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Disk Mirror Guide for CU Common Core

OSS-RC NBI R7

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1 About This Document

1.1 Purpose

The document describes how to deploy the disk mirror solution in OSS-RC NBI R7 system and how to perform a disk recovery by it.

1.2 Target Group

This document is written for the following group of personnel:

- Unix system administrators.
- Application administrators.
- System integrators.
- Support functions.
- It is assumed that the user of this document:
  - Is familiar with Sun Servers and window-based computer interfaces.
  - Is familiar with the UNIX operating system.
  - Has experience in system administration tasks and a familiarity with the installation, configuration and operation of the OSS-RC NBI software.

1.3 Typographic Conventions

Table 1 Typographic Conventions

Type	Description	Convention
User Input	A command that you must enter in a Command Line Interface (CLI) exactly as written.	**`cd $HOME`**
Command Variables	Command variables, the values of which you must supply.	***`<home_directory>`***
GUI Objects	GUI objects, such as menus, fields, and buttons.	On the **File** menu, click **Exit**.
Key Combinations	Key combinations.	Press **Ctrl+X** to delete the selected value.(1)
System Elements	Command, parameter, program, path, and directory names.	The files are located in `E:\Test`. The files are located in `etc/opt/ericsson/bin`. (2)

Type	Description	Convention
Output Information	Text displayed by the system	`System awaiting input`
Code Examples	Code examples	`stat char* months[]=\` `{"Jan","Feb"}`(3)

(1) The plus sign (+) indicates that you must press the keys simultaneously.
(2) The use of the forward slash (/) is for Unix systems, PC systems use the backslash (\).
(3) The back slash (\) is used to show where long lines are split.

2 Preparations

1. NBI Server should contain at least 4 hard disks. Different hard disk capacities are needed according to different Sun server types:

V440/V445 4*73G disks

V890 4*146G disks

3 Disk Mirror Solution Overview

The Disk Mirror solution is to solve the problem that NBI system will stop working and can't be recovered easily if any hard disk crashed. The Solaris Volume Manager (SVM) is selected as the solution, which is integrated with the Solaris OE since Solaris™ 9 and provides several types of RAID configurations varying degrees of availability, capacity, and performance. RAID 0+1 with four disks is selected as the solution implementation of NBI R7.

The SVM overall solution for four disks is shown as below.

SVM uses virtual disks to manage physical disks and their associated data. In SVM, a virtual disk is called a volume. For RAID 0+1 model, RAID 0 volume is as a sub-mirror, directly mapping to a slice of a physical hard disk. And RAID 1 volume is as a mirror, composed of two RAID 0 volumes and make them being mirrored with each other. By following the diagram below to mirror all slices of two physical hard disks, the whole file system will be mirrored.

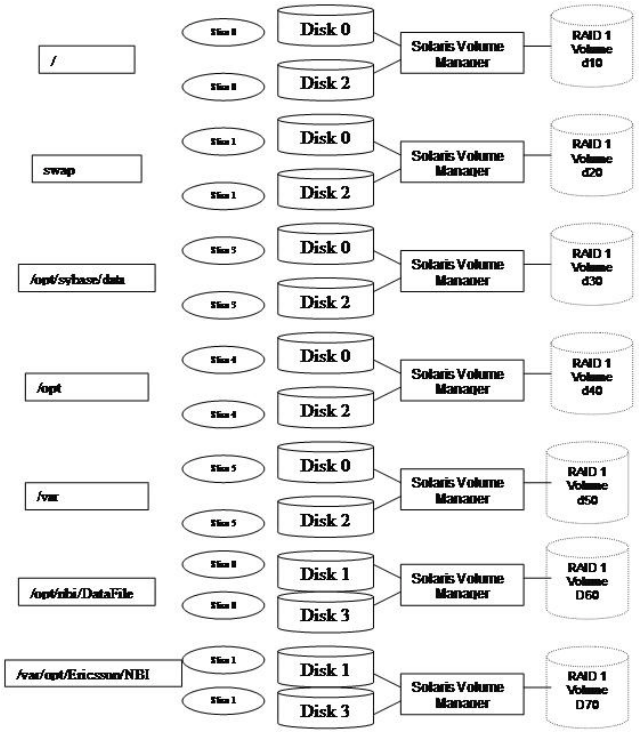

Figure 1 SVM solution overview

After the solution deploy, two mirrored pairs formed, Disk 0 mirroring Disk 2, Disk 1 mirroring Disk 3. For Disk0 and Disk2, five mirrors are used, corresponding to five file systems as above diagram. And two mirrors are used in Disk 1 and Disk 3.Below is the mapping of disk label and disk name. All the discussion on disk number is based on below table.

Please note that disk label sometimes is shown as “c0” instead of “c1” in some severs. However user can identify the disk numbers by the “t” number from the Disk label. For example, t1 means Disk 1; t2 means Disk 2 and etc.

Table 2

c1t0d0	c1t1d0	c1t2d0	c1t3d0
Disk0	Disk1	Disk2	Disk3

4 Disk Mirror Deployment

4.1 Deployment Overview

This chapter is to identify the Disk mirror deployment position in the whole NBI server installation. The deployment is distributed through the whole NBI