
Xerox Enhanced LPR Filters

This document provides instructions for installing and using the Xerox Enhanced LPR Filters (XELF). It explains how to:

- Install the software
- Start the filter GUI
- Install the software license key
- Define filter queues and ports
- Submit jobs
- Resolve installation problems
- Backup and restore the filters software

Installing

Step 1: Place the XELF software CD in the CD-ROM drive.

Step 2: Open a Terminal window and log in as root. Enter your root password when prompted. Use this terminal window to complete the remaining steps in the installation.

Step 3: Mount the CD-ROM drive

Enter: **volcheck**

Step 4: Change to the CD-ROM directory

Enter: **cd/cdrom/cdrom0/**

Step 5: Execute the installation script.

Enter: **./install.sh**

You will receive the following response:

Welcome to the Xerox EPS LPR Filters installation program.

This program will install or upgrade the Xerox EPS LPR Filters package on the system.

Do you want to continue with the installation? [y/n]:

Enter **Y** to complete the installation. You will receive the following response.

The sparc version of the software will be installed.

>> Package Installation in progress...

>> Extracting /tmp/cdpackage/s.tar.Z file...

Extraction complete.

>> Checking for previously installed packages...

No previous packages installed.

>> Adding Xerox Enhanced LPR Filters packages to system...

XRXelf

Processing package instance <XRXelf> from
</var/spool/XRXnps/tmp>

Xerox Enhanced LPR Filter Components

(sparc) Xerox

Xerox Corporation

Using </> as the package base directory.

Processing package information.

Processing system information.

8 package pathnames are already properly installed.

Installing Xerox EPS LPR Filter Components as <XRXelf>

Installing part 1 of 1.

