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Dear Customer:

This kit contains the DocuSP Disk Overwrite software supporting all DocuSP-based printing products 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 DocuSP 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, 3rd party software with more flexibility and functions, such as UniShred Pro is available. However, it is not part of the DocuSP software nor is it supported by DocuSP.

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

Requirements

- DocuSP version 3.8 or higher

- If running DocuSP 3.8, the Solaris Operating System version 8 for Disk Overwrite software only is required (part number 301E54050).

    NOTE: For systems originally installed with DocuSP 3.8 or earlier, a full scrape and new installation of the Solaris Operating System is required to partition the drive for the Disk Overwrite functionality. All saved jobs, fonts, forms, resources, and any other customer-installed software are deleted during the installation.

- 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 DocuSP.

Installation

The DocuSP 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 DocuSP controller hard disk must be backed up to another medium prior to installation.

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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. If DocuSP 3.8 is installed on the system, the Xerox Service Representative installs the Solaris Operating System version 8 for Disk Overwrite. This installation requires a scrape and repartition of the hard disk(s).

    If the system is running a version of DocuSP later than 3.8, a scrape is necessary ONLY if the system has not been scraped since the upgrade to DocuSP 4.X or higher. Use the Solaris Operating System version delivered with the DocuSP software to perform the scrape.

    If the system is running DocuSP 4.2 on a Sun W1100Z controller, the DocuSP Disk Overwrite 4.2 Self Install Patch is required. The patch should be installed prior to the Disk Overwrite software installation. Refer to the patch installation instructions provided with the Patch CD.

    If the system is running DocuSP 50 or higher, 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 DocuSP, 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 opening a terminal window, logging in as root, and entering the following command to start the installation process:
                        /cdrom/cdrom0/volstart

WARNING: 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.

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4. Answer Y (yes) to the package installation questions.

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:
      For example: Enter S for 10% 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 <u>once</u>.

      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.`

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

   c) Enter new partition size in gigabytes [Min, Max]
      Please wait, it may take a few minutes.

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

   d) 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.

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

   e) Enter new partition size in gigabytes [Min, Max]
      Please wait, it may take a few minutes.

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

      The system reboots in a few seconds.

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

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After installation

Perform the following steps after the Disk Overwrite software has been installed and DocuSP reboots.

1. The Xerox Service Representative enables the Disk Overwrite license to activate the Disk Overwrite software.

2. If the system was scraped, the Xerox Service Representative restores any system parameters. The customer restored the saved jobs, fonts, forms, resources, and any other customer-installed software.

   NOTE: In DocuSP 3.74 or earlier, the default location for saved jobs is /var/spool. In DocuSP 3.8 and later, for the Disk Overwrite function to work, the default location for the saved jobs is /var/spool/XRXnps/saved. All saved jobs must be restored to the /var/spool/XRXnps/saved directory.

3. If the system was scraped and saved jobs were restored from the /var/spool save repository, the customer, or the Xerox Service Representative, must run the conversion tool that updates the internal links for the new default locations by performing the following:

   a) Open a terminal window.

   b) Log on as root user and enter the root password.

   c) From the command line, enter /opt/XRXnps/XRXinit/bin/UpdateSaveJobs, then press <Enter>.
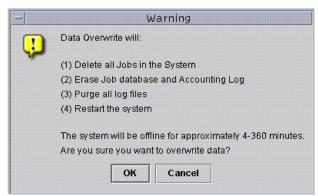
How to use Disk Overwrite

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

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

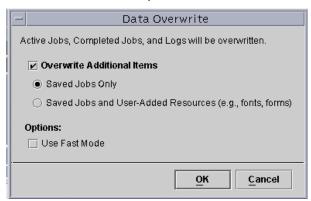### *Running the Disk Overwrite process from the DocuSP Interface*

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

1. Select the System menu. From the System pull-down menu, select Data Overwrite.

2. 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.

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3. If there are active jobs in the system, a warning message is displayed that all active jobs are deleted. Select [OK].

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

```
┌─────────────────────────────────────────────┐
│ ─                Data Overwrite              │
├─────────────────────────────────────────────┤
│ Active Jobs, Completed Jobs, and Logs will be overwritten. │
│                                             │
│  ☑ Overwrite Additional Items               │
│    ◉ Saved Jobs Only                        │
│    ○ Saved Jobs and User-Added Resources (e.g., fonts, forms) │
│                                             │
│  Options:                                   │
│    ☐ Use Fast Mode                          │
│                                             │
│                          ┌────┐  ┌────────┐ │
│                          │ OK │  │ Cancel │ │
│                          └────┘  └────────┘ │
└─────────────────────────────────────────────┘
```

  - 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.

5. 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.

