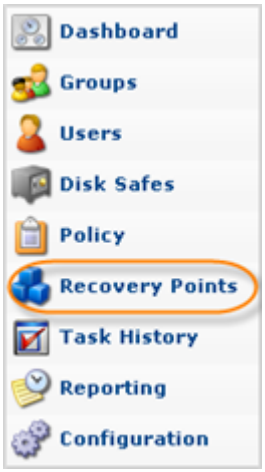
Launching Bare-Metal Restore

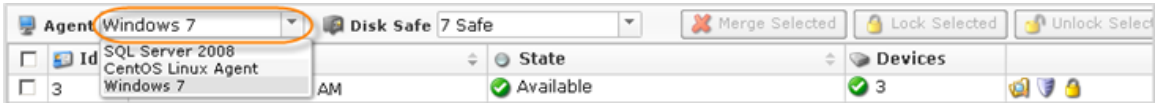
Follow the instructions below to start the Bare-Metal Restore of selected Recovery Points.

> **Note**
> The process is the same for all Boot methods:
>
> - Live CD
> - PXE Network Boot

1. Click on "Recovery Points" in the Main Menu to open the "Recovery Points" screen.

Enterprise Edition	LiveCD Server, PXE Server
	

2. Select an Agent from the drop-down menu located on the "Recovery Points" list toolbar.

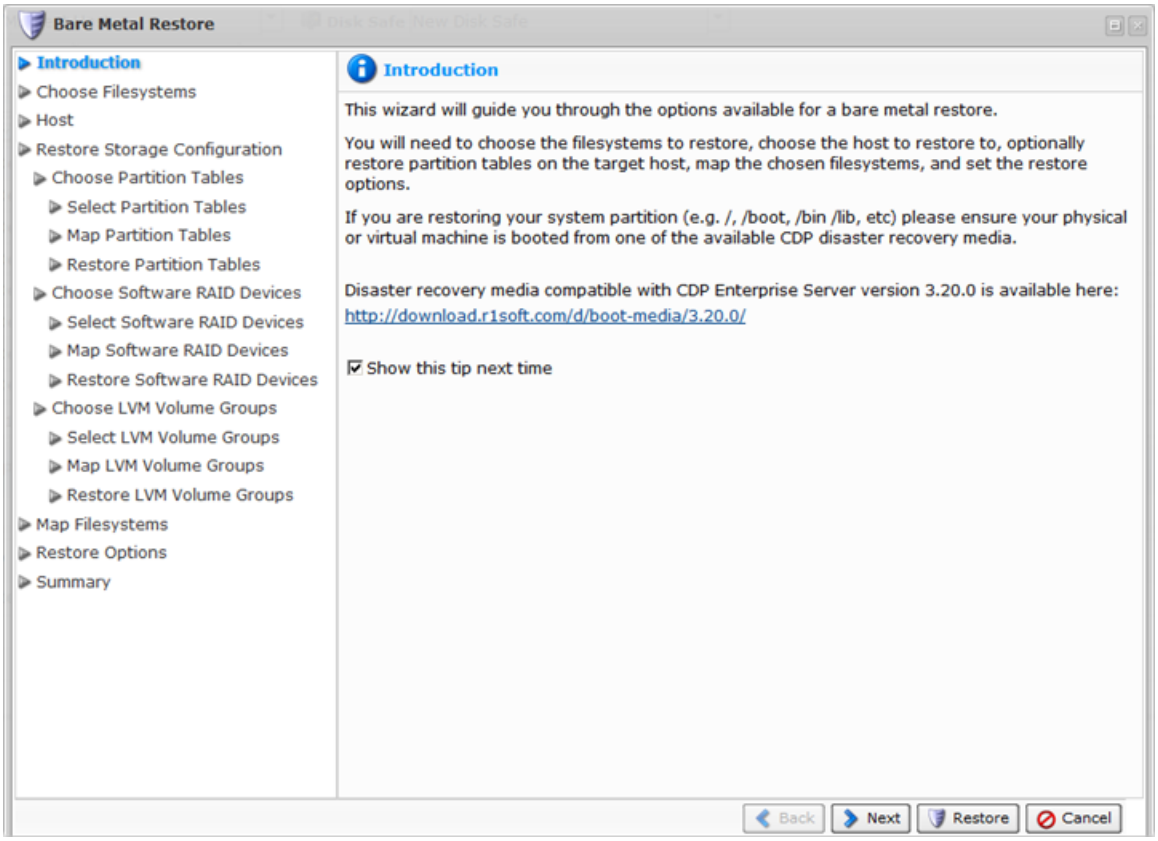


Select a Disk Safe from the drop-down menu located on the "Recovery Points" list toolbar.

3. In the "Recovery Points" list, click on the "Bare-Metal Restore" icon in the "Actions" column for the Recovery Point from which you are going to restore.

> **Tip**
> To find a Recovery Point, you can use the Basic and Advanced List Filters. See Customizing the Recovery Points List.

4. The "Bare-Metal Restore" window opens.



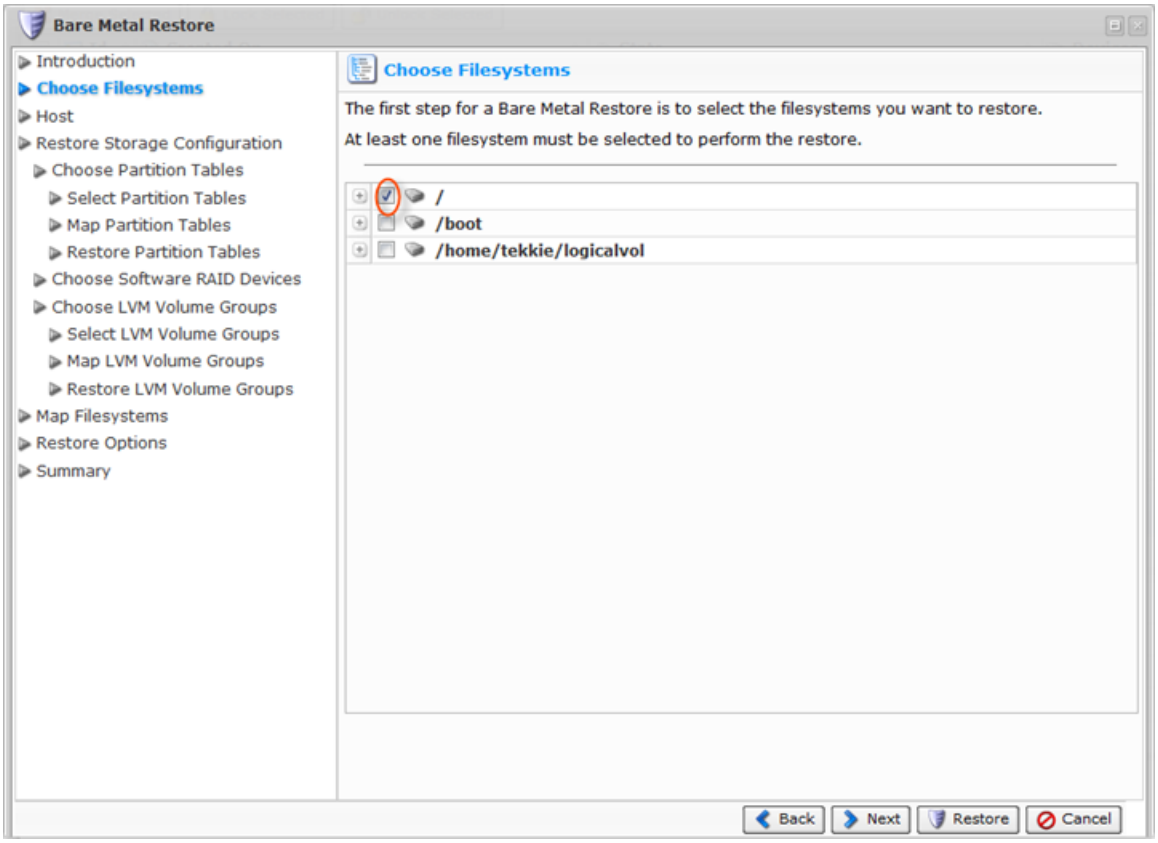
5. Look through the information on the Introduction screen and click "Next."

