

# FreeFlow<sup>®</sup> Print Server Disk Overwrite



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June 2008

Dear Customer:

This kit contains the FreeFlow<sup>®</sup> Print Server Disk Overwrite software supporting all printing products with the FreeFlow Print Server digital front end that meet the minimum disk size requirements as described below.

## Overview

The Disk Overwrite software removes all data from the spool, swap, and outQ partitions of the print server hard disk. The data cannot be retrieved. Data is overwritten in four passes using different patterns written to the entire disk or section of the disk. This four-pass algorithm conforms to U.S. Department of Defense Directive 8500.1. Of the four passes, the third pass is used to write 0x40404040 and the last pass is to verify (by reading and comparing) 0x40404040. An option is provided to perform a single pass (fast mode) disk overwrite.

The data overwrite operation does not process defective or spare blocks for SCSI and FCAL drives. It also does not perform any special disk error recovery. If a higher secure data overwrite scheme is required, the Sun Solaris Format command Purge utility is available. Additionally, 3<sup>rd</sup> party software with more flexibility and functions, such as UniShred Pro<sup>®</sup> is available. However, it is not part of the Disk Overwrite software nor is it supported by the FreeFlow Print Server.

The Disk Overwrite procedure can be initiated from the FreeFlow Print interface or from a UNIX command line.

## Requirements

- FreeFlow Print Server version 6.0 or higher
- Minimally two 18 Gbyte disks or one 36 Gbyte disk in the Sun platform in order to support the disk partitioning
- Disk Overwrite license enabled and activated on the FreeFlow Print Server
- Ensure that the Disk Overwrite version and the FreeFlow Print Server software are the same

## Partition size considerations

For systems with very large disks, for example 160 Gbytes, Disk Overwrite takes a long time to complete. The time can be reduced by specifying a smaller disk partition size during the FreeFlow Print Server installation. However, reducing the disk partition size may prevent the system from spooling very large jobs.

The Xerox Service Representative may repartition the disk space in order to improve the Disk Overwrite performance if it is required by the customer.

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## Security considerations

In addition to a regularly planned schedule for performing the Disk Overwrite process, it is important to ensure that the environment for the FreeFlow Print Server and supported printers is secure.

Xerox is committed to providing a level of security that allows the print server to be a good network citizen in the response to current security intrusions. Additional security beyond this remains the responsibility of the customer.

Xerox is constantly evaluating the security of the FreeFlow Print Server and the Sun Solaris Operating System. Xerox is committed to providing the latest Solaris security patches provided by Sun Microsystems in each major print server release. The FreeFlow Print Server development team also adds Solaris security patches in between major release cycles.

Security of the network and the print environment is the responsibility of you, the customer. The following are some considerations to ensure a secure printing environment.

- The FreeFlow Print Server System Administrator, Operator, and UNIX superuser (root) passwords must follow proper security protocols, which include a regular timetable for changing the passwords and include length and character mix for the passwords.  
*NOTE: Please be aware that Xerox Customer Support Personnel must have access to the new root password for service and support. It is the customer's responsibility to ensure that the root and system administrator passwords are available for them.*
- The room or rooms containing the supported printers are secure.
- The network environment is secure.
- The FreeFlow Print Server software is properly installed, is the most current version, and contains all current security patches. For further information on print server security, refer to the most current version of the *Xerox FreeFlow Print Server Security Guide*. This document is included as a PDF file on the User Guides CD-ROM delivered with your printer.

## Installation

The Disk Overwrite software is installed by a Xerox Service Representative following the instructions in the *Installing the Disk Overwrite Software* section of this document.

*NOTE: If a scrape install is required, all saved jobs, fonts, forms, resources, and any other customer-installed software saved on the print server hard disk must be backed up to another medium prior to installation.*

### **Pre-installation procedures**

Before the Disk Overwrite software can be installed, the following must be completed:

1. If a scrape is required, back up all saved jobs, fonts, forms, resources, and customer-installed software. This is the responsibility of the customer.
2. Two options are presented during the operating system installation:
  - Data Overwrite is planned to be used on this system
  - Backup is planned to be used on this system

**Both** options must be checked in order to run the Disk Overwrite software. If these two options were not checked, a scrape install of the system is required and the two options checked.

*NOTE: If the Disk Overwrite software is reinstalled for any reason, for example to change the partitioning, it is not necessary to reinstall the Solaris Operating System.*

### **Installing the Disk Overwrite software**

To install the Disk Overwrite software:

1. Insert the Disk Overwrite CD into the CD/DVD ROM drive.
2. A window opens and a log-in prompt displays.
3. Enter the root password and press <Enter>.

