



You make **possible**



Breaking News – New Veeam v10

Kevin Ridings Alliance SE EMEA
@ukpenfold

PAR-2973

CISCO *Live!*

Barcelona | January 27–31, 2020



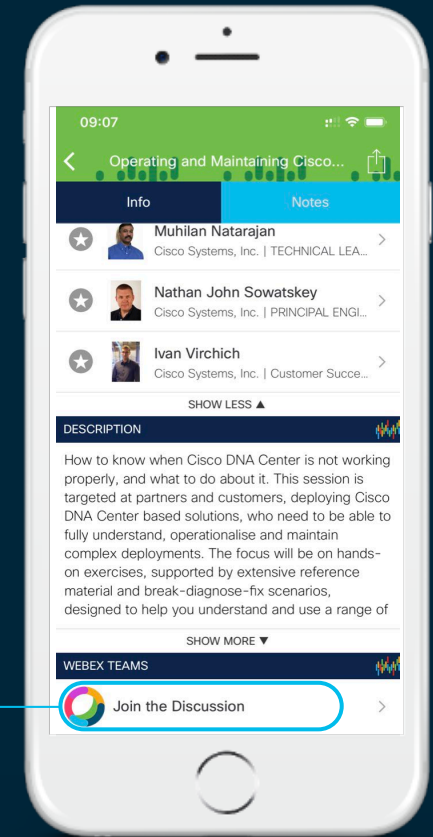
Cisco Webex Teams

Questions?

Use Cisco Webex Teams to chat with the speaker after the session

How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex Teams or go directly to the team space
- 4 Enter messages/questions in the team space

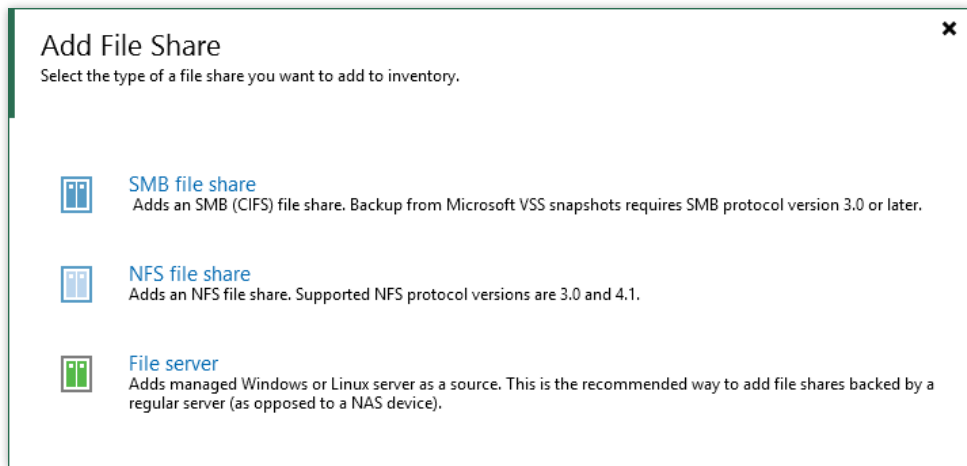


NAS Backup



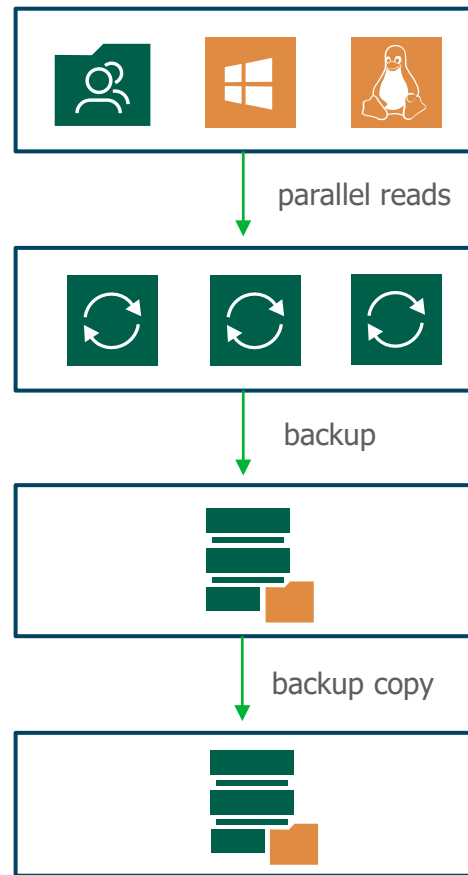
What Can Veeam Backup?