6. The next screen lists each file systems and swap device (if Linux) available in the recovery point.

Here select the file system you want to restore. All available file systems are listed. At least one must be selected by clicking on the appropriate checkbox.

Tip
To display file system properties, click on the "Plus" icon in front of the file system name. The following data is provided for each file system:

- Content Type - Either "MBR" (Master Boot Record) or a file system of special type. Most common file system types are NTFS (Windows) or EXT3 (Linux).
- Device Path - The path used by the operating system to identify the hard disk or partition. In Windows, it looks like \\?\Volume2cb24442-fd22-11df-b57d-806e6f6e6963. In Linux, it looks like /dev/hda or /dev/sda. The Device path saved in the Recovery Point refers to the Device that this Recovery Point was created for. If you are performing Bare-Metal Restore to alternate Agent, the Device Path will be different.
- Size - Size of the hard disk or partition in gigabytes.
- Block Size - Minimum amount of space that can be allocated on the hard disk. Depends on the partition size and file system used, and equals to multiple of 512 bytes.
- Total Blocks - The total number of blocks (see above) available for data on this partition.
- Allocated Blocks - The number of blocks allocated for data at the time Recovery Point was created.



Click "Next" to proceed to the following step.

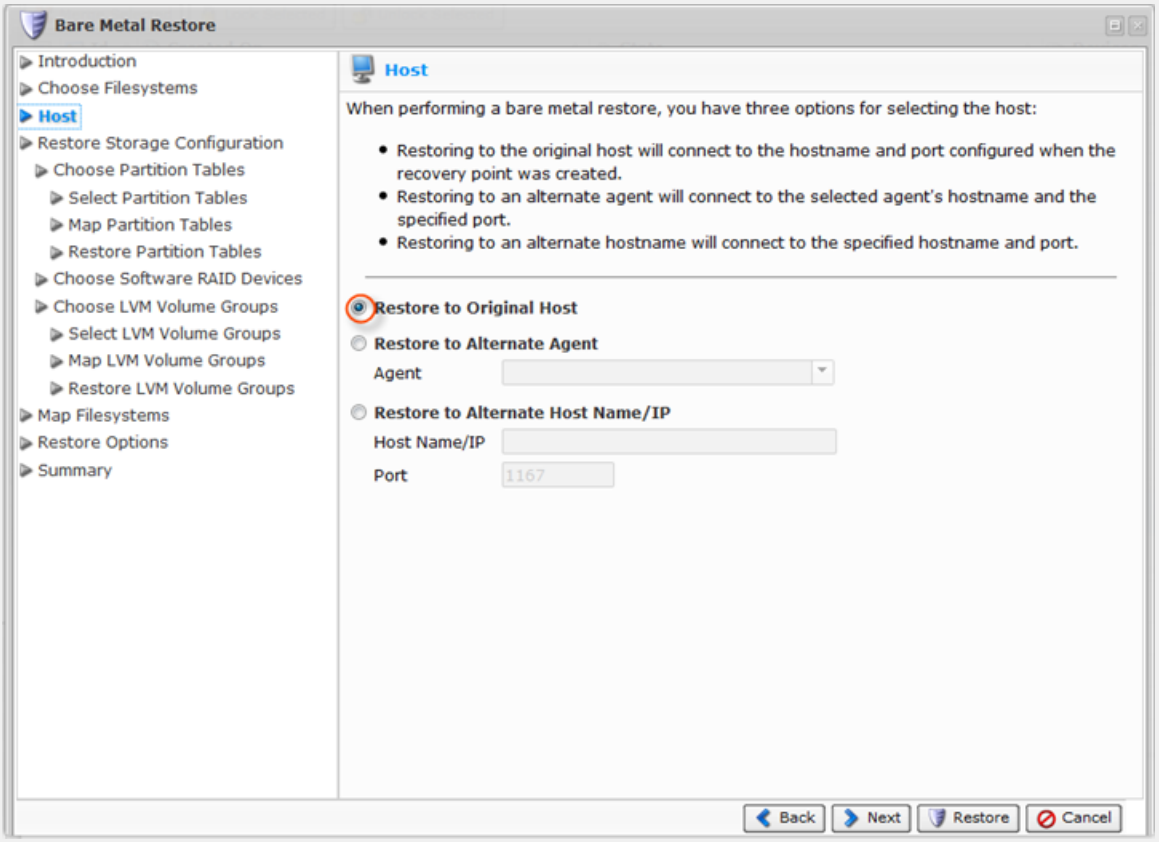
7. On the next screen, select one (1) of the following options:

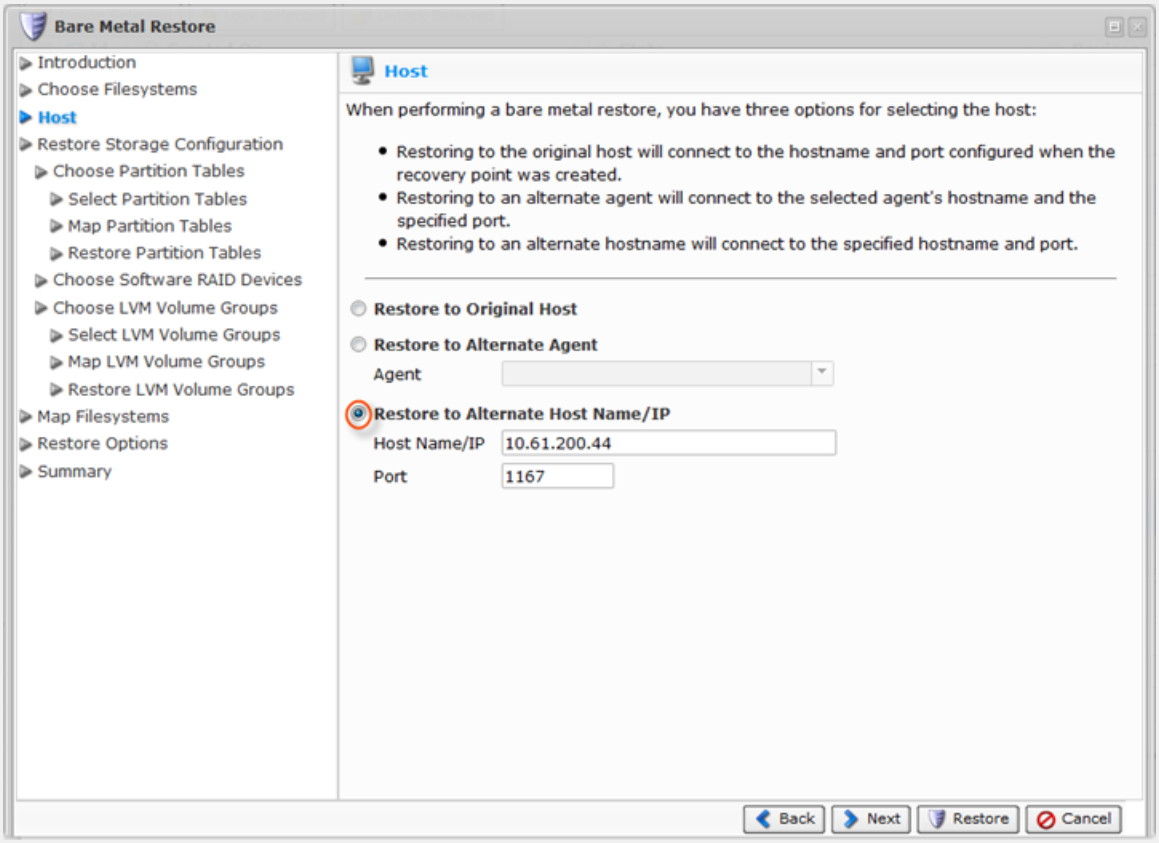
- Restore to Original Host - The same Agent Name/IP address and port as the original Agent. Connects to the Agent name and uses the port configured when the Recovery Point was created.
- Restore to Alternate Agent - Connects to the selected Agent's hostname and the specified port. The Agent must have already been added to the system.
- Restore to Alternate Host Name/IP - Connect to the specified hostname and port. This option allows you to Restore to a Host with a Host Name/IP address different than the original Host. For example, if the PXE host has a different IP, specify the IP address.

To restore to the Agent where the system was installed previously, choose the first option (" Restore to Original Host"). This is the only option that makes sense when you perform Bare-Metal Restore using Server Live CD or Server PXE Boot.

If you chose to restore to an alternate Agent added to the system, select the second option (" Restore to Alternate Agent"). Then select the Agent from the drop-down list. The Agent must be running the R1Soft Backup Disaster Recovery Boot Media and should be known to the CDP Server. When a Host is booted into Disaster Recovery Media, no authentication will be required.

If you chose to restore to an alternate Agent not added to the system, select the last option (" Restore to Alternate Host Name/IP"). Then enter the Hostname or IP address of the alternate Agent. This option should be selected when you perform Bare-Metal Restore using Agent Live CD or Agent PXE Boot.

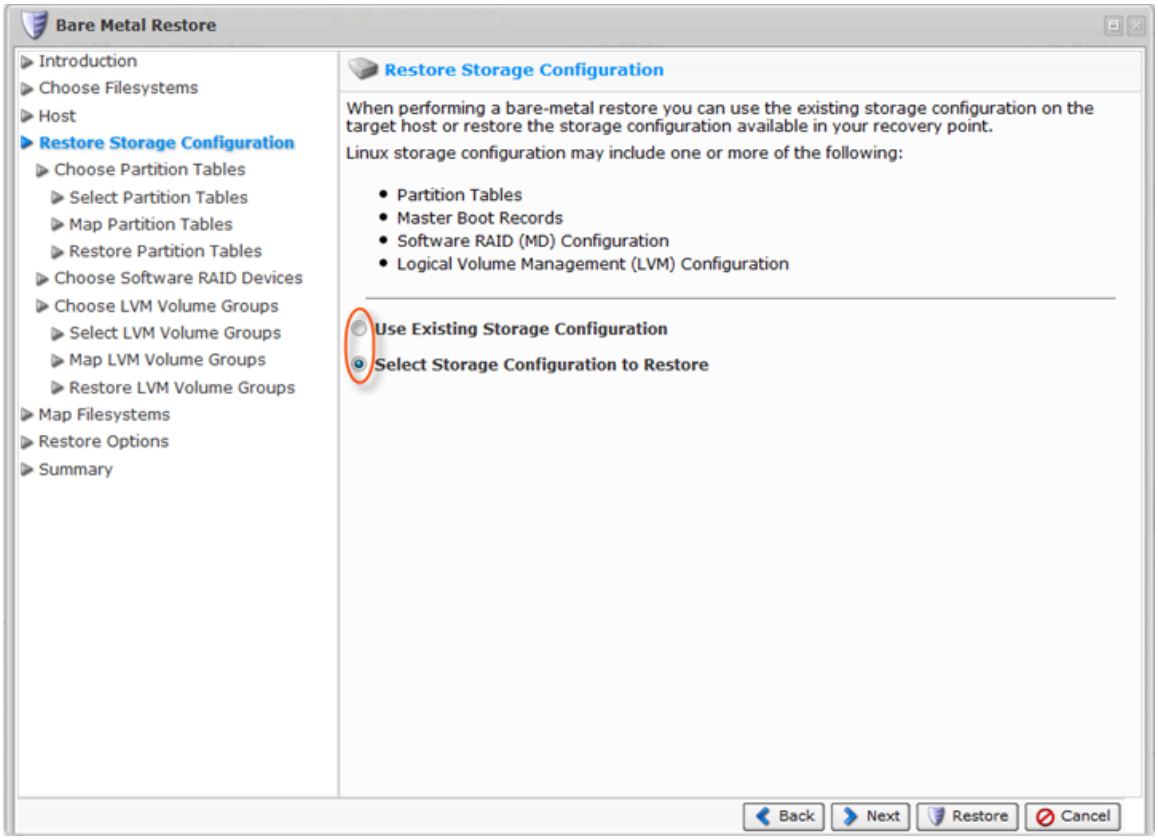
LiveCD Server, PXE Boot Server	

LiveCD Agent, PXE Boot Agent	

Click "Next" to proceed to the following step.

