

Many organizations have transformed their IT infrastructure through VMware server virtualization. This transition has driven down costs, improved agility and spawned a new world of digital services. However, the sprawling numbers of virtual machines have created challenges for managing data protection. Traditional approaches to backup and recovery fail badly in these environments.

Hitachi Virtual Infrastructure Integrator

Modernization of IT Infrastructure Requires Modernization of Data Protection

Hitachi Virtual Infrastructure Integrator, coupled with Hitachi storage systems or Hitachi converged systems, solves data protection challenges by using modern, high-performance, hardware-based snapshot and cloning technologies. All of the processing and data movement is performed by the storage, removing a huge load from the hypervisor and virtual machines (VMs). Virtual Infrastructure Integrator helps to:

- Eliminate the need for “backup windows” with near-instant, nondisruptive, application-consistent and space-efficient snapshots.
- Reduce the amount of new data at risk of loss by 95% by improving recovery point objectives (RPO) from daily to hourly, for example.
- Eliminate the many hours or days to perform recovery after a failure; recovery time objectives (RTO) can be improved to a few minutes.
- Simplify and automate copy data management, making space-efficient copies of snapshots available for repurposing to support secondary uses such as test and development.

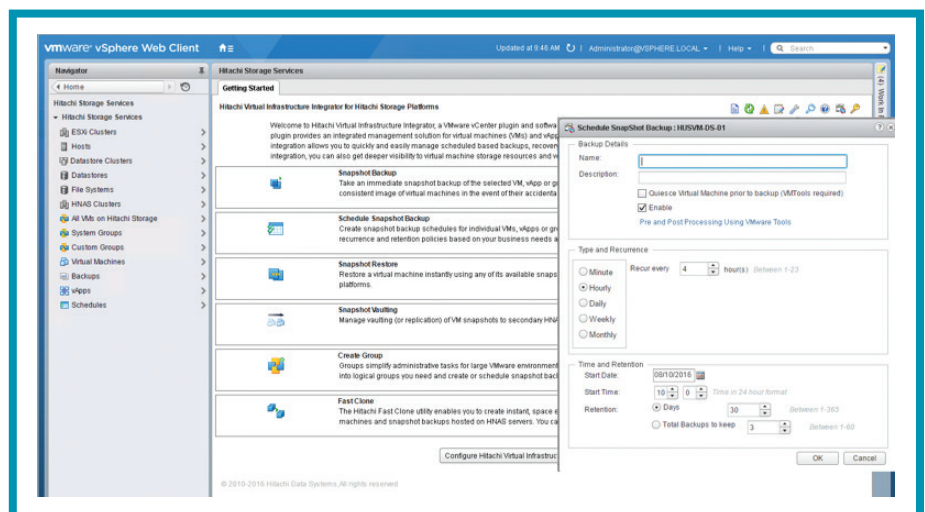


Figure 1. Virtual Infrastructure Integrator and VMware User Interface

- Reduce backup storage requirements by 90% or more by avoiding the need for repetitive full backups.

Virtual Infrastructure Integrator supports VMware vSphere 5.5 and 6.x deployments on both block and file storage (see Figure 1). It can be used with the Hitachi Thin Image snapshot software of the Hitachi Virtual Storage Platform (VSP) family, including the VSP F series, VSP G series and VSP NAS module. And it works with the snapshot software of Hitachi NAS Platform (HNAS) products, including HNAS 4100, HNAS 4080, HNAS 4060 and HNAS 4040.

The user interface is integrated directly into the VMware vSphere web administration console, enabling data protection to be a proactive, visible and automated part of provisioning new VMs, rather than an afterthought. VMs can be custom grouped for simplified common policy management, and rich information on storage infrastructure and backup reports are available directly from the interface.

In addition, the data protection services are also available to be automated through VMware vRealize Automation with the vRealize Orchestrator component plug-in.

Unified Protection Across Virtual and Physical Applications

Virtual Infrastructure Integrator works with Hitachi Data Instance Director (HDID) to provide modern data protection and copy data manage-



ment across the IT infrastructure. HDID can trigger, view and restore VMware snapshots that are managed by Virtual Infrastructure Integrator or create VMware VADP-based backups on local and remote data centers. HDID also orchestrates application-specific, storage-based snapshots, clones and remote replication for virtual and nonvirtual environments.

Hitachi Virtual Infrastructure Integrator provides organizations that have VMware data protection with simplicity, efficiency and performance, while reducing risks and cost. VM administrators can now overcome the challenges of backup and recovery administration, copy data management, unpredictable virtualization workloads, and general capacity inefficiencies, as shown in Table 1.

TABLE 1. OPERATIONAL CAPABILITIES

Virtual machine (VM) and application-consistent protection	<ul style="list-style-type: none"> Any Linux or Microsoft® Windows® VM using Network File System (NFS), VMware Virtual Machine File System (VMFS) or VVol datastores Microsoft applications: Any applications supported by Volume Shadow Copy Service, including Exchange, SharePoint® Server and SQL Server® Linux applications: MySQL and Oracle, extensible to support other applications with available scripts
Flexible protection options	<ul style="list-style-type: none"> Choose to protect VMs, vApps, custom groups, datastores, datastore clusters and dynamic system groups Static and dynamic grouping of VMs for ease of management Flexible schedule and retention policies
Restore from snapshot	<ul style="list-style-type: none"> Instantly restore an individual VM, regardless of size. Uses hardware snapshot pointer manipulation or VMware's Storage vMotion to instantly make recovered VM available to a production datastore
Granular recovery, mount a snapshot of a virtual machine disk (VMDK)	<ul style="list-style-type: none"> Ability to perform granular recovery of data from snapshot VMDKs Preserves the backup copy
Reporting	<ul style="list-style-type: none"> Backup reports: job status and summary reports The compliance validation dashboard validates an optimal storage configuration Simplified search for snapshots View VM storage details
Additional	<ul style="list-style-type: none"> Self-service recovery via VMware vRealize Orchestrator Create space-efficient snapshot clones of VMs for repurposing (test/dev, auditing, DevOps, big data analytics and more) Vault a storage-based snapshot off-site