- SMB (CIFS) file shares
 - Versions 1, 2 and 3
- NFS file shares
 - Versions 3 and 4.1
- Veeam managed servers (Windows & Linux)

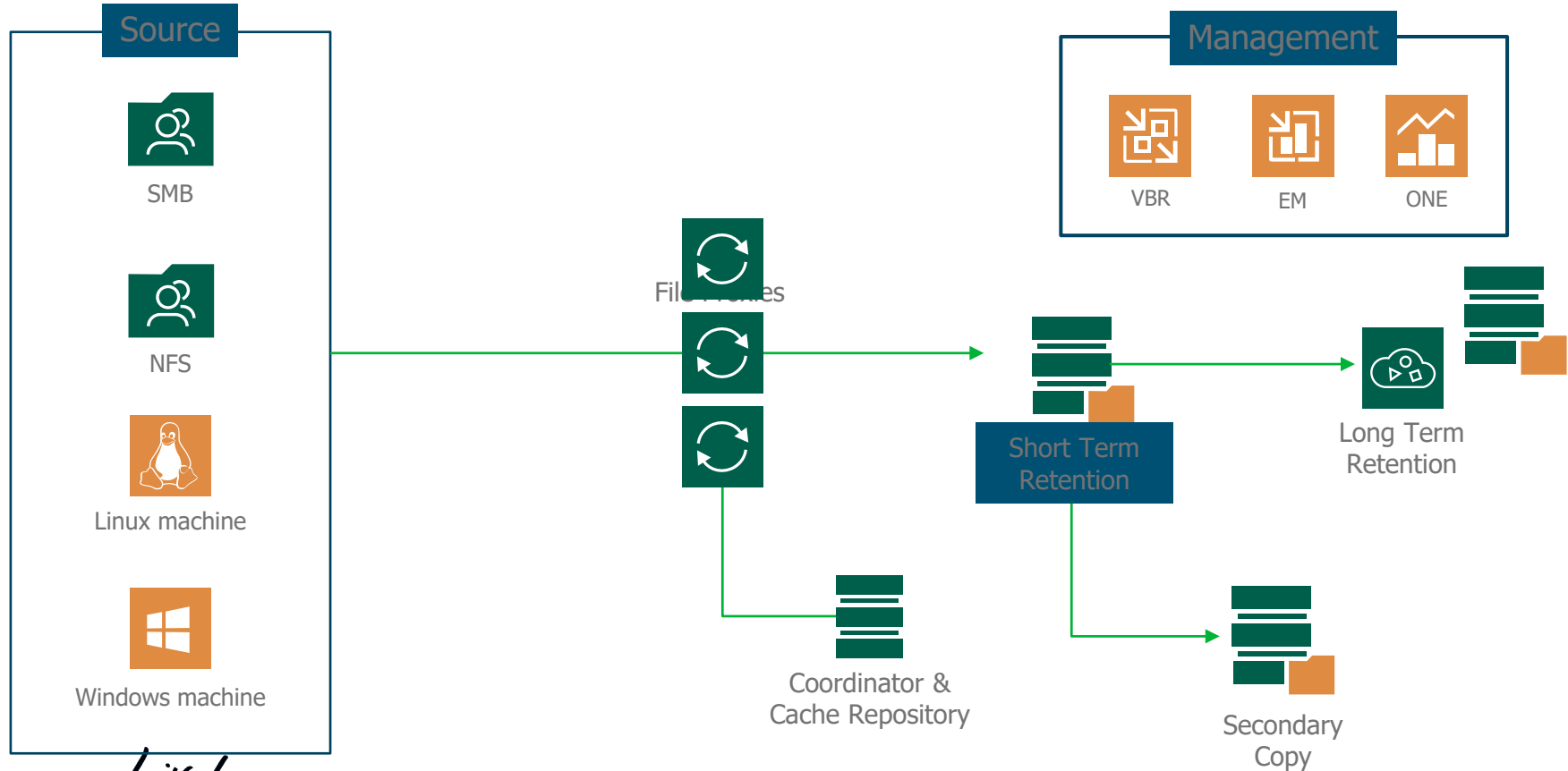


Simplified Technical Overview

- File based backup
- Massive parallel processing
- Incremental backup is fast because we only look at folder attributes
 - We do not read the backups!
- New backup file format
 - Scale to billions of files and PBs of data
- Data compression built-in

