant and Portal. If there is a difference then the behavior of the applications after upgrade will be unpredictable.

For more information, see [Notes for Remote Migration](#).

**Step 11** Examine the log files in the following location to verify that the data 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**

The migration.log will be created only when either RME or IPM is migrated. However, the rme\_base.log and ipm\_base.log are created only when RME and IPM are migrated.

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

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

## Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

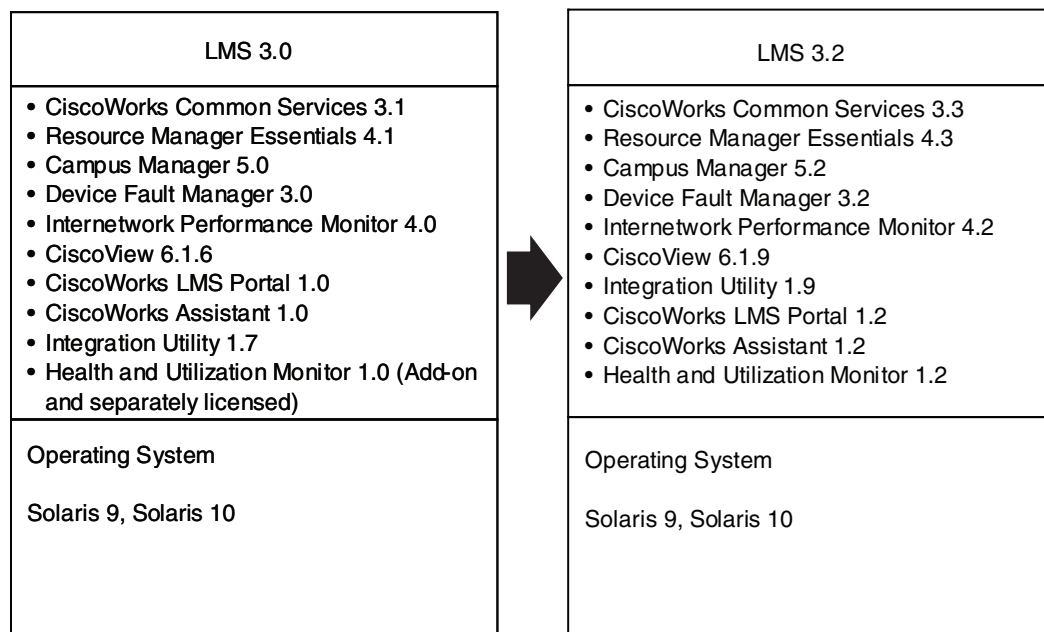
This section explains how to migrate data from LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

You can migrate to LMS 3.2 in two ways:

- [Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)
- [Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1](#)

Figure 3-3 shows the migration of data from LMS 3.0 to LMS 3.2.

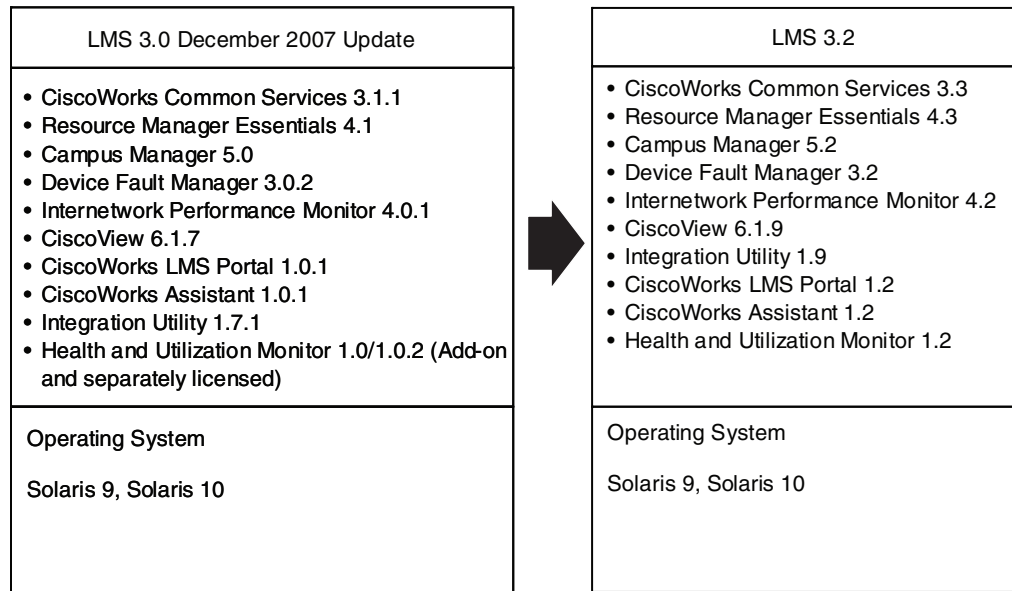
**Figure 3-3** Migrating Data from LMS 3.0 to LMS 3.2



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Figure 3-4 shows the migration of data from LMS 3.0 December 2007 Update to LMS 3.2.

