

Real Protection for Virtual Environments

DATA PROTECTION

APPLICATION AVAILABILITY

DISASTER RECOVERY

LifeKeeper Protection Suite for VMware VirtualCenter

Key Features:

- Provides high availability clustering and data replication for VirtualCenter Management Server 2.x and above
- Supports and Protects Microsoft SQL Server and Oracle databases (local or remote)
- Full monitoring and recovery of VirtualCenter including hardware, Windows OS, file systems, IP connections, VirtualCenter client and VirtualCenter server processes
- Provides automatic reconnection for VirtualCenter agents to recovered VirtualCenter servers without need for manual intervention
- Dynamically updates DNS for WAN configurations
- Wizard-driven GUI for configuration
- Supports Data Replication or SCSI/iSCSI/Fiber Channel shared storage
- Provides both manual and automated failover of VirtualCenter components to protect against both planned and unplanned downtime
- Integrates with SteelEye Protection Suite for VMware Infrastructure 3 for maximum protection of entire VMware environment

Companies worldwide spend millions of dollars each year to consolidate mission critical servers using VMware for cost saving and business continuity purposes. As the number of VMware virtual machines grows within an organization, the management of this substantial investment becomes a critical IT process. VMware VirtualCenter provides a powerful central console, running on the Microsoft Windows Operating System, that can effectively manage hundreds of VMware servers and thousands of virtual machines. Using VirtualCenter, administrators can create, deploy and clone virtual machines, monitor status and performance, and utilize tools such as VMotion and DRS. To provide this management capability, VirtualCenter leverages either a Microsoft SQL Server or Oracle database to store important configuration and performance data.

Why Protect VirtualCenter?

As companies continue to make additional VMware investments, the functions provided by VirtualCenter become increasingly more critical to the availability of virtualized IT operations. Should the VirtualCenter server, the supporting database, or related physical hardware fail, the ability to effectively manage the multitude of virtual machines in a virtualized environment can be severely impacted or crippled for extended periods of time.

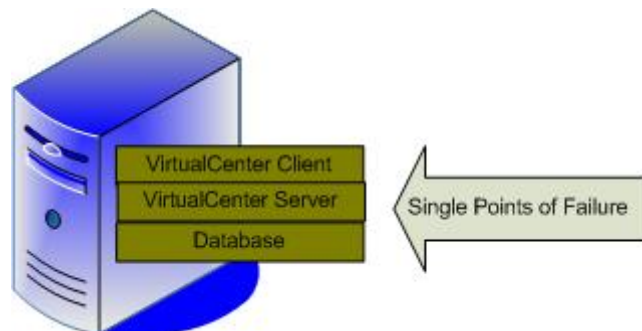
The LifeKeeper Protection Suite for VMware VirtualCenter solution protects VMware Administrators against the following negative impacts of planned or unplanned downtime:

- Loss of Centralized Management of VMware Servers
- Loss of VMotion and DRS capabilities
- Loss of ability to centrally provision virtual machines
- Loss of ability to centrally manage task scheduling and alerting
- Loss of ability to centrally monitor performance & utilization of physical servers and virtual machines
- Loss of detailed centralized reporting of CPU, memory and I/O performance
- Loss of ability to configure/manage VMware HA



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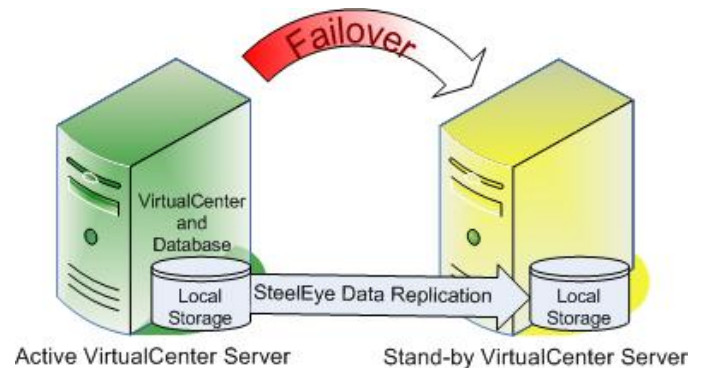
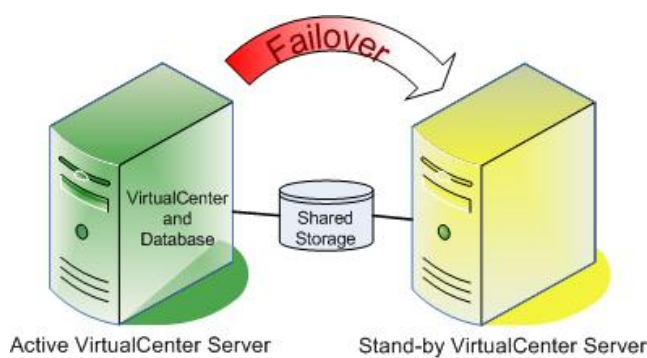