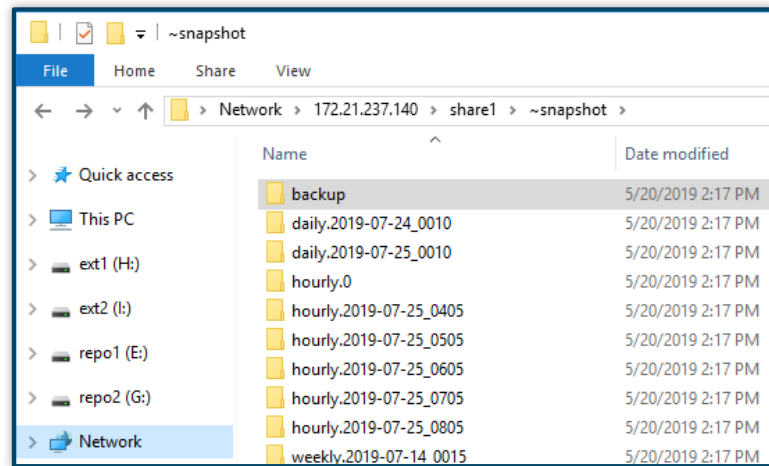
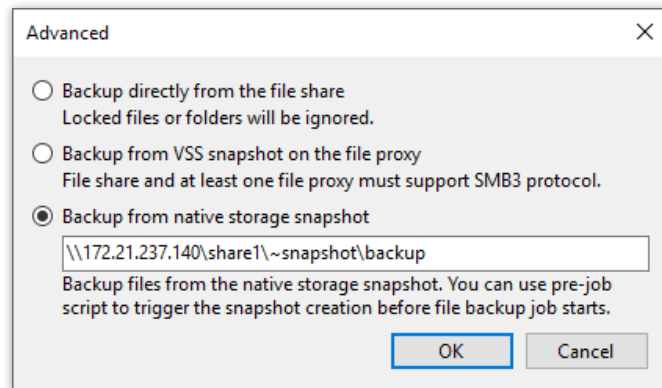


Simplified Technical Scheme



Backup From Alternative Path

- Why?
- Open files on SMB shares cannot be backed up
- Reduce load on primary NAS if backing up from secondary snapshot (e.g. SnapVault)
- Solution:
- Specify alternative backup path to a snapshot of NAS share (don't use changing folders like the hourly.0)



Flexible Restore Options

Restore from File Backup

Select the type of restore you want to perform.



Restore entire share

Restores the latest version of all files to the selected location. Use this option in case of a complete loss of storage service, or major storage-level corruption impacting unknown number of files.



Rollback to a point in time

Reverts all files modified since the specific date and time to the previous version, and restores all files that were deleted. Use this option to recover from ransomware, virus or insider attack.



Restore individual files and folders

Restores the required file version, or point-in-time state of a folder to the specified location. Use this option to find and restore missing files or folders, or fetch previous file versions.

Cancel

Licensing

- NAS backup available in all editions
- 1 Universal License = 250 GB of frontend data
- same content backed up twice (different jobs, VM backup, Agent backup) -> counts twice!



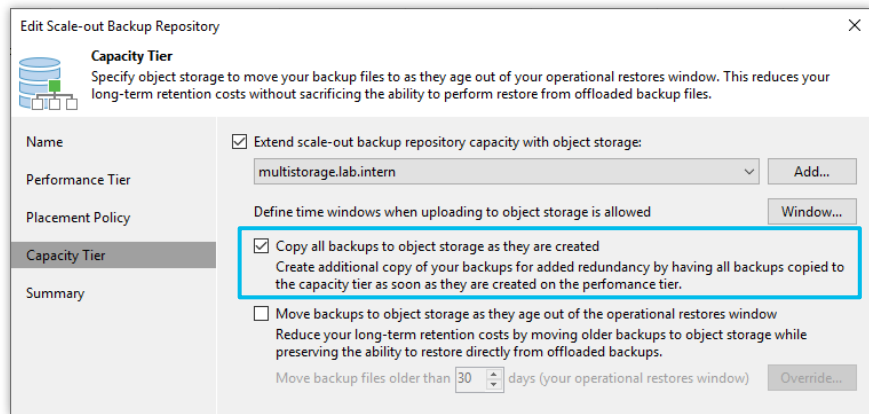
Capacity Tier Improvements

Veeam's Object Storage Journey

- 9.5 Update 4
 - Move old backups to object storage
 - hierarchical storage management
- V10
 - Copy current backups
 - Simplify offsite backup (3-2-1 rule)
 - on-prem storage redundancy and immutability

