



# Veeam Backup & Replication™ v5 with vPower™



## and Drobo SAN Storage for Business



# What Are the Challenges?

- Managing VMware-centric environments requires a new way of thinking
- Attempting to manage virtual environments with traditional backups
- Reducing backup storage utilization
- Lowering the cost and complexity of storage
- Finding a cohesive data protection and storage strategy for virtual environments

# The Ideal Solution

- Restarts a VM within minutes using existing backups and storage
- Obtains reliable backups every time
- Recovers virtualized application items/objects without added complexities or cost
- Tests VMs before pushing them live (patches, troubleshooting, etc.)
- Reduces backup storage requirements
- Stores backup images on a lower-cost tier of storage
- Grows at the lowest possible cost with backup data
- Automates backup storage infrastructure (no config)

# Veeam Backup & Replication

Existing tools aren't doing the job

- Traditional backup
  - Agent in each VM
  - Full VM recovery is complex
  - Expensive
  - Does not guarantee recoverability
- Typical VMware backup
  - Backup code runs on ESX/i hosts
  - Significant storage requirements
  - Limited recovery options
  - Does not guarantee recoverability

*“A major reason that organizations still hit these bumps on the backup and recovery road: They use the same products for both physical and virtual server backup, when we all know that **virtualization requires a fundamentally different approach.**”*

– SearchServerVirtualization.com

# Drobo

- Drobo BeyondRAID™ innovative storage technology provides:
  - **Thin Provisioning** – up to 255 x 16TB Smart Volumes use a common pool of storage
  - **Virtual Hot Spare** – the free space in the storage pool is the hot spare for recovery
  - **Instant Expansion** – add a drive, it automatically adds to the storage pool
  - **Infinite Expansion** – replace a smaller drive with a larger drive without touching the GUI
  - **Mixed Drive Utilization** – use all of the storage vs. being limited to the lowest common size
  - **Dual Disk Redundancy** – change on the fly with a checkbox in the GUI
  - **Data Aware** – proportional rebuilds for faster recovery, enables intelligent tiering of data
  - **Drive Re-ordering** – move disk packs to another Drobo in any order

