



# Veeam Availability Suite v9



Thomas Sandner  
System Engineer, Veeam Software  
[thomas.sandner@veeam.com](mailto:thomas.sandner@veeam.com)



# Racing to



## NEW Veeam Availability Suite v9 feature announcements:

May 2015	June	July	August	September	October	November 2015
<b>Veeam integration with EMC</b>	<b>Veeam Cloud Connect – now with replication</b>	<b>Primary Storage Integration</b>	<b>Oracle and other explorer enhancements</b>	<b>Enterprise Enhancements</b>	<b>Backup Storage Integration</b>	<b>Scale-out Backup Repository</b>
Backup from Storage Snapshots	Veeam Cloud Connect Replication	Direct NFS Access	Veeam Explorer for Oracle	ROBO Enhancements	HP StoreOnce Catalyst support	Scale-out Backup Repository
Veeam Explorer™ for Storage Snapshots		On-Demand Sandbox for Storage Snapshots	Veeam Explorer for Microsoft Active Directory, Exchange, SharePoint and SQL Server	Standalone Console	EMC Data Domain Boost enhancements	
		Backup for NetApp SnapMirror and SnapVault		Advanced Tape Support	High-performance backups from ANY deduplication appliance	

# VEEAM 2015

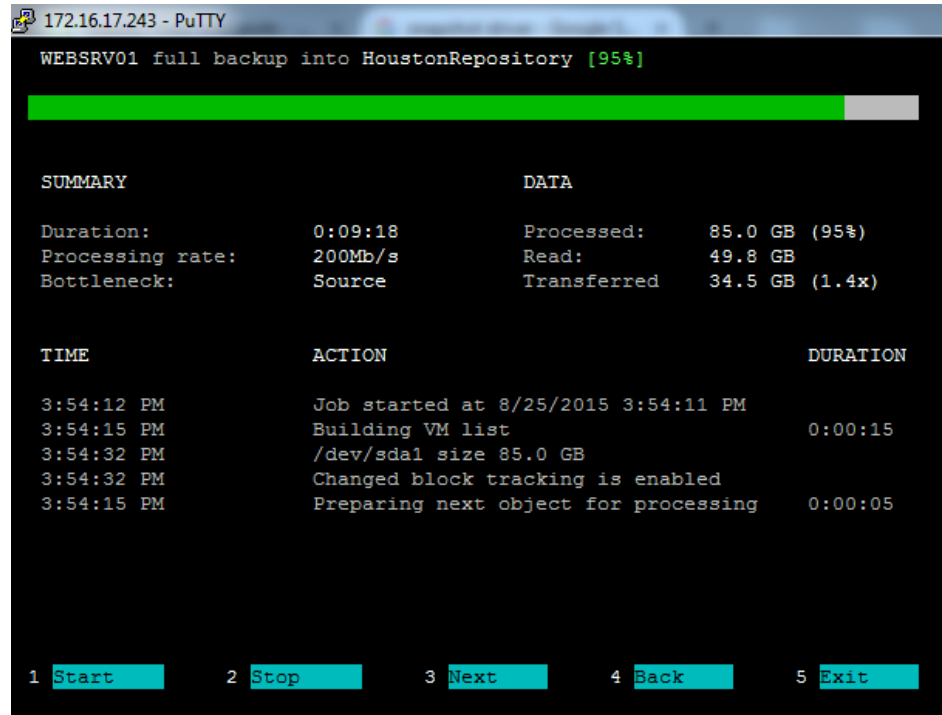
## THE WORLD'S PREMIER DATA CENTER AVAILABILITY EVENT

- 1,860 Attendees
- 45 Sponsors
- 149 Registered media 29 countries +89%
- Generated 300+ pieces of media
- 395 VMCE Participants



# Veeam Backup for Linux

- Agentenbasierte Lösung für phy. oder Cloud Linux
- Veeam CBT für Linux
- LVM-Support
- Debian und Red Hat Support (genaue Liste bei Release)
- Pre- und Post-Skripte
- Webgui, CLI, Config-Datei
  
- Es ist ein Free-Produkt!
- Beta 1. HJ 2016



```
172.16.17.243 - PuTTY
WEBSRV01 full backup into HoustonRepository [95%]

SUMMARY                                     DATA
Duration:                                0:09:18      Processed:      85.0 GB (95%)
Processing rate:                          200Mb/s      Read:           49.8 GB
Bottleneck:                               Source       Transferred    34.5 GB (1.4x)

TIME                                       ACTION                                               DURATION
3:54:12 PM                               Job started at 8/25/2015 3:54:11 PM
3:54:15 PM                               Building VM list                                     0:00:15
3:54:32 PM                               /dev/sda1 size 85.0 GB
3:54:32 PM                               Changed block tracking is enabled
3:54:15 PM                               Preparing next object for processing                0:00:05

1 Start  2 Stop  3 Next  4 Back  5 Exit
```

