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Using VERITAS NetBackup DataCenter 4.5 with ESX Server

This technical note describes basic procedures for using VERITAS NetBackup DataCenter™ version 4.5 to backup VMware ESX Server™ files. The tasks required to use NetBackup DataCenter are described in the following sections:

- Setting Up the Server
- Setting Up the Unix Client
- Setting Up the Policy
- Setting Up a Tape Device
- Restoring a File

Setting Up the Server

To set up the NetBackup DataCenter server, perform the following:

1. Install the NetBackup DataCenter server application on a Windows Server of your choice.

   Refer to the VERITAS documentation for instructions for information on completing this task.

2. Download and install the latest Maintenance Pack (MP5) for the NetBackup DataCenter server. It can be found at:

   `http://seer.support.veritas.com/docs/260531.htm`

3. Prepare the ESX Server for the backup.

   a. Setup backup media (tape or disk).

   b. Run an inventory on the tape drive if necessary.

   c. Verify media sets are configured. This should have been done automatically.

   Note: Ensure you allow overwrite on the media in the tape drive. If the media is not blank and has existing data NetBackup DataCenter will not overwrite the data. For detailed tape drive setup please refer to Setting Up a Tape Device on page 5.

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Setting Up the Unix Client

To use NetBackup DataCenter version 4.5 as your backup tool, perform the following setup tasks on your ESX Server client.

1. Download the latest UNIX Client Maintenance Pack (MP5) and any patches that you need.

    This includes Linux support. From the VERITAS support web site:

    ```
    http://seer.support.veritas.com/docs/260536.htm
    ```

2. Install the UNIX client from the NetBackup DataCenter Unix and/or Linux CD-ROM.

    At your Linux command line, type the following:

    ```
    mount /mnt/cdrom
    ```

    ```
    cd /mnt/cdrom
    ```

3. Run the VERITAS UNIX Client installation script.

    Start the script, type at the command line:

    ```
    [root@esx044 cdrom]# ./install
    ```

    The following is a sample script with suggested responses:

    ```
    VERITAS Installation Script
    ```

    ```
    Copyright 1993 - 2002 VERITAS Software Corporation, All Rights
    Reserved.
    ```

    ```
    Installation Options
    ```

    ```
      1 NetBackup DataCenter
    ```

    ```
      2 NetBackup DataCenter Client Software
    ```

    ```
      3 NetBackup DataCenter Client Java Software
    ```

    ```
      q To quit from this script
    ```

4. Install the NetBackup DataCenter client software.

    Continuing with the installation script, select the following:

    ```
    Choose an option [default: q]: 2
    ```

    ```
    Do you want to install the NetBackup DataCenter client software
    for this client? (y/n) [y]
    ```

5. Install the Linux RedHat 2.2 Client

    Continue with the installation script, select the following:

    ```
    Enter the name of the NetBackup DataCenter server: <your server's
    host name>
    ```

    ```
    Enter the name of this NetBackup DataCenter client: <your client's
    host name>
    ```

    After you have entered the required information, the installer displays information, similar to the following:

    ```
    + /bin/cp ./bp /usr/openv/netbackup/bin/bp
    ```

    ```
    + /bin/cp ./bpcd /usr/openv/netbackup/bin/bpcd
    ```

    ```
    + /bin/cp ./bpdynamicclient /usr/openv/netbackup/bin/
    bpdynamicclient
    ```

    ```
    + /bin/cp ./bpjava-msvc /usr/openv/netbackup/bin/bpjava-msvc
    ```

    ```
    + /bin/cp ./bpjava-usvc /usr/openv/netbackup/bin/bpjava-usvc
    ```

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```
+ /bin/cp ./bpbkar /usr/openv/netbackup/bin/bpbkar

+ /bin/cp ./bpbackup /usr/openv/netbackup/bin/bpbackup

+ /bin/cp ./bprestore /usr/openv/netbackup/bin/bprestore

+ /bin/cp ./bplist /usr/openv/netbackup/bin/bplist

+ /bin/cp ./bpclimagelist /usr/openv/netbackup/bin/bpclimagelist

+ /bin/cp ./bpclntcmd /usr/openv/netbackup/bin/bpclntcmd

+ /bin/cp ./tar /usr/openv/netbackup/bin/tar

+ /bin/cp ./version /usr/openv/netbackup/bin/version

+ set +x

+ /bin/cp ./bphdb /usr/openv/netbackup/bin/bphdb

+ /bin/cp ./bpmount /usr/openv/netbackup/bin/bpmount

+ /bin/cp ./vnetd /usr/openv/bin/vnetd

+ /bin/cp ./vopied /usr/openv/bin/vopied

+ /bin/cp ./vauth_util /usr/openv/bin/vauth_util

+ /bin/cp ./vauth_test /usr/openv/bin/vauth_test

+ /bin/cp ./vauth_testd /usr/openv/bin/vauth_testd

+ /bin/cp ./vopie_util /usr/openv/bin/vopie_util

+ /bin/cp ./libVmangle.so /usr/openv/lib/libVmangle.so

+ /bin/cp ./libvnoauth.so /usr/openv/lib/libvnoauth.so

+ /bin/cp ./libvopie.so /usr/openv/lib/libvopie.so

+ /bin/cp ./libVcvcomb.so /usr/openv/lib/libVcvcomb.so

+ /bin/cp ./libubs.so /usr/openv/lib/libubs.so

+ /bin/cp ./libnbbeclass.so /usr/openv/lib/libnbbeclass.so

+ /bin/cp ./libnbbestdutl.so /usr/openv/lib/libnbbestdutl.so

+ /bin/cp ./libnbbedscomn.so /usr/openv/lib/libnbbedscomn.so

+ /bin/cp ./libdbsb.so /usr/openv/lib/libdbsb.so

+ /bin/cp ./merge_auth_templates /usr/openv/netbackup/bin/
merge_auth_templates

+ /bin/cp ./template.methods.txt /usr/openv/var/auth/
template.methods.txt

+ /bin/cp ./template.methods_allow.txt /usr/openv/var/auth/
template.methods_allow.txt