LifeKeeper Protection Suite for VMware VirtualCenter

SteelEye Provides Complete Protection

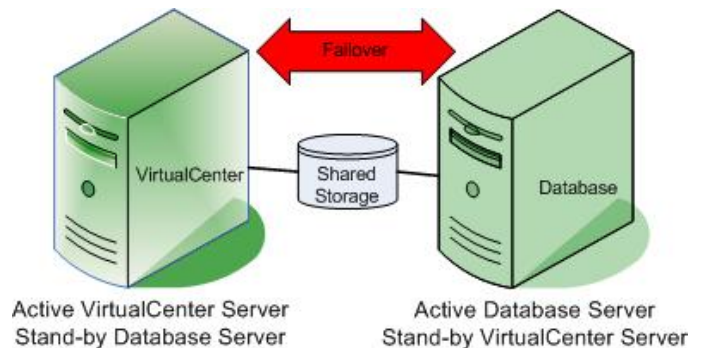
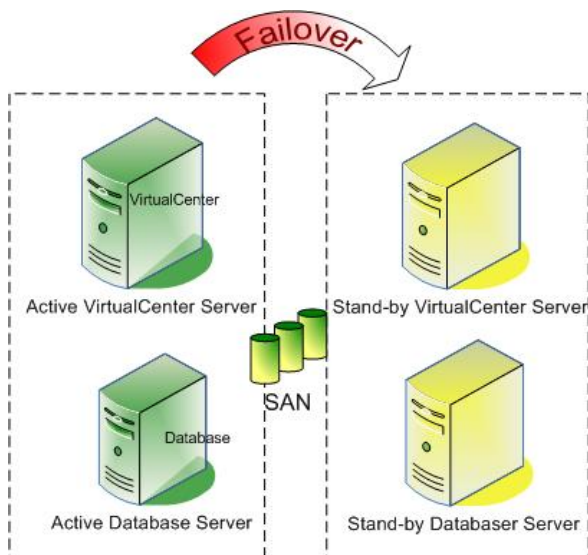
SteelEye provides the industry's only solution for clustering VirtualCenter server to ensure complete protection against any failure within the VMware Infrastructure management environment. SteelEye LifeKeeper constantly monitors critical VirtualCenter services, the associated database, servers, network connections and all other critical components. On detection of any problem, an automated recovery process is begun based on policies defined by the system administrator. It also provides a simple interface for manual movement of applications to eliminate outages from planned maintenance.

With support for both data replication and shared storage environments and for configurations where VirtualCenter and the underlying database reside on either the same server or separate servers, LifeKeeper provides maximum flexibility in the configurations that can be deployed.



In a shared storage configuration, management data resides on a single common disk. LifeKeeper monitors VirtualCenter and database health and automatically migrates the processes and IP addresses needed to ensure full access to VirtualCenter agents between clustered servers.

Using SteelEye Data Replication for continuous data protection, all management data is automatically copied to the backup server either over a LAN or WAN. This has the double benefit of removing the need for shared storage and of allowing building of an off-site disaster recovery solution. All monitoring and recovery is the same as in shared storage configurations.



Active/Active configurations are also supported. VirtualCenter servers and database servers can both be running their separate workloads while acting as backup for each other. No systems need be sitting idle letting you get the most advantage from your IT investment.

VirtualCenter and the associated database can also be on separate servers. LifeKeeper establishes the correct relationships across servers, performs end-to-end health monitoring and takes care of ensuring that appropriate connections are maintained during failovers.

LifeKeeper Protection Suite for VMware VirtualCenter

At-A-Glance Status of entire VirtualCenter Infrastructure

LifeKeeper's intuitive cluster console provides simple wizard-driven setup and at-a-glance status for the entire VirtualCenter cluster. Using the graphical interface shown below, administrators can perform manual switchovers to eliminate downtime from planned maintenance, can drill down on any individual piece of the cluster to view status, can easily make configuration and parameter changes and can get a quick visual representation of the health of the VirtualCenter cluster.

Drill down on status of individual components and manage the VirtualCenter services and the Database.

Hierarchy shows relationships between VirtualCenter processes, associated SQL Server database and IP address used by clients.

Component	VirtualCenterA	VirtualCenterB
VMware_VirtualCenter_Server	Active 1	StandBy 10
SQLServer_VirtualCenterDB	Active 1	StandBy 10
SQLServer_ClientIP	Active 1	StandBy 10
SQLServer_Volume_E	Active 1	StandBy 10
SQLServer_Volume_G	Active 1	StandBy 10
VirtualCenter_ClientIP	Active 1	StandBy 10

Colored icons show that all VirtualCenter components are functioning properly on the Active server and ready to come in service as needed on the standby server.

VMware VirtualCenter Server Configuration

LifeKeeper Protected Optional Services

webAccess

VMware VirtualCenter Database Instance

172.17.100.246\VirtualCenterDB

LifeKeeper Remote Database Check Enabled?

No

Service Management Database Management

Apply Changes Reset Help

Resource Tag = VMware_VirtualCenter_Server, Resource ID = VMware_VirtualCenter_Server

Summary

SteelEye provides the only solution for clustering VirtualCenter server to ensure complete protection against any failure within the VMware Infrastructure environment. With the ability to also monitor underlying SQL Server or Oracle databases, the complete VirtualCenter environment is protected against the negative impacts of both planned and unplanned downtime. Full monitoring and recovery of VirtualCenter including hardware, Windows OS, file systems, IP connections, VirtualCenter client, VirtualCenter server processes and the database ensures that you are always protected.

About SteelEye Technology®

SteelEye, a subsidiary of SIOS Technology Inc., is a leading provider of application and data availability management solutions for business continuity and disaster recovery on Linux and Windows. The SteelEye LifeKeeper family of software products enable enterprises of all sizes to ensure continuous availability of business-critical applications and data on industry standard servers and storage systems. SteelEye software products are available worldwide and may be purchased directly from SteelEye or through the SteelEye international network of business partners.

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