



# Cluster Platform 15K/9960 System

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## Recovery Disks Guide

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# Preface

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This guide contains an overview of the Cluster Platform 15K/9960 recovery disk and a procedure on how to recover the management server. To use this guide, you must have prior experience installing the Solaris™ operating environment and must have Sun™ service training.

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## Using UNIX Commands

This document might not contain information on basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices.

See one or more of the following for this information:

- *Solaris Handbook for Sun Peripherals*
- AnswerBook2™ online documentation for the Solaris operating environment
- Other software documentation that you received with your system

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# Typographic Conventions

Typeface	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
<b>AaBbCc123</b>	What you type, when contrasted with on-screen computer output	% <b>su</b> Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this. To delete a file, type <code>rm filename</code> .

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# Shell Prompts

Shell	Prompt
C shell	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#



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## Related Documentation

**Note** – Before you attempt to install the Cluster Platform 15K/9960 system, you must read the Late-Breaking News document. You should also obtain the latest version of all of Cluster Platform 15K/9960 system documents, which are available at:

[http://www.sun.com/products-n-solutions/hardware/docs/Integrated\\_Platforms/index.html](http://www.sun.com/products-n-solutions/hardware/docs/Integrated_Platforms/index.html)

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Application	Title	Part Number
Release Notes	<i>Cluster Platform 15K/9960 System Release Notes</i>	816-3541
	<i>Cluster Platform 15K/9960 System Late-Breaking News</i>	816-3540
Site Preparation	<i>Cluster Platform 15K/9960 System Site Planning Guide</i>	816-3537

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# Cluster Platform 15K/9960 System Recovery Disks

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The recovery disks enable you to replace the factory-installed Cluster Platform 15K/9960 software environment on the management server in the event of a system disk failure.

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## Contents of the Recovery Disks

The Cluster Platform 15K/9960 system media kit contains a bootable CD and a recovery DVD that are used for restoring the system software. The DVD contains the following software:

- Solaris™ 8 10/01 operating environment
- Solaris DiskSuite™ 4.2.1 software with patches
- Sun Cluster™ 3.0 Update 1 software with the appropriate patches
- Solaris JumpStart™ software environment
- Sun™ Management Center 3.0 update 2 with help desk
- AnswerBook2™ 1.4.4 software
- Apache 1.3 server software
- VERITAS Volume Manager 3.1.1 software

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## Before You Use the Recovery Disks

Before you attempt to restore the management software environment, you must know your system configuration information and the state of your system backups. For information about the configuration, refer to the *Cluster Platform 15K/9960 System Site Planning Guide*.

Your system configuration information must include the following:

- System name
- IP address
- Annex port name or number
- Time zone
- Name service
- Subnet information
- Ethernet addresses

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**Note** – When you installed the management server for the first time, you should have created a back-up copy of the `/jumpstart/Files/JumpStart.conf` file. After you recover the management server, you must install the backup copy of the `/jumpstart/Files/JumpStart.conf` file to restore the system variables.

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## Using the Recovery Disks

This section includes procedures for recovering the management server. The recovery disks are intended only for recovering from a disaster. Do not use the recovery disks for installation and configuration of the management server or cluster nodes.



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**Caution** – Initiate a recovery only at the direction of technical support. Because the recovery results in a generic, unconfigured system, you must restore all site-specific configuration files from backup data.

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## ▼ To Use the Recovery Disks

The following procedure contains examples of the output from the recovery scripts. Certain values such as IP addresses and host names are examples only. Your system will have different values.

1. **Log in to your admin station as the superuser.**
2. **Use the following command to access the management server console through the terminal concentrator:**

```
# telnet terminal_concentrator_name 5001
```

3. **In the console window, press Ctrl+] to enter the telnet command mode, as indicated by the `telnet>` prompt.**
4. **Use the following command to access the OpenBoot™ PROM (OBP) prompt:**

```
telnet> send brk
```

5. **Insert the Installation CD into the DVD-ROM drive.**
6. **Boot the system from the CD:**

```
ok boot cdrom
```

The system will prompt you for the Solaris installation information.

7. **Press 1 for initial install.**

## 8. Type Y to format the boot disk.



---

**Caution** – In this procedure, you are not performing a generic Solaris software installation. You must ensure that you format the boot disk properly. Do not accept the default formatting scheme.

