

**NetWorker for DIGITAL UNIX**  
**Version 5.2**  
AA-00000-TE

# **SingleServer**

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**Software:** NetWorker Version 5.2

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# Chapter 1

## NetWorker SingleServer

### Preface

This document describes the functionality of NetWorker SingleServer, the installation process for NetWorker SingleServer, and the set up required to use NetWorker SingleServer to perform a backup or restore.

### Related Information

The NetWorker SingleServer documentation set includes:

- *NetWorker SingleServer for DIGITAL UNIX Systems*
- *NetWorker for DIGITAL UNIX Release Supplement and Installation Guide*
- *NetWorker for DIGITAL UNIX Administrator's Guide*
- *NetWorker for DIGITAL UNIX Disaster Recovery Guide*
- *NetWorker for DIGITAL UNIX Release Notes*
- *NetWorker Read This First*

You can view the documentation directly from the CD-ROM or copy the files onto your system. The NetWorker distribution files include Acrobat Reader software. The documentation files are in PDF format and are located in the NetWorker documentation directory on the CD-ROM.

Use Adobe Acrobat Reader to view or print PDF versions of NetWorker SingleServer documentation. If you do not already have Acrobat Reader installed on your system, it is available for free download at <http://www.adobe.com>.

### Overview

NetWorker SinglerServer is a graphical utility that backs up and recovers local files on a single machine to local backup media. It is a subset of NetWorker for DIGITAL UNIX®.

NetWorker SinglerServer protects your data by automating the day-to-day process of backing up the server. NetWorker SinglerServer offers functionality similar to the multi-client NetWorker products, except that it supports a single client. When NetWorker SinglerServer is installed on a machine, the machine becomes a client of itself.

NetWorker SinglerServer is shipped with preconfigured settings that provide you with the ability to start backing up files immediately.

The full version of NetWorker backs up and restores files on single machines as well as multiple machines across a TCP/IP network. See *NetWorker for DIGITAL UNIX Administrator's Guide* for a more complete description of NetWorker for DIGITAL UNIX for multi-client systems.

### Benefits of NetWorker SingleServer

Unlike standard UNIX backup utilities, such as tar, cpio, dump/restore, or vdump/vrestore, NetWorker provides easy-to-use user interfaces for saving and restoring data and for performing system administration tasks.

Other features of NetWorker SinglerServer include:

- Easy to use preconfigured settings
- Label templates for electronically labeling tapes
- The ability to perform unattended backups
- Predefined backup schedules
- Preconfigured policies for managing backed-up files
- Preconfigured directives that assist you in streamlining backups
- Notification of NetWorker activity
- Easy file recovery

## Differences in NetWorker SingleServer

The information in the NetWorker documentation set applies to NetWorker SingleServer with the following exceptions:

- All references to network-wide backups do not apply because NetWorker SingleServer backs up a single local machine.
- All references to more than one client do not apply because the NetWorker SingleServer backs up a single machine and the machine is, in effect, a client of itself.
- All references to creating new configurations do not apply.
- NetWorker SingleServer does not support NFS file systems.
- All references to autochangers or silos do not apply.
- All references to archiving, cloning, and Hierarchical Storage Management (HSM) do not apply.
- All references to the Save Set Consolidation feature do not apply.
- All references to cluster client support do not apply.
- All references to NetWorker run as a cluster server do not apply.
- All references to storage nodes do not apply.

## Registering NetWorker Products

The Enabler Code for NetWorker SingleServer is:

**878409-4b6bcc-5f478f**

For instructions on how to enable, register, and authorize your NetWorker product, see the *NetWorker for DIGITAL UNIX Release Supplement and Installation Guide*. To register your NetWorker products and obtain authorization codes, email, fax, or mail your registration form to DIGITAL.

**Email:** *networker@mail.dec.com*

**Fax:** (603) 884-3920

**Mail:** Digital Equipment Corporation  
8 Cotton Rd.  
Nashua, NH 03063  
Attn: Obligation Management

## Installing NetWorker SingleServer

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### Installing NetWorker SingleServer

For details on installing NetWorker SingleServer, please see the *NetWorker for DIGITAL UNIX Release Supplement and Installation Guide*.

### Starting NetWorker SingleServer

Installing the NetWorker Server subset automatically starts the NetWorker daemon. To start the NetWorker SingleServer graphical user interface (GUI), enter the following command (as root user):

```
# nwadmin
```

The NetWorker Administrator SingleServer Main window is displayed. For details on using the GUI to perform backup and recovery operations, see the “Backup and Recovery with NetWorker Client Software” section in Chapter 5 of the *NetWorker for DIGITAL UNIX Administrator’s Guide*.