# Feature announcements

**EMC VNX(e) Integration**

**Verbesserte NetApp-Integration**

**Oracle Integration**

**Neue Features in den Veeam Explorern**

**Enterprise-Features**

**HP StoreOnce Catalyst**

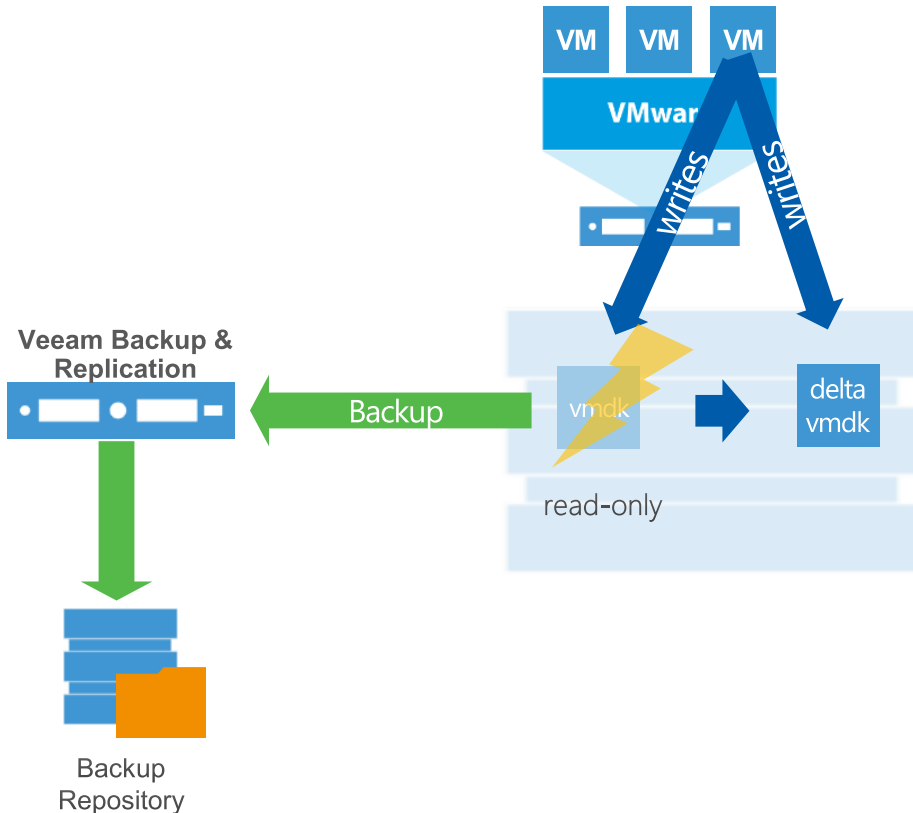
**Scale-Out Backup Repository**

**Veeam Cloud Connect Replication**

# Integration with EMC Storage Snapshots

- **Backup from Storage Snapshots**
- **Veeam Explorer for Storage snapshots**

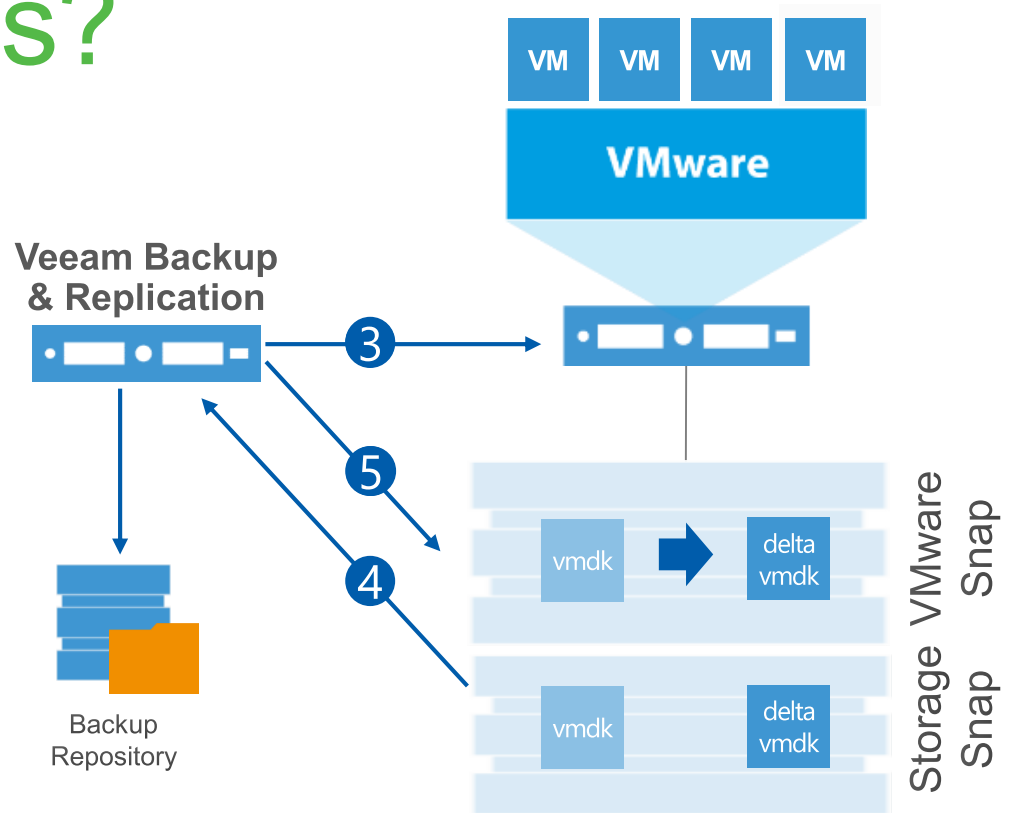
# Wieso Backup aus SAN Snaps?



- Bei VMs mit viel IO (während dem Backup), kann das Auflösen des VMware-Snapshots nach dem Backup Probleme bereiten

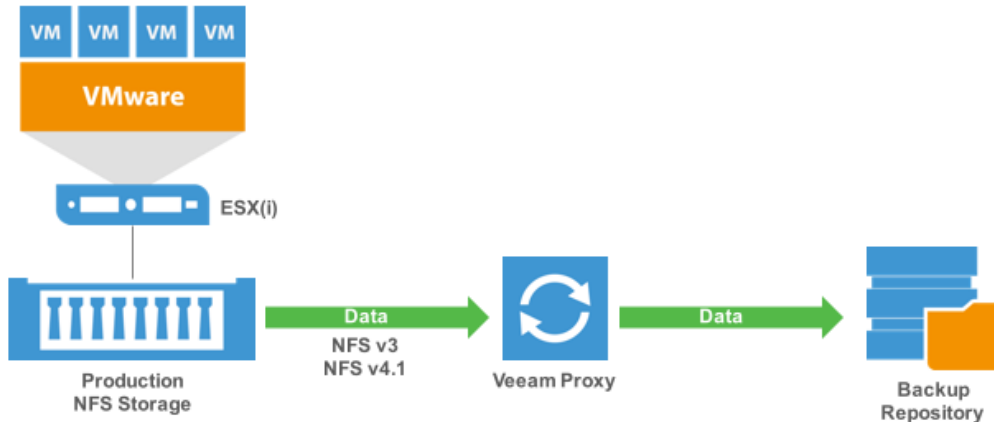
# Wie funktioniert's?

1. Veeam erzeugt einen Applikationskonsistenten VMware Snapshot
2. Veeam erzeugt Storage Snapshot
3. Veeam löscht VMware Snapshot
4. Backup direkt aus Storage Snapshot
5. Veeam löscht Storage Snapshot





# Direct NFS Access

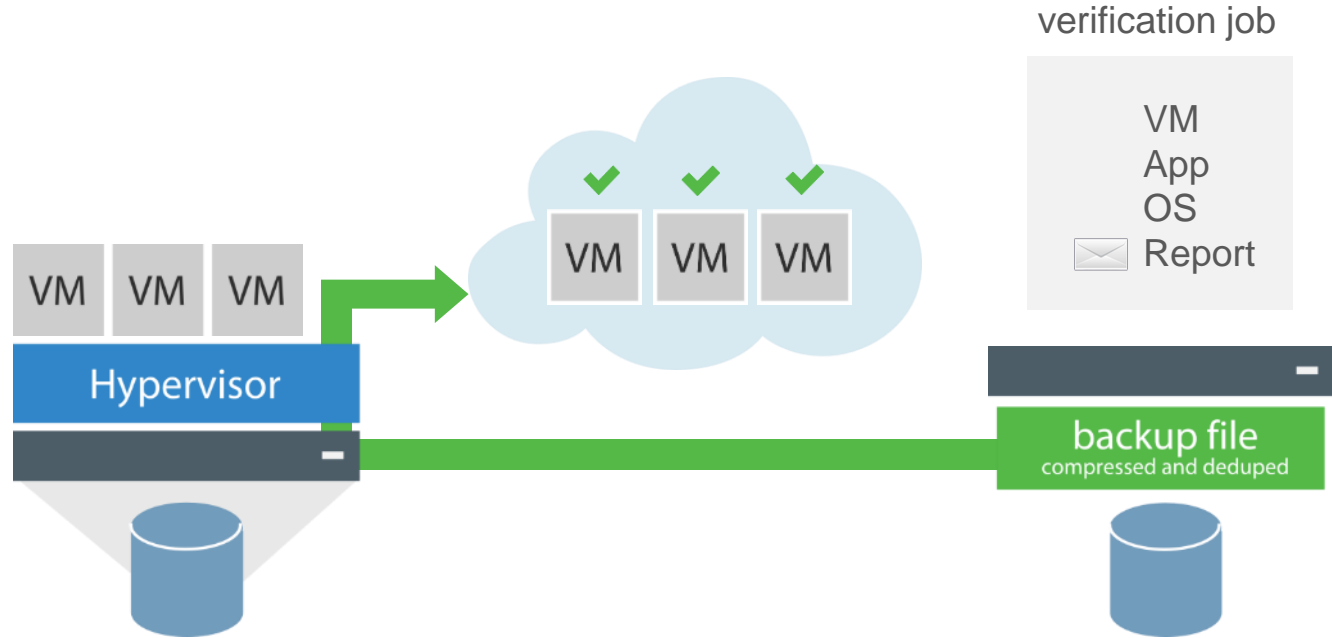


- New and improved NFS client
- Backup and replicate direct from NAS
- Faster backups
- Less load on infrastructure