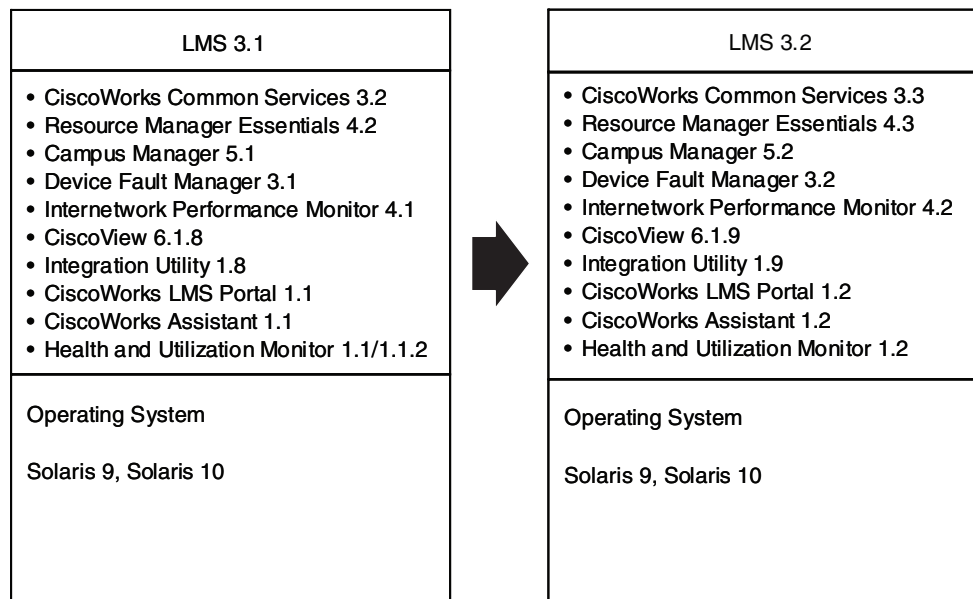
**Figure 3-4** Migrating Data from LMS 3.0 December 2007 Update to LMS 3.2



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Figure 3-5 shows the migration of data from LMS 3.1 to LMS 3.2.

**Figure 3-5** Migrating Data from LMS 3.1 to LMS 3.2



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## Local Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

Install LMS 3.2 over LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1. The data for CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal and CV is automatically migrated during installation. HUM is a add-on application and it is optional.



### Note

We recommend you to stop the daemon manager, before you take the backup of LMS data.

For details on installing LMS 3.2, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2* 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)

## Remote Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1

This section explains the procedure of [Migrating Data for CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal and CV](#) to a remote machine. HUM is a add-on application and it is optional.

In this section, the machine that has LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 is referred to as Machine A and the remote machine where you need to install LMS 3.2 and restore the data, is referred to as Machine B.



### Note

We recommend you to stop the daemon manager, before you take the backup of LMS data.

## Migrating Data for CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal and CV

To migrate data to a remote machine:

- 
- Step 1** Log in as root into Machine A.
- Step 2** Back up CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal, and CV data.
- To do this using CLI, enter the following command:
- ```
NMSROOT/bin/perl NMSROOT/bin/backup.pl BKP
```
- where *BKP* is the backup directory.
- You must enter the absolute path for *BKP*. For example, if *BKP* is under /opt, give the path as
- ```
NMSROOT/bin/perl NMSROOT/bin/backup.pl /opt/BKP
```
- Step 3** Log in as root into Machine B.
- Step 4** Install LMS 3.2.
- Step 5** Transfer the backup directory *BKP* that contains the CiscoWorks Assistant, CS, RME, CM, DFM, IPM, HUM, Portal and CV data as a compressed file (example .tar) from Machine A to any temporary location.
- Step 6** Stop the daemon manager by entering:
- ```
/etc/init.d/dmgt_d stop
```
- Step 7** 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 enter the absolute path for *BKP*. For example, if *BKP* is under */opt*, give the path as *NMSROOT/bin/perl NMSROOT/bin/restorebackup.pl -d /opt/BKP*.

