

Dell Lasso

Version 4.1

User's Guide



Notes and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

Information in this publication is subject to change without notice.

© 2012 Dell Inc. All rights reserved.

Reproduction of these materials in any manner whatsoever without the written permission of Dell Inc. is strictly forbidden.

Trademarks used in this text: Dell™, PowerVault™, PowerConnect™, EqualLogic™, Force10™ and Compellent™ are trademarks of Dell Inc. Microsoft®, Windows®, Windows Server®, .Net®, and Windows Vista® are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Red Hat Enterprise Linux® and Enterprise Linux® are registered trademarks of Red Hat, Inc. in the United States and/or other countries. VMware®, ESX®, ESXi®, and vSphere® are registered trademarks or trademarks of VMWare Inc. in the United States or other countries. UNIX® is a registered trademark of The Open Group in the United States and other countries. EMC®, Celerra®, and CLARiiON® are registered trademarks of EMC Corporation in the United States and other countries. Brocade and McData are registered trademarks of Brocade Communications Systems, Inc., in the United States and/or in other countries. Cisco® and Cisco Nexus® is a registered trademark of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries. XenServer™ is a trademark of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered in the U.S. Patent and Trademark Office and in other countries. Broadcom® is a registered trademark of Broadcom Corporation and/or its subsidiaries in the United States and certain other countries. Linux® is a registered trademark of Linus Torvalds. QLogic® and SANsurfer® is a registered trademark of QLogic Corporation. Emulex® and HBAnyware® is a registered trademark of Emulex Corporation. AIX® and IBM® are registered trademarks of IBM Corporation. McAfee® is a registered trademark of McAfee, Inc. or its subsidiaries in the United States and other countries. AVG® a registered trademark of AVG technologies. HP-UX® is a trademark of the Hewlett Packard Company. Oracle®, Solaris®, and Java® are registered trademarks of Oracle and/or its affiliates.

Other trademarks and trade names may be used in this publication to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

Contents

1	Introduction	5
	Key Features	5
	What's New in This Release?	6
	Supported Storage Devices and Operating Systems	8
2	Installing and Uninstalling Lasso	9
	Installing Lasso	9
	Upgrading Lasso	10
	Modifying Lasso Installation	11
	Repairing Lasso Installation	11
	Uninstalling Lasso	11
	Using GUI	11
	Using CLI	12
3	Using Lasso	13
	Prerequisites For Data Collection	13
	Running Lasso	14
	Starting New Configuration	14
	Use Existing Configuration	16

Loading Configuration File	16
Upload Existing Collection	17
Single Device Collection	17
Importing Customer Configuration File	17
Log Files	17
Generated File Formats	18
Viewing Reports	18

Introduction

Lasso is a Windows-based client and server utility that automates the collection of logs and configuration from servers, disk arrays (EqualLogic, PowerVault MD-Series, and EMC), Fibre Channel switches (Brocade, McData, and Cisco), tape libraries, Ethernet, and FCoE Switches.

After Lasso collects the data, it parses the data into XML and HTML formats that is packaged along with the collected data and encrypted. The collected data is saved as a .zip file on the local system. Optionally, you can enable Lasso to automatically upload the report to Dell Technical Support.

Benefits of using Lasso:

- Evaluate the data collected from various devices in the SAN to troubleshoot problems in storage devices.
- Determine hardware, software, and firmware versions to check compatibility, and upgrade existing equipment.

This guide provides an overview of the Lasso tool, the installation details, and the various methods to the report. For information about the fields and options available in Lasso and the command line options, see *Online Help*.

Key Features

- Re-validate option on each device window, to re-validate devices when an existing configuration is used.
- Use of Forced multi-threaded mode of execution for enhanced Lasso performance.
- Secure Site option in the **Your Company Information** window of the Lasso GUI to remove Customer Identification Information (CII) from XML format of collection.
- Raw data collection and parser support for the following devices:
 - Cisco switches 3750E/3750X and 4948
 - PowerConnect ethernet switches 7024/7048
 - vSphere 5.0 hosts attached to EqualLogic and MD Series arrays.

- EqualLogic arrays PS6500, PS6510, PS6000, PS5500, PS4110, PS6110, PS6010, PS6100, PS4100, and PS4000.
- Raw data collection support for Force 10 switches.
- Raw data collection and parsing for the PowerConnect ethernet switches in simple mode.
- User name and password credentials in Lasso are optional when PowerConnect ethernet switch is configured.
- Correct parsing of PowerConnect ethernet switches upon v4.1 Firmware upgrade.
- Correct parsing of service tag information for all the models of EqualLogic Arrays upon v5.1 Firmware upgrade.
- Lasso displays information related to EqualLogic iSCSI volumes in the vSphere iSCSI VMFS section.
- Collection and parsing of Host Integration Tool Kit data for Linux Hosts in EqualLogic Storage Area Network (SAN).