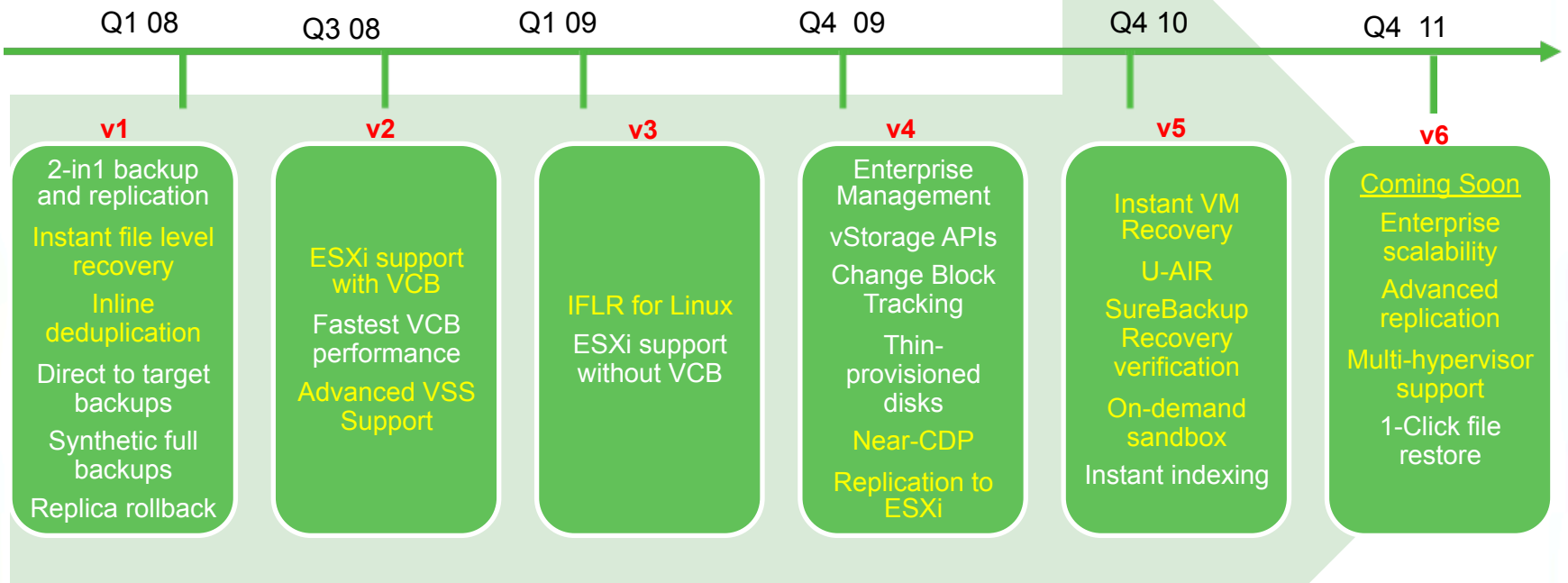


# Veeam and Drobo

- Veeam + Drobo provide an optimized, end-to-end storage & data protection solution for virtual environments
  - **Instantly Scale Backup Environment** - Drobo's BeyondRAID technology allows you to add or upsize drives on-the-fly, automatically expanding the common storage pool
  - **Advanced Thin Provisioning** - Veeam can leverage thinly provisioned volumes, and Drobo Smart Volume technology automatically allocates physical storage as required to ensure individual volumes never run out
  - **Affordable Protection Onsite & Offsite** - Veeam offers backup and replication in a single solution, at one price. Combined with cost-effective iSCSI SAN solutions from Drobo, you now have the flexibility to replicate VMs onsite for high availability, offsite for DR, or both.
  - **Built-in Deduplication** - Leverage Veeam's built-in deduplication capabilities to shrink your backups, increase efficiency of your Drobo storage, and further reduce your overall costs.