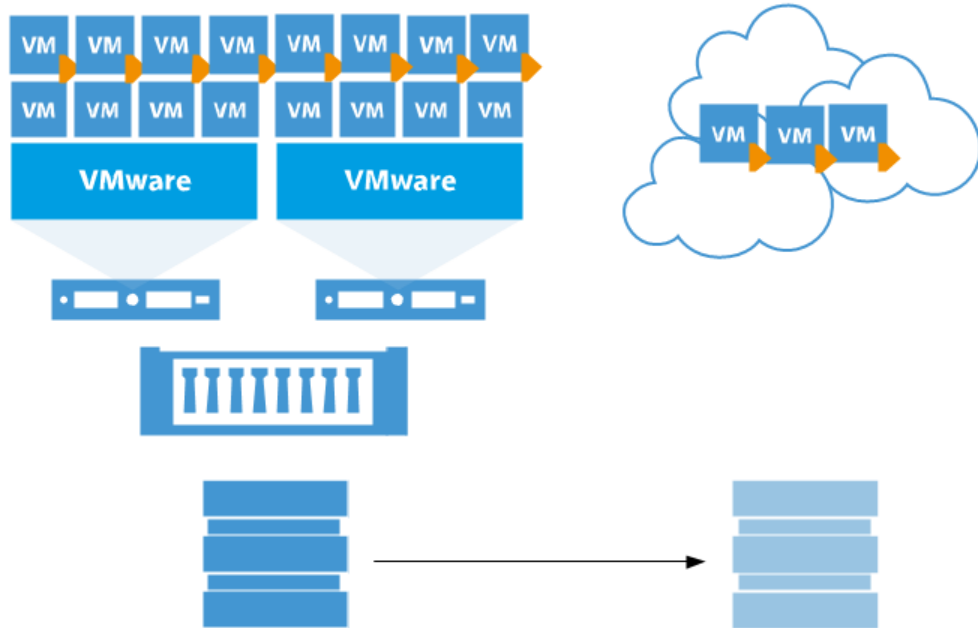


# Verified Protection

SureBackup, SureReplica & Virtual Lab

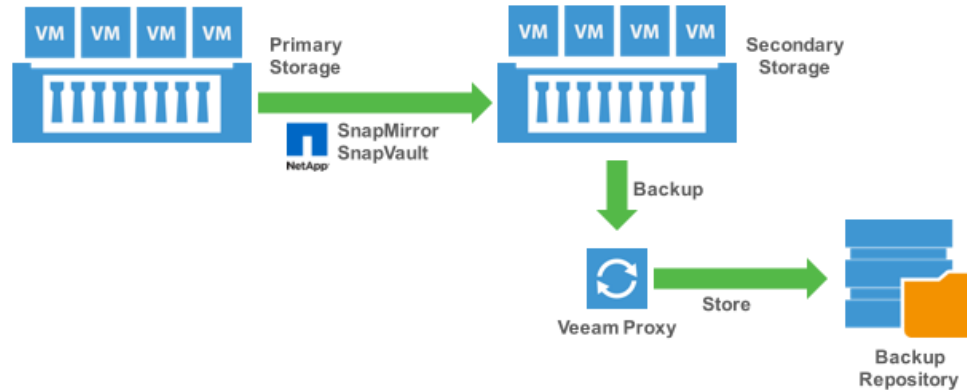


# On-Demand Sandbox™ for Storage Snapshots



- Full performance for Virtual Labs!

# Backup from NetApp SnapMirror and SnapVault



- Eliminate the additional impact from backup activities on your primary NetApp storage

# Scale-Out Backup Repository

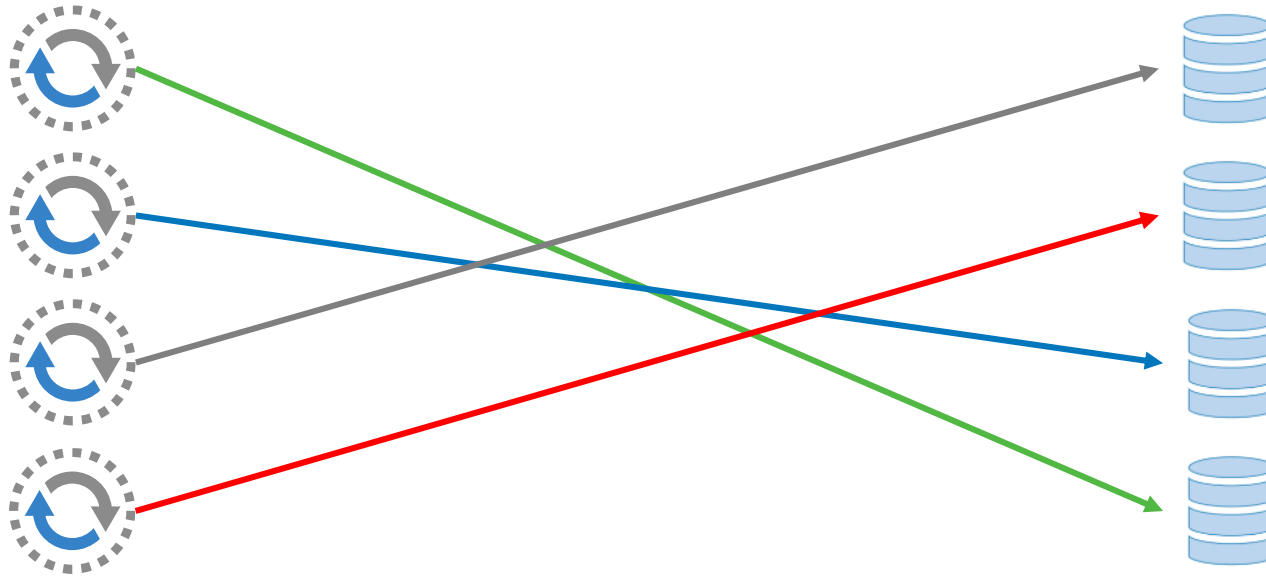
- **Global Pool**
- **Leverage your storage investments**
- **Storage Aware Placement**

# Backup Repositories in v8

Name	Type	Host	Path	Capacity	Free
pxy01-FCrep1	Windows	pxy01	O:\	15,0 TB	7,2 TB
pxy01-rep1	Windows	pxy01	E:\	10,0 TB	3,2 TB
pxy01-rep10	Windows	pxy01	N:\	15,0 TB	5,6 TB
pxy01-rep2	Windows	pxy01	F:\	10,0 TB	1,1 TB
pxy01-rep3	Windows	pxy01	G:\	10,3 TB	8,7 TB
pxy01-rep4	Windows	pxy01	H:\	10,5 TB	2,9 TB
pxy01-rep5	Windows	pxy01	I:\	10,0 TB	2,5 TB
pxy01-rep6	Windows	pxy01	J:\	15,0 TB	4,0 TB
pxy01-rep7	Windows	pxy01	K:\	15,0 TB	10,4 TB
pxy01-rep8	Windows	pxy01	L:\	15,0 TB	6,8 TB
pxy01-rep9	Windows	pxy01	M:\	15,0 TB	9,7 TB
pxy02-rep1	Windows	pxy02	E:\	10,0 TB	891,3 GB
pxy02-rep10	Windows	pxy02	N:\	15,0 TB	10,2 TB
pxy02-rep2	Windows	pxy02	F:\	15,0 TB	6,0 TB
pxy02-rep3	Windows	pxy02	G:\	10,0 TB	3,1 TB
pxy02-rep4	Windows	pxy02	H:\	10,0 TB	4,7 TB
pxy02-rep5	Windows	pxy02	I:\	10,0 TB	3,2 TB
pxy02-rep6	Windows	pxy02	J:\	10,0 TB	1,3 TB
pxy02-rep7	Windows	pxy02	K:\	15,0 TB	6,7 TB
pxy02-rep8	Windows	pxy02	L:\	15,0 TB	7,5 TB
pxy02-rep9	Windows	pxy02	M:\	15,0 TB	4,5 TB
pxy03-rep1	Windows	pxy03	E:\	10,0 TB	2,6 TB
pxy03-rep10	Windows	pxy03	N:\	15,0 TB	7,6 TB
pxy03-rep2	Windows	pxy03	F:\	10,0 TB	2,0 TB
pxy03-rep3	Windows	pxy03	G:\	10,0 TB	1,3 TB
pxy03-rep4	Windows	pxy03	H:\	10,0 TB	1,0 TB
pxy03-rep5	Windows	pxy03	I:\	10,0 TB	2,5 TB
pxy03-rep6	Windows	pxy03	J:\	10,0 TB	1,4 TB
pxy03-rep7	Windows	pxy03	K:\	15,0 TB	6,0 TB
pxy03-rep8	Windows	pxy03	L:\	15,0 TB	5,8 TB
pxy03-rep9	Windows	pxy03	M:\	15,0 TB	6,7 TB
pxy04-rep1	Windows	pxy04	E:\	10,0 TB	6,1 TB