/etc/init.d/xelfstart

/etc/init.d/xelfstop

/etc/rc1.d/K99xelfstop

/etc/rc2.d/S99xelfstart

/opt/XRXelf/COPYRIGHT

/opt/XRXelf/VER

/opt/XRXelf/WDqueue.dat

/opt/XRXelf/dsimain/addfilter.sh

/opt/XRXelf/dsimain/client/DSICLIENT.jar

/opt/XRXelf/dsimain/client/dsiclient.sh

/opt/XRXelf/dsimain/deletefilter.sh

/opt/XRXelf/dsimain/modifyfilter.sh

/opt/XRXelf/dsimain/server/DSISERVER.jar

/opt/XRXelf/dsimain/server/XRXdsiservers.startstop

/opt/XRXelf/dsimain/server/dsiXfrmPrinter.sh

/opt/XRXelf/dsimain/server/startdsi.sh

/opt/XRXelf/dsimain/server/stopdsi.sh

/opt/XRXelf/fix_hostname.sh

/opt/XRXelf/lib/license/auth_tool

/opt/XRXelf/lprmain/addfilter.sh

/opt/XRXelf/lprmain/deletefilter.sh

/opt/XRXelf/lprmain/modifyfilter.sh

/opt/XRXelf/model/xelf_imodel.src

/opt/XRXelf/startXelfGUI.sh

/opt/XRXelf/sxg.sh

/opt/XRXelf/transform/A2Exfrm

/opt/XRXelf/transform/AACCExfrm

/opt/XRXelf/transform/AACCxfrm

/opt/XRXelf/transform/AMCxfrm

/opt/XRXelf/transform/ASCxfrm

/opt/XRXelf/transform/BARR1xfrm

/opt/XRXelf/transform/BaseTransform.db

```
/opt/XRXelf/transform/CUST1xfrm
/opt/XRXelf/transform/DCxfrm
/opt/XRXelf/transform/DMxfrm
/opt/XRXelf/transform/EBCxfrm
/opt/XRXelf/transform/FBxfrm
/opt/XRXelf/transform/IBMCCxfrm
/opt/XRXelf/transform/MVSDxfrm
/opt/XRXelf/transform/NPFxfrm
/opt/XRXelf/transform/OFFxfrm
/opt/XRXelf/transform/PADHxfrm
/opt/XRXelf/transform/RGHxfrm
/opt/XRXelf/transform/ToneE2Exfrm
/opt/XRXelf/transform/Transform.db
/opt/XRXelf/transform/VRxfrm
/opt/XRXelf/transform/WDMxfrm
/opt/XRXelf/transform/XDPExfrm
/opt/XRXelf/xelfgui/XELF.jar
/opt/XRXelf/xelfgui/gui.sh
/opt/XRXelf/xelfgui/listOutQ.sh
/opt/XRXelf/xelfgui/xelfJRE/jre.tar.Z
[ verifying class <none> ]
## Executing postinstall script.
Unpacking JRE: jre...
Running uncompress...
Running tar extract...
Running tar extract...
JRE fully extracted.

Installation of <XRXelf> was successful.

The Xerox Enhanced LPR Filters package was successfully added.

>> The installation is now complete.
>>
Starting Xerox Enhanced LPR Filter Manager's GUI...
#
```

The software is now installed in the /opt/XRXelf directory.

Starting the GUI

- Step 1: Open a Terminal window and log in as root. Enter your root password when prompted. Open a Terminal window and logon as root.

Step 2: Start the GUI.
Enter: **/opt/XRXelf/sxg.sh**

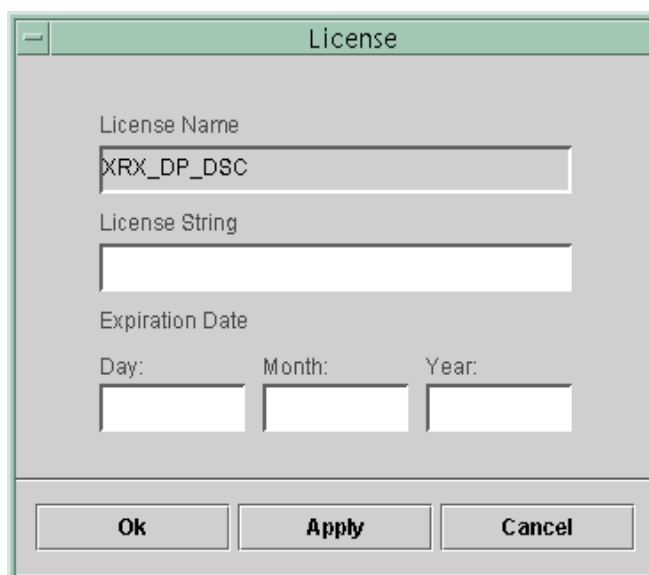
Step 3: Exit the root logon, so that you can close the Terminal window without closing the filter's GUI.
Enter: **volcheck**

Installing the software license key

Step 1: Start the GUI.
Enter: **/opt/XRXelf/sxg.sh**

Step 2: Select **Setup->Filter License** to display the license dialog box.

Step 3: Enter the 20-character license string provided by Xerox in the License String field.

A screenshot of a 'License' dialog box. The dialog has a title bar with the word 'License'. Inside, there are three main sections: 'License Name' with a text field containing 'XRX_DP_DSC', 'License String' with an empty text field, and 'Expiration Date' with three separate text fields for 'Day:', 'Month:', and 'Year:'. At the bottom of the dialog are three buttons: 'Ok', 'Apply', and 'Cancel'.

Step 4: Enter the license expiration date in the Day, Month, and Year fields.

Step 5: Click **OK** to validate and save the license information.

Managing the filters

This section explains how to add, modify, and delete filter queues and ports.

DocuSP EPS Setup

Complete these activities to set up the EPS controller to receive filtered data streams:

- Verify that the printer resources have been copied into the /var/spool/XRXnps/resources/lcds directory.
- Create the DocuSP queues that will receive jobs from the filters. These queues should be defined as spooling queues.

Adding LPR filters

A LPR filter consists of these parts:

- The filter type
- An input queue name (used in the LPR command)
- An output queue name (The DocuSP queue name)
- The filter description/comments (optional)

To set up the filter

Step 1: Start the filters GUI

Step 2: Select the **Filter → Add** option to display the Add Filter dialog box.