---

```
The default root disk is /dev/dsk/clt0d0.  
The Solaris installer needs to format  
/dev/dsk/clt0d0 to install Solaris.
```

```
WARNING: ALL INFORMATION ON THE DISK WILL BE ERASED!
```

```
Do you want to format /dev/dsk/clt0d0? [y,n,?,q]: y
```

```
NOTE: The swap size cannot be changed during filesystem layout.
```

## 9. Enter the swap slice size.

```
Enter a swap slice size between 352MB and 34729MB, default = 512MB [?] 1024
```

## 10. Press N when prompted to begin the swap slice at the beginning of the disk.

```
The Installer prefers that the swap slice is at the beginning of the  
disk. This will allow the most flexible filesystem partitioning later in the  
installation.
```

```
Can the swap slice start at the beginning of the disk [y,n,?,q] n
```

## 11. Press 1 when prompted to place the swap slice at cylinder 0.

```
WARNING: Placing the swap slice at a cylinder location other than cylinder 0  
requires expert knowledge about disk layout. This choice may affect disk layout  
choices later in the installation.
```

```
Enter a starting cylinder between 0 and 24257, default = 0 [?] 1
```

**12. Press Y to confirm the choices.**

```
You have selected the following to be used by the Solaris installer:
```

```
Disk Slice : /dev/dsk/clt0d0  
Size      : 1024 MB  
Start Cyl. : 1
```

```
WARNING: ALL INFORMATION ON THE DISK WILL BE ERASED!
```

```
Is this OK [y,n,?,q] y
```

The system is rebooted at this point. Then, the Solaris WebStart installation begins.

**13. Answer the WebStart questions as in the following example.**

Some of the information that appears between the user input lines have been left out to simplify the example.

Consult your network administrator about specifying a naming service. If you use a name service, you must modify the `/etc/nsswitch.conf` file on the management server so that “files” appears before any other name service.

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**Note** – The two cluster nodes are automatically configured *not* to support a naming service. This default configuration avoids the need to rely on external services:

---

```
Welcome to the Web Start Solaris Command Line installation!

The following questions will gather information about this system.
This information will be used to configure:
    Network
    Name Service
    Date and Time
    Root Password
    Power Management
<Press Return to continue> Return

Please wait while the system information is loaded...

Is this machine networked (y/n) [n]? y

Would you like to configure using DHCP [n]? n

Enter host name []: host_name

Enter this machine's IP Address []: IP_address

Enter the subnet netmask [255.255.255.0]: netmask

Enable IPv6 [n]: n

Please enter the number corresponding to the type of name service you would
like [5]: 5

Please enter the number corresponding to your router discovery method [1]: 2

Router Address []: IP_address
```

- 14. Select a method for specifying the time zone.**
- 15. Select the appropriate time zone region.**
- 16. Select the appropriate time zone.**
- 17. Specify date, time, root password, then confirm the settings.**
- 18. Select CD as the installation media.**



**19. Insert the Cluster Platform 15K/9960 recovery DVD into the DVD-ROM drive, then press Return to start the recovery process.**

**20. Select the Cluster Platform 15K/9960 flash archive.**

```
Select one or more Flash archives to install.
[ ] 0 f15k9960ms
Select which Flash archive(s) you would like to install

Enter the number corresponding to a Flash archive to view its information.
Enter n when finished. To enter a different network file system path, enter
B to go back [n] 0

Content name: catfishms
Path: /cdrom/f15k9960ms
Toggle catfishms [n]? y
Select one or more Flash archives to install.
[X] 0 f15k9960ms

Enter the number corresponding to a Flash archive to view its information.
Enter n when finished. To enter a different network file system path, enter
B to go back [n] n

You selected the following Flash archives for initial install:
CD /cdrom/f15k9960ms
<Press Return to continue> Return

To select additional Flash archives, please specify the media where the
archives are located.

Media:
1. CD (already selected)
2. Network File System
3. HTTP
4. Local Tape
5. None - Archive Selection Complete
Media [5]: 5
```

