SAN and NAS Backup Solutions with Bacula Enterprise

**Enterprise products to optimize your network backup strategies**

Bacula Enterprise integrates easily with the high-end capabilities of the most popular NAS devices and fits efficiently in any SAN-based data management infrastructure.

Bacula Enterprise helps your organization tailor cost-effective and optimized storage protection solutions to get the most out of your SAN and NAS based infrastructure.

To meet the data protection needs of the organization, administrators will deploy Bacula Enterprise and select from a palette of high-end plugins including NDMP, Incremental Accelerator for NetApp and SAN Shared Storage. To meet the specific requirements of *Network Attached Storage (NAS) Disaster Recovery*, our all-in-one cost-effective NAS Backup Edition product is also available.
**Key Benefits**

- Restores efficiently Filers’ data and configuration
- Handles efficient and accurate ACLs restore
- 40% faster than NFS or CIFS
- Allows for instant disaster recovery
- Single file restore via NAS snapshots
- Supports Filer-to-Server mode
- Supports NetApp SnapMirror to Tape (SM-TAPE)
- Eases load on network and hardware

**NDMP plugin**

The *Network Data Management Protocol* (NDMP) is an industry protocol developed to ease the process of integrating backup and restore of NAS devices with data protection software such as Bacula Enterprise Edition.

NDMP backups can significantly outperform those run against mounted NFS/CIFS volumes, especially when dealing with millions of small files and ACLs. With the NDMP plugin, average backup speed is increased significantly and the network load is decreased.

The NDMP plugin is designed ideally to protect NAS filers in major disaster scenarios. The plugin enables full and incremental backups of the filer data, including ACLs, as well as its extended configuration and parameters.

Restoring a single file with the NDMP plugin is possible either by using the built-in NAS snapshot capability or by restoring the NDMP datastream to a local machine.

The plugin also supports NetApp SnapMirror to Tape (SMTAPE) to provide block-level volume backup to tapes.

The NDMP plugin is certified to work with the following NAS devices:

- NetApp 7.3 and higher
- Hitachi BlueArc (Bacula Enterprise version 6 and higher)
- EMC Celera (Bacula Enterprise version 6 and higher)

*The plugin is also compatible with a wide range of other filers. Please contact us for details.*
Key Benefits

- Increases tape library and autoloader utilization rate
- Decreases backup time
- Leverages SPC-3 SCSI reservation protocol

SAN Shared Storage plugin

The Bacula Enterprise Edition SAN Shared Storage plugin provides an enhanced backup strategy for SAN networks of SCSI devices by allowing two or more separate Storage daemons to share the same physical tape device.

The resource access locking process

The SAN Shared Storage plugin is available for the following environments:

- Ubuntu LTS
- Debian Squeeze 6.0

Typical use

Using Bacula Systems SAN shared storage plugin as LAN-free backup solution

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Key Benefits

- The main benefit of using the Incremental Accelerator for NetApp plugin is a vastly improved performance in determining what files must be backed up by getting the list of all files modified since the last backup from the OS instead of having to walk through the entire filesystem. This technique applies to differential and incremental backups.
- Allows convenient single file restore

Incremental Accelerator for NetApp plugin

The Incremental Accelerator for NetApp plugin is designed to simplify the backup and restore procedure of your NetApp NAS, hosting a huge number of files. When using the plugin, Bacula Enterprise will query the NetApp device to get the list of all files modified since the last backup instead of having to walk through the entire filesystem. Once Bacula has the list of all files to back up, it will use a standard network share (such as NFS or CIFS) to access files. In order to compute the modified files list since the last backup, Bacula needs to store few snapshots on the NetApp device. The Incremental Accelerator for NetApp plugin will manage the snapshot list to minimize resources usage.

Incremental Accelerator for NetApp compatibility:

- RHEL 5 and 6 (32/64 bits)
- SUSE 11 (64 bits)
- Microsoft Windows Server 2008 and higher (32/64 bits)
- NetApp 7.3.6, 8.0 and 8.1

*The plugin is also compatible with a wide range of other filers. Please contact us for details.*
Key Benefits

- All-in-one standalone solution including both NDMP and Incremental Accelerator for NetApp features
- Convenient single file restore for NetApp NAS
- Reliable full and incremental backup of multi-vendor NAS filers
- Fast block-level image backup using SMTAPE
- Integrated with our Bare Metal Recovery plugin
- Unlimited scalability

Bacula Enterprise NAS Backup Edition

Protecting the data of Network Attached Storage devices has never been that easy, complete and affordable!

Bacula Enterprise NAS Backup Edition is a standalone solution designed to address the data protection requirements of IT organizations which have invested in NAS-based infrastructures and looking for a better solution than purchasing additional expensive backup software in addition to the budget needed for high-quality network attached storage devices.

Bacula Enterprise NAS Backup Edition is composed of Bacula Enterprise 6, the NDMP plugin, Bare Metal Recovery (BMR) for Linux and the Incremental Accelerator for NetApp plugin. These products can be deployed and configured on a typical Bacula Enterprise environment in a matter of hours.

The package NAS Backup Edition is certified to work with the following NAS devices:

- Hitachi BlueArc (Bacula Enterprise 6 and higher)
- EMC Celera (Bacula Enterprise 6 and higher)
- NetApp 7.3 and higher

The solution is also compatible with a wide range of other filers. Please contact us for details.