The screenshot shows a window titled "Add New Filter". It contains the following elements:

- Input Mode:** Two radio buttons. The first is labeled "LPR" and is selected. The second is labeled "Direct Socket Interface (DSI)".
- Input Queue:** A text input field.
- Filter Type:** A dropdown menu currently showing "Variable Block/Record Filter".
- Output Queue:** A text input field with a small dropdown arrow on its right side.
- Comment:** A text input field.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Step 3: Select the LPR input mode button

Step 4: In the Input Queue field, enter the name of the input queue that will receive jobs for filtering. This queue name must be the same as the queue name you enter in the LPR command.

Note: This queue name must not be used as DocuSP queues name.

Step 5: Select the desired filter type from the pull-down list.

Step 6: Select the DocuSP queue to which the filtered jobs will be spooled to for printing in the Output Queue pull down list.

Step 7: Specify comments as required in the comment field.

The screenshot shows a dialog box titled "Add New Filter". It contains the following fields and controls:

- Input Mode:** Two radio buttons. The first is labeled "LPR" and is selected. The second is labeled "Direct Socket Interface (DSI)".
- Input Queue:** A text input field containing the text "Queue_1".
- Filter Type:** A pull-down menu showing "ASCII CR/LF to ASCII IBM ONL".
- Output Queue:** A pull-down menu showing "Accounts_Payable".
- Comment:** A text input field containing the text "LCDS queue for accounts payable".
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Step 8: Click OK to complete this task

Adding sockets filters

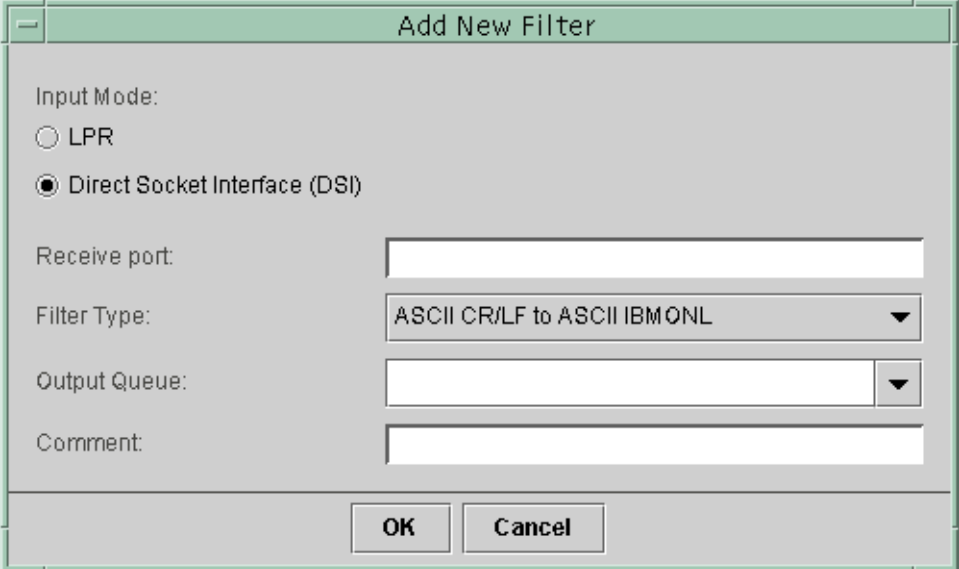
A sockets filter definition consists of these parts:

- The filter type
- An input port number
- An output queue name (The DocuSP queue name)
- The filter description (optional)

To set up the filter

Step 1: Start the filters GUI

Step 2: Select the **Filter → Add** option to display the Add Filter dialog box.

The image shows a dialog box titled "Add New Filter". It contains several input fields and buttons. At the top, there is a title bar with a minus sign and the text "Add New Filter". Below the title bar, the "Input Mode:" section has two radio buttons: "LPR" (unselected) and "Direct Socket Interface (DSI)" (selected). Below this, the "Receive port:" field is a text box. The "Filter Type:" field is a pull-down menu currently showing "ASCII CR/LF to ASCII IBMONL". The "Output Queue:" field is another pull-down menu. The "Comment:" field is a text box. At the bottom right, there are two buttons: "OK" and "Cancel".

