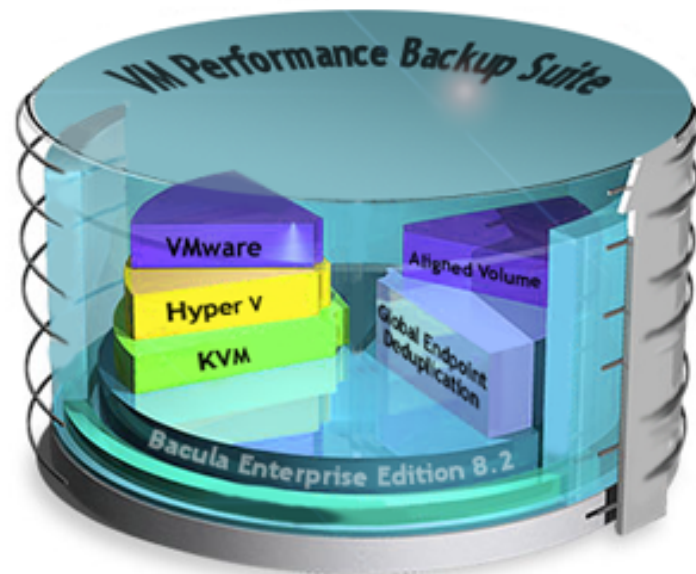




## Bacula Systems Virtual Machine Performance Backup Suite

Bacula Systems' VM Performance Backup Suite brings you Backup and Replication for hypervisor environments of any size, when used with Bacula Enterprise Edition version 8.2

The VM Performance Backup Suite provides a variety of fast and flexible recovery options, including entire hypervisor virtual machines (VMs) and application items. It is comprised of a variety of plugins outlined in this datasheet, and it offers further performance and efficiency gains via Global Endpoint Deduplication, and a range of other specific controls.



# Virtualization

# Bacula Enterprise Datasheet

## Key Benefits

- Full, Differential and Incremental image-level backups of virtual machines
- Restores complete virtual machine image
- Restores vmdk files to local directory
- VADP<sup>a</sup> based online backups
- VSS based snapshots for quiescing VSS based applications
- Supports both TCP/IP and SAN (FC/iSCSI) VMware™ Datastore access

<sup>a</sup>vStorage API Data Protection

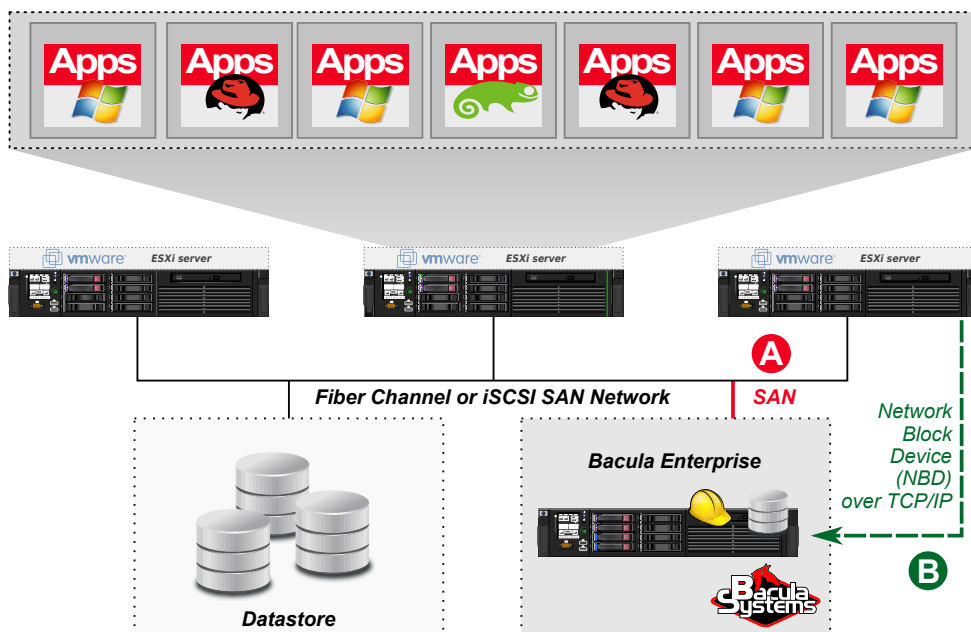
## VMware™ plugin

# The right solution to back up your virtual vSphere® environment

The VMware™ plugin allows you to back up vSphere® systems with Bacula Enterprise Edition and also provides virtual machine bare metal recovery.

This Bacula Enterprise Edition plugin also enables backup at guest level.

The VMware™ plugin can work either over a *SAN* or via *Network Block Device*.



Backing up VMware™ machines via SAN or NBD

The VMware™ plugin integrates the VMware™s Changed Block Tracking (CBT) technology to ensure only blocks that have changed since the initial Full, and/or the last Incremental or Differential backup are sent to the current Incremental or Differential backup stream, to give more efficient backups and reduced network load.