# Innovation

## ■ Veeam “firsts” to market



# Reinventing Data Protection

## ■ Innovation with

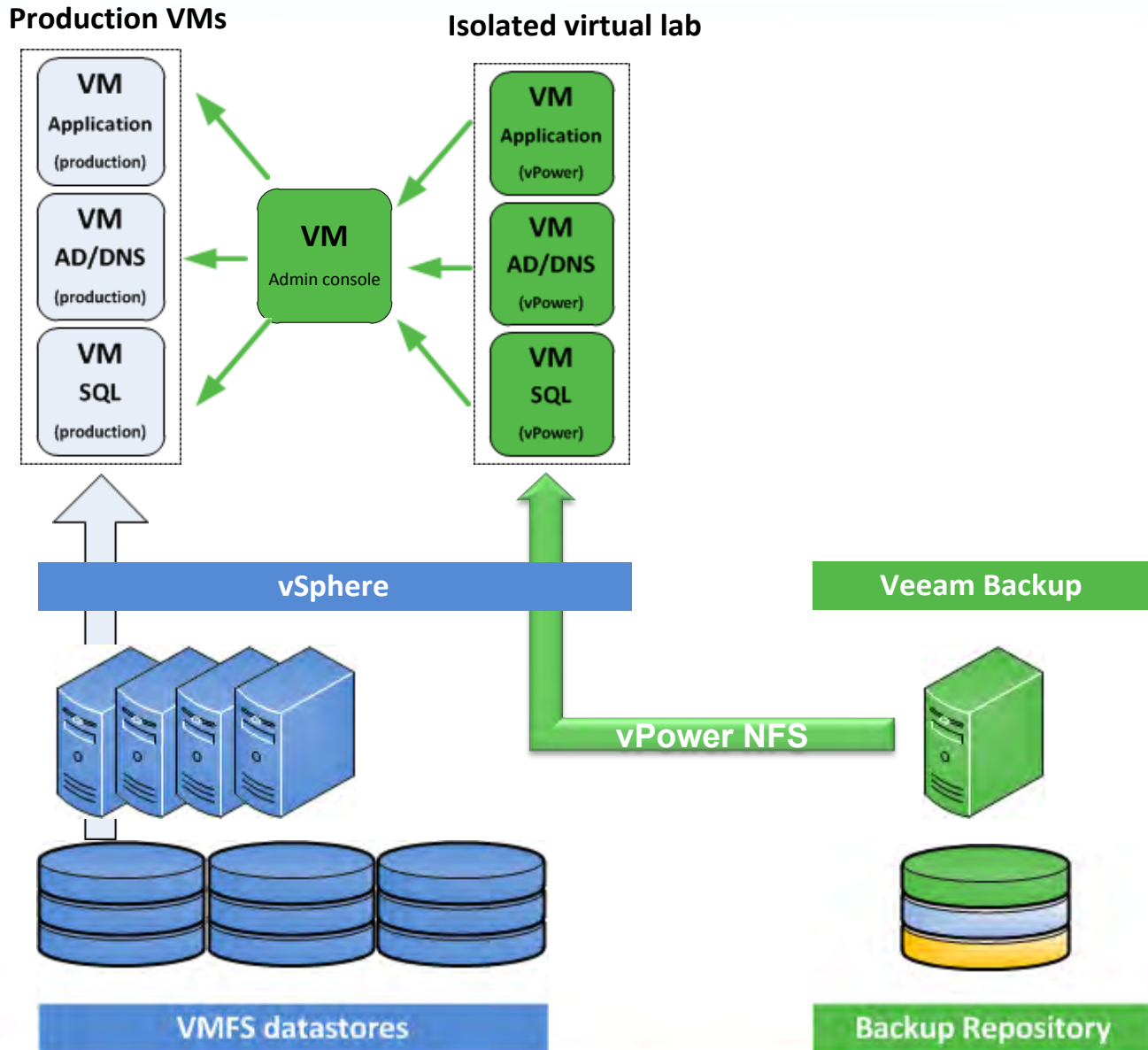
**vPower**

- Run a VM directly from a compressed and deduplicated backup file
  - Eliminates need to provision storage, extract and copy the backup
- ## ■ Taking data protection to the next level
1. **Instant VM Recovery** - recover an entire VM in less than 2 minutes
  2. **U-AIR** - recover individual emails, database records, etc. from a regular image-level backup—without agents, special indexes or extra backups
  3. **Sure Backup** - verify the recoverability of every backup
  4. **On-Demand Sandbox** - create VMs on the fly for testing or troubleshooting
  5. Instant File-Level Recovery for *any guest OS and file system*