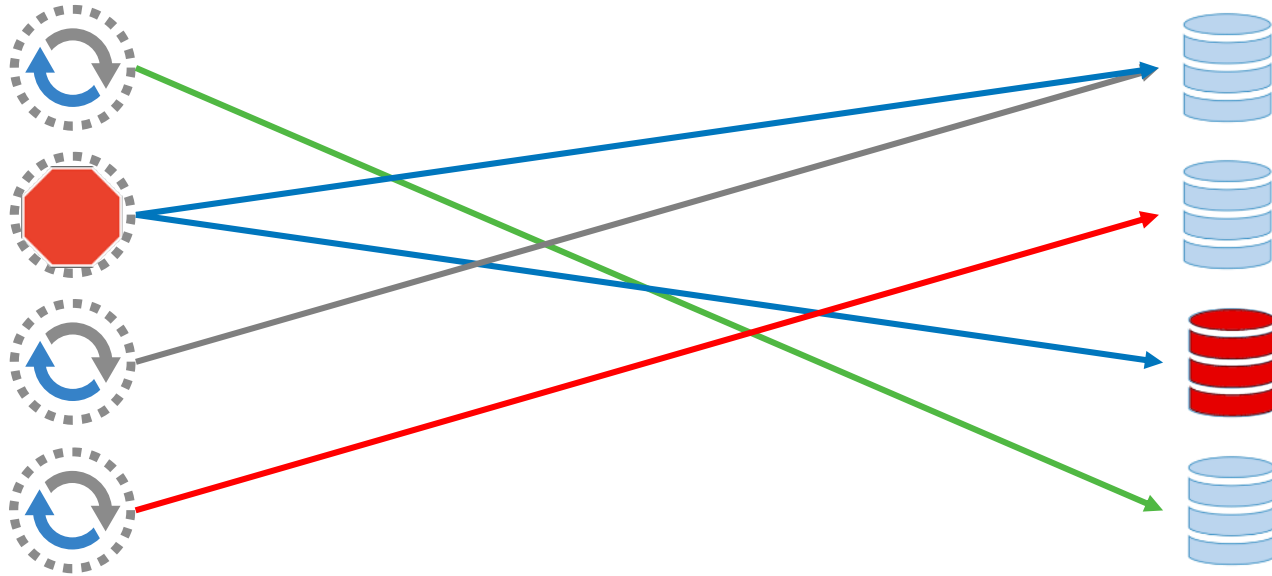
- Different, separate Repos.
- Space consumption hard to calculate and manager

# Backup storage management, before Scale-out Backup Repository



Each backup job needs to be manually assigned to one backup repository

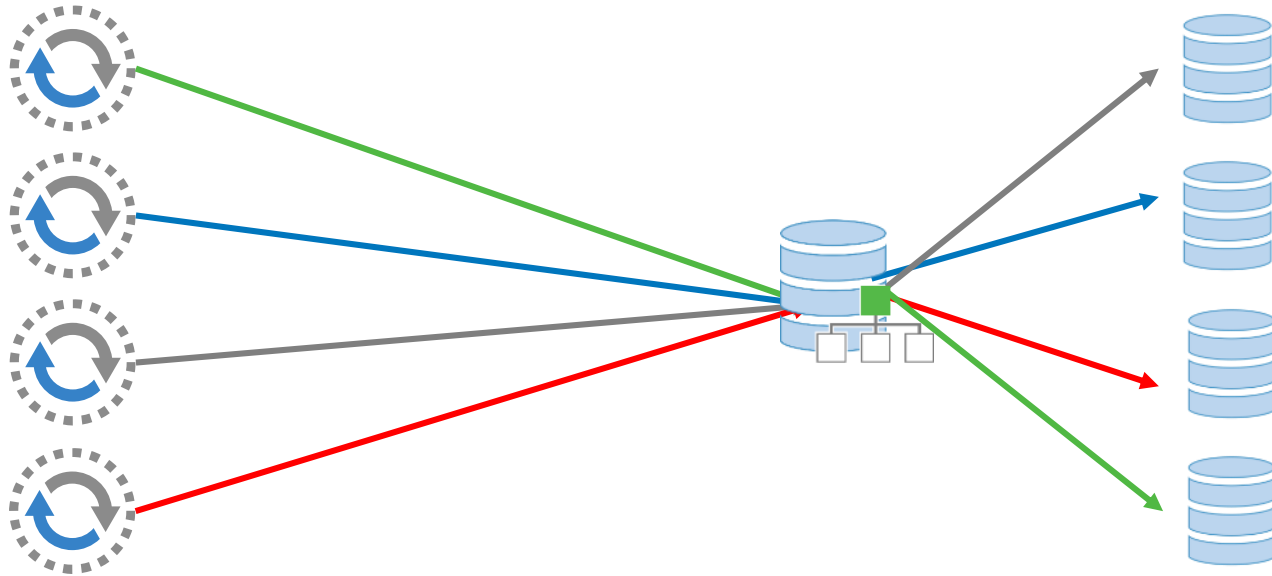
# Backup storage management hell



If a backup repository runs out of space, a backup job needs to be stopped and relocated.

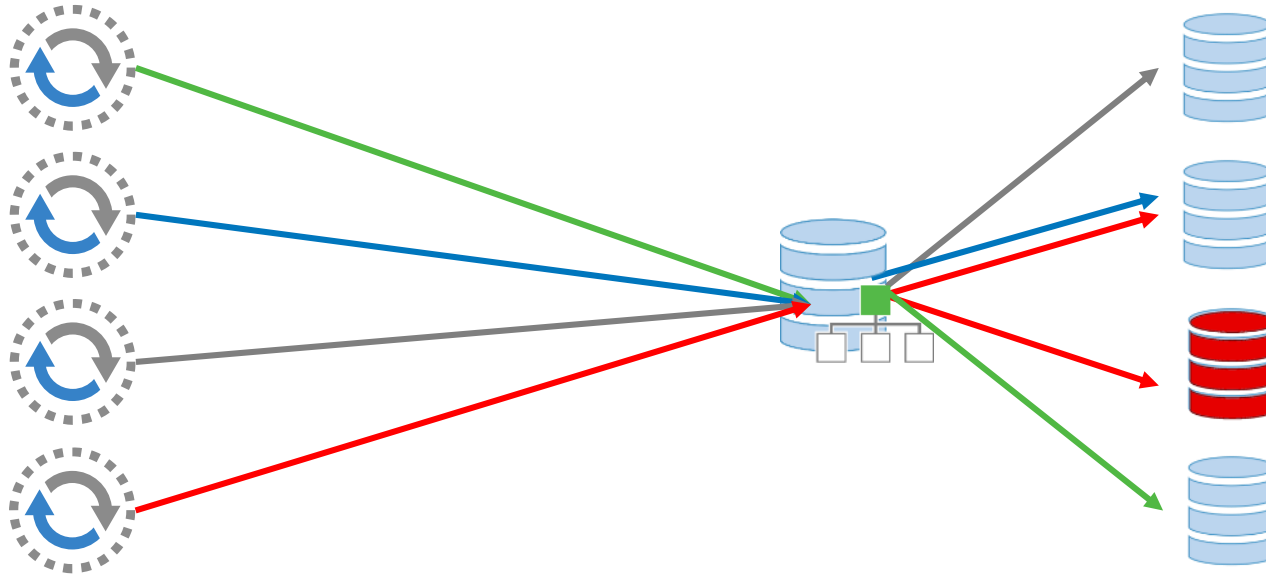


# Automated backup job management with Scale-out Backup Repository



Backup jobs are just pointed at the Scale-out Backup Repository, which sends data to the best target

# Automated backup job management (continued)

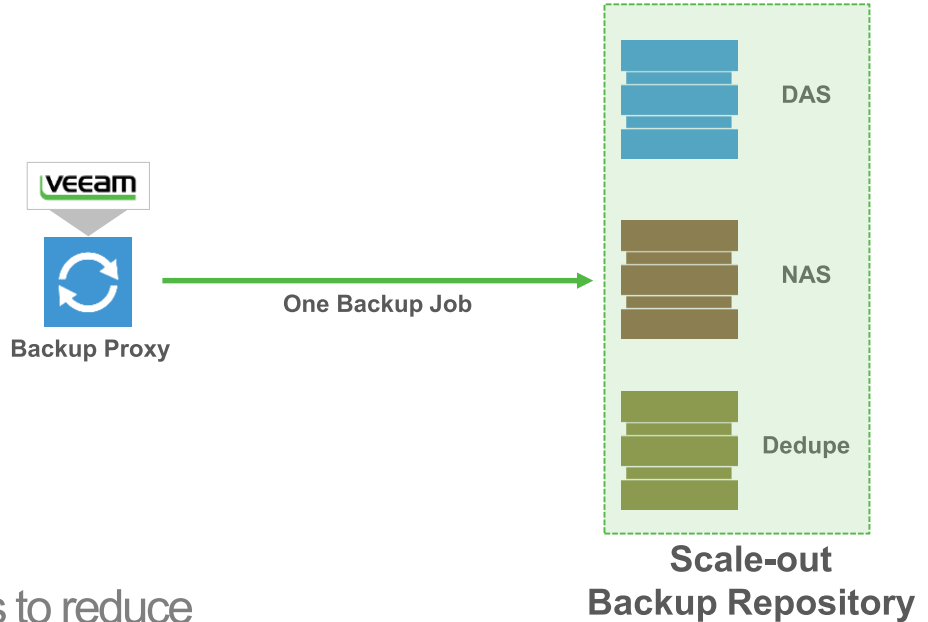


Any change in the back end is transparent to front end

# Scale-out Backup Repository

By allowing backup jobs to be pointed at the Scale-out Backup Repository, instead of at individual repositories, administrators no longer have to worry about an individual storage device running out of disk space