### Configuring the NetWorker Server

NetWorker SingleServer is shipped with preconfigured settings (defaults) for your NetWorker server. From the Administrator window, use the pull-down menus to configure elements that are unique to your environment, such as the device that you will use to store your backups.

Refer to the *NetWorker for DIGITAL UNIX Administrator’s Guide* for more details about the windows available from the pull-down menus in the Administrator window. You can also click the Help menu item to access online help for each window and topic.

The following sections describe the NetWorker Administrator window and some of the windows available from the pull-down menus on that window.

#### Administrator Main Window

The Administrator window supplies information about your NetWorker server. It contains the name of your server, how long it has been running, the number of backup sessions, and the number of recovery sessions.

#### Devices Window

NetWorker SingleServer allows you to back up to only one device; autochangers and/or silos are not supported.

If the default device name is not the one available on your system, you need to replace it. To delete a device, open the Devices window and select Devices from the Media menu. In the Devices window, click Delete and then click



Apply. To create a device, click Create, enter the name of the device and the media type, and then click Apply. The device you create in the Devices window will display in the Main window in the Devices display.

### **Servers Window**

The Servers window displays the name of your server and the version of NetWorker SingleServer that you are running. To open the Servers window, select Server Setup from the Server menu. You can only change the Server parallelism attribute, which has a maximum setting of 2. The Sessions per device attribute will always have the same setting as the Server parallelism attribute. There is no limit on the number of administrators that you can enter. The number of Active devices cannot be changed.

### **Notifications Window**

NetWorker SingleServer has several different notification messages that inform you about NetWorker activity. The notifications appear in the display area of the Administrator window, and you can receive them by electronic mail. To open the Notifications window, select Notifications from the Customize menu.

### **Pools Window**

You cannot make any additions or changes in the Pools window. NetWorker SingleServer has only one preconfigured pool that can be used in single-server mode: Default. The additional preconfigured pools require multi-client NetWorker enablers.

### **Label Templates Window**

NetWorker SingleServer provides only one preconfigured label template that can be used in single-server mode (that is, Default) that corresponds to the Default pool. To open the Label Templates window, select Label Templates from the Customize menu. You can change the separators and the names of the templates, but you cannot create any new templates.

## **Selecting Backup Configurations**

NetWorker SingleServer provides preconfigured settings that you can select to back up your server. It is suggested that you make your selections in groups first, followed by schedules, policies, and then directives. These selections are performed in the Clients window.

## Clients Window

The following sections describe the configuration selections you make in the Clients window. Your NetWorker SingleServer server is a client of itself; you cannot create new clients.

### Groups

There is only one preconfigured group that can be used in single-server mode (that is, Default) to which your server belongs. To automate the default group, you can use the Autostart buttons in the Groups window. To open the Groups window, select Groups from the Customize window. You can change the Start time attribute, but you cannot change Client retries or create any new groups. At a minimum you must enter the Start time for your backup and enable the group.

### Schedules

Select one of the five preconfigured schedules that can be used in single-server mode for your backups. To open the Schedules window, select Schedules from the Customize menu. In the Schedules window, you can set up the backup levels on a daily, weekly, or monthly schedule. You can modify the existing schedules, but you cannot change their names or add new ones.

### Policies

Select one of the five preconfigured policies for your backed up data. The browse policy determines how long the file index will contain a browseable entry. The retention policy determines how long the file information will remain in the media index. To open the Policies window, select Policies from the Customize menu. You can modify the existing policies, but you cannot change their names or create new ones.

### Directives

Select one of the preconfigured directives. Directives contain instructions to assist the backup process, such as compressing the data or skipping over core files during backup. You cannot change the names or create any new directives.

## Setting Up SingleServer as a Client of a Remote Server

If the system is to be backed up as the client of a remote NetWorker server, you must update a local file: */nsr/res/servers*.

NetWorker UNIX clients use the *servers* file in the */nsr/res* subdirectory to determine whether a NetWorker server is authorized to back up the client's data. If you want this client to back up to other NetWorker servers, you must

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## NetWorker SingleServer

add the names of the NetWorker servers to this file. The file is limited to one server name per line. If you do not have the *servers* file, you can create it in */nsr/res* using your preferred editor.