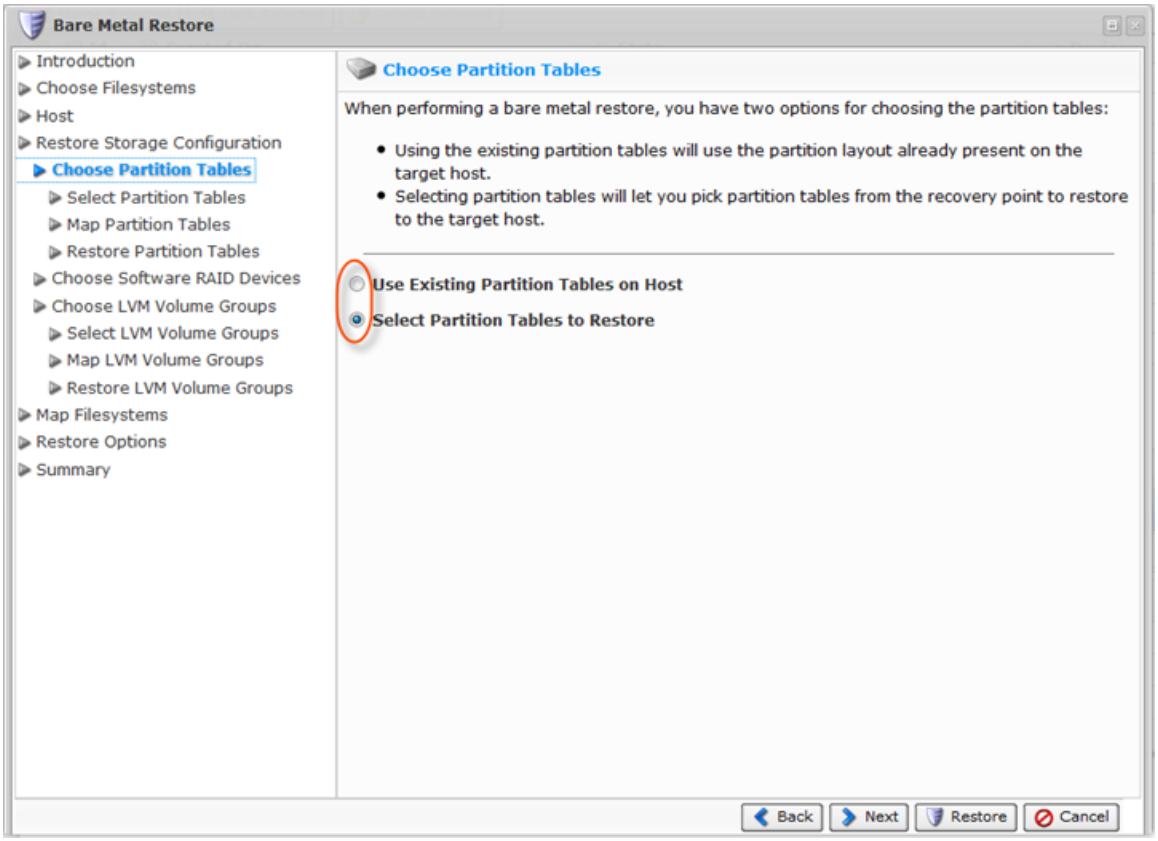
8. On the next screen, select one (1) of the following options:

- Use Existing Storage Configuration - Bare-Metal Restore will use the existing Storage Configuration. This option should almost never be used when performing Bare-Metal Restore.
- Select Storage Configuration to Restore - Selecting this option lets you pick Storage Configuration to restore to the target Agent. In most cases you should select this option.



9. On the next screen, select one (1) of the following options:

- Use Existing Partition Tables on Host - Bare-Metal Restore will use the partition layout already present on the target Agent. This option should almost never be used when performing Bare-Metal Restore.
- Select Partition Tables to Restore - Selecting this option lets you pick partition tables from the Recovery Point to restore to the target Agent. In most cases you should select this option.



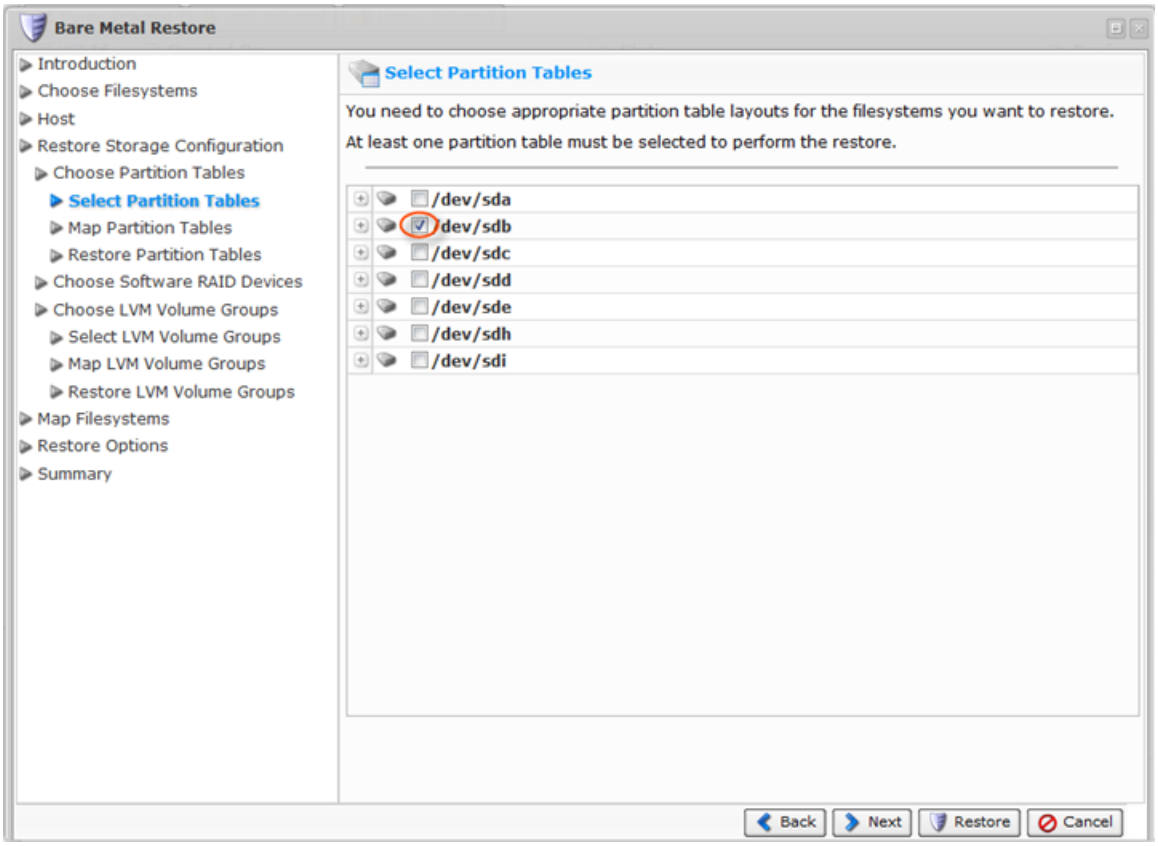
Click "Next" to proceed to the following step.

If you select the "Select Partition Tables to Restore" option, then three (3) additional steps arise:

- Select Partition Tables
- Map Partition Tables
- Restore Partition Tables

9.1 Selecting Partition Tables

Select the partition table layout(s) for the filesystems you want to restore.



Tip
To display the partition table properties, click on the "Plus" icon in front of the partition table's name.

- Content Type - Either MBR (Master Boot Record) or other special type of the partition.
- Size - Size of the partition table in gigabytes.
- Number Of Sectors - Shows the total number of partition table sectors.
- Sector Size - The value in bytes of the sector.
- Serial Number - Full serial number of the partition table.
- Partitions - The list of partitions allocated with the partition table.

Click "Next" to proceed to the following step.

9.2 Mapping Partition Tables

After choosing partition tables to restore, map the selected Partition Table(s) Recovery Points to physical Disks in the Target Agent. From the drop-down menu, select the physical Disks you are

going to restore to.