This added storage efficiency allows enterprises to reduce storage hardware spending, and improve backup storage performance and availability



# Enterprise-level enhancements for Veeam Explorers

- **Veeam Explorer for Oracle**
- **Existing Veeam Explorer enhancements**

# Improved Veeam Explorers in v9!

Featuring **NEW** Veeam Explorer for Oracle



Veeam Backup  
Repository

Restore

Low RTO

**VEEAM** Explorers

Oracle **NEW**

Microsoft Exchange **ENHANCED**

Microsoft Active Directory **ENHANCED**

Microsoft SQL Server **ENHANCED**

Microsoft SharePoint **ENHANCED**

# Veeam Explorer for Oracle

This new Explorer provides these key capabilities:

Transaction-level recovery

Agentless transaction log backup and replay

Additionally, Oracle's Automatic Storage Management (ASM) is supported.



# Veeam Explorer for Oracle

The screenshot displays the Veeam Explorer for Oracle application window. The interface is divided into several sections:

- Left Panel:** A tree view showing the hierarchy: SSA-RDS039.SSA.LAB > OraDB12Home1 > ORCL > VEEAMDAT. A context menu is open over the VEEAMDAT folder, offering options: "Restore to SSA-RDS039.SSA.LAB" and "Restore to another server...".
- Database Info:** A section displaying key database parameters:
  - Name: VEEAMDAT
  - VEEAMDATA1
  - NOARCHIVELOG
  - Backup time: 9/15/2015 8:01 PM
  - Listener port: not available
- Available Restore Period:** A section indicating "Not available".
- Database Files:** A section listing file paths:
  - Control files:**
    - C:\APP\ORACLEBUILDER\ORADATA\VEEAMDATA2\CONTROLFILE\O1\_MF\_BY5TDKO\_CTL
    - C:\APP\ORACLEBUILDER\FAST\_RECOVERY\_AREA\VEEAMDATA2\CONTROLFILE\O1\_MF\_BY5TDPK\_CTL
  - Data files:**
    - C:\APP\ORACLEBUILDER\ORADATA\VEEAMDATA2\DATAFILE\O1\_MF\_SYSTEM\_BY5N3H6\_DBF
    - C:\APP\ORACLEBUILDER\ORADATA\VEEAMDATA2\DATAFILE\O1\_MF\_SYSAUX\_BY5L1HP\_DBF
    - C:\APP\ORACLEBUILDER\ORADATA\VEEAMDATA2\DATAFILE\O1\_MF\_UNDOTBS1\_BY5PTTG\_DBF

The status bar at the bottom of the window displays "VEEAMDAT".

# Veeam Explorers in v9

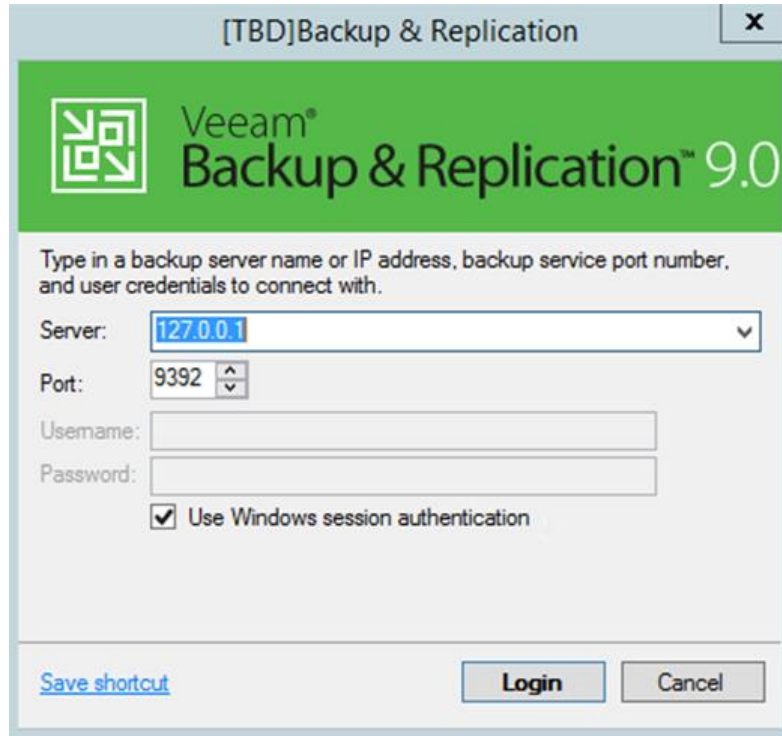
- **Active Directory**
  - Group Policy Objects restore, AD-integrated DNS Records, configuration partition objects
- **Microsoft Exchange**
  - New eDiscovery Export Report (track who exported what where + search criteria)
  - Export size estimation for search queries
- **Microsoft SharePoint**
  - Full-site, site collection and list and item permission restores
  - Remote staging server
- **Microsoft SQL**
  - Table-level recovery
  - Remote staging server



# Availability for the Enterprise

- **Standalone Console**
- **Advanced Tape Support**
- **Remote Office/Branch Office (ROBO) Enhancements**

# Standalone Console



The screenshot shows a Windows-style dialog box titled "[TBD]Backup & Replication" with a close button (X) in the top right corner. The dialog has a green header bar with the Veeam logo and the text "Veeam® Backup & Replication™ 9.0". Below the header, there is a text prompt: "Type in a backup server name or IP address, backup service port number, and user credentials to connect with." The form contains the following fields and controls:

- Server:** A text input field containing "127.0.0.1" and a dropdown arrow on the right.
- Port:** A spin box containing the number "9392".
- Username:** An empty text input field.
- Password:** An empty text input field.
- Use Windows session authentication:** A checked checkbox.

At the bottom of the dialog, there are three buttons: "Save shortcut" (a blue link), "Login", and "Cancel".

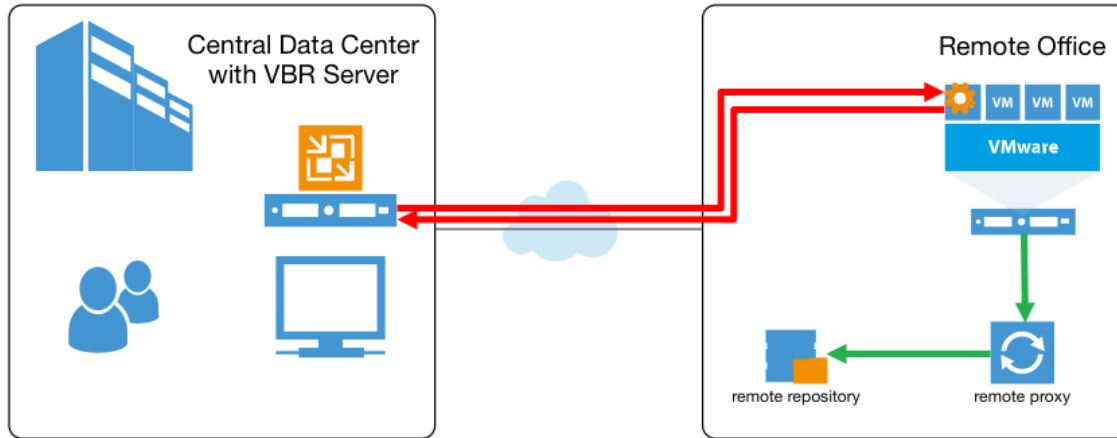
- Just like Veeam ONE Client!
- No more RDP sessions!
- Assumes mount server role

# ROBO Enhancements

- Better scalability
- Improve backup and recovery times
- Reduce WAN bandwidth consumption