What's New in This Release?

- Support to collect diagnostic information from the Group Lead and member, when a member IP address is provided.
- Option to automatically upload the collection report to Dell Technical Support site.
- Support for the following devices:
 - EqualLogic PS4110
 - EqualLogic PS6110
 - EqualLogic PS6510
- Support to collect and parse Host Integration Tool Kit data for vSphere hosts in the EqualLogic SAN.
- Option to provide the Delta Service Request number and Project Manager ID and include this in the XML and HTML reports.
- Parser support for the following devices:
 - EqualLogic FS7500
 - Dell Force10 S50/S60/S2410/S4810 Switches

- XenServer
- PowerVault NX3500
- Resolving Lasso Error 904 for the EqualLogic Array.
- Parser support for MaxRequestHoldtime for all the Windows hosts in EqualLogic and MD Series SAN.
- Support to capture and parse Broadcom NIC information when running in Host Bus Adapter (HBA) mode under the control of Broadcom Advanced Server Program (BASP) software.
- Support to collect NAS Appliance information from the EqualLogic Group.
- Support for firmware version 5.2 on Dell EqualLogic Arrays.
- Support to collect and parse the following attributes from EqualLogic Array:
 - ROM Level
 - Last Boot Time
- Support for ping test between the members in the EqualLogic Group.
- Support to collect and parse Qlogic FC information from Windows, Linux, and VMware hosts attached to Compellent.
- Support to collect Emulex FC information from Windows, Linux, and VMware hosts attached to Compellent.
- Support to collect and parse SAS HBA information from Windows and Linux (32-bit only) hosts attached to PowerVault MD Series and Compellent.
- Support to validate user input for Ethernet Switch type in Ethernet Switches screen.
- Support to include the following attributes in the HTML report:
 - Collection Date
 - Collection Time
 - Build Version
- Support to collect and parse Data Center Bridge (DCB) information from EqualLogic Storage array and Windows Hosts attached to EqualLogic, MD Series, and Compellent.

- Support to collect Converged Network Adapter (CNA) card information under the control of Broadcom Command Line Utility (BCU) in Windows Hosts attached to EqualLogic, MD Series, and Compellent.
- Support to collect DCB information from PowerConnect B-Series Switch.

Supported Storage Devices and Operating Systems

For information on the storage devices and operating systems (Windows and UNIX), see the *Readme* available with the installer or go to support.dell.com/manuals. Click **Software**→ **Serviceability Tools**→ **Lasso**.

Installing and Uninstalling Lasso

This section provides information to install, modify, repair, and uninstall Lasso.

Installing Lasso

Before installing Lasso, make sure that the following prerequisites are met:

- Use an Administrator account or have Administrator privileges.
- Windows (32-bit and 64-bit) operating system is any of the following:
 - Windows XP
 - Windows Vista
 - Windows 7
 - Windows Server 2003
 - Windows Server 2008



NOTE: Windows Server Core is not supported.

To install Lasso:

- 1** Double click the .msi file.
The **Welcome to the Dell Lasso Installation Wizard** is displayed.
- 2** Click **Next**.
The *Dell Software License Agreement* is displayed.
- 3** Click **I accept the license agreement** and click **Next**.
The *Readme* information is displayed.
- 4** Click **Next**.
The **Destination Folder** window is displayed.
- 5** Click **Next** to accept the default directory path or click **Browse** to specify another location, and click **Next**.
The **Security Level** window is displayed.
- 6** Select one of the following options and click **Next**:

- **Save Environment, Username, and Password** — Saves all SAN configuration details, user name, and password. It is recommended to use this option to run Lasso multiple times and avoid re-entering configuration and security details.
- **Save Environment and Username only** — Saves all SAN configuration details and the user name. The password is not saved.
- **Save Environment only** — Saves all SAN configuration details. The user name and password is not saved. Select this option to skip saving any security related details.
- **Do not save any information** — Does not save any configuration details of the environment, user name, and password. Select this option to save configuration and security details, or if the location from where you run Lasso does not allow saving any details.

The **Prerequisites** window is displayed. The window provides the list of prerequisites that must be met to enable Lasso to collect the data after installation is complete.

7 Click **Next**.

The **Ready to Install the Application** window is displayed.

8 Click **Next** to continue with the installation.

The **Lasso has been successfully installed** window is displayed.

9 Click **Finish** to close the installation wizard.

Upgrading Lasso

To upgrade Lasso, uninstall the existing version and install the required version.