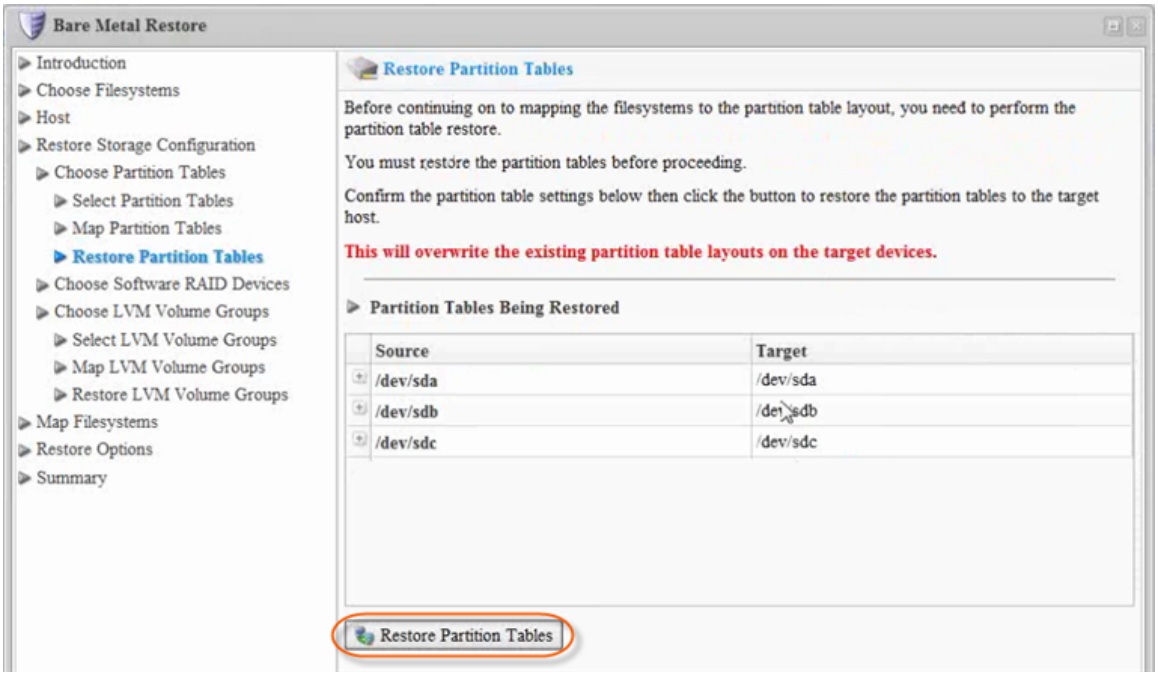
You are provided a table that allows you to map the chosen Partition Tables to physical Disks on the Target Agent. You can see as many lines in the table as the Partition Tables selected for restore. Each Partition Table must be mapped to a physical Disk on the Target Agent before proceeding.

After selecting the Disks, click on "Next" to proceed to the next page.

9.3 Restoring Partition Tables

Perform the partition table restore by clicking on the "Restore Partition Tables" button. Once confirmed, the Partition Table Restore will be initiated. A busy indicator will be displayed while the restore is in progress. Restoring the partition table should not take a lot of time because the partition table fits into one sector - 512 bytes.

> **Notice**
> Restored partition tables will overwrite the existing partition table layout on the target devices.

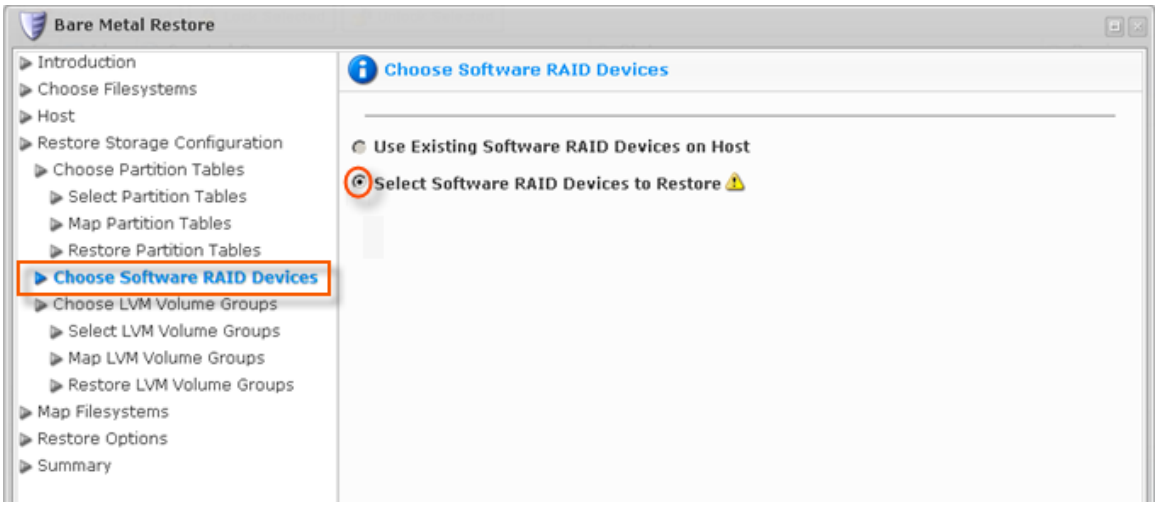


When the process is over, click "OK" in the notification pop-up.

Click "Next" to proceed to the following step.

10. On the "Choose Software RAID Device" screen, choose one (1) of the following options:

- Select Software RAID Device to Restore
- Use Existing Software RAID Device



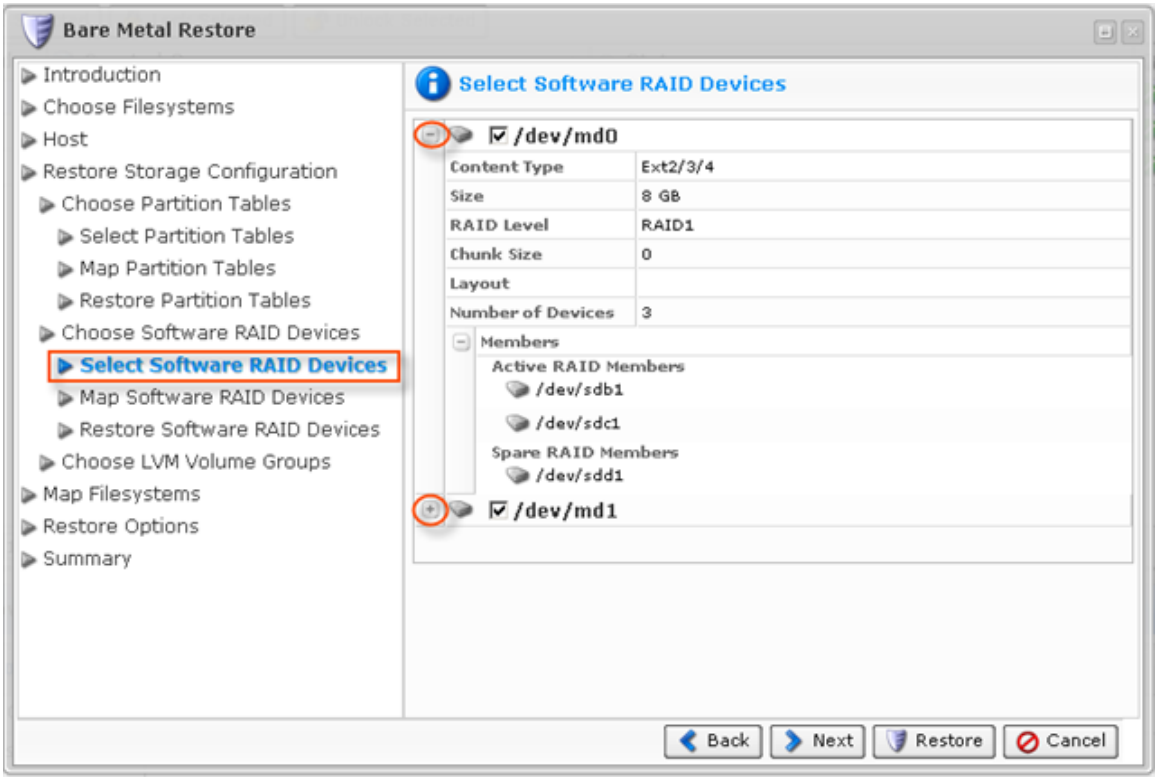
Click "Next" to proceed to the following step.