For more details, see [Syntax and Usage for Restore Script](#).

The application list in the backed up data should exactly match the application list in the machine where it is restored. If there is a difference then the behavior of the applications after upgrade will be unpredictable.

For more information, see [Notes for Remote Migration](#).

You can also restore data from CiscoWorks LMS 3.1 to the CiscoWorks LMS 3.2 server with Symantec Veritas implementation.

For details on High Availability (HA) implementation, see the *Installing and Getting Started with CiscoWorks LAN Management Solution 3.2* 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)

**Step 8** Examine the log files in the following location to verify that the data was restored. The files are:

- */var/adm/CSCOPx/log/restorebackup.log*
- */var/adm/CSCOPx/log/migration.log*
- */var/adm/CSCOPx/log/rme\_base.log*

**Note**

---

The *migration.log* and the *rme\_base.log* will be created only when RME is migrated.

---

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

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



## 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:

- [CS Data Migration Errors](#)
- [RME Data Migration Errors](#)
- [CM Data Migration Errors](#)
- [DFM Data Migration Errors](#)
- [IPM Data Migration Errors](#)
- [HUM Data Migration Errors](#)
- [Frequently Asked Questions on LMS Upgrade and Data Migration](#)

You must:

- Make sure that the server configuration and OS versions are compatible with LMS 3.2. Also, make sure the server has enough space to do the DB backup and restore.
- Check migration logs. The logs `migration.log` and `restorebackup.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

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

---

**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 commands:

- On Solaris

```
NMSROOT/bin/perl
NMSROOT/objects/db/conf/configureDb.pl action=unreg dsn=dsn_name
dmprefix=dmprefix_name

NMSROOT/bin/perl
NMSROOT/objects/db/conf/configureDb.pl action=uninstall dsn=dsn_name

rm -fr NMSROOT/tempBackupData
```

- On Windows

```
NMSROOT\bin\perl
NMSROOT\objects\db\conf\configureDb.pl action=unreg dsn=dsn_name
dmprefix=dmprefix_name

NMSROOT\bin\perl
NMSROOT\objects\db\conf\configureDb.pl action=uninstall dsn=dsn_name

rmdir NMSROOT/tempBackupData
```

The following table lists the *dsn\_names* (data source names) and *dmprefixes* (daemon manager prefixes) of all applications in LMS 3.2.

<b>Applications</b>	<i>dsn_name</i>	<i>dmprefix</i>
Common Services	cmf	Cmf
Resource Manager Essentials	rmeng	RME
Campus Manager	ani	ANI
Device Fault Manager	<ul style="list-style-type: none"> <li>• dfmEpm</li> <li>• dfmInv</li> <li>• dfmFh</li> </ul>	<ul style="list-style-type: none"> <li>• EPM</li> <li>• INV</li> <li>• FH</li> </ul>
Internetwork Performance Monitor	ipm	Ipm
CiscoWorks Assisstant	opsxml	Opsxml
Health and Utilization Monitor	upm	UPM

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

- On Solaris

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

- On Windows

```
net start crmdmgt
```

## CS Data Migration Errors

If you encounter errors during CS data migration, you can use the following options to troubleshoot the problems:

- 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 send this information as a report, 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 a specific test is successful.

## RME Data Migration Errors

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

- Make sure that the server configuration and OS version are compatible with LMS 3.2. Also, make sure the server has enough space to back up the database and restore it.
- 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.

## CM Data Migration Errors

If you encounter errors during CM data migration:

- Check for the migration logs. The relevant logs are:

Solaris:

- /var/adm/CSCOpX/log/restorebackup.log
- /opt/CSCOpX/bgupgrade/CmfUpgrade.log (In case of Upgrade)

Windows:

- *NMSROOT*\log\restorebackup.log
- *NMSROOT*\bgupdrade\CmfUpgrade.log (In case of Upgrade)

- Check the contents of the backup data file, filebackup.tar. The following is the list of CM related files that are backed up into the specified backup directory.

