

Logical Replication (LREP) Tool 2.0

User Guide

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Preface

About this guide

This guide describes how to use the Logical Replication (LREP) tool on Windows®, UNIX®, and Linux® platforms.

Audience

This guide is for system administrators who are familiar with operating systems such as UNIX, Windows 2000 Server, Windows Server 2003, and storage systems running Data ONTAP® software. It also assumes that you are familiar with how to configure these systems and how the NFS, CIFS, and HTTP protocols are used for file sharing or transfers. This guide does not cover basic system or network administration topics; it emphasizes the characteristics of the Open Systems SnapVault product and how it is used with the NetApp® storage systems.

Terminology

When the term “storage system” is used, the information applies to all Network Appliance™ storage system models.

In this document, the term “storage system” is also referred to as “filer”.

Command conventions

You can enter storage system commands on the system console or from any client that can obtain access to the storage system by using a Telnet session. In examples that illustrate commands executed on a UNIX workstation, the command syntax and output might differ from what you see, depending on the version of UNIX that you are using.

Formatting conventions

The following table lists different character formats used in this guide to set off special information.

Formatting convention	Type of information
<i>Italic type</i>	◆ Words or characters that require special attention. ◆ Placeholders for information you must supply. For example, if the guide requires you to enter the <code>fcstest adaptername</code> command, you enter the characters “fcstest” followed by the actual name of the adapter. ◆ Book titles in cross-references.
Monospaced font	◆ Command and daemon names. ◆ Information displayed on the system console or other computer monitors. ◆ The contents of files.
Bold monospaced font	Words or characters you type. What you type is always shown in lowercase letters, unless your program is case-sensitive and uppercase letters are necessary for it to work properly.

Keyboard conventions

This guide uses capitalization and some abbreviations to refer to the keys on the keyboard. The keys on your keyboard might not be labeled exactly as they are in this guide.

What is in this guide...	What it means...
hyphen (-)	Used to separate individual keys. For example, Ctrl-D means holding down the Ctrl key while pressing the D key.
<i>Enter</i>	Used to refer to the key that generates a carriage return; the key is named Return on some keyboards.
<i>type</i>	Used to mean pressing one or more keys on the keyboard.
<i>enter</i>	Used to mean pressing one or more keys and then pressing the Enter key.

Special messages

This guide contains special messages that are described as follows:

Note

A note contains important information that helps you install or operate the system efficiently.

Attention

An attention notice contains instructions that you must follow to avoid damage to the equipment, a system crash, or loss of data.

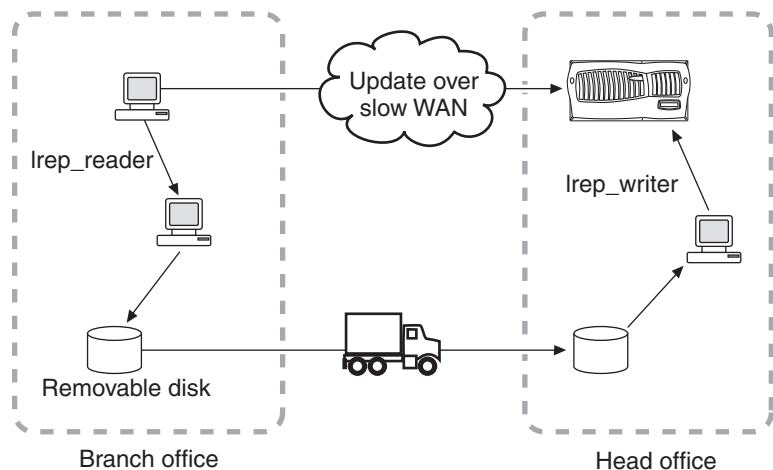
What the Logical Replication (LREP) tool does

The Logical Replication (LREP) tool enables you to create a baseline relation between an Open Systems SnapVault primary storage system (or a Data ONTAP primary storage system) and a secondary storage system (such as NetApp® FAS 250) using a portable device (for example, a USB external drive). You can then ship the portable device to the secondary storage system location (for example, a data center), transfer the data from the portable device to the secondary storage system, and modify the relationship between the primary and secondary storage systems.

Need for the LREP tool

The baseline transfers can have a crippling effect on the limited bandwidth wide area network (WAN) connections of remote or branch offices. Using the LREP tool, no network bandwidth is used.