Configuration Copy Policy

- Single checkbox
 - Copy starts as soon as backup file is created (also for per-VM chains where the backup copy job waited until job finished)
- No backup copy job needed
- Combination with “move” possible (move removes data from performance tier)



The screenshot shows the 'Edit Scale-out Backup Repository' dialog box. The 'Capacity Tier' tab is selected in the left sidebar. The main content area has a title 'Capacity Tier' with a description: 'Specify object storage to move your backup files to as they age out of your operational restores window. This reduces your long-term retention costs without sacrificing the ability to perform restore from offloaded backup files.' Below this, there are several configuration options:

- ☒ Extend scale-out backup repository capacity with object storage:
 - A dropdown menu shows 'multistorage.lab.intern' with an 'Add...' button.
 - A button 'Window...' is next to the text 'Define time windows when uploading to object storage is allowed'.
- ☒ Copy all backups to object storage as they are created
 - Subtext: 'Create additional copy of your backups for added redundancy by having all backups copied to the capacity tier as soon as they are created on the performance tier.'
- ☐ Move backups to object storage as they age out of the operational restores window
 - Subtext: 'Reduce your long-term retention costs by moving older backups to object storage while preserving the ability to restore directly from offloaded backups.'
 - A text field shows '30' days, with a note: 'Move backup files older than 30 days (your operational restores window)' and an 'Override...' button.

Mode Comparison

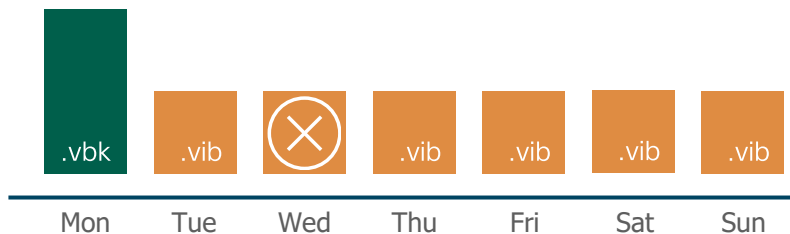
- Move
- Only sealed chains
- Offload old data every 4h

Copy

- All backup files (VBK, VRB, VIB)
- Continuous offload as soon as created

Restore Scenarios

01 Backup file Unavailable



02 Extent unavailable



03 SOBR unavailable



04 Backup server unavailable



Prevent Deletion – Air Gap On S3

- Protect against malicious or accidental modification / deletion
- Alternative to tape
- Based on AWS object lock & versioning
- Supported systems:
 - S3 object lock compatible
 - AWS and others

Immutable S3 Buckets / WORM

1. Check checkbox
2. Set amount of days

New Object Storage Repository

Bucket
Specify Amazon S3 bucket to use.

Name

Account

Bucket

Summary

Data center region:
EU (Frankfurt)

Bucket:
hannesk-immutable

Folder:
veeam [Browse...](#)

☐ Limit object storage consumption to: 10 TB
This is a soft limit to help control your cloud storage spend. If the specified limit is exceeded, the already running data offload tasks will be allowed to complete, but no new tasks will start.

☒ **Make recent backups immutable for:** 30 days (increases costs)
Protects recent backups from modification or deletion by ransomware, malicious insiders or hackers. This option uses native object storage capabilities and incurs additional API and storage costs.

☒ Use infrequent access storage class (may result in additional costs)
Provides lower price per GB at the cost of higher retrieval and early deletion fees, and so is best suited for storing quarterly and yearly backups which you are unlikely to have to restore from.

< Previous Next > Finish Cancel

Yes, this also protects
against insider attacks...



Flexible retentions

Daily retention

- Choose between restore points and daily retention
- VBR always keeps at least 3 restore points*

Edit Backup Job [XFS-Fast-Clone]

Storage
Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.

Name
Virtual Machines

Storage
Backup proxy: Automatic selection [Choose...](#)
Backup repository: beta-repo (Created by WIN-0PS2E4VSSHQ\Administrator at 5/7/2019 11:24 AM.) [Map backup](#)
60.3 GB free of 69.9 GB

Guest Processing
Retention policy: 7 days [i](#)
☒ Keep some periodic full backup for archival purposes [Configure...](#)
4 weekly

*we have a registry key for that ;-)

GFS For Backup Jobs

What?