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

Windows:

- *NMSROOT*\campus\etc\cws\DeviceDiscovery.properties
- *NMSROOT*\campus\etc\cws\ANIServer.properties
- *NMSROOT*\campus\etc\cws\ut.properties
- *NMSROOT*\campus\etc\cws\discoverysnmp.conf
- *NMSROOT*\campus\etc\cws\datacollectionsnmp.conf
- *NMSROOT*\campus\etc\cws\WlseUhic.properties
- *NMSROOT*\campus\etc\cws\Snmpv3EngineParam.txt
- *NMSROOT*\campus\etc\cws\UTSnmpv3EngineParam.txt
- *NMSROOT*\campus\etc\cws\UTDiscoverOnTrunk.properties
- *NMSROOT*\campus\etc\cws\users
- *NMSROOT*\campus\etc\cws\archives
- *NMSROOT*\campus\etc\users
- *NMSROOT*\campus\etc\cws\ReportArchives
- *NMSROOT*\campus\etc\cws\CMReportArchives
- *NMSROOT*\campus\etc\cws\portsData.xml
- *NMSROOT*\campus\etc\cws\RouterData.xml
- *NMSROOT*\campus\etc\cws\vlanData.xml
- *NMSROOT*\campus\etc\cws\CMHP.properties
- *NMSROOT*\campus\etc\cws\rmeServerCred.dat
- *NMSROOT*\campus\etc\cws\MACDetection.properties
- *NMSROOT*\campus\etc\cws\OUI.properties
- *NMSROOT*\htdocs\campus\maps
- *NMSROOT*\campus\lib\classpath\com\cisco\nm\cm\ut\uhic\utlite\properties\utliteuhic.properties
- *NMSROOT*\campus\lib\classpath\com\cisco\nm\cm\ut\utm\properties\utm.properties
- *NMSROOT*\campus\lib\classpath\com\cisco\nm\cm\ut\uhic\mac\properties\macuhic.properties

Solaris:

- *NMSROOT*/campus/etc/cws/DeviceDiscovery.properties
- *NMSROOT*/campus/etc/cws/ANIServer.properties
- *NMSROOT*/campus/etc/cws/ut.properties
- *NMSROOT*/campus/etc/cws/discoverysnmp.conf
- *NMSROOT*/campus/etc/cws/datacollectionsnmp.conf
- *NMSROOT*/campus/etc/cws/WlseUhic.properties
- *NMSROOT*/campus/etc/cws/Snmpv3EngineParam.txt
- *NMSROOT*/campus/etc/cws/UTSnmpv3EngineParam.txt

- *NMSROOT/campus/etc/cwsi/UTDiscoverOnTrunk.properties*
- *NMSROOT/campus/etc/cwsi/users*
- *NMSROOT/campus/etc/cwsi/archives*
- *NMSROOT/campus/etc/users*
- *NMSROOT/campus/etc/cwsi/ReportArchives*
- *NMSROOT/campus/etc/cwsi/CMReportArchives*
- *NMSROOT/campus/etc/cwsi/portsData.xml*
- *NMSROOT/campus/etc/cwsi/RouterData.xml*
- *NMSROOT/campus/etc/cwsi/vlanData.xml*
- *NMSROOT/campus/etc/cwsi/CMHP.properties*
- *NMSROOT/campus/etc/cwsi/rmeServerCred.dat*
- *NMSROOT/campus/etc/cwsi/MACDetection.properties*
- *NMSROOT/campus/etc/cwsi/OUI.properties*
- *NMSROOT/htdocs/campus/maps*
- *NMSROOT/campus/lib/classpath/com/cisco/nm/cm/ut/uhic/utlite/properties/utliteuhic.properties*
- *NMSROOT/campus/lib/classpath/com/cisco/nm/cm/ut/utm/properties/utm.properties*
- *NMSROOT/campus/lib/classpath/com/cisco/nm/cm/ut/uhic/mac/properties/macuhic.properties*
- Check the Database files at the following directory:
  - Windows:
    - *NMSROOT\databases\ani\ani.db*
  - Solaris:
    - *NMSROOT/databases/ani/ani.db*

## DFM Data Migration Errors

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. The following is the list of DFM related files or databases that are backed up 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*/objects/dps/config
- *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*\objects\dps\config
- *NMSROOT*\setup\dfm.info



**Note**

*NMSROOT*\objects\dps\config will be backed up only when you migrate from LMS 3.0 December 2007 Update.