Input Mode:

☐ LPR

☒ Direct Socket Interface (DSI)

Receive port:

Filter Type:

Output Queue:

Comment:

OK Cancel

Step 3: Select the Direct Sockets Interface input mode button

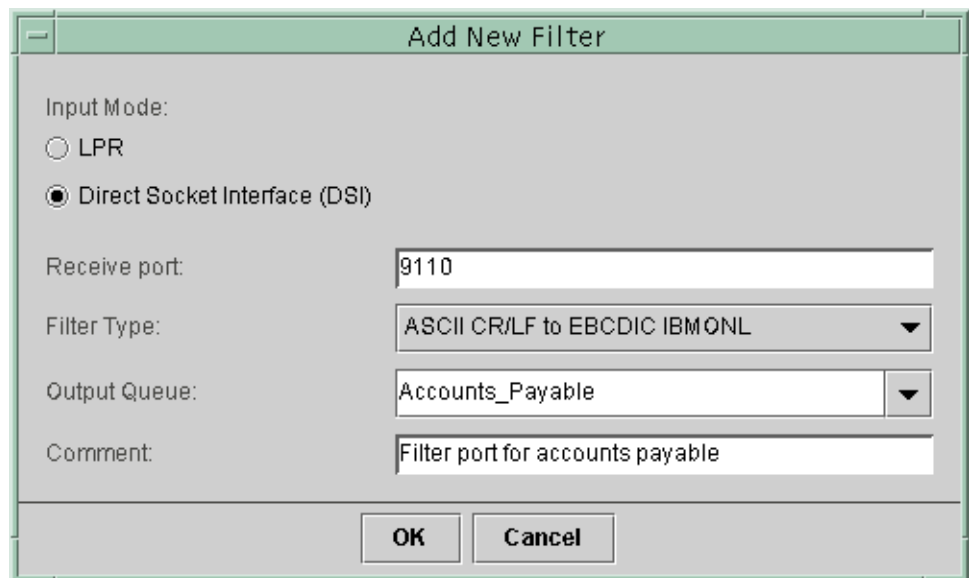
Step 4: In the Input Port field, enter the port number that will receive jobs for filtering.

Note: This port number must not be enabled in the DocuSP sockets gateway.

Step 5: Select the desired filter type from the pull-down list.

Step 6: Select the DocuSP queue to which the filtered jobs will be spooled to for printing in the Output Queue pull down list.

Step 7: Specify comments as required in the comment field.



The 'Add New Filter' dialog box contains the following fields and controls:

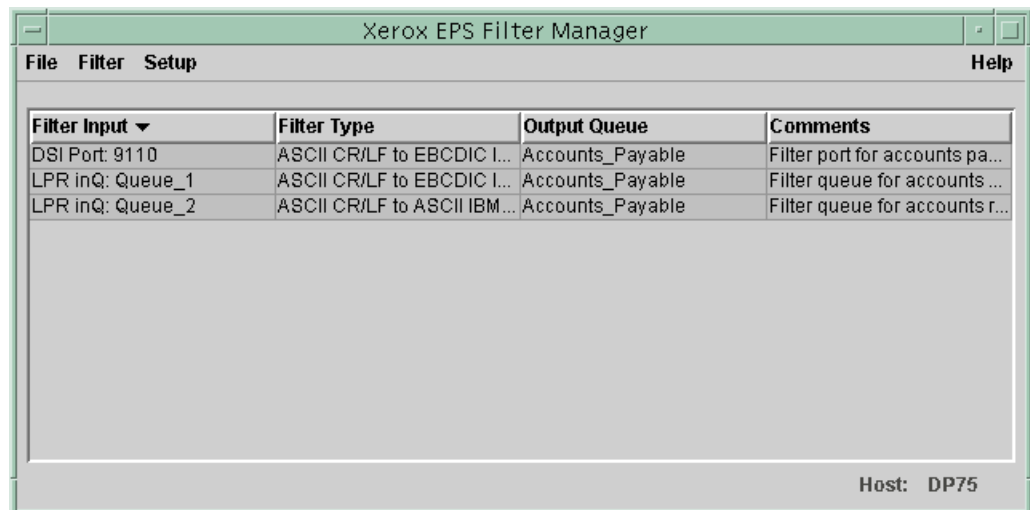
- Input Mode:** Two radio buttons. 'LPR' is unselected, and 'Direct Socket Interface (DSI)' is selected.
- Receive port:** A text box containing '9110'.
- Filter Type:** A dropdown menu showing 'ASCII CR/LF to EBCDIC IBMONL'.
- Output Queue:** A dropdown menu showing 'Accounts_Payable'.
- Comment:** A text box containing 'Filter port for accounts payable'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