Modifying Lasso Installation

After installing Lasso, you can modify the components that are installed.

To modify the components:

- 1 Double-click on the .msi file.
The **Application Maintenance** window is displayed.
- 2 Select **Modify** and click **Next**.
The **Ready to Modify the Application** window is displayed.
- 3 Click **Next**.
The **Updating System** screen is displayed.
- 4 Click **Finish** to exit Lasso.

Repairing Lasso Installation

You can also reinstall the corrupt files, registry keys, and shortcuts to the Lasso application. To repair Lasso:

- 1 Double-click the .msi file.
The **Application Maintenance** window is displayed.
- 2 Select **Repair** and click **Next**.
The **Ready to Repair the Application** window is displayed.
- 3 Click **Next**.
The **Updating System** window is displayed.
- 4 Click **Finish** to exit Lasso.

Uninstalling Lasso

Lasso can be uninstalled using the GUI or the CLI option.

Using GUI

To uninstall Lasso using the GUI, use one of the following options:

- Start Menu
- Windows Add or Remove Programs Wizard


From Start Menu

To uninstall Lasso from the **Start Menu**:

- 1 Click **Start** → **Programs** → **Dell** → **Lasso** → **Uninstall**.
The **Are you sure you want to uninstall this product** prompt is displayed.
- 2 Click **Yes** to uninstall Lasso.

From Windows Add or Remove Programs Wizard

To uninstall DSET from the Windows Add or Remove Programs wizard on Windows operating systems:

- 1 Click **Start** → **Control Panel** → **Add or Remove Programs**.
 **NOTE:** This option differs based on the operating system.
- 2 Select **Dell Lasso (4.1)** and click **Remove**.
- 3 On the **Are you sure you want to uninstall Dell Lasso?** prompt, click **Yes** to uninstall **Dell Lasso**.

From the Application Maintenance Window

To uninstall Lasso from the **Application Maintenance Window**:

- 1 Double-click the installed **.msi** file.
The **Application Maintenance** screen is displayed.
- 2 Select the **Remove** option and click **Next**.
The **Lasso Uninstall** window is displayed.
- 3 Click **Next**.
The **Updating Screen** is displayed.
- 4 Click **Finish** on the **Lasso has been successfully uninstalled** window.

Using CLI

To uninstall Lasso using the CLI, run the following uninstallation command from a command prompt:

```
msiexec.exe /X {F3DBD63F-287B-4BF5-9B6C-BD3B70E107F4}
```

For information about the command line options, see *Online Help*.

Using Lasso

Lasso compiles information for all the devices in the Storage Area Network (SAN). It also includes company and site contact information. You can save this information as a configuration file (.xml format) for later use. Lasso collects data for the selected devices and generates a report that can be uploaded to Dell Technical Support site.

This section provides information to use Lasso to collect data about various storage devices in your Storage Area Network (SAN).

Prerequisites For Data Collection

Before using Lasso to collect data, make sure the following pre-requisites are met:

- IP connectivity is available for the required devices.
- For PowerVault MD Series devices, MD Storage Manager software is installed on the system where Lasso is running.
- For data collection in XML and HTML format, .Net Framework 2.0 or later and a Service Pack of version 1.0 or later is installed.
- For EqualLogic, MD series, and Compellent devices, .Net framework 2.0 or later must be installed on the remote Windows host.
- For EMC SAN, use a system that is not a fibre channel attached host.
- For EqualLogic, Compellent, and MD series devices, the SAN Surfer CLI (iSCSI) software must be installed on the remote Windows, Linux, and VMware hosts to successfully collect iSCSI HBA information.
- For a QLogic iSCSI HBA device, install iscli on UNIX servers.
- For Compellent SAN, the HBA Anywhere CLI must be installed on the remote Windows, Linux, and VMware host to successfully collect Emulex FC HBA collection.
- For EqualLogic devices, install Lasso on one of the iSCSI hosts.

Running Lasso

You can run Lasso in the following modes.

- GUI
 - Start a new configuration
 - Use an existing configuration
 - Load the configuration file
 - Upload an existing collection
- CLI
 - Single device collection
 - Importing customer configuration file and collect for multiple devices


Starting New Configuration

Use this option to create a new configuration and generate a report.

To collect data using GUI:

- 1** Click **Start**→ **Programs**→ **Dell**→ **Lasso** and click **Lasso**.
The **Welcome to Lasso** window is displayed.
- 2** Select **Start with a new configuration** and click **Continue**.
The **Your Company Information** window is displayed.
- 3** Enter the required information and click **Continue**. Select **Secure Site** if you do not want Customer Identification Information (CII) available in the collected data in the XML and HTML files.
The **Your Company Contacts** window is displayed.
- 4** Enter the required information and click **Continue**.
The **Your Hardware Environment** window is displayed.
- 5** Select the devices (one or multiple devices depending on your requirement and SAN) for which Lasso must collect data and click **Continue**.
The device-specific **Your Hardware Environment** windows are displayed.