*NOTE: For certain security settings on the FreeFlow Print Server, automatically installing software on a CD may be prohibited. If the Disk Overwrite CD is inserted into a CDROM or DVDROM drive and a window does not open after the CD has been detected, manually install the software by performing one of the following:*

1. *Open a terminal window, log in as root, and enter the following command to start the installation process:*  
`/cdrom/cdrom0/volstart`
2. *From the FreeFlow Print Server user interface, select System, Software Install.*

**CAUTION: Do not run any other programs on the CD to load the software. An improper installation could result in unknown side effects and cause the system to be unstable.**

4. Answer Y (yes) to the package installation question.
5. Once the package is installed, the system provides the following Disk Overwrite installation directions:

a) Enter the type of verification to perform after sanitizing the disk(s).

Input **S** for Sample verification or **F** for Full verification.

**CAUTION: It is strongly recommended you accept the default settings for the partitioning when the software is initially installed and run the Disk Overwrite process once.**

**Although the setup procedure allows you to re-size each data partition to improve Disk Overwrite performance, reducing the size of a partition may leave sensitive data on the unused portion of the disk.**

*NOTE: The system reboots automatically after the repartition process is finished.*

b) Do you wish to re-size the /var/spool/XRXnps/outQ partition?(Y/N)

Enter Y to resize or N to use the default values.

If Y is entered, the following information appears:

The current partition size is XX Gbytes.

Enter new partition size in gigabytes [Min, Max]

Please wait, it may take a few minutes.

If N is entered, the system uses the default values.

Upon completion, the following message appears:

Resizing of /var/spool/XRXnps/outQ has been successfully completed

c) Do you wish to re-size the /var/spool/XRXnps partition? (Y/N)

Enter Y to resize or N to use the default values.

If Y is entered, the following information displays:

The current partition size is XX Gbytes.

Enter new partition size in gigabytes [Min, Max]

Please wait, it may take a few minutes.

If N is entered, the system uses the default values, the setup procedure exits, and the system reboots.

Upon completion, the following message appears:  
Resizing of /var/spool/XXnps has been successfully completed.

The system reboots in a few seconds.

*NOTE: Disk Overwrite does not work without a valid license.*

### **After installation**

Perform the following steps after the Disk Overwrite software has been installed and the FreeFlow Print Server reboots.

1. The Xerox Service Representative enables the Disk Overwrite license to activate the Disk Overwrite software.
2. If the system was scrapped, the Xerox Service Representative restores any system parameters. The customer restores the saved jobs, fonts, forms, resources, and any other customer-installed software.

### **How to use Disk Overwrite**

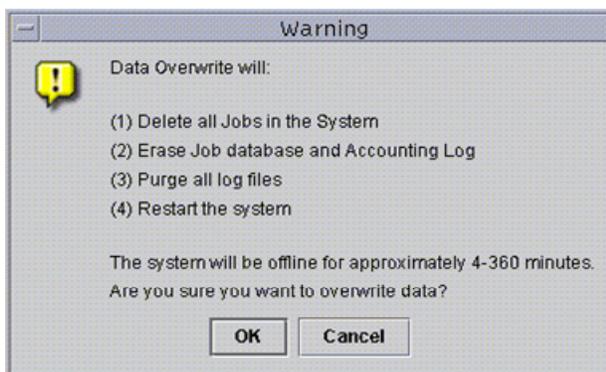
If the Disk Overwrite license is enabled and active, the Disk Overwrite function is available on the System pull-down menu of the FreeFlow Print Server user interface.

This section describes the methods for running a Disk Overwrite from the FreeFlow Print Server interface and running a Disk Overwrite process from a UNIX command line.

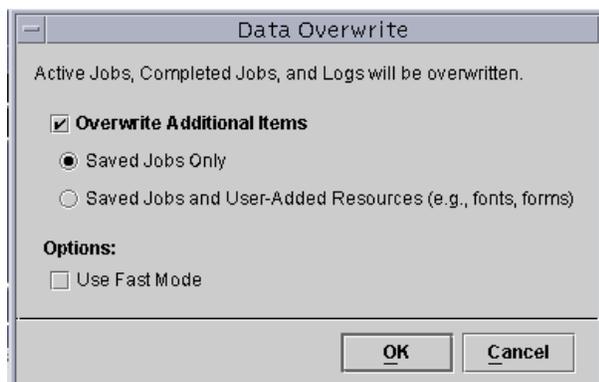
### **Running the Disk Overwrite process from the FreeFlow Print Server Interface**

To use the Disk Overwrite process from the print server interface, perform the following steps.