- Weekly / monthly / yearly retention directly on backup job (no backup copy job required)

Why is it important?

- Simplify job design

Keep in mind:

- Always have at least one copy
- Don't break 3-2-1 rule!





Veeam Agent For Windows Improvements

Resume backups

- For backup jobs to normal repository and cloud connect
- Hibernate or sleep issues also addressed
- It just works (tested by removing network cable for about 10min)



Resume the backup cache sync

- Sync job will check the block map and transfer only missing blocks every minute

Keep in mind

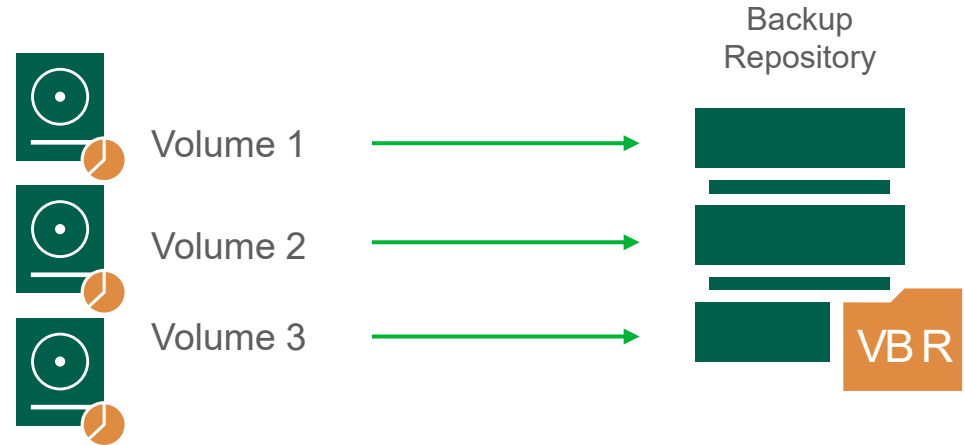
- Backup cache is only available for “entire computer” and “volume level” backup
- Backup Cache does not require first backup to target



Parallel Disk / Volume Processing

Why is it important?

- More performance



Dropped Support Agents

Windows 8 (GA)

Windows 10 15.07 (GA)

Windows 10 15.11

Reason: .NET framework 4.7.2 not supported



Veeam Agent for Linux Improvements

Application Aware for...

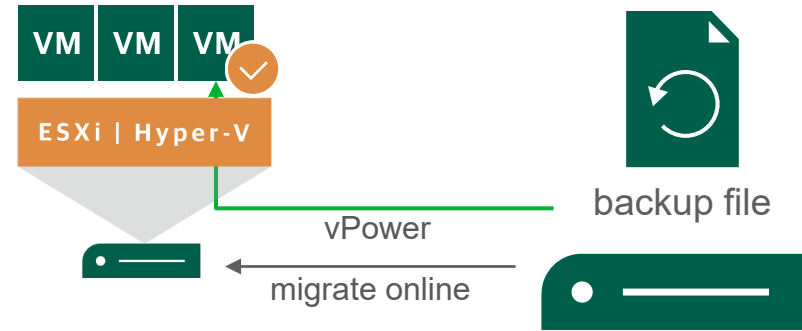
- PostgreSQL Application Aware Processing
- MySQL Application Aware Processing



Instant Recovery improvements

Up To 5x Better Performance


- Up to 5x faster copy of large files within instant recovery VM
- Smarter cache
- Smart pre-fetch for sequential workloads
- async I/O



Multi-VM Instant Restore

- Instant recovery of multiple VMs without clicking through the wizard again and again

Instant VM Recovery



Machines
Select machines to be restored. You can add individual machines from backup files, or containers from (containers will be automatically expanded into plain list).