# How

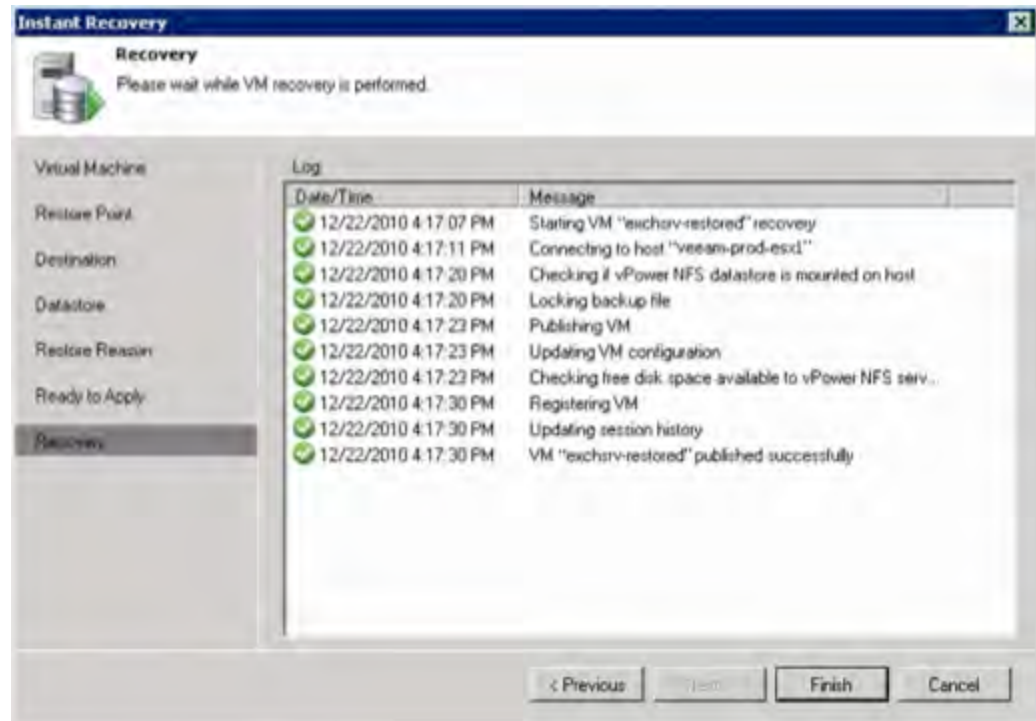
# vPower

# Works

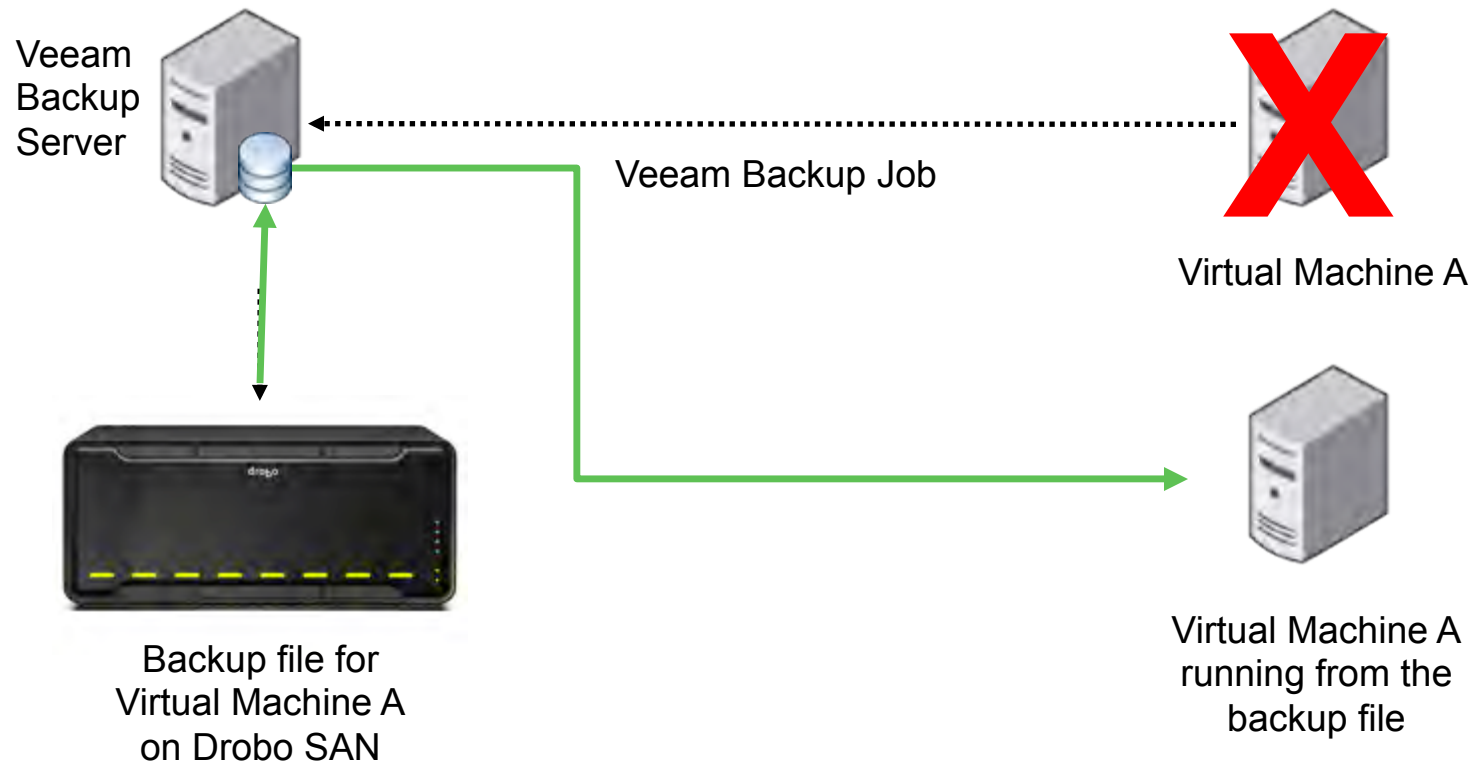


# Instant VM Recovery

- **Fast** - start VM directly from backup file
- **Readily available** - uses existing backups and backup storage
- **Buys you time** - users keep working while you troubleshoot the problem
- **Easy** - backups online and ready for recovery, just click and go