+ /bin/cp ./template.methods_deny.txt /usr/openv/var/auth/
template.methods_deny.txt

+ /bin/cp ./template.names_allow.txt /usr/openv/var/auth/
template.names_allow.txt

+ /bin/cp ./template.names_deny.txt /usr/openv/var/auth/
template.names_deny.txt


cp NB-Java.tar.Z /usr/openv/NB-Java.tar.Z

cp Linux_JRE.tar.Z /usr/openv/java/Linux_JRE.tar.Z
```

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```
cp libSigScheduleJNI250.so /usr/openv/lib/server/linux/
libSigScheduleJNI250.so

cp NB-Java.tar.Z /usr/openv/NB-Java.tar.Z

cp Linux_JRE.tar.Z /usr/openv/java/Linux_JRE.tar.Z

cp libSigScheduleJNI250.so /usr/openv/lib/server/linux/
libSigScheduleJNI250.so

Installing NB-Java.
```

6. Quit the installer:

    Continuing with the installation script, select the following:

    ```
    VERITAS Installation Script

    Copyright 1993 - 2002 VERITAS Software Corporation, All Rights
    Reserved.

            Installation Options

            1 NetBackup DataCenter

            2 NetBackup DataCenter Client Software

            3 NetBackup DataCenter Client Java Software

            q To quit from this script

    Choose an option [default: q]:<CR>
    ```

7. Expand the client file you downloaded in step 2. Type at the command line:

    ```
    tar xvf NB_CLT_45_5_M_260536.tar
    ```

8. Install the expanded files. Type at the command line:

    ```
    Run ../Vrts_pack.install
    ```

    Where `../` is the directory path you specified when the files were expanded from the tar file.

9. Enter the name of the update at the prompt.

    The installer lists the names of the updates available. The required name is marked as the only option. The installation then proceeds automatically.

Setting Up the Policy

Perform the following to set up the backup policy. Add a new backup policy for the client you added in the section, Setting Up the Unix Client on page 2.

1. Open the NetBackup DataCenter administration console.

2. Select **New Policy**.

    Right-click on policy in the left hand tree view and select new policy.

3. Enter a policy name and a policy type in the respective fields.

    Select **Standard** for UNIX or Linux.

4. Add the host machine.

    Click Add and enter the machine's hostname and hardware operating system type.

5. Enter the fully qualified path to the .dsk file you want to backup. For example

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```
/vmfs/vmhba0:0:0:0/foo.dsk
```

NetBackup DataCenter does not accept partial paths, such as, `/vmfs/` or `/vmfs/vmhba0:0:0:0`.

Click the small folder button on the right side to browse for a file:

Note: When browsing for a file to backup, the if the file is above 2gb in size it displays as 0K in the browse window. This is a problem specific to the NetBackup DataCenter product in Linux.

6. Choose **Full Backup** and leave the default backup time.

   The wizard prompts for information about type of backup and backup scheduling.

7. Initiate a backup.

   Right click on the policy you just created and select **Manual Backup**.

Setting Up a Tape Device

If you are running the NetBackup DataCenter Server in a virtual machine, perform the following steps to setup a tape device for NetBackup DataCenter 4.5.

1. Connect the tape device to the physical machine.

2. Setup the tape device so the virtual machine can see it.

3. Make sure the virtual machine's SCSI ID for the tape loader and tape drive match their physical SCSI IDs.

4. Download VERITAS tape drivers from their web site:

   ```
   http://support.veritas.com/menu_ddProduct_NETBACKUPDC.htm
   ```

5. Install the tape drivers after NetBackup DataCenter 4.5 has been installed and patched.

6. Run the storage device configuration wizard.

   The wizard configures the tape devices and performs an inventory of the media in the drive.

7. Enable **Allow Media Overwrite**.

   If the media you are using has data that NetBackup DataCenter recognizes, the default setting for NetBackup DataCenter does not write to the tapes. To change the default:

   a. Click on Host Properties.

   b. Expand the tree.

   c. Click on the Master Server icon.

   d. Locate your server in the right window.

   e. Right click your server.

   f.   Click Properties.

   g. Click Allow Media Overwrite.

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Restoring a File

Perform the following to restore a file you backed up using NetBackup DataCenter.

1. Choose **Start** > **Programs** > **VERITAS NetBackup DataCenter** > **Backup, Archive, Restore**.

2. From the screen that appears, choose **File** > **Select Files And Folders To Restore** > **From Normal Backup**.

3. From the same screen, choose **File** > **Specify NetBackup DataCenter Machines**.

4. From the new screen that appears, select Policy type **Standard**, if you are restoring to a UNIX/Linux based machine.

5. Verify that the source client is the same machine you backed up from.

6. Verify that the destination client machine is the client you want to restore the file to.

7. Verify that the server is the server you used for backup.

8. Start the restore.

   Select the **Restore** button on the left.