Machines





Restore Mode

Secure Restore

Reason

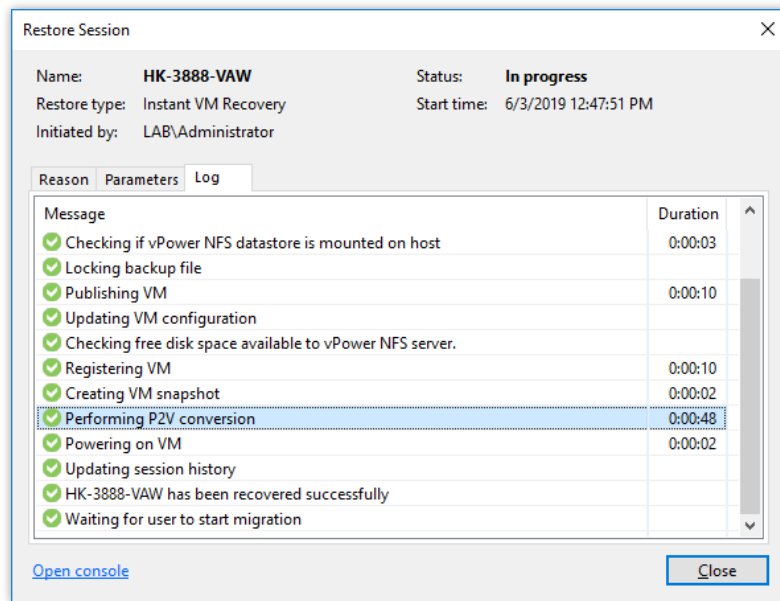
Summary

Machines to restore:

Name	Size	Restore point
 HK-Nano	546.0 MB	30 days ago (10:15 AM Tuesd...
 HK-OVPN-central	2.1 GB	51 days ago (2:01 AM Tuesda...
 HK-SQL-01	108.9 GB	49 days ago (7:01 AM Thursd...
 HK-VBO30-Win2016	15.9 GB	31 days ago (8:36 PM Sunday ...

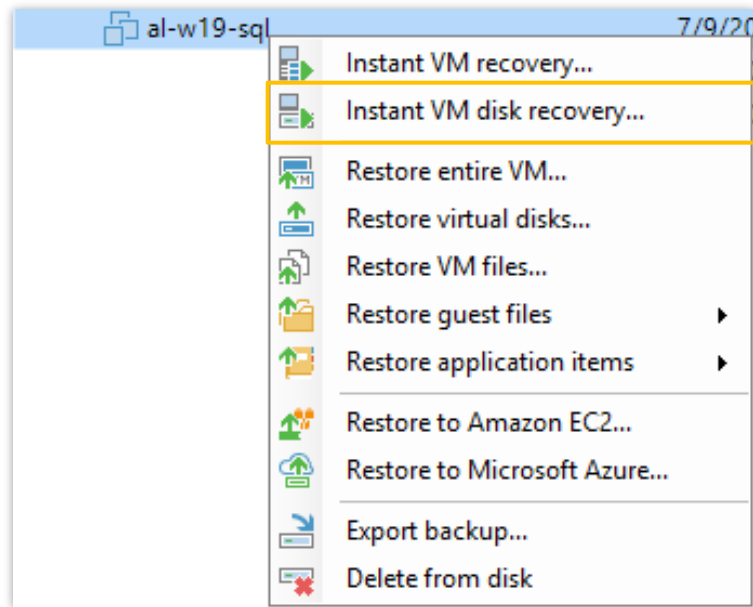
Instant Agent Recovery to VMware

- Similar user experience to what existed for Hyper-V
- Automatic P2V conversion (inject drivers)
- Write cache in vPower cache or datastore



Instant Disk Recovery

- Mount disk of VMware backup to VMware VM
- vPower based (incl. sVMotion)
- Use cases
 - Issues on only one vmdk
 - Restore without network access (e.g. to DMZ machines)
 - Restore only NTFS permissions with help of robocopy /SECFIX

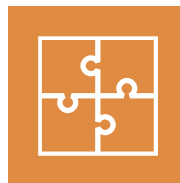


Data Integration API (Mount API)

- Mount any restore point to any system
- 10 disk less 2 minutes
- iSCSI based

Use Cases

- Let 3rd party applications access content of Veeam backups for:
 - Security analysis
 - eDiscovery
 - Data classification
 - Data mining