# How Instant VM Recovery Works

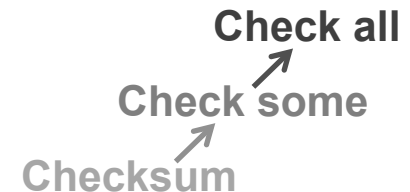


# U-AIR

- Performs item-level recovery from any virtualized application without:
  - ✗ application-specific agents to license
  - ✗ additional products to buy
  - ✗ special backups to create
- Supports administrator- and user-directed recovery
  - Wizards for administrator-directed item recovery from Microsoft Exchange, Active Directory and SQL Server
  - User-directed item recovery from **ANY** application or database
- Easy and efficient Backup Appliance solution by centralizing all backup onto an affordable, high-capacity storage system

# SureBackup

- Verify the *recoverability of every backup*
- Does not affect backup windows or require additional hardware and staff
- Reduce storage requirements without sacrificing tape support or creating a single point of failure
- Additional level of assurance provided by Drobo BeyondRAID with Data Scrubbing
  - If a bad block is found it is immediately marked bad and the data is moved and protected
  - Data scrubbing helps avoid soft sector errors in data sets that are rarely accessed



# How SureBackup Works

1 Publish

2 Start

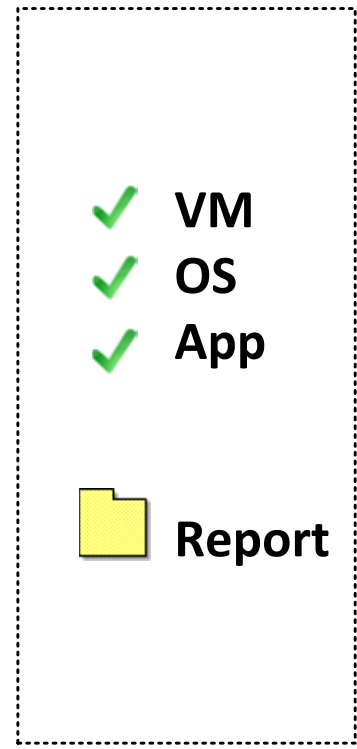
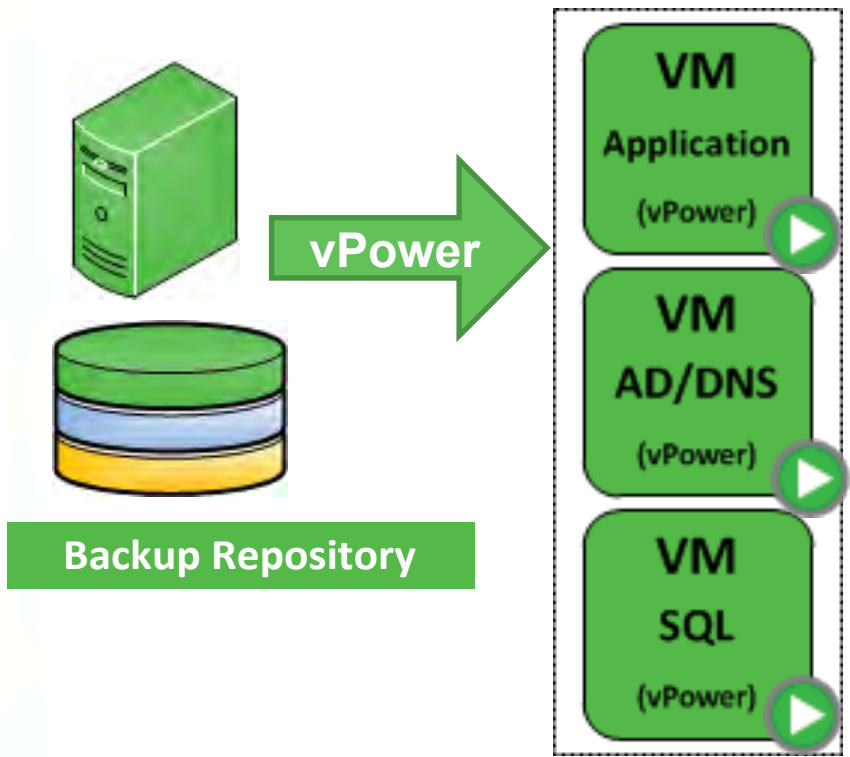
3 Verify