As shown in the following illustration, the baseline data is transferred from the primary storage system to the SnapVault secondary storage system using LREP. After the baseline data has been transferred over to the secondary storage system, the relationship between the primary and secondary storage systems is established for incremental transfers to occur directly. For more information, see [“Data Backup using the LREP Tool”](#) on page 9.



You can also restore data from the secondary storage system to the primary storage system. For more information, see [“Data Restore using the LREP Tool”](#) on page 15.

Supported platforms

The LREP tool is supported on the following operating systems:

- ◆ Windows 2000, Windows Server 2003, and Windows Storage Server 2003 on x86 and x86-64/EM64T platforms
- ◆ Red Hat Enterprise Linux 4.0 for x86 and x86-64/EM64T
- ◆ Red Hat Enterprise Linux 5.0 for x86 and x86-64/EM64T
- ◆ SuSE® Linux Enterprise Server 9 for x86 and x86-64/EM64T
- ◆ SuSE Linux Enterprise Server 10 for x86 and x86-64/EM64T
- ◆ Solaris™ 9 and 10 on UltraSPARC systems
- ◆ AIX 5L™ 5.1, 5.2, and 5.3 on IBM® PowerPC® and IBM POWER™ processor-based systems
- ◆ HP-UX® 11.23 and HP-UX 11.31 on PA-RISC® based systems.

For example, by using the LREP tool running on Windows 2000, you can write data from a Data ONTAP primary storage system to a Zip drive that is locally attached to the Windows 2000 system.

Features

The LREP tool provides the following features:

- ◆ Compression

The LREP tool enables the compression of data using a zlib library. Compression of LREP data is done in the memory before the data is written to the disk. The compression feature described here is not the same as the compression feature available in the Qtree SnapMirror™ data transfer protocol.

- ◆ Encryption

The advanced Encryption Standard algorithm is used to encrypt and decrypt the LREP data. The supported key sizes are 128 bits, 192 bits, and 256 bits. The data is compressed prior to encryption.

- ❖ Password-based encryption—This is used to encrypt the LREP data. The user enters a password, and a private encryption key is derived from the password by lrep_reader. The user has to enter the same password for decryption.

The password should be minimum of 8 characters and a maximum of 64 characters. It should include both alphanumeric and non-alphanumeric characters.

- ❖ Password verification—During decryption, the password input is verified by lrep_writer before decrypting the data.

- ❖ Data authentication—During encryption, a data digest is generated and stored as part of the file. This data digest authenticates the data during decryption.

Downloading the LREP tool

The binary files for the LREP tool are also packaged with the Open Systems SnapVault software. You can access the binary files from the same location where you uncompressed the Open Systems SnapVault software package on the primary storage system. LREP 2.0 is packaged with Open Systems SnapVault 2.5.

Also, you can download the LREP tool from the NOW™ NetApp on the Web™ (NOW) site in one of the following ways:

- ◆ Go to the Download Software page at <http://now.netapp.com/NOW/cgi-bin/software> and follow directions to go to the Download page of Open Systems SnapVault package for your platform. The binary file of the LREP tool is located on that Download page.
- ◆ Go to <http://now.netapp.com/NOW/download/tools/lrep/> to download the LREP tool.

Note

Before you download the LREP 2.0 software, delete any earlier versions of LREP on the system.

Installing the LREP tool

The LREP tool is a stand-alone binary file, and it does not need to be installed and can be run from the system on which the binary file is located. If Open Systems SnapVault is installed, the following files are available to run the LREP operation:

- ◆ For Windows:
 <INSTALL_DIR>\bin\lrep_reader.exe
 <INSTALL_DIR>\bin\lrep_writer.exe
- ◆ For UNIX:
 \$INSTALL_DIR/bin/lrep_reader
 \$INSTALL_DIR/bin/lrep_writer

Note

Before installing the LREP 2.0, delete any earlier versions of LREP from the system.

Versioning

To check the version number of LREP, run the following command from <INSTALL_DIR>\bin\:

```
lrep_reader -v
```

How the LREP tool works

The LREP tool consists of two utilities:

- ◆ lrep_reader—Used at the remote office to write data from the primary storage system to the portable device
- ◆ lrep_writer—Used at the location of the secondary storage system to write data from the portable device to the secondary storage system

Note

If lrep_writer needs to be run on a machine on which the Open Systems SnapVault software is installed, stop the Open Systems SnapVault service before using this tool.