1. Log on to the FreeFlow Print Server as Administrator.
2. From the System pull-down menu, select Data Overwrite.
3. Select [OK]. Before the Data Overwrite screen is displayed, a Warning screen displays with the number of minutes the Disk Overwrite process requires. The Disk Overwrite process may take up to six (6) hours to complete.
4. If there are active jobs in the system, a warning message is displayed that all active jobs are deleted. Select [OK].



- The Data Overwrite screen is displayed. All Active Jobs, Completed Jobs, and Logs are automatically overwritten. Select the Overwrite Additional Items option if desired.



- Selecting **Saved Jobs Only** also overwrites all saved jobs in the `/var/spool/XRXnps/saved` directory.
  - Selecting **Saved Jobs and User-Added Resources** also overwrites all additional resources, such as fonts or forms.
- Select the Use Fast Mode option if desired. The Use Fast Mode option runs the Disk Overwrite process in a single write pass only plus sample or full verification.
  - Select [OK].
  - The FreeFlow Print Server interface and the Solaris operating system are shut down.
  - The system is rebooted into single user mode.
  - A warning message is displayed asking if you are sure you want to start the Data Overwrite. Type Y and press <Enter>.
  - The Disk Overwrite process starts.
  - When the Disk Overwrite process has successfully completed, the system reboots and the FreeFlow Print Server interface restarts.
- NOTE: For the Nuvera printers, the system powers down after completion of the overwrite process. The customer needs to power up the system afterward.*
- Some printer products, such as Nuvera, have an image disk in the printer itself. In these cases, the image Disk Overwrite process is automatically started in parallel with the system Disk Overwrite process.

### **Running the Disk Overwrite process from UNIX**

To run the Disk Overwrite process from a UNIX command line, perform the following steps.

- If the FreeFlow Print Server interface is running, ensure that no jobs are currently processing and select System and then Exit.
- Open a terminal window and logon as root. Enter `init s` and press <Enter> to reboot the system into single user mode.
- Enter one of the following commands, depending upon what is to be overwritten:

To overwrite Active Jobs, Completed Jobs, Logs, Saved Jobs and user added resources such as fonts or forms, type:

```
/opt/XXNps/bin/DataOverwrite -f
```

To overwrite Active Jobs, Completed Jobs, Logs, and Saved Jobs only:

```
/opt/XXNps/bin/DataOverwrite -f -X  
/opt/XXNps/configuration/permanent.exclude
```

To overwrite Active Jobs, Completed Jobs, and Logs:

```
/opt/XXNps/bin/DataOverwrite -f -X  
/opt/XXNps/configuration/permanent_and_saved.exclude
```

where the parameter f (fast) indicates single write pass plus sample or full verification.

5. A warning message is displayed asking if you are sure you want to start the Data Overwrite. Type Y and press <Enter>.
6. The Disk Overwrite process starts.
7. When the Disk Overwrite process has successfully completed, the system reboots and the print server interface restarts.  
*NOTE: For the Nuvera printers, the system powers down after completion of the overwrite process. The customer needs to power up the system afterward.*
8. If the printer has an internal image disk, such as the Nuvera printers, the image Disk Overwrite process is automatically started in parallel with the system Disk Overwrite.

### Managing the Log File

The Disk Overwrite process maintains a detailed log of the entire Disk Overwrite process, including the start and stop time for each partition, the partition name and boundaries, and error messages. The log file is cumulative and every time the Disk Overwrite process is run, the details are added to the existing log. The file is maintained during the overwriting process in /tmp/dataOverwrite.log. When the Disk Overwrite process is complete, the file is transferred to var/spool/XXNps/log/dataOverwrite.log.

On a regular basis, the log file should be backed up and deleted from the system.

Below is a sample of a portion of the log file.

```
Tue Jul 22 14:41:05 EDT 2003 DataOverwriteInit Start  
/.profile not found DataOverwriteInit End Tue Jul 22 14:41:05  
EDT 2003 Tue Jul 22 14:43:25 2003 DataOverwrite Start Logfile  
Created Successfully Tue Jul 22 14:43:25 2003 Reading in  
Commandline Args Tue Jul 22 14:43:25 2003 Checking License for  
DataOverwrite Feature License validated and approved for  
DataOverwrite Feature. Tue Jul 22 14:43:25 2003 Prompting user  
to continue Tue Jul 22 14:44:27 EDT 2003 DoPreWipeOutQ Start  
Unmounting /var/spool/XXNps/outQ DoPreWipeOutQ End Tue Jul 22  
14:44:27 EDT 2003 DatOvrPurge Start Purging c0t1d0 : 0 -  
60885674 Warning: interrupted DoPostWipeOutQ Start Restoring  
outQ Partition Creating New Filesystem On  
/dev/dsk/c0t1d0s1Cylinder groups must have a multiple of 16  
cylinders with the given parameters Rounded cgsz up to 256
```