4 Protect

Isolated virtual lab

Verification job

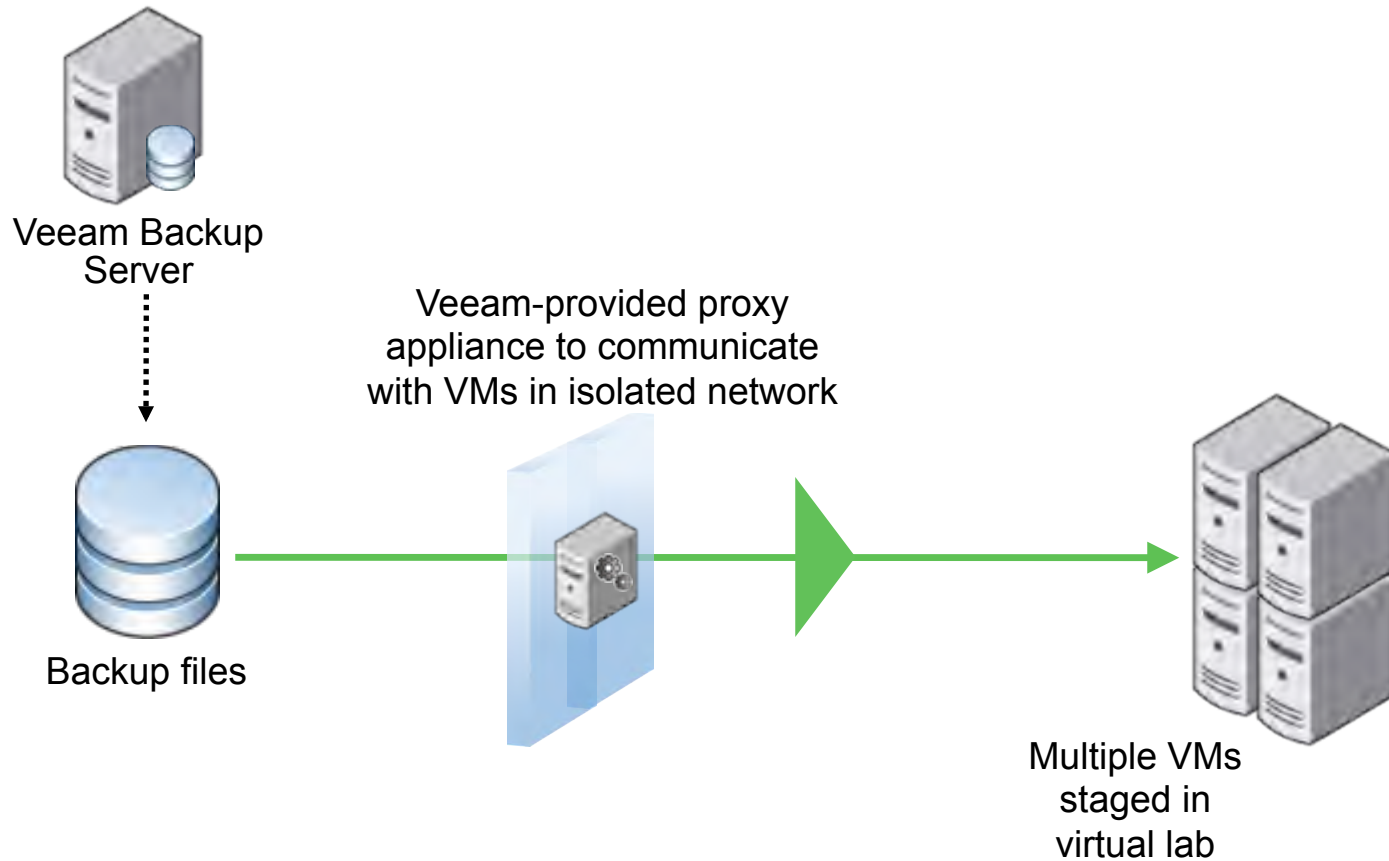
Data Scrubbing



## On-demand Sandbox

- Instantly start a group of production VMs in sandbox
- Restore from any point (full or incremental backup)
- Run directly from the backup file, with backup file remaining untouched
- Lower the cost of storage in test and development environments with iSCSI SAN that is a different tier than Tier 1 primary