LREP command options

LREP reader:

Following is the script for the `lrep_reader` utility; the following table shows the different options that can be used with the `lrep_reader` utility.

`lrep_reader [options] host:path`

Options	Description	Default value
-c	Enables compression Note _____ Encryption implies compression. The -c option is redundant for encryption. You will be prompted to enter a password consisting of ASCII printable characters. _____	
-e	Enables encryption, that is, this option enables compression followed by encryption.	
-k	Specifies the key size (could be 128 bits, 192 bits, or 256 bits)	128 bits
-o	Specifies the output files in the format <code>outfiles@max_files</code> For example, if your original data set is 4-GB, -o E:\test@0 results in E:\test.0 E:\test.1, each file of 2 GB.	<code>lrep_reader.data:0</code>
-p	Specifies the protocol for data transfer (<code>snapvault_start</code> or <code>snapvault_restore</code>)	<code>snapvault_start</code>
-l	Enables logging of headers	OFF
-f	Specifies the destination host name	<code>lrep_reader</code>
-q	Specifies the destination path	<code>/vol/lrep_reader/lrep_reader</code>

Options	Description	Default value
-O	Specifies the transfer from a Data ONTAP system	
-P	Specifies the pause operation between files	
-v	Specifies the version information	

During backup, *host:path* specifies the following:

IP address or DNS name of the primary storage system:location of primary source data

During restore, *host:path* specifies the following:

IP address or DNS name of SnapVault secondary storage system:location of qtree

LREP writer:

Following is the script for the `lrep_writer` utility; the following table shows the different options that can be used with the `lrep_writer` utility.

`lrep_writer [options] list of paths`

Options	Description	Default value
-p	Specifies the protocol for data transfer (snapvault_start or snapvault_restore)	snapvault_start
-O	Specifies the transfer from a Data ONTAP system	
-P	Specifies the pause operation between files	

list of paths specifies the paths to the output files created by `lrep_reader`.

The following are the list of variables and their descriptions that can be used later in this chapter.

- ◆ *prim_host:dirpath* is the directory path on the Open Systems SnapVault primary server from where data is backed up to the Zip drive.
- ◆ *prim_host:prim_vol* specifies the qtree on the primary storage system to be backed up.
- ◆ *Zip_dirpath* is the directory path on the Zip drive.
- ◆ *sec* is the name of the destination (secondary storage system) to which the data from the primary storage system qtree is transferred. If no secondary storage system is specified, the local host's name is used.
- ◆ */vol/sec_vol/sec_qtree* is the path to and the name of the qtree on the secondary storage system.

Overview of data backup using the LREP tool

Assume a Windows server WIN1 is located in a remote office of an enterprise. A volume vol1 of a SnapVault secondary storage system SEC1 located in the data center, will be used to back up data from WIN1. The remote office has a WAN connection of small bandwidth to the data center. So, the system administrator uses the LREP tool for the baseline transfer. For more information, see [“Overview of the Logical Replication \(LREP\) Tool”](#) on page 1.

Using `lrep_reader`, the baseline transfer is done from WIN1 to a Zip drive (drive letter E) connected to a Windows client CL1. The Zip drive is shipped to the data center where a second Windows client CL2, uses `lrep_writer` to write data from the Zip drive to the secondary storage system SEC1.

Backing up data from open systems to a secondary storage system

At the remote office: Complete the following steps.

Step	Action
1	Enter the following command in the directory of the system (CL1) on which <code>lrep_reader</code> is installed: <pre>lrep_reader.exe [-c] [-e] [-p snapvault_start] -f sec -q /vol/sec_vol/sec_qtree -o Zip_dirpath@0 [-l reader.log] prim_host:dirpath</pre> <code>-l reader.log</code> is the location where the LREP headers are saved. Note When the <code>-c</code> option is used, the output files generated at <code>Zip_dirpath</code> are compressed. When the <code>-e</code> option is used, you are prompted to enter and reconfirm the encryption password. Example: <pre>C:\>lrep_reader.exe [-p snapvault_start] -f SEC1 -q /vol/vol1/backup -o E:\test@0 [-l reader.log] WIN1:D:\dataset</pre> Transfer started. Use 'snapvault status' on source to monitor progress. Transfer done. Verify by using 'snapvault status' on filer.

At the data center: After the Zip drive arrives at the data center, connect it to the second Windows client (CL2).

Ensure that the Open Systems SnapVault services are stopped before lrep_writer is installed.