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

## IPM Data Migration Errors

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

- restorebackup.log
- migration.log
- ipmclient.log
- ipmserver.log
- ipm\_base.log

The logs are available at:

- Solaris  
/var/adm/CSCOpX/log
- Windows  
NMSROOT\log

You may also encounter the following types of errors while migrating IPM data:

- 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. Also check whether Collectors configured with SNA operations are migrated.
- If Collectors are not moved into running state, check whether:
  - Devices are SNMP reachable from IPM4.1.
  - 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 the Report Jobs and System Reports are not migrated, check if the job and system reports exist in filebackup.tar in the backup folder.

The location of filebackup.tar: *backupfolder/0/ipm/filebackup.tar*

The following folders must be present in filebackup.tar:

- Windows: Jobs folder in *NMSROOT/files/ipm/jobs* and System Reports in *NMSROOT/tomcat/webapps/ipm/system\_reports*
- Solaris: Jobs folder in *var/adm/CSOCpx/files/ipm/jobs* and System Reports *NMSROOT/tomcat/webapps/ipm/system\_reports*
- If the backup directory of IPM2.6 does not contain all required files, make sure it contains the following files:
  - ipmdb.db
  - .dbPassword
  - ipmdb.tmpl
  - ipm.env
- If the backup directory of IPM4.0 or IPM4.0.1 does not contain all required files, make sure it contains the following files:
  - ipm.db
  - filebackup.tar
  - ipm.tmpl
  - ipmdb.tmpl

## HUM Data Migration Errors

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

- restorebackup.log
- upm\_process.log

The logs are available at:

- Solaris:  
/var/adm/CSCOpX/log
- Windows:  
NMSROOT\log

You may also encounter the following types of errors while migrating HUM data:

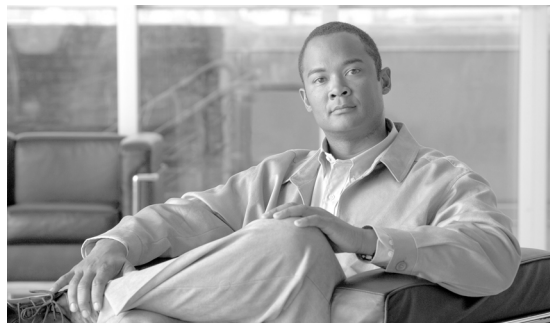
- If pollers, templates, or thresholds are not migrated properly, make sure the HUM backedup database contains the related data.
- If reports are not migrated, make sure filebackup.tar contains the reports in *NMSROOT/MDC/tomcat/webapps/upm/reports* folder.
- If threshold scripts are not migrated, make sure filebackup.tar contains the reports in *NMSROOT/hum/thresholdscripts*.
- If Poller failures are observed, make sure the devices are SNMP reachable from HUM server.

## Frequently Asked Questions on LMS Upgrade and Data Migration

This section lists the frequently asked questions and 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.** Where can I find the install logfiles for LMS 3.2?
- A.** On Solaris, if errors occur during installation, check the installation log file */var/tmp/Ciscoverks\_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 system 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:\Ciscoverks\_install\_yyyymmdd\_xxx.log*, where *xxx* is the running number for the last CiscoWorks application installed.
- Q.** I have LMS 2.6 applications installed on different servers. Can I migrate data from these multiple servers to one LMS 3.2 server?
- A.** No, this option is not supported.

- Q.** I have LMS 2.6 installed on Windows 2000 Server. I want to upgrade the OS to Windows 2003 Server, and also upgrade to LMS 3.2. In what order should I perform these upgrades?
- A.** You must:
- a.** Upgrade your Operating System to Windows 2003 Server.
  - b.** Upgrade LMS 2.6 to LMS 3.2 on Windows 2003 Server.
- Q.** I have been running LMS 3.2 for sometime, and have collected a lot of data. I would like to restore an older LMS 2.6 SP1 backup, and merge the data from the current system and the backup. Is this possible?
- A.** No. After a backup is restored, all data that is currently in the running system is replaced with the data from the backup.
- Q.** I have LMS 3.1 installed on Windows 2003 Server. I would like to upgrade the Operating System to Windows 2008 Server, and also upgrade to LMS 3.2. In what order should I perform these upgrades?
- A.** You must:
- a.** Upgrade LMS 3.1 to LMS 3.2 on Windows 2003 Server.
  - b.** Upgrade your Operating System to Windows 2008 Server.