# How On-demand Sandbox Works



# Value of a Joint Solution

## Veeam Backup & Replication Drobo

- 2-in-1: backup and replication
- No extra charge for
  - Deduplication
  - Enterprise Manager
  - Multi-hypervisor support
- Licensing by CPU socket
  - No per-server, per-agent or per-mailbox fees
- Quick ROI and low TCO
- Compelling Economics
  - Simplicity & automation of drives down operating expense
  - BeyondRAID provides big storage with a small capital expense

# Benefits

- **Instant VM Recovery** - Run a virtual machine (VM) directly from the backup file stored on Drobo without having to first restore the backup to primary storage
  - Drobo's data-aware tiering technology recognizes "hot" data on the now live VM and automatically promote to the transactional tier to ensure optimal performance until primary storage can be brought back online
- **Instant File & Object Recovery** - Unlike tape, using Drobo's disk-based solutions in conjunction with Veeam enables recovery of individual files or objects for any virtualized application directly from your backups in seconds
  - Veeam's patent-pending U-AIR technology does this without agents on any application using native permissions
- **Affordable Protection Onsite & Offsite** - Veeam offers backup and replication in a single solution, at one price
  - Combined with cost-effective iSCSI SAN solutions Drobo, replicate VMs onsite for high availability, offsite for disaster recovery purposes, or both
- **Built-in Deduplication** - built-in deduplication capabilities in Veeam shrink your backups, increase efficiency of your Drobo storage for better overall cost
  - Source-side dedupe allows publishing deduped backups as regular VMDK files