Step	Action
1	Enter the following command in the directory of the system (CL2) on which lrep_writer is installed: <pre>lrep_writer.exe Zip_dirpath</pre> Note_____ If the files at <i>Zip_dirpath</i> are compressed, lrep_writer will internally uncompress the files. If the files are encrypted, lrep_writer prompts you to enter the decryption password and internally decrypt the files. _____ Example: <pre>C:\>lrep_writer.exe E:\test</pre> lrep_writer: Will read 1 files from prefix e:\test Waiting for connection. Use snapvault start command on secondary to create a relationship E:\test is the source LREP data. If the source LREP data spans multiple portable drives (for example, drive E contains the first 8-GB of data and drive F contains the next 4-GB of data) then enter the following command: <pre>C:\>lrep_writer.exe E:\test F:\test</pre>

Step	Action
2	Now, to start the data transfer from the secondary storage system (SEC1), enter the following command in the console of the secondary storage system: <pre>snapvault start -S CL2:Zip_dirpath /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault start -S CL2:E:\test /vol/vol1/backup</pre> Snapvault configuration for the qtree has been set. Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.
3	Enter the following command to modify the relationship on the secondary storage system (SEC1): <pre>snapvault modify -S prim_host:dirpath /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault modify -S WIN1:D:\dataset /vol/vol1/backup</pre> Configuration for qtree /vol/vol1/backup is: /vol/vol1/backup source=WIN1:D:\dataset kbs=unlimited tries=2 back_up_open_files=on,ignore_atime=off
4	To ensure that a relationship between the primary storage system (WIN1) and SnapVault secondary storage system (SEC1) is established, force an incremental backup: <pre>snapvault update /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault update /vol/vol1/backup</pre> Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.

Step	Action															
5	Run the following command on the secondary storage system to check the status: snapvault status Example: <pre>SEC1> snapvault status</pre> Snapvault secondary is ON <table><tr><td>Source</td><td>Destination</td><td>State</td><td>Lag</td><td>Status</td></tr><tr><td>WIN1:D:\dataset</td><td>SEC1:/vol/vol1/backup</td><td>Snapvaulted</td><td></td><td></td></tr><tr><td>00:00:35</td><td>Idle</td><td></td><td></td><td></td></tr></table>	Source	Destination	State	Lag	Status	WIN1:D:\dataset	SEC1:/vol/vol1/backup	Snapvaulted			00:00:35	Idle			
Source	Destination	State	Lag	Status												
WIN1:D:\dataset	SEC1:/vol/vol1/backup	Snapvaulted														
00:00:35	Idle															

Backing up data from a SnapVault primary storage system to a secondary storage system

At the remote office: Here, the source is a Data ONTAP primary storage system. Complete the following steps.

Step	Action
1	Run the following command in the directory of the system (CL1) on which lrep_reader is installed: <pre>lrep_reader.exe -O [-c] [-e] [-p snapvault_start] -f sec -q /vol/sec_vol/sec_qtree -o Zip_dirpath@0 [-l reader.log] prim_host:prim_vol</pre> Note When the -c option is used, the output files generated at <i>Zip_dirpath</i> are compressed. When the -e option is used, you are prompted to enter and reconfirm the encryption password. Example: <pre>C:\>lrep_reader.exe -O [-p snapvault_start] -f SEC1 -q /vol/vol1/backup -o E:\test@0 [-l reader.log] FAS_PRI:/vol/data/Logic</pre> Transfer started. Use 'snapvault status' on source to monitor progress. Transfer done. Verify by using 'snapvault status' on filer.

At the data center: After the Zip drive arrives at the data center, connect it to the second Windows client, CL2.

Step	Action
1	Enter the following command in the directory of the system (CL2) on which lrep_writer is installed: <pre>lrep_writer.exe -O Zip_dirpath</pre> Note_____ If the files at <i>Zip_dirpath</i> are compressed, lrep_writer will internally uncompress the files. If the files are encrypted, lrep_writer will prompt you to enter the decryption password and internally decrypt the files. _____ Example: <pre>C:\>lrep_writer.exe -O E:\test</pre> lrep_writer: Will read 1 files from prefix e:\test Waiting for connection. Use snapvault start command on secondary to create a relationship E:\test is the source LREP data. If the source LREP data spans multiple portable drives (for example, drive E contains the first 8-GB of data and drive F contains the next 4-GB of data) then enter the following command: <pre>C:\>lrep_writer.exe -O E:\test F:\test</pre>
2	To start the data transfer from the secondary storage system (SEC1), enter the following command at the console of the secondary storage system: <pre>snapvault start -S CL2:Zip_dirpath /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault start -S CL2:E:\test /vol/vol1/backup</pre> Snapvault configuration for the qtree has been set. Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.