The VMware™ plugin is available for the following platforms:

- RHEL 5 and 6, 64bits
- Debian Squeeze 6 64bits

and is compatible with the following environments:

- Bacula Enterprise 6.x and higher
- ESX/ESXi versions 5.1, 5.0, 4.1, and 4.0 with the vStorage API enabled. Please note that the vStorage API is **not** available on the free ESX edition.

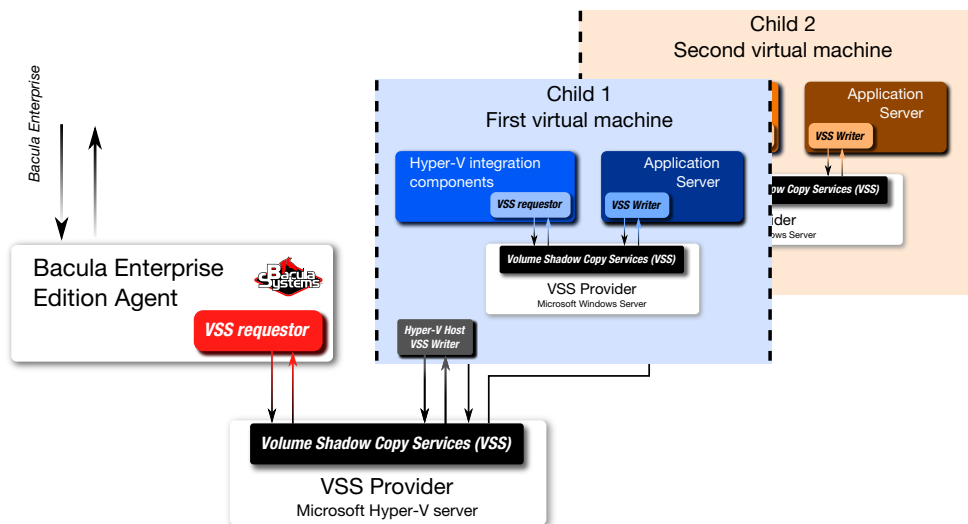
# Bacula Enterprise Datasheet

## Hyper-V Key Benefits

- Full image level backups of virtual machines
- Restores complete virtual machine image
- Restores disk images
- VSS based snapshots for quiescing VSS based applications

## Hyper-V™ plugin

Backing up and restoring Hyper-V virtual machine is supported with Full level backups using the VSS API. Use of the Global Endpoint Deduplication plugin and the “bothsides” FileSet option allows the user to minimize the amount of data transfer and storage use.



Bacula Enterprise Version and Hyper-V

## KVM Key Benefits

- Includes VM auto-discovery feature
- Backup at File level
- Allows backup of multiple virtual machines at the same time
- Allows includes and excludes on the plugin command
- Fully integrated into BWeb Management Suite
- Uses guestfish and libvirt toolkits

## KVM™ plugin

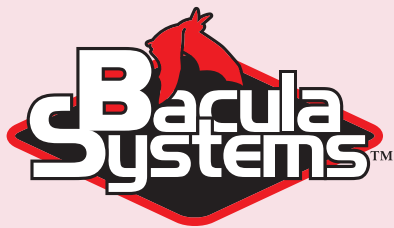
Backing up and restoring KVM virtual machines at file level is now supported. The plugin uses the libvirt virtual machine management interface, and provides the following main features:

- File level backup
- Automatic virtual machine discovery
- Full, Differential, Incremental backup level support
- Possibility to handle inclusion/exclusion of files

The KVM plugin can be used when the hypervisor uses local storage for virtual machine disks and libvirt for virtual machine management.

## Xen™ plugin

Note: the Xen plugin is currently in development. If you need a solution urgently, please contact us to get help to include Xen into your current or future Bacula Enterprise Edition Backup & Restore infrastructure.



Enterprise Data Protection

# Bacula Enterprise Datasheet

## Key Benefits

- Universal built-in deduplication solution
- Possibility to choose the deduplication engine on the Storage or on the Client
- Reduction of bandwidth usage requirement & disk space optimization
- Faster backup and restore processes
- Feature included in subscriptions at Silver, Gold and Platinum levels only

## Deduplication Plugins



**Performance Acceleration with Global Endpoint Deduplication** The VM Performance Backup Suite offers further performance and efficiency gains via Global Endpoint Deduplication, and a range of other specific controls. Global Endpoint Deduplication is an industry-leading technology that analyzes data at the block level, then stores only new blocks and uses references in Bacula volumes to blocks that are stored in the Deduplication engine. This not only saves storage space but also network bandwidth usage, which is achieved by only sending a File Daemon unknown blocks to the Storage Daemon.

**Aligned Volume Deduplication** This is another option that allows you to benefit from built-in deduplication features designed in filesystems like ZFS, BTRFS and others. Bacula System's Aligned Volume Deduplication technology offers an alternate (additional) Volume format that is aligned on specific block boundaries. This allows an underlying filesystem to efficiently deduplicate the Bacula Enterprise Deduplication Optimized Volume format. Aligned Volume Format Deduplication is an effective solution for ZFS deduplication. It is ZFS based, and supported with Netapp data ONTAP 8.0.1 and higher.

- **Contact us** today to try the VM Performance Backup Suite
- Ask us about **Bacula Enterprise Edition's** full feature-set

