

VMware Backup Agent

Healthcare organizations are increasingly moving towards a virtualized server environment. As is the case with physical servers, the protection of virtual server data, and the ability to quickly restore in the event of system outage, loss or disaster, is of paramount importance to hospitals.

BridgeHead's VMware Backup Agent integrates in to the VMware protection framework, utilizing vStorage API's for Data Protection (VADP), enabling hospitals to protect their clinical and administrative information from their virtualized environments.

KEY FEATURES

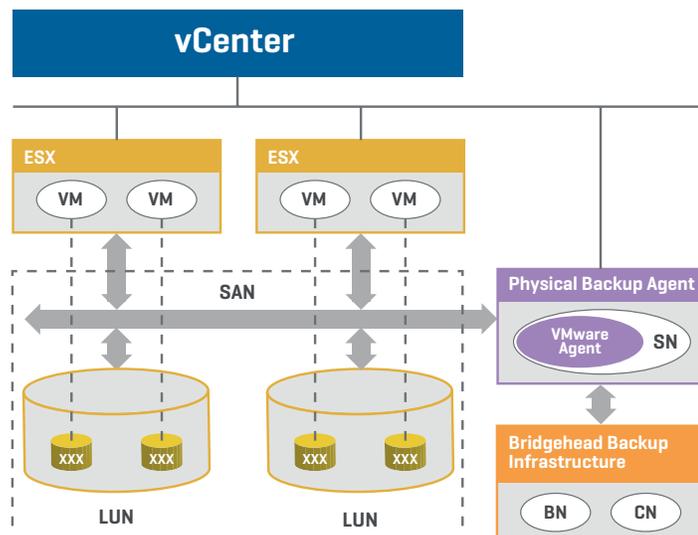
- ▶ Works in concert with other BridgeHead Backup and Archiving Agents
- ▶ Integrates with ESX as well as advanced VM services such as vCenter
- ▶ Reduces requirements for disk space during backup
- ▶ Offers 'agentless' backup [if there is no requirement for application interaction]
- ▶ Image [fast block mode whole system backup]
- ▶ Windows file system backup
- ▶ BridgeHead Software is VADP certified

Technical Overview

BridgeHead's VMware Backup Agent is designed to work with a hospital's entire VMware infrastructure and is built around VMware Storage API's for Data Protection (VADP). A production VMware system is more than just the ESX server hosting the virtual images; it also consists of the management components such as vCenter and vMotion as well as the SAN infrastructure where the VMware image files (VMDK) physically live. BridgeHead's VMware Backup Agent integrates with all of these to provide healthcare organizations with total protection and peace of mind.

In high availability scenarios the location of the 'live' VMware image may change, but this won't affect protection – BridgeHead's VMware Backup Agent saves all of the latest changes. Enhanced backup methodologies have also been added to VADP such as Changed Block Tracking (CBT) which BridgeHead's VMware Backup Agent fully supports. CBT allows the VMware Agent to backup only the changed blocks since the previous backup. Even without CBT, the close integration of BridgeHead's Agent and VMware means that backups are rapid and will not impact the production system.

Additionally, since the vast majority of virtualized systems are file and print servers, hospitals will benefit from the integration between the VMware Backup Agent and VM Tools – allowing clientless backups on the virtual machine.



Architecture Recommendations

BridgeHead's recommended best practice for the protection of VMware environments is to use a physical backup server. This is due to the inevitable I/O load of the backup stressing the hardware to the point where all VM [guests] are impacted during the process. In 9am – 5pm workplaces this may be acceptable but, for most healthcare systems, 24x7 performance is required.

The Advanced SAN Transport method allows the BridgeHead servers to use their own fiber channel connection, removing the pressure on the ESX server.

For environments where the impact of the backup load can be tolerated, BridgeHead supports the alternative transport mechanisms that require all the data to pass through the ESX machine.

Restore Strategies

Virtual or not, backup is really all about the ability to restore systems and data should there be a loss, outage or disaster. A backup that cannot easily be restored to a working system isn't providing any 'real' protection for a hospital.

Agentless backups cover most cases. Image backups can be quickly recovered to recreate the entire VM – effectively a "bare metal" restore. File system backups provide the granular restore for individual files.

More complex applications [such as Microsoft Exchange] will require their corresponding BridgeHead Agent[s] to be installed to facilitate efficient restore.

BridgeHead's consultants can help customers define the right strategy for their requirements.

Functional Specification

- ▶ vSphere Version 3. Limited CDP support
- ▶ vSphere Versions 4 & 5, including Changed Block Tracking [CBT] support
- ▶ VADP Certified
- ▶ BridgeHead's core services run on Windows Servers – 2003 or 2008, 32 or 64 bit

For more information on how BridgeHead Software can help lower the cost and administrative burden of managing your healthcare data, contact us at: info@bridgeheadsoftware.com or visit us at: www.bridgeheadsoftware.com



With 20 years' experience in data and storage management, and 10 years in healthcare, BridgeHead Software is trusted by over 1,000 hospitals worldwide.

Today, BridgeHead Software helps healthcare facilities overcome challenges stemming from rising data volumes and increasing storage costs while delivering peace of mind around how to **STORE**, **PROTECT** and **SHARE** clinical and administrative information.

BridgeHead's Healthcare Data Management [HDM] solutions are designed to work with any hospital's chosen applications and storage hardware, regardless of vendor, providing greater choice, flexibility and control over the way data is managed, now and in the future.

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