Step	Action															
3	Modify the relationship on the secondary storage system (SEC1) by entering the following command: <pre>snapvault modify -S prim_host:prim_vol /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault modify -S FAS_PRI:/vol/data/Logic /vol/vol1/backup</pre> Configuration for qtree /vol/vol1/backup is: /vol/vol1/backup source=FAS_PRI:/vol/data/Logic kbs=unlimited tries=2 back_up_open_files=on,ignore_atime=off															
4	To ensure that a relationship between WIN1 and the secondary storage system (SEC1) is established, force an incremental backup: <pre>snapvault update /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault update /vol/vol1/backup</pre> Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.															
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Source	Destination	State	Lag	Status												
FAS_PRI:/vol/data/Logic	SEC1:/vol/vol1/backup	Snapvaulted														
00:00:35	Idle															

Restoring data with the help of the LREP tool

You can restore data from a secondary storage system to the primary storage system using the LREP tool, without having to transfer data over the network.

At the data center, using the `lrep_reader`, the baseline transfer is done from SEC1 to a Zip drive (drive letter E) connected to a Windows client, CL1. The Zip drive is shipped to the remote office where a second Windows client, CL2, uses the `lrep_writer` to write data from the Zip drive to WIN1.

Complete the following steps to restore and resync a relationship after restoring the data from the secondary storage system (SEC1) to the Open Systems SnapVault primary server (WIN1) using the LREP tool.

At the data center: Let us assume that the LREP tool is installed on a Windows client CL1, and you have to restore the data to the Open Systems SnapVault primary server WIN1 at the remote office. Complete the following steps.

Step	Action
1	Run the following command in the directory of the client (CL1) on which <code>lrep_reader</code> is installed: <pre>lrep_reader [-c] [-e] -p snapvault_restore -o Zip_dirpath@0 -f WIN1 -q C:\data [-l reader.log] sec:/vol/sec_vol/sec_qtree</pre> Note_____ When the <code>-c</code> option is used, the output files generated at <code>Zip_dirpath</code> are compressed. When the <code>-e</code> option is used, you will be prompted to enter and reconfirm the encryption password. _____ Example: <pre>C:\> lrep_reader -p snapvault_restore -o E:\rest@0 -f WIN1 -q C:\data [-l reader.log] SEC1:/vol/data/Logic</pre> Transfer started. Use 'snapvault status' on source to monitor progress. Transfer done. Verify by using 'snapvault status' on filer.

At the remote office: Let us assume that the LREP tool is installed on a Windows client (CL2).

Step	Action
1	Connect the Zip drive to the system. Enter the following command in the directory (CL2) on which lrep_writer is installed: lrep_writer -p snapvault_restore Zip_dirpath Note If the files at <i>Zip_dirpath</i> are compressed, lrep_writer will internally uncompress the files. If the files are encrypted, lrep_writer will prompt you to enter the decryption password and internally decrypt the files. Example: <pre>C:\> lrep_writer -p snapvault_restore E:\rest</pre> lrep_writer: Will read 1 files from prefix E:\rest Waiting for connection. Use snapvault start command on secondary to create a relationship
2	Now, to start the data transfer, run the following command on the Open Systems SnapVault primary server (WIN1): snapvault restore -S CL2:Zip_dirpath prim_dirpath Note Enable the restart/resync on restore check box in the Configurator GUI, before you start the data transfer. Example: <pre>C:\> snapvault restore -S CL2:E:\rest C:\data</pre>