# Guest interaction in v8

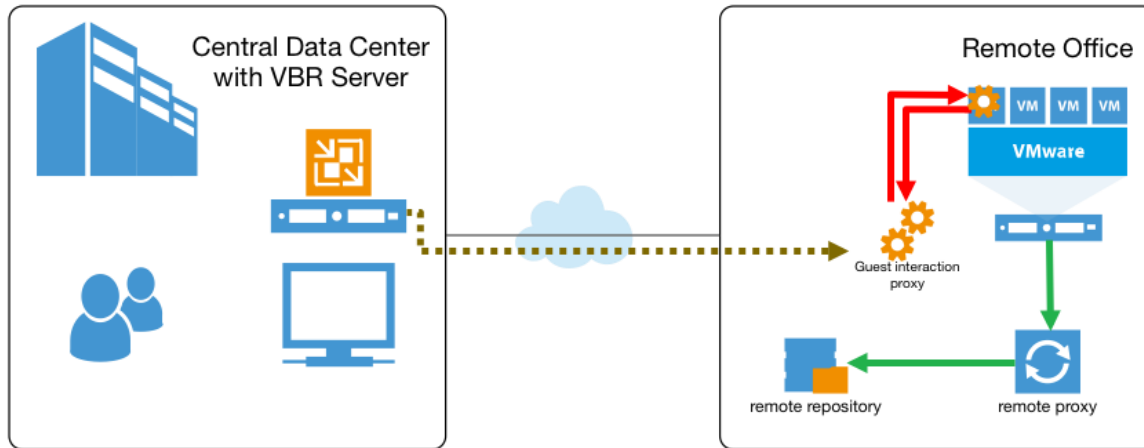
- Central VBR Server handles guest interactions at remote site



- Load on backup server limits concurrent guest interactions
- Slow WAN links cause extra delay for backup to start

# Guest interaction in v9

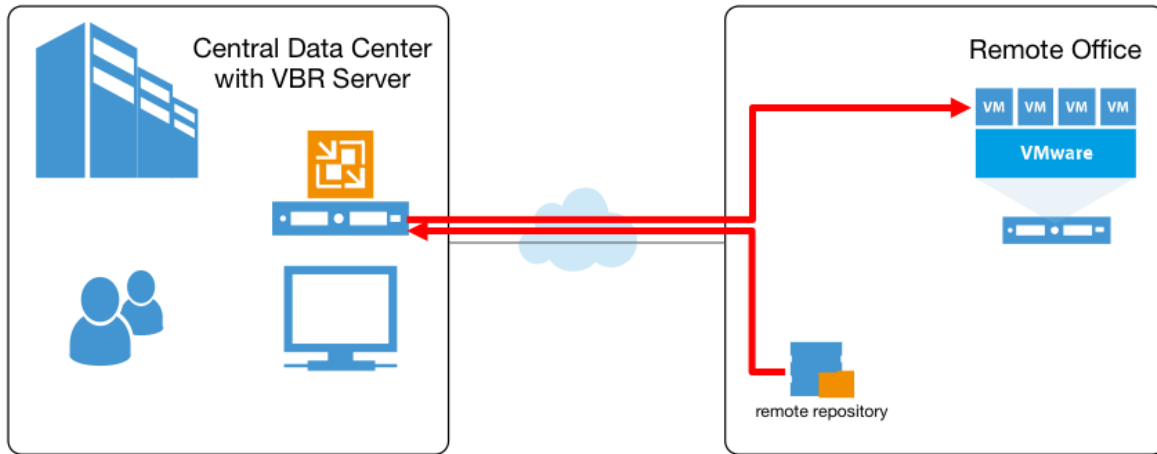
- A new component - Guest Interaction Proxy - handles guest interactions



- Any Windows server
- Traffic stays local
- Easier to scale
- Ideal for separated networks

# File Level Restore in v8

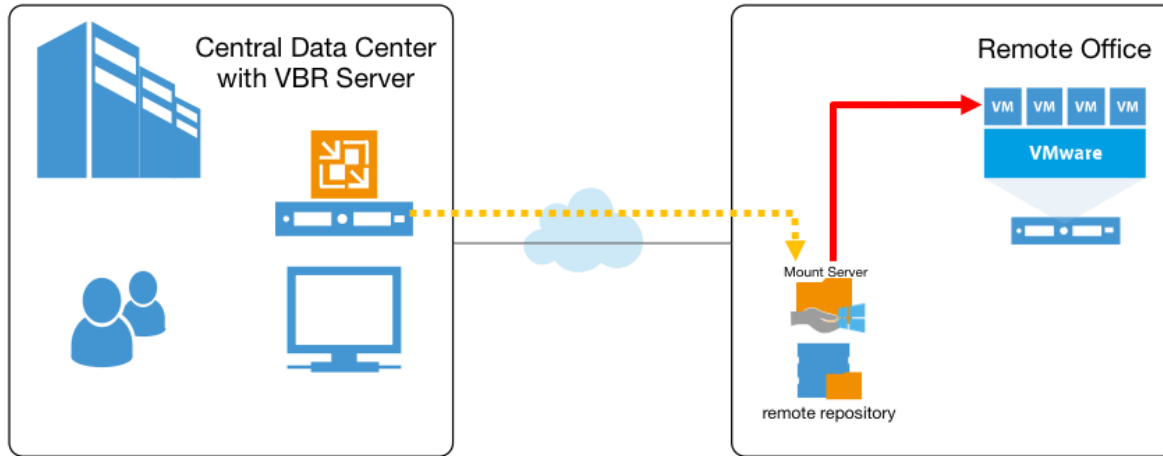
- Central VBR Server needs to mount backups



- Doubles WAN traffic
- Multi-OS FLR workaround

# File Level Restore in v9

- Mount is done locally on a mount server



- Mount Server possibility on every backup repository
- Restore traffic stays local

# Advanced Tape Support

- Global Media Pool – span data across multiple libraries
- Parallel processing – between multiple tape drives
- GFS Media Pool
- Support for devices without native Microsoft Windows Drivers



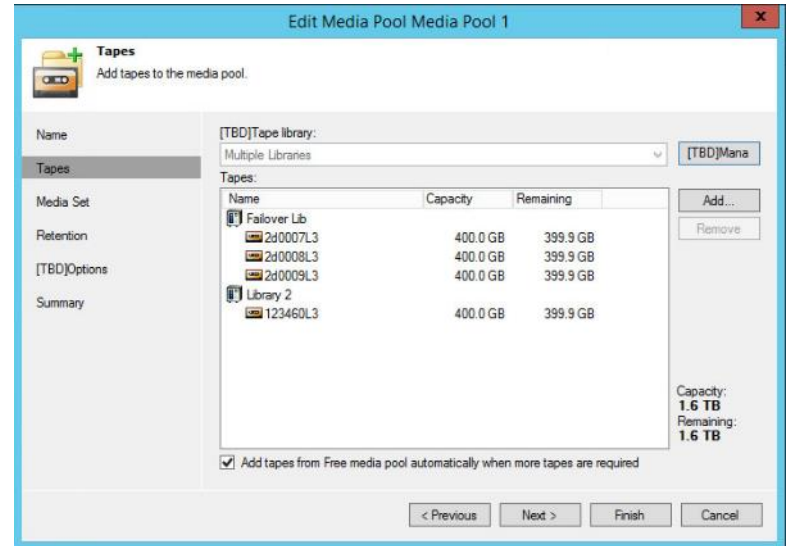
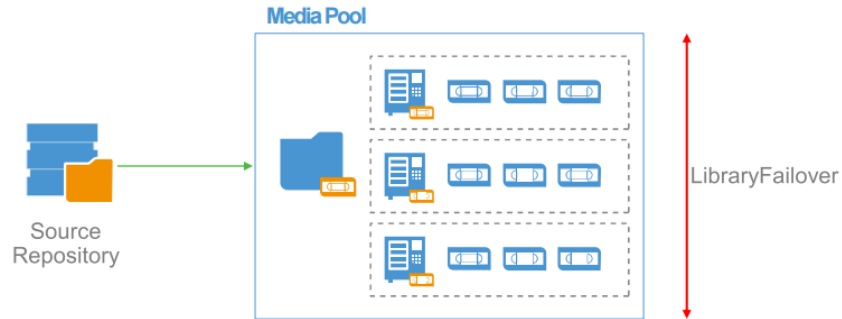
# Media Pool in v8