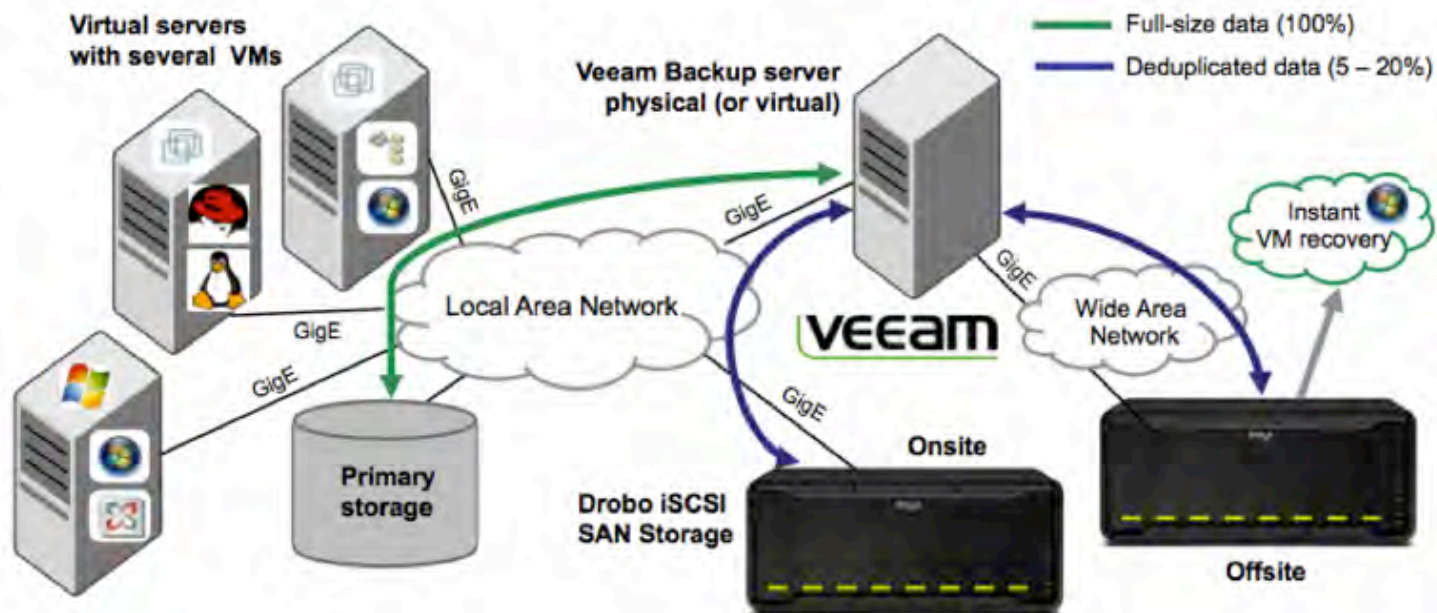
# Technical Details

## Configuration

- Drobo SAN Storage for Business
  - Drobo B800i for backup price/capacity
  - Drobo B1200i for backup and Tier 2 primary
- Drobo Dashboard management software (most recent version)
- Enterprise-grade 7200RPM SAS or SATA disk drives (recommended)
- Windows Server 2008 R2 (dedicated server recommended)

## Supported Versions

- Veeam Backup and Replication v5
- B800i firmware version 2.0.2 or higher
- B1200i firmware version 1.0.1 or higher



# Best Practices

- Direct SAN Access mode is recommended
  - While Virtual Appliance or Network modes for Veeam Backup work with Drobo, Direct SAN Access is the most efficient method, leverages VMware storage APIs
- A physical host for Veeam is recommended
  - While a VM host can be the backup server, having dedicated resources serves better for compression and deduplication
- A minimum of 6 x 7200 RPM disks is recommended
  - While a Drobo can provide a great deal of storage with few very large drives, 6 drives will offer a better level of service
- More information on best practices for the combined solution documented @ [http://info.drobo.com/veeam/how\\_to\\_guide](http://info.drobo.com/veeam/how_to_guide)

# Additional Considerations

- Great fit - sizing
  - 1 Veeam server = model B800i, multiple Veeam servers = model B1200i
- Not as great a fit
  - Drobo as primary storage for applications with > 250 users
  - Running high IOPS VMs from instant restore on Drobo for a long duration
  - Primary storage with HyperV clustering
    - SCSI-3 persistent reservations not currently supported
- Considerations
  - Drobo delivers improved performance when storing on NTFS vs. a VMFS datastore
  - When using the Microsoft iSCSI Initiator to connect to datastores on which the VMs reside or to where VMs are backed up, DO NOT mount them
    - Potential risk that VMFS volumes are re-signed by Windows
    - Veeam recommends that the diskpart automount be disabled
      - Version 5 automatically disables automount

## More Information

- Go to <http://www.drobo.com/veeam> for valuable assets
  - Expert Webcast replay featuring Rick Vanover
  - Risk-free trial offer for this Veeam + Drobo solution
  - Detailed How-To Guide
  - Solution Brief document

and more...

Attend the Webinar

Read the How-To Guide

Risk-Free Drobo + Veeam Trial

- Contact Drobo sales to get connected with a reseller who can assist you with this joint Veeam + Drobo solution
  - 1.888.97DROBO (1.888.973.7626)
  - Email [sales@drobo.com](mailto:sales@drobo.com)



# Product Pictures: Front & Back

- Drobo SAN Storage for Business

Drobo model B800i



Drobo model B1200i



## V6: Coming Soon

- Enterprise scalability - Scales for larger deployments
- Advanced replication - Provides 10x faster replication
- Multi-Hypervisor support - Supports Microsoft Hyper-V

Additional enhancements including

- 1-click file restore
- VM migration for VMware

... and many more

# Useful Links

- Veeam Backup and Replication v5  
[vee.am/backupreplication](http://vee.am/backupreplication)
- Veeam Monitor  
[vee.am/vmwmntr](http://vee.am/vmwmntr)
- Veeam Reporter  
[vee.am/vmwrprtr](http://vee.am/vmwrprtr)
- Veeam Business View  
[vee.am/bview](http://vee.am/bview)
- nworks Management Pack for VMware for MS System Center  
[vee.am/nworksMP](http://vee.am/nworksMP)
- nworks Smart Plug-in for VMware for HP Operations Mgr  
[vee.am/nworksSPI](http://vee.am/nworksSPI)

# Thank You

- Questions?
- Additional resources
  - <http://www.veeam.com>
  - Veeam on Twitter: @Veeam
  - Veeam Blog: <http://www.veeam.com/blog/>
  - Veeam Community Podcast (iTunes, RSS) - [www.veeam.com/podcast](http://www.veeam.com/podcast)