If you select the "Select Software RAID Device to Restore" option, then three (3) additional steps arise:

- Select Software RAID Device
- Map Software RAID Device
- Restore Software RAID Device

10.1 Select Software RAID Device

Select Software RAID Arrays to restore in the corresponding check box.


Bare Metal Restore
Introduction
Choose Filesystems
Host
Restore Storage Configuration
Choose Partition Tables
Select Partition Tables
Map Partition Tables
Restore Partition Tables
Choose Software RAID Devices
Select Software RAID Devices
Map Software RAID Devices
Restore Software RAID Devices
Choose LVM Volume Groups
Map Filesystems
Restore Options
Summary
Select Software RAID Devices
/dev/md0
Content Type
Ext2/3/4
Size
8 GB
RAID Level
RAID1
Chunk Size
0
Layout
Number of Devices
3
Members
Active RAID Members
/dev/sdb1
/dev/sdc1
Spare RAID Members
/dev/sdd1
/dev/md1
Back
Next
Restore
Cancel

Tip
Click the plus sign to see the details of a Software RAID Array.

The following information is available:

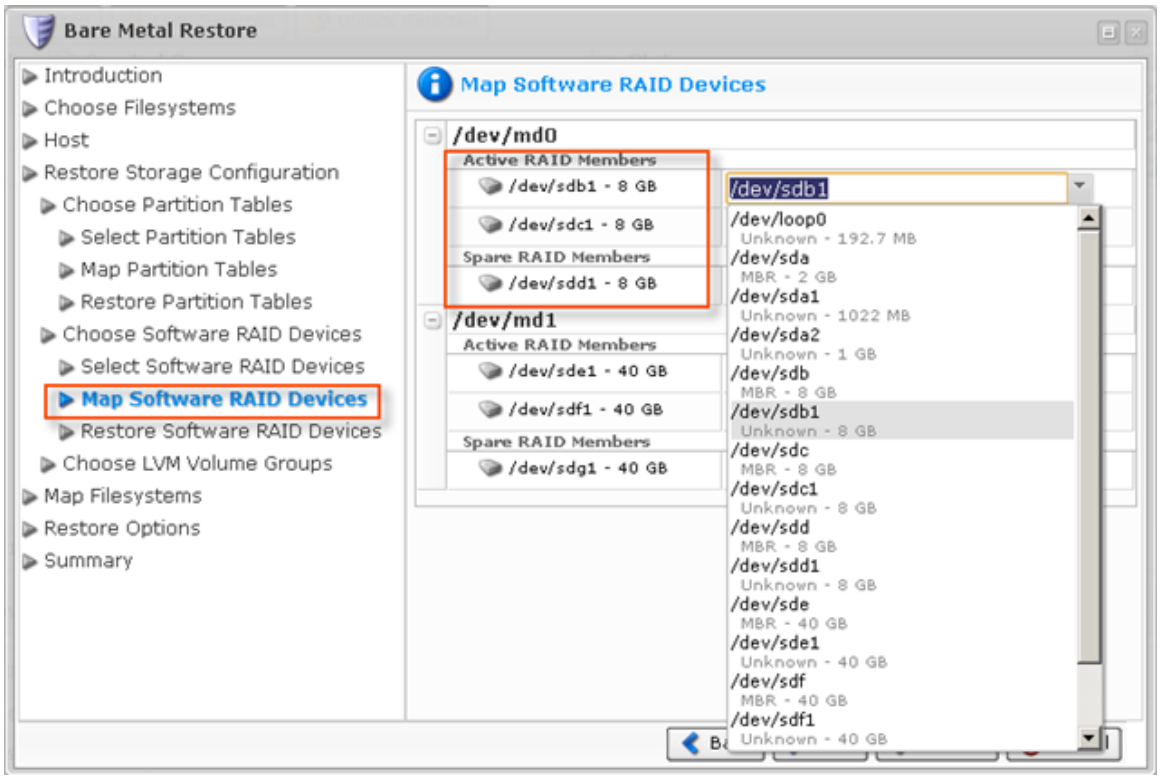
- Content Type
- Size
- RAID Level
- Chunk Size
- Layout
- Number of Devices
- Members

Click "Next" to proceed to the following step.

10.2 Map Software RAID Device

After choosing the Software RAID Arrays to restore, map them.

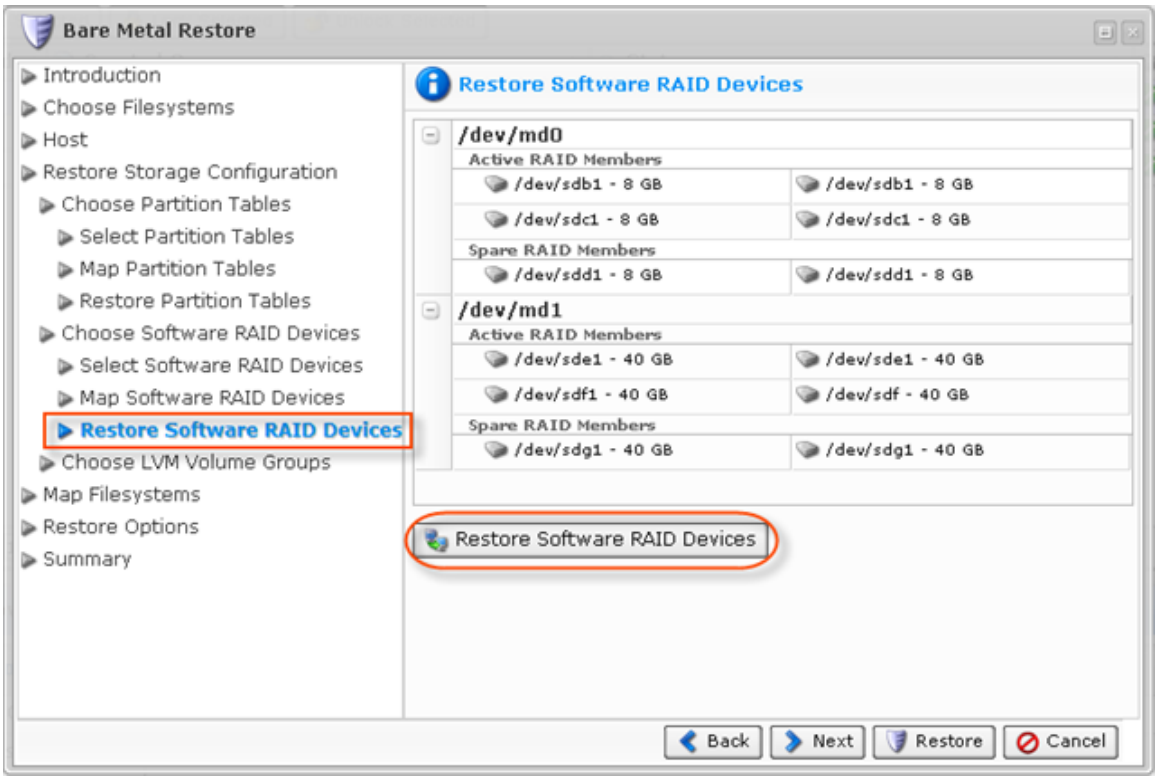
Notice
Mapping RAID arrays is hierarchical. Instead of mapping the actual RAID device (/dev/md0), you should map its active and spare members.