Media Pool can only contain tapes from single library



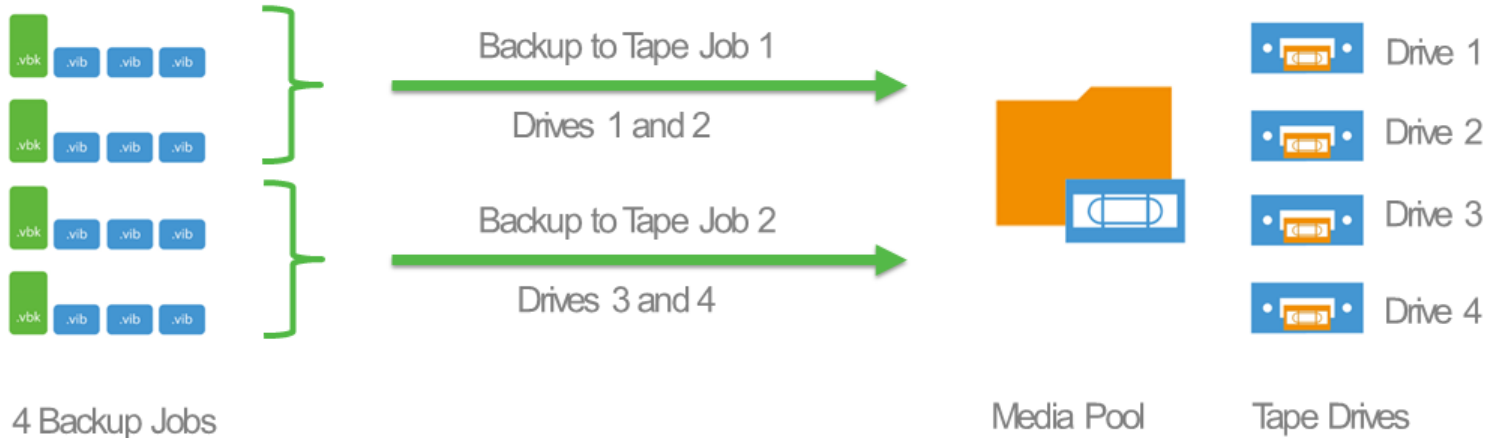
# Media Pool in v9

Media Pool can span multiple tape libraries



# Parallel Processing

Backup to tape jobs using the same media pool can process backup files from separate backup jobs simultaneously

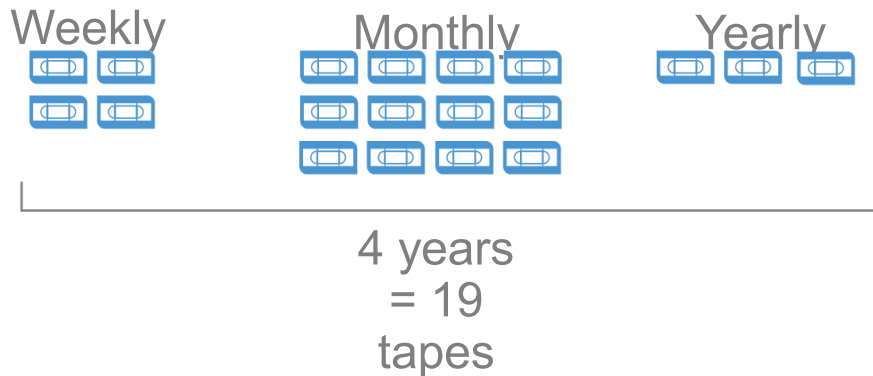


# GFS Media Pool

- Grandfather – Father – Son retention
- Save on tapes

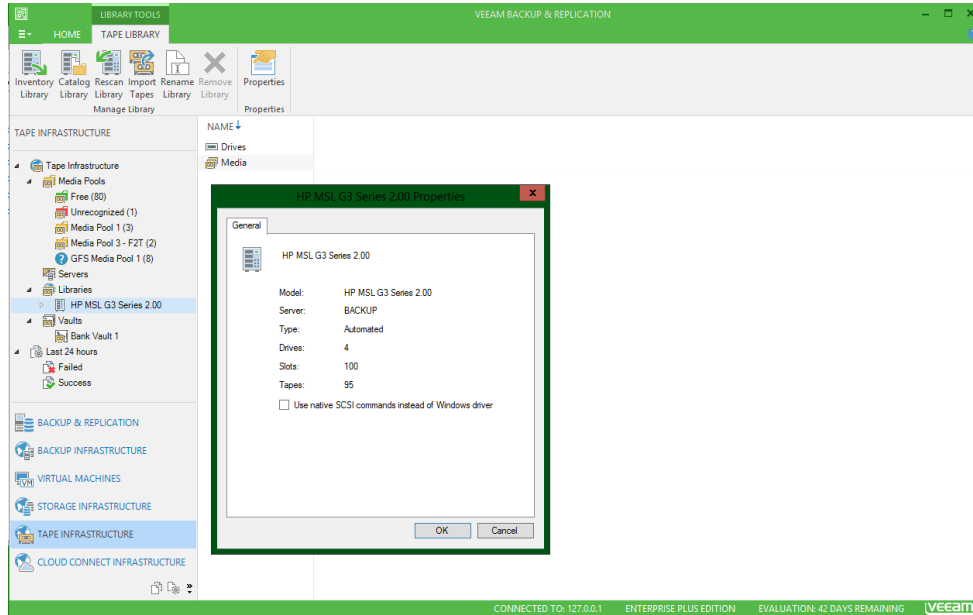
## 4 Media Sets:

- Weekly
- Monthly
- Quarterly
- Yearly



# Unknown Media Changer

Support for tape devices without native Microsoft Windows Drivers - Failover to native SCSI commands

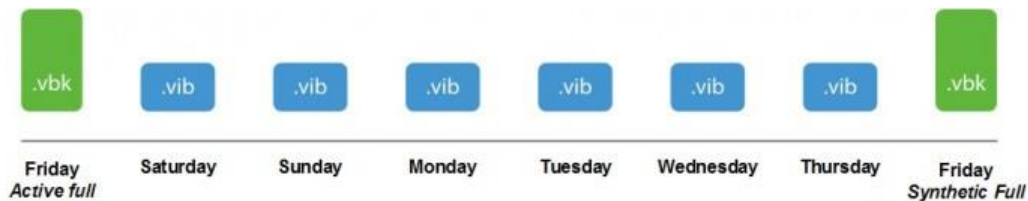


# Backup Storage Integration

- **HP StoreOnce Catalyst integration**
- **Updated EMC Data Domain support**
- **New features for high-performance backups with ANY deduplication appliance**

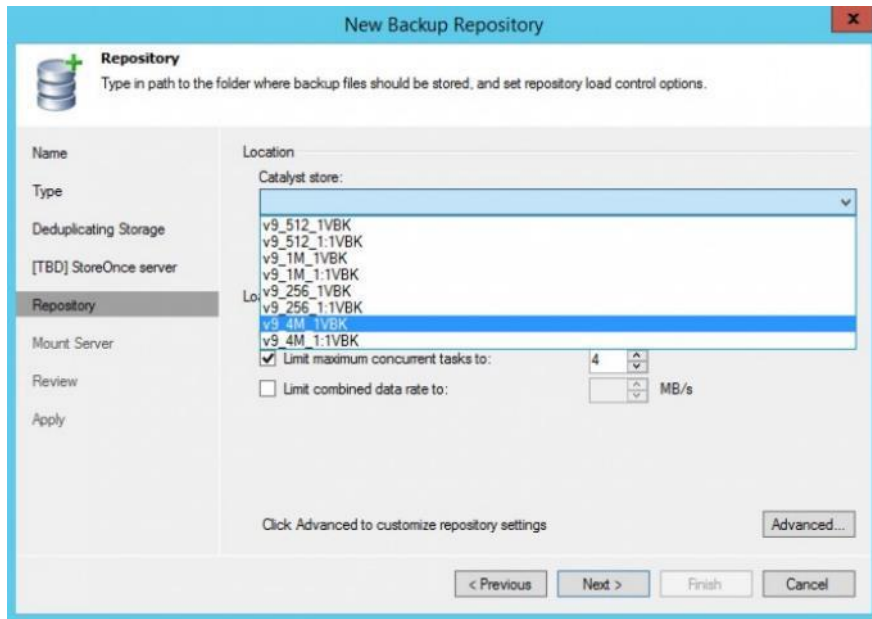
# HP StoreOnce Catalyst integration

- Improved backup performance
  - Advanced source-side deduplication capabilities
- Improved synthetic full creation and transformation performance
  - Up to 10x
  - Metadata-only operation instead of physical data copying