Step	Action										
3	Run the following command to check the status: snapvault status Example: <pre>C:\> snapvault status</pre> Snapvault primary is ON <table><tr><td>Source</td><td>Destination</td><td>State</td><td>Lag</td><td>Status</td></tr><tr><td>SEC1:/vol/data/Logic</td><td>CL2:C:\data</td><td>Broken-off</td><td>-</td><td>Idle</td></tr></table>	Source	Destination	State	Lag	Status	SEC1:/vol/data/Logic	CL2:C:\data	Broken-off	-	Idle
Source	Destination	State	Lag	Status							
SEC1:/vol/data/Logic	CL2:C:\data	Broken-off	-	Idle							
4	To resync the relationship on the secondary storage system, run the following command on the secondary storage system (SEC1): snapvault start -r -S <i>prim_host:dirpath</i> /vol/sec_vol/sec_qtree Example: <pre>SEC1> snapvault start -r -S WIN1:C:\data /vol/data/Logic</pre> The resync base snapshot will be: <i>snapshot name</i> Resync may alter the data in this qtree. Are you sure you want to resync the qtree? y Wed Mar 21 15:33:33 GMT [replication.dst.resync.success:notice]: SnapVault resync of /vol/data/Logic to WIN1:c:\data was successful. Snapvault configuration for the qtree has been set. Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.										

Restoring data from a secondary storage system to the primary storage system

Complete the following steps to resync a relationship after restoring the data from the secondary storage system (SEC1) to the primary storage system (PRI1) using the LREP tool.

At the data center: Let us assume that the LREP tool is installed on the Windows client CL1, and you have to restore the data to the remote office PRI1.

Step	Action
1	Run the following command on the directory of the client (CL1) on which lrep_reader is installed: <pre>lrep_reader -O [-c] [-e] -p snapvault_restore -o Zip_dirpath@0 -f prim_host -q prim_vol [-l reader.log] sec:/vol/sec_vol/sec_qtree</pre> Note_____ When the -c option is used, the output files generated at <i>Zip_dirpath</i> are compressed. When the -e option is used, you are prompted to enter and reconfirm the encryption password. _____ Example: <pre>C:\> lrep_reader -O -p snapvault_restore -o E:\rest@0 -f PRI1 -q /vol/vol1/backup [-l reader.log] SEC1:/vol/data/Logic</pre> Transfer started. Use 'snapvault status' on source to monitor progress. Transfer done. Verify by using 'snapvault status' on filer.

At the remote office: Let us assume that the LREP tool is installed on the Windows client CL2 and the Zip drive is connected to CL2. Complete the following step.

Step	Action
1	Enter the following command in the directory of the system (CL2) on which lrep_writer is installed: <pre>lrep_writer -O -p snapvault_restore Zip_dirpath</pre> Note If the files at <i>Zip_dirpath</i> are compressed, lrep_writer will internally uncompress the files. If the files are encrypted, lrep_writer will prompt you to enter the decryption password and internally decrypt the files. Example: <pre>C:\> lrep_writer -O -p snapvault_restore E:\rest</pre> <pre>lrep_writer: Will read 1 files from prefix e:\rest Waiting for connection. Use snapvault start command on secondary to create a relationship</pre>
2	Now, run the following command on the primary storage system (PRI1) to start the data transfer: <pre>snapvault restore -S CL2:Zip_dirpath prim_vol</pre> Example: <pre>PRI1> snapvault restore -S CL2:E:\rest /vol/vol1/backup</pre>

Step	Action
3	To resync the relationship on the secondary storage system, run the following command on the secondary storage system (SEC1): <pre>snapvault start -r -S <i>prim_host:prim_vol</i> /vol/sec_vol/sec_qtree</pre> Example: <pre>SEC1> snapvault start -r -S PRI1:/vol/vol1/backup /vol/data/Logic</pre> The resync base snapshot will be: <i>snapshot name</i> Resync may alter the data in this qtree. Are you sure you want to resync the qtree? y Wed Mar 21 15:33:33 GMT [replication.dst.resync.success:notice]: SnapVault resync of /vol/data/Logic to PRI1:/vol/vol1/backup was successful. Snapvault configuration for the qtree has been set. Transfer started. Monitor progress with 'snapvault status' or the snapmirror log.

The following table lists the error messages you can encounter while using the LREP tool, their causes, and actions you can take to remedy these errors.

Error message	Cause	Action to take
Error in bind: <i>No such file or directory</i>	The LREP writer fails with this error message. This indicates that Open Systems SnapVault is holding on to port 10566, which LREP is also trying to use.	Stop Open Systems SnapVault agent or try another machine that is not running Open Systems SnapVault.
Could not connect to host host_name: No error	lrep_reader tries to communicate to Open Systems SnapVault, residing on the host, (when Open Systems SnapVault is not running) and fails with this error message. This indicates that when Open Systems SnapVault service is not running on the host, which is mentioned in the lrep_reader command, this error occurs.	Start the Open Systems SnapVault service.

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