Step 8: Click OK to complete this task

Modifying a filter

Step 1: Start the filters GUI

Step 2: Select an available filter for modifying



The 'Xerox EPS Filter Manager' window displays a table of filters. The table has four columns: Filter Input, Filter Type, Output Queue, and Comments. Below the table, the host name 'Host: DP75' is displayed.

Filter Input ▼	Filter Type	Output Queue	Comments
DSI Port: 9110	ASCII CR/LF to EBCDIC I...	Accounts_Payable	Filter port for accounts pa...
LPR inQ: Queue_1	ASCII CR/LF to EBCDIC I...	Accounts_Payable	Filter queue for accounts ...
LPR inQ: Queue_2	ASCII CR/LF to ASCII IBM...	Accounts_Payable	Filter queue for accounts r...

Host: DP75

Step 3: Select the **Filter → Modify** option to to display the Modify Filter dialog box.

Modify Filter

Input Mode:

☐ LPR

☒ Direct Socket Interface (DSI)

Receive port: 9110

Filter Type: ASCII CR/LF to EBCDIC IBM ONL

Output Queue: Accounts_Payable

Comment: Filter port for accounts payable

OK Cancel

Step 4: Select the desired filter type from the pull-down list.

Step 5: Select the DocuSP queue to which the filtered jobs will be spooled to for printing in the Output Queue pull down list.

Step 7: Specify comments as required in the comment field.

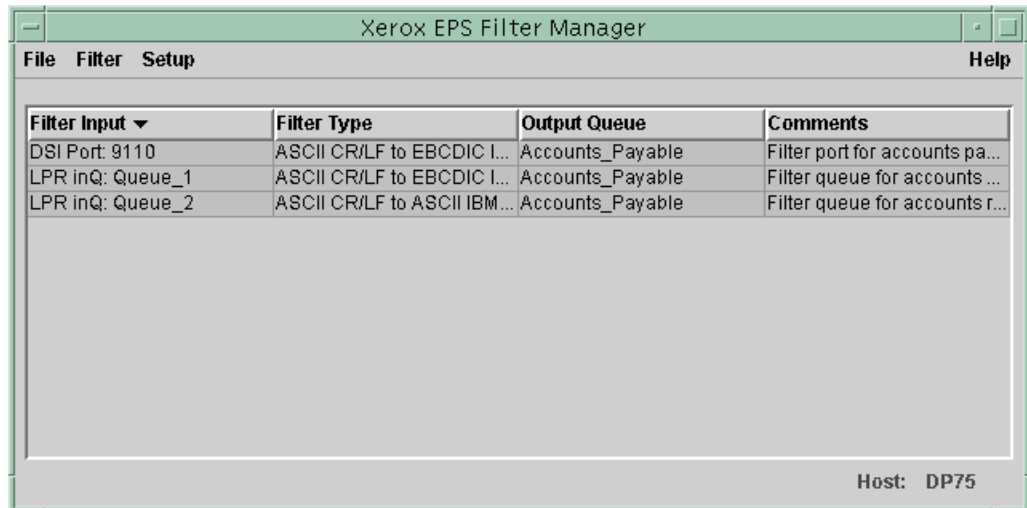
Step 9: Click OK to complete this task

Note: The Input Queue name, input port number, or input mode may not be changed with this facility. The filter queue definition must be deleted to re-create to change these fields.