## CHAPTER 5

# Guidelines to Post-Upgrade Activities

---

This chapter contains:

- [Guidelines for DFM 3.2 Post-Upgrade Activities](#)
- [Guidelines for CS 3.3 Post-Upgrade Activities](#)
- [Resetting the Login Module](#)

## Guidelines for DFM 3.2 Post-Upgrade Activities

This section contains the complete basic configuration steps for Configuring SNMP Trap Receiving and Forwarding.

### Configuring SNMP Trap Receiving and Forwarding

To use HPOV or NetView adapters on a remote system with Device Fault Manager 3.2 on a local system, make sure that system running DFM is registered with DNS.

To upgrade all remote adapters, see *Installing and Getting Started With CiscoWorks LAN Management Solution 3.2*. It is available at:

[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)

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 3.2 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 3.2 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 **Apply**.
- Step 4** Make sure NMS is configured to receive traps at the port you specified in Step 2.
- 

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 Configuring SNMP Trap Receiving and Forwarding and Basic configuration steps, see the [User Guides for Device Fault Manager](#).

## Guidelines for CS 3.3 Post-Upgrade Activities

This section contains the CS 3.3 Authorization, Authentication, and Accounting (AAA) methods.

### CS 3.3 AAA Methods

CS 3.3 supports two AAA modes:

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



#### Note

If you had configured ACS mode in CS 3.1 or CS 3.1.1, it will be automatically preserved in CS3.3 during upgrade.

### ACS Mode

If you select ACS mode, the CS 3.3 server uses both authentication and authorization from the CiscoSecure ACS server. Since authorization is based on the roles of the user in the CS 3.3 server, note the following:

- CS 3.3 only supports ACS 3.2, 3.2.3, 3.3.2, 3.3.3, 3.3.4, 4.0(1), 4.1, 4.1.1, 4.1.2, 4.1.3, 4.1.4, and 4.2
- CS 3.3 supports ACS 5.0 only Authentication
- Authorization, Authentication, and Accounting are 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 an 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 is available in ACS with Super Admin privilege
- We recommend that you install the Admin HTTPS PSIRT patch (on ACS 3.2.3). The patch is available at:  
[http://www.cisco.com/cisco/software/release.html?mdfid=283434800&flowid=19062&softwareid=282812296&release=nmidb\(1.0.091\)&rellifecycle=&relind=AVAILABLE&reltype=all](http://www.cisco.com/cisco/software/release.html?mdfid=283434800&flowid=19062&softwareid=282812296&release=nmidb(1.0.091)&rellifecycle=&relind=AVAILABLE&reltype=all)

## Non-ACS Mode

CS 3.3 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 3.3 uses CiscoWorks server authentication (CiscoWorks Local) to authenticate users and authorize them to access CiscoWorks applications. If you select CiscoWorks Local mode, CS 3.3 performs the authentication and authorization.

However, if you select a Login module other than CiscoWorks Local, you can only perform authentication and not authorization. You can perform authorization only through CiscoWorks Local.

## Resetting the Login Module

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

On Solaris:

- 
- Step 1** Stop the LMS system by entering:
- ```
/etc/init.d/dmgt_d stop
```
- Step 2** Run the following script:
- ```
NMSROOT/bin/perl NMSROOT/bin/ResetLoginModule.pl
```
- Step 3** Start the LMS system by entering:
- ```
/etc/init.d/dmgt_d start
```
-

On Windows:

---

**Step 1** Stop the LMS system by entering:

```
net stop crmdmgt
```

**Step 2** Run the following script:

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

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

```
net start crmdmgt
```

---



# APPENDIX **A**

## Syntax and Usage for Backup Script

You can take a manual backup using the following syntax:

|                   | <b>LMS 2.6/LMS 2.6 SP 1</b>                                         | <b>LMS 3.0/LMS 3.0 December 2007 Update/LMS 3.1</b>                                                           |
|-------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Syntax</b>     | <code>wrapper.pl</code>                                             | <code>backup.pl</code>                                                                                        |
| <b>On Solaris</b> | <code>NMSROOT/bin/perl dir1/wrapper.pl</code><br><i>BKP Logfile</i> | <code>NMSROOT/bin/perl</code><br><code>NMSROOT/bin/backup.pl BKP</code><br><i>[Logfile] [Num_Generations]</i> |
| <b>On Windows</b> | <code>NMSROOT\bin\perl dir1\wrapper.pl</code><br><i>BKP Logfile</i> | <code>NMSROOT\bin\perl</code><br><code>NMSROOT\bin\backup.pl BKP</code><br><i>[Logfile] [Num_Generations]</i> |

