13000 Appliance Replacing Hard Disk Drives

Important - Make sure that you are electromagnetically grounded when performing the following procedures. ESD (electrostatic discharge) can damage the appliance.
Removing a Hard Disk Drive

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Ejector handle</td>
</tr>
<tr>
<td>2</td>
<td>Hard drive casing</td>
</tr>
</tbody>
</table>

**To remove a hard disk drive:**

1. On the hard disk drive, push left on the ejector handle to unlock the drive.

   ! **Important** - Do not use the ejector handle to remove the hard disk drive from the appliance. If you pull too hard on the ejector handle, it can break off from the hard drive casing.

2. Hold the hard drive casing and remove the hard disk drive from the appliance.
Installing a Hard Disk Drive

Insert the replacement hard disk drive into the appliance.

To install a hard disk drive:
1. Hold the hard drive casing and insert the replacement hard disk drive into the slot.
2. Push the extraction handle to close it.
   The hard disk drive clicks into position.

Hard Disk Drives RAID Monitoring

The appliance does RAID1 mirroring across two hard disk drives using software RAID. This lets the appliance continue to work if there is a hard disk failure.

The mirror rebuild is automatic. The two hard disk drives must be the same type.

First Boot Up

At first boot up, wait for two hours to let the hard disks fully synchronize. If you reboot the appliance before the hard disks are synchronized, the synchronization starts again at the next boot.

To monitor the RAID status of the disks from the CLI:
1. Log in to the appliance.
2. Use one of these tools to monitor the RAID status of the hard disks:
   - Run `raid_diagnostic`
     This shows data about the RAID and hard disks, with the percent synchronization done.
     DiskID 0 is the left hard disk. DiskID 1 is the right hard disk.

     ```
     Expert@cpmoduleJ#raid_diagnostic
     Raid Status:
     VolumeID:0 RaidLevel: RAID-1 NumberofDisks:2 raidsize:465GB State:DEGRADED flags: ENABLED RESYNC _IN_PROGRESS
     DiskID:0 DiskNumber:0 Vendor:ATA ProductID:<HDD Model> Size:465GB State:ONLINE flags:None
     ```
   - Run `cpstat os -f raidInfo`
     This shows almost the same information as the `raid_diagnostic` command in tabular format
To monitor the RAID status of the hard disks using SNMP:

Set up SNMP traps to send information about the RAID.
Use OID: 1.3.6.1.4.1.2620.1.6.7.7

For more about configuring the SNMP settings on the appliance, see the Gaia or SecurePlatform Administration Guide for the applicable version.

To hot swap a hard disk drive:

⚠️ Important - Make sure that there is at least one fully synchronized hard disk in the system.

1. When the system is up, remove the failed hard disk.
2. Wait 15 seconds.
   The appliance recognizes that you removed a hard disk.
3. Insert a new hard disk. If necessary, you can reboot the appliance with one hard disk and install the new hard disk later.
   The system automatically adds the new hard disk to the RAID configuration.