Deleting a filter

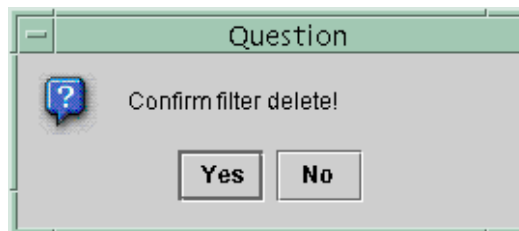
Step 1: Start the filters GUI

Step 2: Select an available filter for deleting



Step 3: Select the **Filter → Delete** option to display the to display a list of the filter definitions.

Step 4: Click OK to complete this task



Submitting the job

To submit your LCDS data to the EPS printer through the XELF filter, follow these steps:

1. Be sure you have done the following:
 - Installed and licensed XELF
 - Created the XELF filter
 - Created the EPS queue, naming it the same as the XELF filter Output Queue name.
 - Properly set up the EPS queue for receiving LCDS data.
2. Using the `lpr` command, send the job to the filter, specifying the XELF Input queue as the `lpr` queue name.

Your filtered job will appear on the EPS queue.

Uninstalling the Filters software

- Step 1: Place the Xerox EPS LCDS Filters software CD in the CD-ROM drive.
- Step 2: Open a Terminal window and log in as root. Enter your root password when prompted. Use this terminal window to complete the remaining steps in the installation.
- Step 3: Mount the CD-ROM drive
Enter: **volcheck**
- Step 4: Change to the CD-ROM directory
Enter: **cd/cdrom/cdrom/**
- Step 5: Execute the installation script.
Enter: **./uninstall.sh**
- You will receive the following response:

Welcome to the Xerox EPS LPR/DSI Filters uninstall program.

This program will remove:

- Any Xerox EPS LPR/DSI Filters patches
- All installation licenses
- The Xerox EPS LPR/DSI Filters packages (application and configuration files)

Do you want to continue with the uninstall? [y/n]:

Enter **Y** to complete the installation. You will receive the following response.

```
>> Ending all Xerox EPS LPR/DSI Filters services...
Removing XELF queues and printers.
*.lpr.config: No such file or directory
Print services stopped.
Print services started.
*.dsi.config: No such file or directory

Removing package XRXelf

Removal of <XRXelf> was successful.

>> The uninstall is now complete.
```

Resolving installation problems

- Jobs transmitted from the host do not appear in the DocuSP queue (LPR Configurations)
 - Verify that the IP address in the host printer definition matches the IP address of the printer.
 - Verify that the queue name specified in the host printer definition matches the filter input queue name. Case is important.
 - Verify that the correct filter type has been specified in the filter definition.
 - If the host name has been changed, delete the filter queue and the DocuSP queue and reallocate them.
 - If a custom filter has been installed, verify that it is authorized to execute (-rwxr-xr-x)
 - Verify that the DocuSP queue is defined as a spooling queue
 - Verify that the DocuSP queue is accepting jobs
 - Check for jobs titled "errmsg" in the queue. These are error messages generated by the filter.
 - Issue the command "lpstat -a" to display the list of LPR queues on the system. If the filter queue is shown as "not accepting input" delete the queue and reallocate it.
- Jobs transmitted from the host do not appear in the DocuSP queue (Sockets configurations)
 - Verify that the IP address in the host printer definition matches the IP address of the printer.
 - Verify that the port number specified in the host printer definition matches the port number specified for the filter.

- Verify that the filter sockets connection. This can be done by double clicking on the filter definition in the filter GUI. Clicking save will reactivate the connection.
 - Verify that the correct filter type has been specified in the filter definition.
 - If the host name has been changed, delete the DocuSP queue and reallocate it.
 - If a custom filter has been installed, verify that it is authorized to execute (-rwxr-xr-x)
 - Verify that the DocuSP queue is defined as a spooling queue
 - Verify that the DocuSP queue is accepting jobs
 - Check for jobs titled “errmsg” in the queue. These are error messages generated by the filter.
- Jobs appear in the default DocuSP queue instead of the queue specified in the filter definition.
 - Issue the command “lpstat -a” to display the list of LPR queues on the system. If the filter queue is shown as “not accepting input” delete the queue and recreate it.
 - Verify that the DocuSP queue name specified in the filters printer definition exists and is accepting input.
 - Jobs are formatted incorrectly.
 - Verify that the correct filter type has been specified in the filter definition.
 - Verify that the DocuSP queue is defined as an LCDS queue
 - Verify that the correct JDL/JDE are specified as the initial JDL/JDE.