## 21. Select manual layout of the boot disk:

```
The system is being initialized, please wait...
Select which disks you want to lay out the file systems on.
Available Disks:
  Disk      Size
  clt0d0    17269 MB
  clt1d0    17269 MB

Enter 'y' to layout file systems on the specified disk.  This will erase all
existing data on the disk.  Enter 'n' to leave the disk unmodified.
  Layout file systems on disk clt0d0 (bootdisk) (y/n) [y]? y
Layout file systems on disk clt1d0 (y/n) [n]? n

The Solaris Installer is determining size requirements based on your choices,
please wait...
The swap partition was not created on the first available cylinder.  This is
required for autolayout.  Manual layout of the filesystems is required.  This
layout must be done on the cylinder level.

<Press ENTER to continue> Return
```

## 22. Modify the boot disk partition table:

```
File System operations:
1. Print the current partition table
2. Modify a disk's partition table
3. Done
  Select the number corresponding to a file system operation, or 'Done' to
  proceed with the install [3]: 2

Available disks:
1. clt0d0
  swap 1026 MB 446 Cyls
2. clt1d0 Not Selected
3. Done
  Select a disk to modify, or Done to return to the previous menu [3]: 1
```

### 23. Modify the boot disk for the Solaris DiskSuite software partition:

```
Disk Name      c1t0d0
TotalSpaceCyl  7506
Used Space Cyl 446
Free Space Cyl 7060
```

```
#  Slice Name  Start Cyl  Size Cyl  Minimum Size Cyl
0.  Unused
1.  swap       1 Cyl      446 Cyls  446 Cyls
3.  Unused
4.  Unused
5.  Unused
6.  Unused
7.  Unused
8.  Done
```

```
Select a slice to modify, or Done to return to the previous menu [8]: 7
Enter new slice name: SDS
Enter new start cylinder [0]: 447
Enter new slice size (in Cyls) [5]: Return
```

## 24. Modify the root partition.

For the new start cylinder, add 1 to the Used Space Cyl value.:

```
Disk Name      c1t0d0
TotalSpaceCyl  7506
Used Space Cyl  451
Free Space Cyl  7055

#  Slice Name  Start Cyl  Size Cyl  Minimum Size Cyl
0.  Unused
1.  swap       1 Cyl     446 Cyls  446 Cyls
3.  Unused
4.  Unused
5.  Unused
6.  Unused
7.  /SDS       447 Cyl   5 Cyls   0 Cyls
8.  Done

Select a slice to modify, or Done to return to the previous menu [8]: 0
Enter new slice name: /
Enter new start cylinder [0]: 452
Enter new slice size (in Cyls) [5]: 7054

Disk Name      c1t0d0
TotalSpaceCyl  7506
Used Space Cyl  7505
Free Space Cyl  1

#  Slice Name  Start Cyl  Size Cyl  Minimum Size Cyl
0.  /          452 Cyl   7054 Cyls  0 Cyls
1.  swap       1 Cyl     446 Cyls  446 Cyls
3.  Unused
4.  Unused
5.  Unused
6.  Unused
7.  /SDS       447 Cyl   5 Cyls   0 Cyls
8.  Done

Select a slice to modify, or Done to return to the previous menu [8]: 8
```

## 25. Confirm the boot disk modifications, and start the installation:

```
Available disks:

1.  c1t0d0
   /      16229 MB  7054 Cyls
  swap  1026 MB   446 Cyls
  /SDS   11 MB     5 Cyls

2.  c1t1d0  Not Selected
3.  Done
    Select a disk to modify, or Done to return to the previous menu [3]: 3

File System operations:
1.  Print the current partition table
2.  Modify a disk's partition table
3.  Done
    Select the number corresponding to a file system operation, or 'Done' to
    proceed with the install [3]: 3

The following items will be installed:
  CD  /cdrom/f15k9960ms
    Enter 'y' to accept these values and start the installation, or 'n' to
    return to disk selection to make changes (y/n): y
Installing...

Extracting archive(s)
|-1%-----25%-----50%-----75%-----100%|
Installation details:

      Product                Result      More Info
1.  Solaris Flash archive(s)  Installed  Available
2.  Done
    Enter the number corresponding to the desired selection for more
    information, or enter 2 to continue [2]: 2

<Press Return to reboot the system> Return
```

## Completing the Recovery Process

After the management server software image is restored, you must configure the system to match your environment. Refer to the *Cluster Platform 15K/9960 System Installation Guide* for information on how to customize the management server.