Make sure the *servers* file on a client contains both the short name and the long name of any server you want to use to back up that client's data. For example, a NetWorker server named *mars* in the *oak.com* domain should have the following names on the NetWorker client:

```
mars
```

```
mars.oak.com
```

After you save your changes to the *servers* file, you must restart the NetWorker Remote Exec Service (*nsrexecd* daemon) to ensure that your changes take effect. To restart, use the following commands (as root user):

```
# nsr_shutdown
```

```
# nsrexecd
```

## Chapter 2

# NetWorker for Multi-Client Networks

DIGITAL offers NetWorker for backing up a network of systems. Depending upon your needs, this product will back up just a few systems or hundreds of systems on a single network. NetWorker can be activated by purchasing and enabling the NetWorker software.

### Features of NetWorker for Multi-Client Networks

The following describes the features and benefits of the multi-client NetWorker product:

- On-line backup
- Storage Nodes are special remote NetWorker clients with local remote storage devices. To offload the NetWorker server, data is routed to the storage node directly without the data first going to the NetWorker server. The Storage Node only operates devices; it does not have other NetWorker server functions.
- Cluster server features in Trucluster™ environments. The cluster server failover feature enables a NetWorker server to relocate between nodes in a cluster in the event of a system failure. NetWorker cluster server works in concert with TruCluster software to maintain access to NetWorker databases and devices on shared SCSI buses. This functionality requires Power Edition.
- Parallel streaming supports up to 32 concurrent backup/recover sessions (64 with Power Edition) on the server. This scales upwards as Storage Nodes are added.
- Concurrent device support using up to 16 backup devices simultaneously, including multiple autochangers (32 with Power Edition) on the server. This scales upwards as Storage Nodes are added. Workgroup Edition provides support for two storage devices (only autochangers with 1-8 slots may be configured).
- Autochanger capability enables hands-free, automated data protection using a wide variety of autochangers. Modules are licensed according to the number of slots configured in the robotic devices.
- Silo Software Modules enable hands-free automated data protection using a wide variety of silo modules and are licensed by the number of media (volumes) they will manage inside the silo.

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## NetWorker for Multi-Client Networks

- Archiving to expand NetWorker into a full-featured storage management platform through the addition of the NetWorker Archive Module.
- Hierarchical Storage Management (HSM) to expand NetWorker into a full-featured storage management platform through the addition of the NetWorker HSM Module. HSM allows for automatic migration of files from disk to another storage medium (for later retrieval), based on a set of rules, in order to conserve network storage resources.

HSM is not supported in a TruCluster environment.

- Easy backups, archive, HSM, restore, retrieve and fast file location operations by users and administrators.
- Media management index (up to one terabyte) for tracking media
- Simultaneous backup of multiple local and remote file systems to reduce backup time.
- Supports raw disk, file, tape, or optical disk as backup media.
- Support for data compression and encryption
- Local system administration from graphical user interface and/or command line.
- Remote system administration from native client graphical user interface and/or command line.
- Ability to schedule backups by group, system, or file-system granularity.
- Supports multiple media pools
- Enhanced security option
- DIGITAL UNIX C2 interoperability
- Configuration reports
- Savegroup control for stopping and restarting backups
- Clone (duplicate) backup savesets
- Concurrent recovery for multiple clients
- Reads ANSI tape labels
- Recover by saveset
- Client-side support for TruClusters
- Immediate save and immediate recover for high-speed device support to reduce overhead and increase speed. This functionality requires Power Edition.
- Optional online backup of Oracle®, SAP R/3 on Oracle, Informix®, Exchange and SQL Server.
- Staging, based on policies, moves data at the save set level from one medium to another medium.

## Upgrading to NetWorker

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- SNMP Module supports an enterprise system management strategy by providing seamless integration of NetWorker for DIGITAL UNIX with HP® OpenView™ Network Node Manage and Solstice Site/Domain Manager.
- Version 5.2 is Year 2000 compliant.

The NetWorker server software handles backup, archive, HSM, and restore requests issued by systems running NetWorker client software. The server software also contains device and configuration files that control all backup and restore operations.

In save and archive operations, the NetWorker client software reads files and file systems and sends the data to the NetWorker server or storage node. During restore and HSM operations, the client software allows the user to select files and request those files. The server automatically recycles backup (but not archive) media.

Additional information about DIGITAL products and services can be found on the web at <http://www.digital.com> and in Software Product Description (SPD) 50.98.xx.

## Upgrading to NetWorker

If you would like to upgrade from NetWorker SingleServer to NetWorker for Multi-Client Networks, contact your DIGITAL representative. Upgrading to NetWorker is as easy as loading the appropriate enabler code(s), shutting down the system, and then restarting the NetWorker daemons. You do not have to install new software subsets.

Refer to the Software Product Description (SPD) for NetWorker for information about the licenses required for NetWorker and the devices and jukeboxes that are supported.