# HP StoreOnce Catalyst integration

- Improved recovery performance
  - Optimizations – 2x faster than before
- Catalyst over FC support
  - LAN-free backups



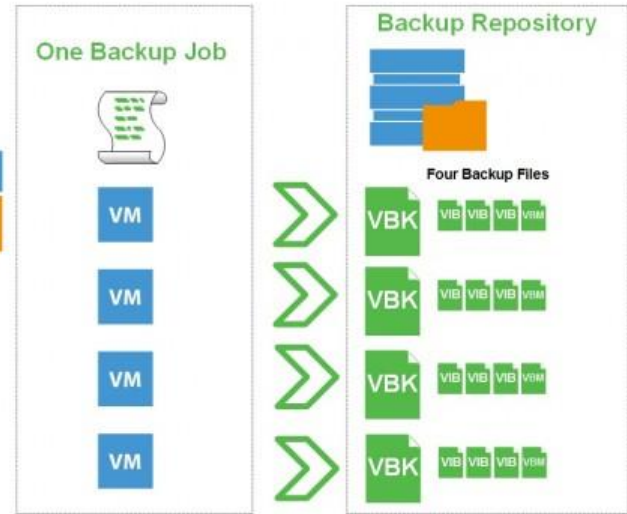
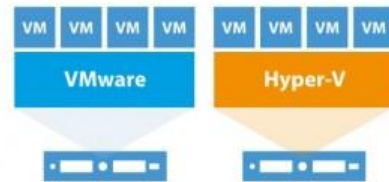


# Enhanced EMC Data Domain support

- Updated integration EMC Data Domain Boost 3.0 SDK
- DD OS 5.6 support
- Source-side deduplication over WAN support
- Encryption over WAN support

# Enhanced support for ANY deduplication appliance

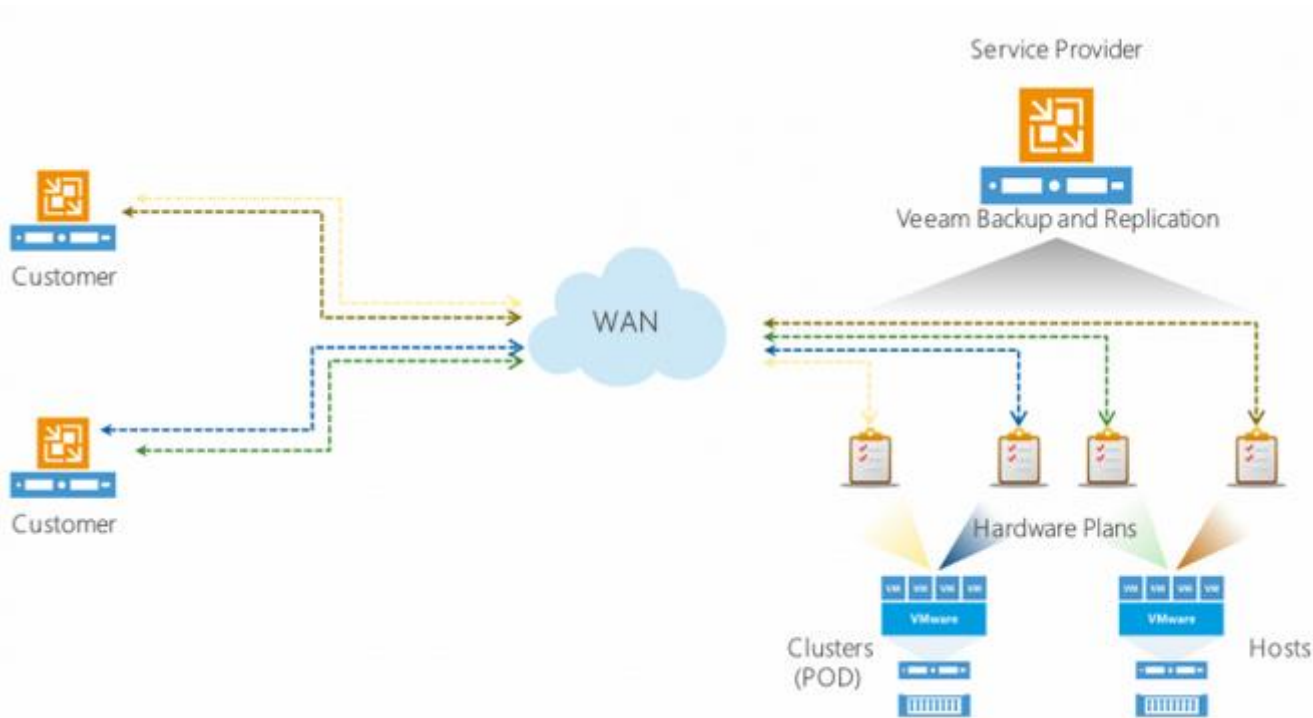
- Up to 10x
- Per VM backup file chains
  - Multiple write streams
  - No drawbacks, because of advanced target deduplication
- Additional under the hood optimizations to improve recovery performance



# Veeam Cloud Connect Replication

- **Now with replication**
- **DRaaS opportunities for Service Providers**

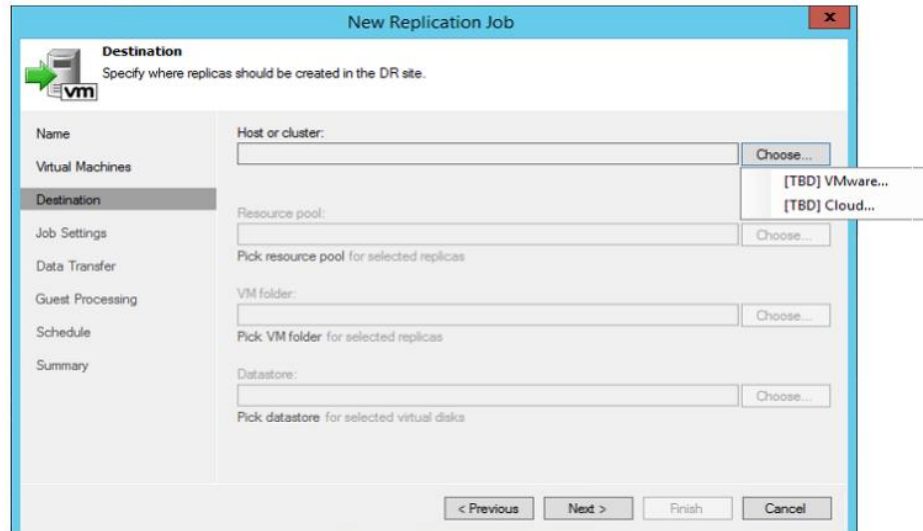
# Veeam Cloud Connect Replication



- DRaaS
- Multi-tenancy

# Replication job

- No difference – just a new target!



The screenshot shows the 'New Replication Job' wizard in the 'Destination' step. The window title is 'New Replication Job' and the subtitle is 'Destination: Specify where replicas should be created in the DR site.' The left sidebar contains a tree view with 'Destination' selected. The main area has several fields with 'Choose...' buttons: 'Host or cluster', 'Resource pool', 'VM folder', and 'Datastore'. A tooltip is visible over the 'Host or cluster' field, showing '[TBD] VMware...' and '[TBD] Cloud...'. At the bottom, there are navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

# v9 edition comparison

New v9 Features	Standard	Enterprise	Enterprise <i>Plus</i>
EMC Integration – Veeam Explorer™ for Storage Snapshots			
EMC Integration – Backup from Storage Snapshots			
Veeam Cloud Connect Replication			
Direct NFS Access			
On-Demand Sandbox™ for Storage Snapshots			
Backup from NetApp SnapMirror and SnapVault			
Veeam Explorer™ for Oracle			
Veeam Explorer for Microsoft Exchange			
Veeam Explorer for Microsoft Active Directory			
Veeam Explorer for Microsoft SharePoint			
Veeam Explorer for Microsoft SQL Server			
Standalone Console			
ROBO Enhancements			
Native Tape Support			
HP StoreOnce Catalyst Support			
Scale-out Backup Repository™		3 Extents	
BitLocker			
Built-in WAN Acceleration		Cloud	

# So when will v9 launch?

When it's ready™ ;-)



Thank you!

