NetBackup BYO Universal Shares configuration steps, prerequisites, and hardware requirements

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Introduction

This article provides the following information for NetBackup 8.3 and NetBackup 8.3.0.1 users about using Universal Shares with a build-your-own (BYO) server:

- Configuring and using a BYO server for Universal Shares
- Universal Share BYO server prerequisites and hardware requirements
- Mounting a Universal Share created from the NetBackup web UI

For more information, see About Universal Shares in the *NetBackup 8.3 Administrator's Guide, Volume I*.

Configuring and using a BYO server for Universal Shares

The table below describes a high-level process for setting up a BYO server for Universal Shares. See the linked topics for more detailed information.

Table 1 Setting up a BYO server for Universal Shares

Step	Description
1	Configure a build-your-own (BYO) server: **1** Identify a machine. If it is not a NetBackup appliance, then choose a NetBackup MSDP server. **2** Make sure that the BYO server complies with prerequisites and hardware requirements. See "Universal Share BYO server prerequisites and hardware requirements" on page 4..
2	In the NetBackup web UI, create a Universal Share. See Create a universal share in the *NetBackup 8.3 Web UI Administrator's Guide*. **Note:** Universal shares created through the appliance web GUI cannot be managed (create/edit/delete) through the NetBackup web UI. You can still use the new policy type 'Universal-Share' to create protection point. Likewise, universal shares created through the NetBackup web UI cannot be managed through Appliance Web GUI.
3	Mount the Universal Share created from the NetBackup web UI. See "Mounting a Universal Share created from the NetBackup web UI" on page 5.
4	Configure a Universal Share backup policy. See one of the following topics from the *NetBackup 8.3 Administrator's Guide, Volume I*: ■ Creating a Protection Point for a NetBackup Appliance Universal Share ■ Creating a Protection Point for a Universal Share on a NetBackup MSDP storage server

Table 1 Setting up a BYO server for Universal Shares *(continued)*

Step	Description
5	Restore from a Universal Share backup. Besides offering an extremely fast data protection process, the Protection Point offers two powerful restore methods: Client-based restore ■ Data protected using a Protection Point (see step 4 in this table) is restored using the exact same method as restoring data from a standard client backup: ■ Restore to the original universal share. In this case, the original universal share must be present. Specify the universal share path as the restore destination and the media server where universal share resides as the client. However, for large data restores, consider restoring to an alternate location. ■ Restore to an alternate location. A standard NetBackup client must be installed on any system where the restore will be directed. Provisioned restore (Instant Access). ■ A Protection Point is a point-in-time (PIT) copy of the data as it existed on the Universal Share when any Protection Point was initiated. This PIT copy of the data can be exported as a separate network share of the Protection Point data. This PIT copy of the Projection Point is called a provisioned copy of the data. The data in this provisioned share is not necessarily connected to any data in the primary Universal Share. It can be used as an autonomous version of the PIT Protection Point data. Any changes to this provisioned copy of the data have no impact on data in the original Universal Share, nor does it have any impact on the source PIT copy of the data. The PIT copy can be mounted on the originating system where the Universal Share was previously mounted, or it can be provisioned on any other system that supports the mounting of a network share. In this sense, the NetBackup Protection Point provides a method of copy data management that offers you another powerful way of utilizing the data that is managed with NetBackup. The process of provisioning a Protection Point is performed using a NetBackup API. This API and all NetBackup APIs are described in the *NetBackup API Reference* documentation, located on the NetBackup master server (`https://<master_server>/api-docs/index.html`). It can also be found online.

Universal Share BYO server prerequisites and hardware requirements

The following are prerequisites for using the Universal Share build your own (BYO) server feature:

- The Universal Share is supported on MSDP build your own (BYO) storage server with Red Hat Enterprise Linux 7.6, 7.7, 7.8, or 7.9.
- The BYO storage server with NFS service installed.
- The BYO storage server has the NGINX version installed.
  - Installing NGINX from Red Hat Software Collections:
    - Refer to https://www.softwarecollections.org/en/scls/rhscl/rh-nginx114/ for instructions.
      Because the package name depends on the NGINX version, run `yum search rh-nginx` to check if a new version is available. (For NetBackup 8.3, an EEB is required if NGINX is installed from Red Hat Software Collections.)
  - Installing NGINX from the EPEL repository:
    - Refer to https://fedoraproject.org/wiki/EPEL for installation instructions of the repository and further information.
      The EPEL repository is a volunteer-based community effort and not commercially supported by Red Hat.
  - The NGINX version must be same as the one in the corresponding official RHEL version release. You need to install it from the corresponding RHEL yum source (epel).
  - Before you start the storage configuration, ensure that the new BYO NGINX configuration entry `/etc/nginx/conf.d/byo.conf` is included as part of the HTTP section of the original `/etc/nginx/nginx.conf` file.
  - If SE Linux has been configured, ensure that the `policycoreutils` and `policycoreutils-python` packages are installed from the same RHEL yum source (RHEL server), and then run the following commands:
    - `semanage port -a -t http_port_t -p tcp 10087`
    - `setsebool -P httpd_can_network_connect 1`

    Enable the `logrotate` permission in SE Linux using the following command:
    `semanage permissive -a logrotate_t`
- Ensure that the `/mnt` folder on the storage server is not mounted by any mount points directly. Mount points should be mounted to `/mnt` subfolders.

If you are configuring the universal share feature on BYO after storage is configured or upgraded without the NGINXx service installed, run the command:

```
/usr/openv/pdde/vpfs/bin/vpfs_config.sh --configure_byo
```

Table 2 Hardware configuration requirements for Universal Shares on a Build Your Own (BYO) server

CPU	Memory	Disk
■ Minimum 2.2-GHz clock rate. ■ 64-bit processor. ■ Minimum 4 cores; 8 cores recommended. For 64 TBs of storage, the Intel x86-64 architecture requires eight cores. ■ Enable the VT-X option in the CPU configuration.	■ 16 GB (For 8 TBs to 32 TBs of storage - 1GB RAM for 1TB of storage). ■ 32 GBs of RAM for more than 32 TBs storage. ■ An additional 500MB of RAM for each live mount.	Disk size depends on the size of your backup. Refer to the hardware requirements for NetBackup and Media Server Deduplication Pool (MSDP).

Mounting a Universal Share created from the NetBackup web UI

Choose the mounting procedure that matches the type of Universal Share you created.

Mount a CIFS/SMB Universal Share

To mount an SMB Universal Share using Windows Explorer

1. Log on to the Windows server, then navigate to the **Map a Network Drive** tool.
2. Choose an available drive letter.
3. Specify the mount path as follows:

   ```
   \\<MSDP storage server>\<export path>
   ```

   For example,

   ```
   \\server.example.com\mnt\vpfs_shares\3cc7\3cc77559-64f8-4ceb-be90-3e242b89f5e9
   ```

   You can find the MSDP storage server name and the export path from Universal share details page NetBackup web UI: **Storage > Universal Share**
4. Click **Finish**.

To mount an SMB Universal Share using Windows command prompt

1. Log on to the Windows server, then open a command prompt.
2. 2. Specify the mount path using the following command:

   `net use <drive_letter>:\\<MSDP storage server >\<export path>`

   For example: `net use <drive_letter>:\\<MSDP storage server >\<export path>`
3. Specify the mount path as follows:

   `\\<MSDP storage server>\<export path>`

   For example, \`net use Z:\\server.example.com\mnt\vpfs_shares\3cc7\3cc77559-64f8-4ceb-be90-3e242b89f5e9`

   You can find the MSDP storage server name and the export path from Universal share details page NetBackup web UI: **Storage > Universal Share**

Mount an NFS Universal Share

To mount an NFS Universal Share

1. Log on to the server as root.
2. Create a directory for the mount point using the following command:

   `#mkdir /mnt/<your_ushare_mount_point_subfolder>`
3. Mount the Universal Share using the following command:

   `#mount -t nfs <MSDP storage server>:<export path>-o rw,bg,hard,nointr,rsize=1048576,wsize=1048576,tcp,actimeo=0,vers=3,timeo=600 /mnt/<your_ushare_mount_point_subfolder>`

   For example:

   `#mount -t nfs server.example.com:/mnt/vpfs_shares/3cc7/3cc77559-64f8-4ceb-be90-3e242b89f5e9 -o rw,bg,hard,nointr,rsize=1048576,wsize=1048576,tcp,actimeo=0,vers=3,timeo=600 /mnt/<your_ushare_mount_point_subfolder>`

   You can find the MSDP storage server name and the export path from the Universal share details page in the NetBackup web UI: **Storage > Universal Share**