



How to Build a Local Business Availability Solution: VMware vSphere

The Intronis ECHOplatform offers the ability to restore workloads running on VMware vSphere virtual machines (VMs) within minutes after a failure by replicating VMs to alternative hosts (i.e., Recovery Servers, as described below). By design, these services can be deployed using off-the-shelf hardware that suits your business model and your clients’ environments. Unlike other platforms, these Intronis solutions require no proprietary hardware, and thus offer high flexibility and margin potential.

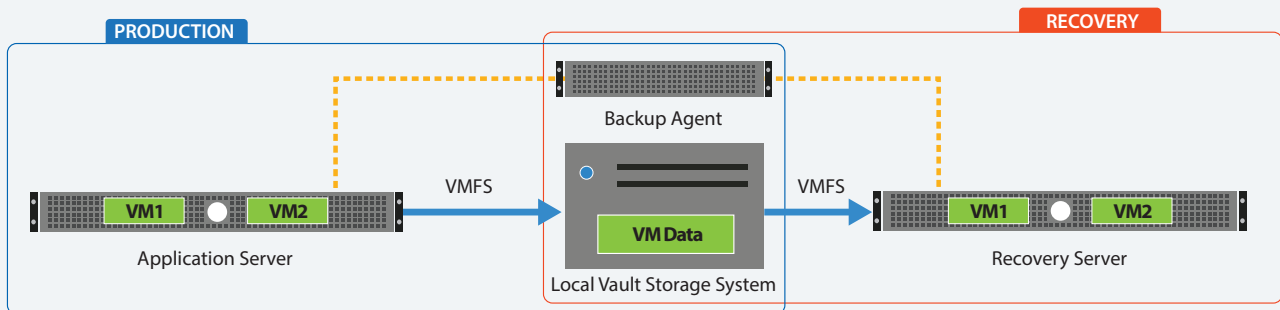
The following is (a.) an overview of the functional components of this local storage architecture, (b.) a brief explanation of the role of each component, and (c.) recommended technical specifications.

(Note: Please refer to similar configuration guides for physical server or Microsoft Hyper-V environments.)

Business Availability Service Options for VMware vSphere

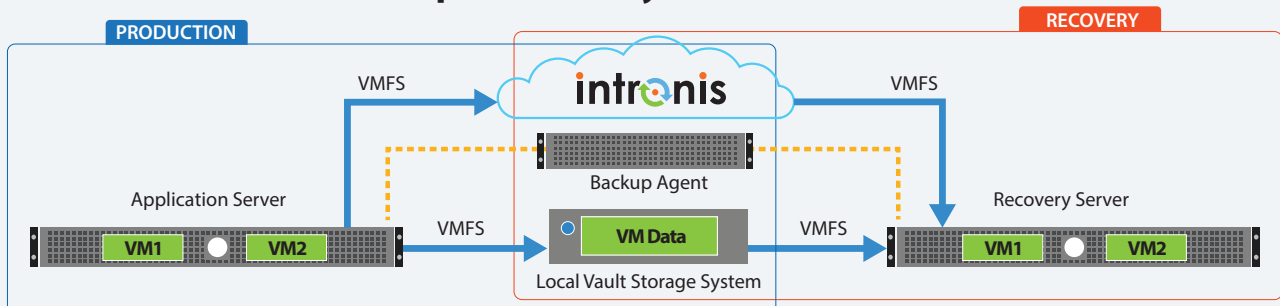
Intronis ECHOplatform supports two image-based services designed to maximize business availability for VMware vSphere environments: **VMware QuickSpin** and **VMware Standard Backup & Restore**.

Generic Architecture VMware QuickSpin



VMware QuickSpin is recommended for applications with Recovery Time Objectives (RTOs) within minutes. This service replicates source VMs on Recovery Servers as standby VMs, ready to spin up in the event of primary server failure.

Generic Architecture VMware Standard Backup & Recovery



VMware Standard Backup & Restore is recommended for applications with RTOs within hours. This service backs VM data up to Local Vault Storage (e.g., to support business continuity strategies), the Intronis cloud (e.g., to support disaster recovery plans), or both. VMware Standard supports restoring VMs to new or repaired – including similar or dissimilar – servers.





Local Vault Storage System



The function of the **Local Vault Storage System** is to maintain and protect image-based backup data, whether during normal production or after a recovery. In a **QuickSpin** recovery scenario, the Intronis ECHOplatform automatically redirects VLAN connections to put recovery VMs hosted on a **Recovery Server** into production. In a **VMware Standard** recovery scenario, virtual machine images are restored either from the cloud or local storage onto a **Recovery Server**, and then put into production.

(Note: Restoring from local storage will be much faster than from the cloud.)

To serve these functions effectively, we recommend the following storage system specifications:

Standard Workloads (up to 10 VMs)	Mission-Critical Workloads
SATA or NL-SAS, RAID 5 or RAID 1	SAS, RAID 6

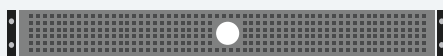
NAS Products

For maximum flexibility and economy, the Intronis ECHOplatform is designed to work with the majority of NAS systems currently on the market. As products are subject to change, we recommend testing all NAS products in controlled environments prior to production deployment.

The following NAS products have been tested and are currently supported for use with **VMware QuickSpin**.

Vendor	Model	Notes
QNAP	TS-453 Pro	Use 512/512e disks
Buffalo	TeraStation TS1200D	Use 512/512e disks

Recovery Server



Because it uses VM replication technology, **VMware QuickSpin** solutions require **Recovery Servers**. **Recovery Servers** are recommended for **VMware Standard** configurations to ensure the fastest time to recovery.

The following minimum requirements apply to both **VMware QuickSpin** and **VMware Standard** services:

- 2 GHz dual-core CPU
- 1 GB of Total RAM (500 MB free RAM during backup, restore, or delete operation)
- Free disk space equaling twice the size of your largest protected file (not required for VM backups)
- Broadband Internet Connection
- Microsoft .NET Framework 3.5





VMware Supported Platforms

- The following platforms are supported by VMware.
- vSphere 4.1, 5.0, 5.1, and 5.5 (including clustered environments)
- All supported versions require a VMware Essentials license or higher

We recommend keeping a **Recovery Server** on hand for **VMware Standard** recoveries, although it does not need to be powered up until a failure occurs.

Technical Support



You can find additional technical resources on the Knowledge Base at Intronis Essentials: Support@Intronis.com.

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Intronis provides world-class data protection solutions for Small Businesses, delivered exclusively through the IT channel. The Intronis ECHOplatform securely protects physical and virtual data with native support for physical imaging, VMware, Hyper-V, Exchange, and SQL, all through a re-brandable central management console that integrates with major RMM and PSA tools. Offered with unlimited and fixed-fee storage pricing per SMB account, IT service providers are able to rapidly grow revenue and scale profit. Through Intronis ECHOshare, channel partners can easily expand their IT services portfolio to include tightly integrated business-grade file sync and share. Learn more at www.intronis.com.

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