EPS Filters software backups

The EPS LCDS Filter software and filter definitions are not included in a DocuSP backup. To backup the filter software and the queue & sockets port definitions:

- Step 1: Open a Terminal window and log in as root. Enter your root password when prompted. Use this terminal window to complete the remaining steps in the installation.
- Step 2: Issue the command “cd /opt/XRXelf/”
- Step 3: Issue the command “./backup.sh”
- Step 4: Respond as required to the prompts.
- Step 5: Copy the files located in the directory /tmp/xelfbackp to CD.

```
# cd /opt/XRXelf
# ./backup.sh

Backing up the Xerox EPS LPR Filters to /tmp/xelfbackup

a /opt/XRXelf/ 0K
a /opt/XRXelf/COPYRIGHT 1K
a /opt/XRXelf/VER 1K
(Some backup messages are not shown in this figure)
a /etc/init.d/xelfstart 1K
a /etc/init.d/xelfstop 1K

Backup of the Xerox EPS LPR Filters successfully completed

**** Copy the files contained in the directory /tmp/xelfbackup to a CD/DVD
****

**** Please refer to the EPS LCDS Filters User Guide for information on
restoring the filters software ****

#
```

To restore the filter software from a backup:

- Step 1: Open a Terminal window and log in as root. Enter your root password when prompted. Use this terminal window to complete the remaining steps in the installation.
- Step 2: Mount the CD containing the filters backup files.
- Step 3: Issue the command "volcheck".
- Step 4: Issue the command "cd /cdrom/cdrom0".
- Step 5: Issue the command "./restore.sh"
- Step 6: Respond as required to the prompts.

Note: "UX:lpstat: ERROR:" messages may be displayed during the restore. These error conditions should be corrected by the restore script after all of the LPR queues have been established. The script will display the final status of the LRP queues at the end of the restore. This status should be "accepting input".

```
# volcheck
# cd /cdrom/cdrom0
# ./restore.sh

Restoring Xerox EPS LPR Filters
x /opt/XRXelf, 0 bytes, 0 tape blocks
x /opt/XRXelf/COPYRIGHT, 134 bytes, 1 tape blocks
x /opt/XRXelf/VER, 40 bytes, 1 tape blocks
(Some restore messages are not shown in this figure)
x /etc/init.d/xelfstart, 322 bytes, 1 tape blocks
x /etc/init.d/xelfstop, 321 bytes, 1 tape blocks

Restoring the LPR filters

Modifying LPR filter entry : filter1

LPR filter filter1 restored
UX:lpstat: ERROR: The LP print service isn't running or can't be
reached.
    TO FIX: Your request can't be completely handled
            without the LP print service. If this
            problem continues, get help from your
            system administrator.

Modifying LPR filter entry : filter2

LPR filter filter2 restored
UX:lpstat: ERROR: The LP print service isn't running or can't be
reached.
    TO FIX: Your request can't be completely handled
            without the LP print service. If this
            problem continues, get help from your
            system administrator.

Please wait for processing to complete...

x86_SAVE accepting requests since Jul 09 11:58 2008
x86_HOLD accepting requests since Jul 09 11:58 2008
x86_PRINT accepting requests since Jul 09 11:58 2008
filter1 accepting requests since Wed 09 Jul 2008 11:57:53 AM EDT
filter2 accepting requests since Wed 09 Jul 2008 11:57:59 AM EDT

Restoring the DSI filters

Please wait for processing to complete...

Server config file = /opt/XRXelf/configuration/8001.dsi.config
Server config file = /opt/XRXelf/configuration/8000.dsi.config

Xerox EPS LPR Filters Restore successfully completed
#
```