You can take selective backup using the following syntax:

|                   | <b>LMS 3.2</b>                                                                                                                                  |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Syntax</b>     | <code>backup.pl</code>                                                                                                                          |
| <b>On Solaris</b> | <code>/opt/CSCOpX/bin/perl /opt/CSCOpX/bin/backup.pl</code><br><code>-dest=BackupDirectory -system [-log=LogFile] [-gen=Num_Generations]</code> |
| <b>On Windows</b> | <code>NMSROOT\bin\perl NMSROOT\bin\backup.pl</code><br><code>-dest=BackupDirectory -system [-log=LogFile] [-gen=Num_Generations]</code>         |

The following table lists the explanation for the syntax:

| <b>Syntax</b>        | <b>Explanation</b>                                                                                                                                                                         |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>NMSROOT</code> | Common Services installation directory (by default, <code>/opt/CSCOpX</code> for Solaris, and <code>C:\Program Files\CSCOpX</code> for Windows, where <code>C:</code> is the System Drive) |
| <code>dir1</code>    | Directory where you have extracted <code>wrapper.pl</code>                                                                                                                                 |
| <code>BKP</code>     | Backup directory where you have backed up data using <code>wrapper.pl</code> or <code>backup.pl</code>                                                                                     |

| Syntax                 | Explanation                                                                                                                                                                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Logfile</i>         | Log file name that contains the details of the backup. The default location of the backup log file ( <b>dbbackup.log</b> ) is: <ul style="list-style-type: none"> <li><i>NMSROOT\CSCOpX\log\</i> (On Windows)</li> <li><i>/var/adm/CSCOpX/log/</i> (On Solaris)</li> </ul> |
| <i>BackupDirectory</i> | Directory that you want to be your Backup directory.                                                                                                                                                                                                                       |
| <i>Num_Generations</i> | Maximum backup generations to be kept in the backup directory.                                                                                                                                                                                                             |

**Example 1**

To back up LMS 2.6 or LMS 2.6 SP1 data in the *backup directory*, enter:

- On Solaris:

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

- On Windows:

```
C:\Progra-1\CSCOpX\bin\perl C:\wrapper\wrapper.pl C:\backup
```

**Example 2**

To back up LMS 3.0 or LMS 3.0 December 2007 Update 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
```

**Example 3**

To specify a different location for the log file during a manual backup of LMS 2.6 or LMS 2.6 SP1, enter:

- On Solaris:

```
NMSROOT/bin/perl dir1/wrapper.pl BKP backup/log/dbbackup.log
```

- On Windows:

```
NMSROOT\bin\perl dir1\wrapper.pl BKP C:\backup\log\dbbackup.log
```



## APPENDIX **B**

# Syntax and Usage for Restore Script

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

For a successful restoration of backedup data, ensure that all services and processes are up and running. Stop the daemons and then run `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] [-gen generationNumber]
```

- Windows

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

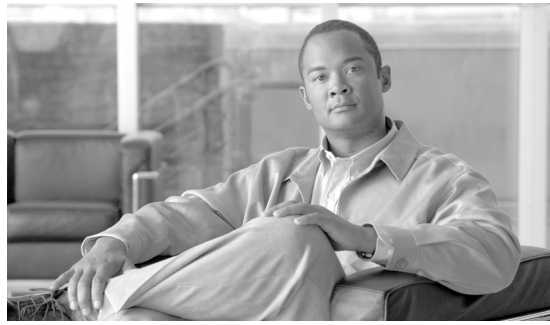
The following table lists the explanation for the syntax:

| Syntax                                    | Explanation                                                                                                                                                                                                                                                  |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>NMSROOT</i> —(Required)                | Common Services installation directory (by default, /opt/CSCOpX in Solaris, and C:\Program Files\CSCOpX in Windows where C: is the System Drive)                                                                                                             |
| -t <i>temporary_directory</i> —(Optional) | This is the directory or folder used by the restore program to store its temporary files. By default this directory is <i>NMSROOT</i> /tempBackupData. You can customize this by specifying your own temporary directory to avoid overloading <i>NMSROOT</i> |
| -gen <i>generationNumber</i> —(Optional)  | This is the generation number. -gen now is the latest generation. If generations 1 through 5 exist, then 5 is the latest.                                                                                                                                    |
| -d <i>BKP</i> —(Required)                 | This is the absolute directory or folder used by the restore program to store the backup.                                                                                                                                                                    |
| -h—(Optional)                             | Displays help. When used with -d <i>BackupDirectory</i> , 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                                     | <code>opt/CSCOp<math>\times</math>/bin/perl<br/>opt/CSCOp<math>\times</math>/bin/restorebackup.p<br/>1 -d <i>BKP</i> -gen now</code>                                                   | <code>C:\Progra~1\CSCOp<math>\times</math>\bin\perl<br/>C:\Progra~1\CSCOp<math>\times</math>\bin\<br/>restorebackup.pl -d <i>BKP</i> -gen now</code>                                      |
| The 12th generation of data                                    | <code>opt/CSCOp<math>\times</math>/bin/perl<br/>opt/CSCOp<math>\times</math>/bin/restorebackup.p<br/>1 -d <i>BKP</i> -gen 12</code>                                                    | <code>C:\Progra~1\CSCOp<math>\times</math>\bin\perl<br/>C:\Progra~1\CSCOp<math>\times</math>\bin\<br/>restorebackup.pl -d <i>BKP</i> -gen 12</code>                                       |
| Data from the forced auto backup during the CS upgrade process | <code>opt/CSCOp<math>\times</math>/bin/perl<br/>opt/CSCOp<math>\times</math>/bin/restorebackup.p<br/>1<br/>-d <i>DB_BKP</i><sup>1</sup>/automaticbackup/c<br/>mfbackup -gen now</code> | <code>C:\Progra~1\CSCOp<math>\times</math>\bin\perl<br/>C:\Progra~1\CSCOp<math>\times</math>\bin\<br/>restorebackup.pl -d<br/><i>DB_BKP</i>\automaticbackup\cmfbackup<br/>-gen now</code> |

1. *DB\_BKP* is the backup directory created by the user.



## INDEX

---

### A

ACS Mode [5-2](#)  
audience for this document [i-ix](#)

---

### C

CAM debugging [4-3](#)  
cautions  
    significance of [i-x](#)  
CM data migration scope [1-5](#)  
configuring SNMP Traps [5-1](#)  
CS 3.3 AAA Methods [5-2](#)  
CS Data Migration Scope [1-4](#)  
CS Post-Upgrade Activities [5-2](#)

---

### D

DFM data migration scope [1-9](#)  
documentation [i-x](#)  
    audience for this [i-ix](#)  
    related to this product [i-x](#)  
    typographical conventions in [i-ix](#)

---

### E

errors from CM data migration [4-4](#)  
errors from CS data migration [4-3](#)  
errors from DFM data migration [4-6](#)  
errors from HUM data migration [4-9](#)  
errors from IPM data migration [4-7](#)  
errors from RME data migration [4-3](#)

---

### F

FAQ on data migration [4-9](#)

---

### I

IPM data migration scope [1-10](#)

---

### L

LDoms [1-3](#)  
log files [3-5](#)

---

### M

Migrating Data From LMS 2.6 or 2.6 SP1 [2-1,3-1](#)  
    Local [2-3](#)  
    Remote [2-3](#)  
Migrating Data From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1 [2-5](#)  
    Local [2-7](#)  
    Remote [2-7](#)  
Migrating Data to CiscoWorks LAN Management Solution 3.2 on Solaris [3-1](#)  
Migrating Data to CiscoWorks LAN Management Solution 3.2 on Windows [2-1](#)  
Migration From 2.6 or 2.6 SP1 [3-1](#)  
    Local [3-3](#)  
    Remote [3-3](#)  
Migration From LMS 3.0 or LMS 3.0 December 2007 Update or LMS 3.1  
    Local [3-7](#)  
    Remote [3-7](#)  
Migration Scope [1-4](#)

CiscoWorks Assistant [1-12](#)  
CM [1-5](#)  
CS [1-4](#)  
CV [1-11](#)  
DFM [1-9](#)  
HUM [1-11](#)  
IPM [1-10](#)  
Portal [1-12](#)  
RME [1-6](#)

---

## Z

Zone based Virtualization [1-3](#)

---

## N

Non-ACS Mode [5-3](#)

---

## R

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

---

## S

scope of data migration [1-4](#)  
selftest tool [4-3](#)  
syntax of restorebackup.pl [B-1](#)  
System Requirements [1-3](#)  
system requirements, operating system supported [1-3](#)

---

## T

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

---

## V

VMware [1-3](#)  
    ESX server 3.0.1 [1-3](#)  
    ESX Server 3.5.0 [1-3](#)