Click "Next" to proceed to the following step.

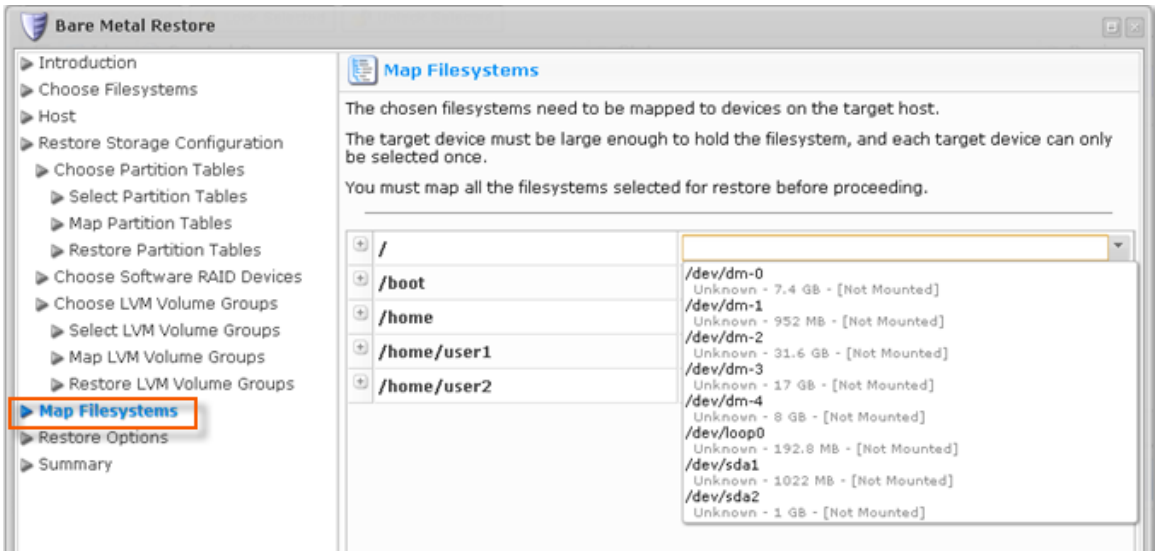
10.3 Restore Software RAID Device

When all the members are mapped, click the "Restore Software RAID Devices" button to launch the restore.



Click "Next" to proceed to the following step.

11. The following step requires you to map the chosen file systems to the devices on the target machine. From the drop-down menu, select destination devices for each source file system.



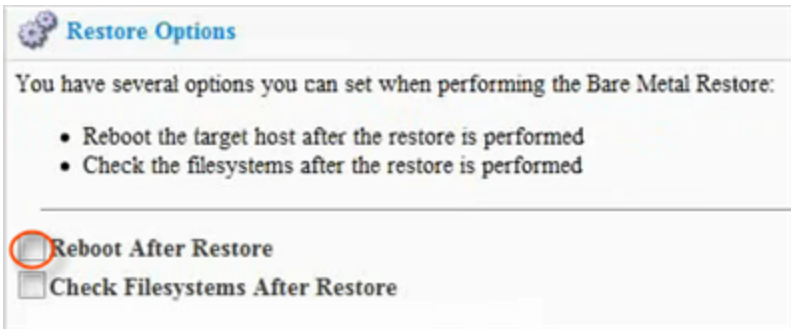
Notice
The target device must be large enough to hold the file system.

> **Notice**
> Each target device can only be selected once.

Click "Next" to proceed to the following step.

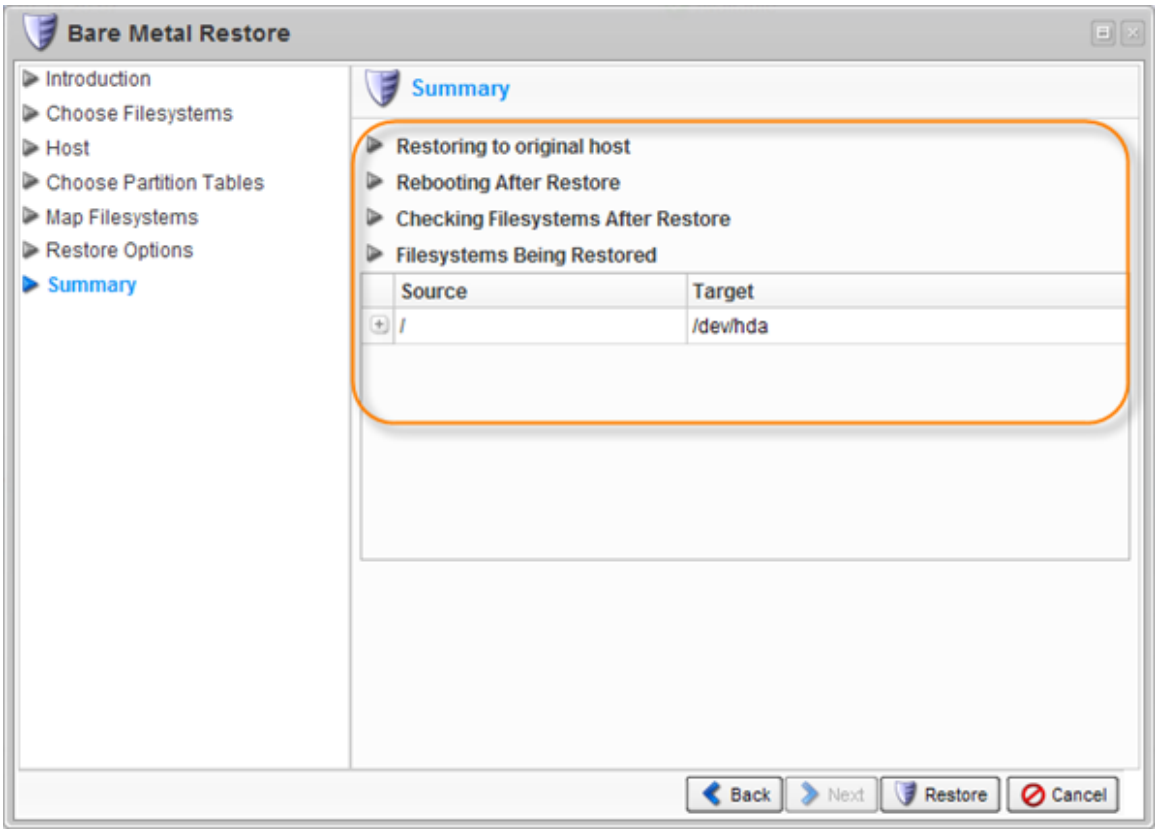
12. Then you need to define the following options:

- Reboot After Restore - Reboots the target host after the restore is performed. Select this checkbox to reboot your Agent after the Bare-Metal Restore is complete. Very useful option, since you have to reboot the target host after restore anyway.
- Check Filesystems After Restore - Checks the file systems after the restore is performed.



Click "Next" to proceed to the following step.

13. On the "Summary" page, you will need to confirm the selected Bare-Metal Restore options. Each selected file system is listed, along with the name of the target device it is being mapped to.



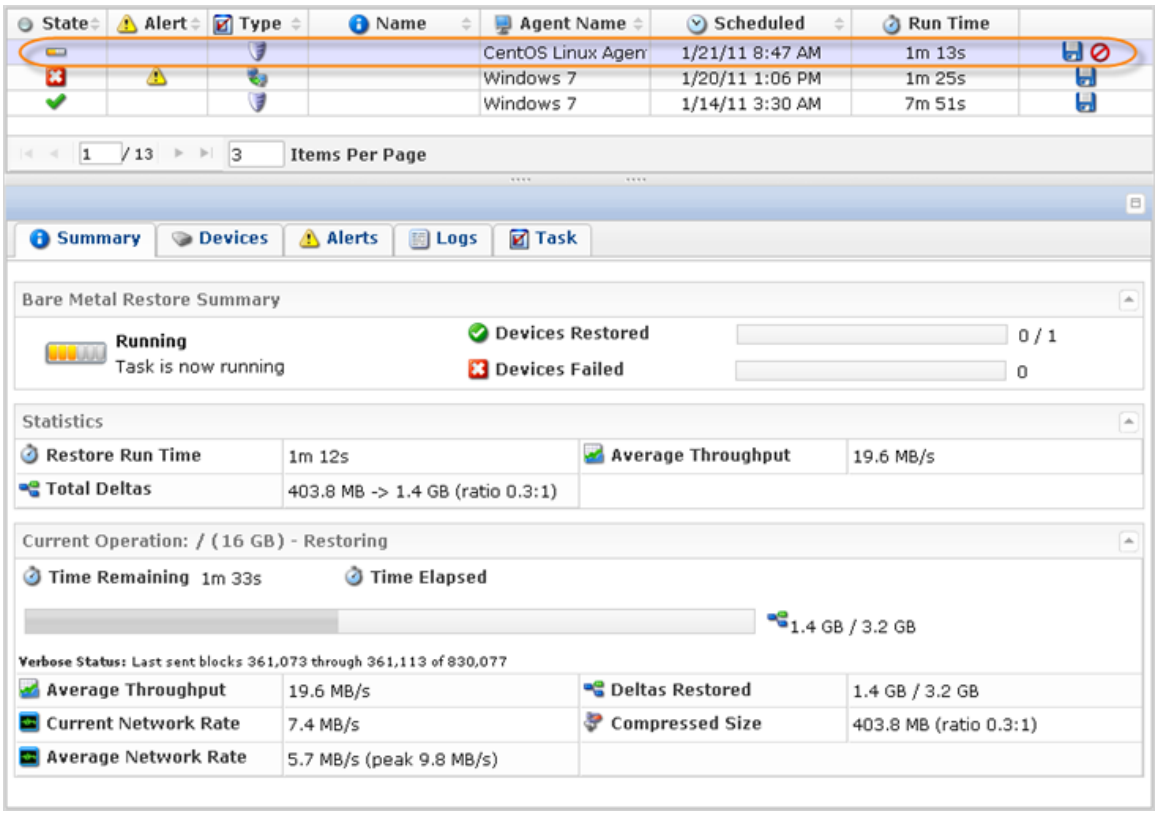
Click "Restore" to start the Bare-Metal Restore task.

14. The data Restore is initiated. Click "OK" in the notification pop-up.

> **Tip**
> The Task results can be sent via email as a Report. See Reporting.

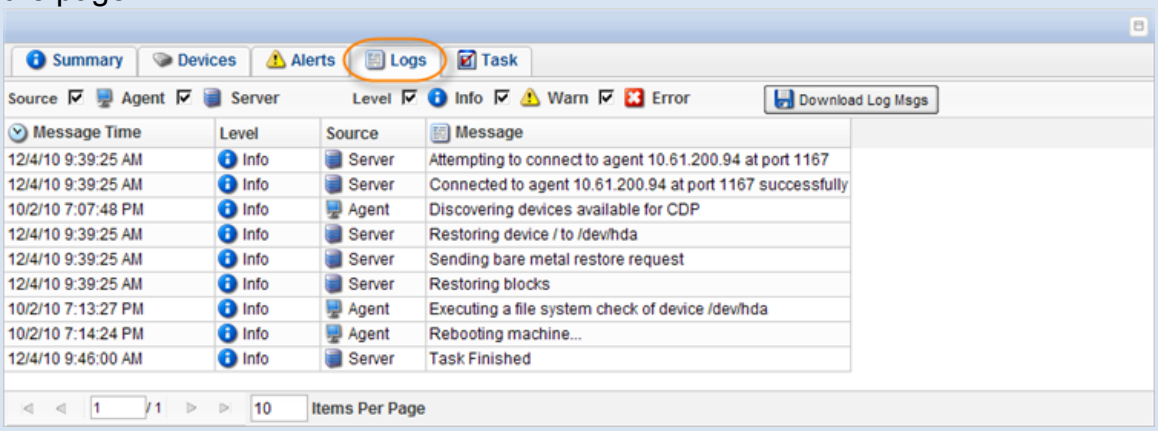
15. The Restore process starts and can take a while. You can go to the "Task History" screen to observe the task progress. See Accessing Task History.

The Task History page displays the State, Alert, Type, Progress percentage, and the Started time stamp of the Bare-Metal Restore process.



Note

You can find more information about the Restore process by reading the Log Messages. The Log Messages for the selected Task are displayed at the bottom of the page.



16. When the process is complete, you can reboot the server you just restored by pressing Ctrl-Alt-Del or by executing the reboot command in the root shell.

Notice

Make sure you eject the Disk from the CD-ROM drive so the server will boot from the hard Disk.

> **Note**
> If the Disk you used for your Bare-Metal Restore is larger than the Disk you backed up previously, the free space on the new Disk will remain free. You can create a new Partition in this space.