- 6 For each device, enter the required information. Click **Continue** until you complete providing information for each selected device.

 **NOTE:** For details about the options, click the **Help** icon on the window. You can also access the **Help** file from the **Start** menu. To do this, go to **Start**→**Programs**→**Dell**→**Lasso** and click the **Help** icon.

The **Device Collection** window is displayed.

- 7 Make sure that the displayed devices are the selected devices for which data must be collected and click **Start Collection**. The status bar displays the collection status.
- 8 Click the Clock icon next to each device to view the progress.
- 9 Click **Continue** once collection is complete.

The collected data is packaged and the **Your Upload Options** window is displayed.

- 10 You can select the following and click **Continue**.

- To access the collected data file, click **Open Location**. By default, it is saved in the user profile directory. For example, `c:\Users\<user name>\Dell\Lasso\results\`. For information about the collected files, see [Generated File Formats](#).
- To immediately upload the collection package to Dell, select **Yes**. Else, select **No**.
- To save the configuration details with a password for later use, select **Yes**. Else, select **No**.

Following actions are performed based on the selection:

- If you have selected **Yes** to upload the report, the collection uploads to Dell Technical Support site.
- If you have selected **Yes**, the **Save Lasso Configuration** dialog box is displayed. Click **Browse** and save the file in the required location with the password.

The **Confirmation** window is displayed.

- 11 To see the SAN configuration, select **View Your SAN Configuration** and click **Finish**.

Lasso tool is closed and the report is opened in an internet browser.

Use Existing Configuration

Before using this option, make sure that a configuration is saved in the Lasso installation directory.

To use an existing configuration:

- 1 Click **Start**→**Programs**→**Dell**→**Lasso** and click **Lasso**.
The **Welcome to Lasso** window is displayed.
- 2 Select **Use an existing configuration** and click **Continue**.
A drop-down box with the available configurations is displayed. A dialog box displays indicating that background validation is in-progress.
The **Your Company Information** window is displayed.
- 3 Edit the existing information or add new information. Perform the steps from 4 to step 11 mentioned in the [Starting New Configuration](#) section.

Loading Configuration File

Use this option if the configuration file is located in a directory that is different from the Lasso installation directory.

To load an existing configuration:

- 1 Click **Start**→**Programs**→**Dell**→**Lasso** and click **Lasso**.
The **Welcome to Lasso** window is displayed.
- 2 Select **Load a configuration file** and click **Browse**. Specify the file and click **Continue**. A dialog box displays indicating that background validation is in progress.
The **Your Company Information** window is displayed.
- 3 Edit the information or add new information. Perform the steps from 4 to step 11 mentioned in the [Starting New Configuration](#) section.

Upload Existing Collection

To upload an existing configuration:

- 1** Click **Start**→ **Programs**→ **Dell**→ **Lasso** and click **Lasso**.
The **Welcome to Lasso** window is displayed.
- 2** Select **Upload an existing collection** and click **Browse**. Specify the file and click **Continue**.
A message displays indicating that uploading to Dell is in-progress.
- 3** After the confirmation message is displayed, click **Finish** to close the tool.

Single Device Collection

For more information, see *Lasso Online Help*.

Importing Customer Configuration File

For more information, see *Lasso Online Help*.

Log Files

The following log files are generated when using Lasso:

- **Validate log** — When files are validated.
- **Collect log** — When data is collected.

Generated File Formats

Lasso generates raw data files, TXT, XML, and HTML files:

- **Raw Data Files** — Lasso generates two types of raw data files:
 - Raw data file with a **.zip** extension.
 - Encrypted raw data file with a **.gpg** extension.
- **TXT files** — Lasso generates .txt file that contains the logs.
- **XML and HTML files** — Lasso parses the data collected into XML and HTML files.

The XML files are:

- An XML output file with an **.xml** extension.
- An encrypted XML output file with a **.gpg** extension.

The HTML files are:

- A HTML output file called **SANconfiguration.html**.

To access the XML and HTML files, go to **USERPROFILE%\Dell\Lasso\results** directory.

Viewing Reports

To view the Lasso collection report, do any of the following:

- After Lasso collects the information, on the **Confirmation** page select **View Your SAN Configuration** option and click **Finish**. Lasso tool is closed and the report is opened in an internet browser.
- Open the files that are saved at the default location **c:\Users\\Dell\Lasso\results** or in the location that you have specified. For information about the files, see [Generated File Formats](#) section.