6. Select [OK].

7. The DocuSP interface and the Solaris operating system are shut down.

8. The system is rebooted into single user mode and requests the root password. Enter the root password, then press <Enter>.

9. A warning message is displayed asking if you are sure you want to start the Data Overwrite. Type Y and press <Enter>.

10. The Disk Overwrite process starts.

11. If for some reason the process needs to be halted, press <CTRL> <C>.

12. When the Disk Overwrite process has successfully completed, the system reboots.

13. Some DocuSP printer products, such as the Nuvera 100/120, DocuTech 75/90, DocuPrint 75/90, or DocuPrint 75MX, 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.

14. After the overwrite is complete, the system reboots and the DocuSP interface restarts.

   NOTE: For the Nuvera 100/120 printers, the system powers down after completion of the overwrite process. The customer needs to power up the system afterward. If the customer is running DocuSP 50 or later on a Sun W1100Z controller, the customer needs to press <CTRL><D> when prompted to exit out of the single

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user mode to continue the boot process.

NOTE: If the process needs to be aborted before completion, the printer must be powered off, then back on before re-booting DocuSP. If you do not power off/on the printer, DocuSP still comes up and you can submit a job, but the job does not print. Either allow for a "cycle out period," (about 20 minutes) to let the printer complete the image Disk Overwrite operation, or power off/on the printer, then restart DocuSP.

Running the Disk Overwrite process from UNIX

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

1. If the DocuSP interface is running, ensure that no jobs are currently processing and select System and then Shutdown.

2. When the system has shutdown, type **boot –s** to reboot the system into single user mode.

3. When prompted, enter the root password and press <Enter>.

4. 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/XRXnps/bin/DataOverwrite –f
    ```

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

    ```
    /opt/XRXnps/bin/DataOverwrite –f –X /opt/XRXnps/configuration/permanent.exclude
    ```

    To overwrite Active Jobs, Completed Jobs, and Logs:

    ```
    /opt/XRXnps/bin/DataOverwrite –f –X /opt/XRXnps/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. If for some reason the process needs to be halted, press <CTRL> <C>.

8. When the Disk Overwrite process has successfully completed, the system is rebooted.

9. The Disk Overwrite process maintains a log of all informational, warning, and error messages. After the Disk Overwrite process is complete, the log can be found in /var/spool/XRXnps/log/dataOverwrite.log. Refer to the section in this document on *Managing the Log File* for more information.

10. If the printer has an internal image disk, such as a Nuvera 100/120, DocuTech 75/90, DocuPrint 75/90, or DocuPrint 75MX, the image Disk Overwrite process is automatically started in parallel with the system Disk Overwrite. After the overwrite is complete, the system reboots and the DocuSP interface restarts.

11. After the overwrite process is complete, the system reboots and the DocuSP interface restarts.

NOTE: For the Nuvera 100/120 printers, the system powers down after completion of the overwrite process. The customer needs to power up the system afterward.

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 installation process. However, reducing the disk partition size may prevent the system from spooling very large jobs.

The Xerox Service Representative may repartition the disk space including the choice of sample or full verification in order to improve the Disk Overwrite performance if it is required by the customer.

A sample verification samples 10% of the disk after the Disk Overwrite process is complete to ensure the data has been erased correctly.

A full verification reads each block of the disk after the Disk Overwrite process is complete to ensure the data has been erased correctly.

Customers who want a quick check should select sample verification.

The size of the disk partition can be increased again by reinstalling the Disk Overwrite software.

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 DocuSP-based printers is secure.

Xerox is committed to providing a level of security that allows the DocuSP controller 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 DocuSP controller and the Sun Solaris Operating System. Xerox is committed to providing the latest Solaris security patches provided by Sun Microsystems in each major DocuSP release. The DocuSP 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 DocuSP System Administrator, Trusted User, 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 DocuSP-based printers are secure.
- The network environment is secure.
- The DocuSP software is properly installed, is the most current version, and contains all current security patches. For further information on DocuSP security, refer to the most current version of the *Xerox Document Services Platform Series Common Controller System Guide.* This document is included as a PDF file on the User Guides CD-ROM delivered with your printer.

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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/XRXnps/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/XRXnps/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 cgsize up
to 256 Warning: 1 sector(s) in last cylinder unallocated /dev/rdsk/c0t1d0s1: 60885674
sectors in 21075 cylinders of 27 tracks, 107 sectors 29729.3MB in 659 cyl groups (32
c/g, 45.14MB/g, 5632 i/g) super-block backups (for fsck -F ufs -o b=#) at: 32, 92592,
185152, 277712, 370272, 462832, 555392, 647952, 740512, 833072,  925632, 1018192,
1110752, 1203312, 1295872, 1388432, 1480992, 1573552, 1666112, 1758672, 1851232,
```