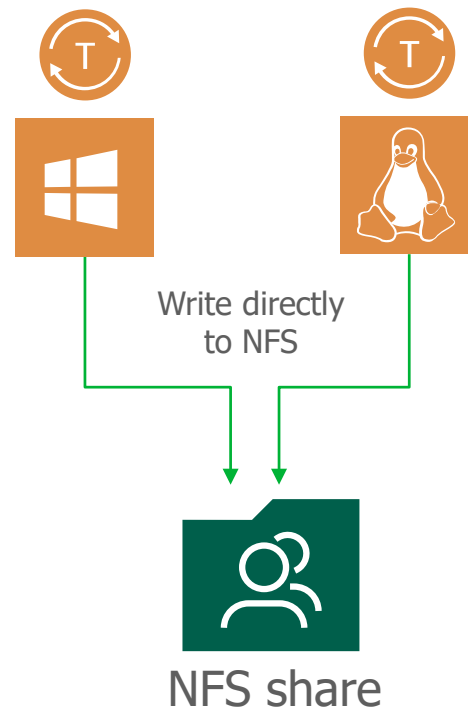




NFS Repositories

Why Is It Important?

- NFS supports write-through
 - Reliability over SMB protocol
 - Veeam does write-through
- Simplify creation of Veeam appliances
 - HCI solutions are often NFS based
- Simplification: no extra Linux server required anymore to write data to NFS share



NFS Repositories

- No Linux server required anymore!
- Mount server must be Windows machine
- Linux can also act as gateway server

Edit Backup Repository

Folder
Specify a folder to store backups in, and a gateway server to access NFS share through. Automatic gateway selection functionality requires that NFS Tools are installed on registered Linux servers.

Name

Share

Repository

Mount Server

Review

Apply

Summary

Shared folder:
172.21.239.13:/mnt/nfs
Use server/folder format

Gateway server:
☒ Automatic selection
☐ The following server:
HK-4207-VBR.lab.intern (Backup server)
Use this option to improve performance and reliability of backup to a NAS located in a remote site.



Console improvements

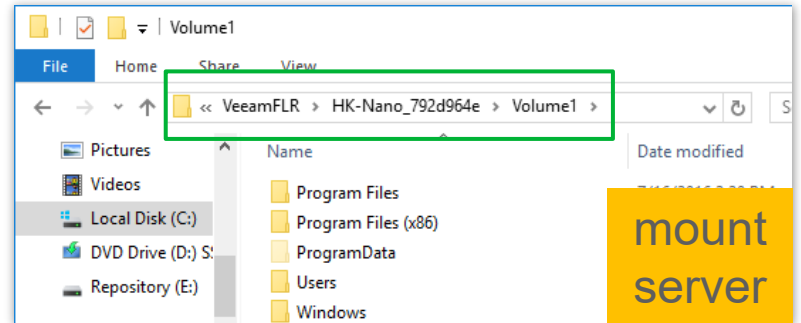
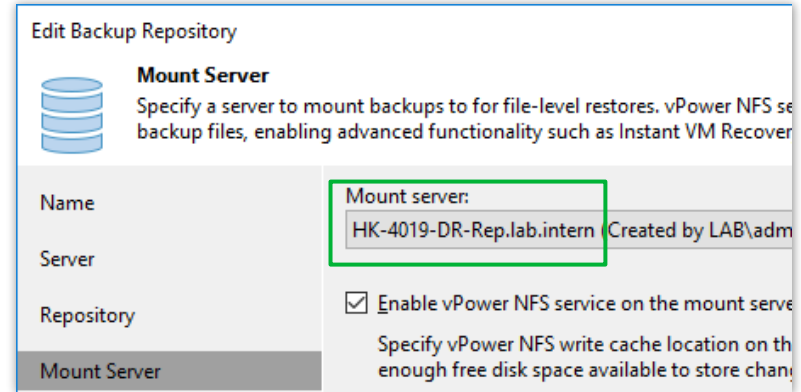
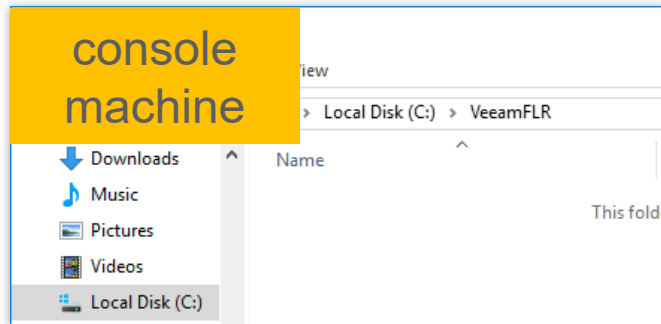
Better Console Performance

- “UI service” solves unresponsive UI issues in large environments
- Not a real “service”
- Caches requests for GUI and PowerShell
- Async loading



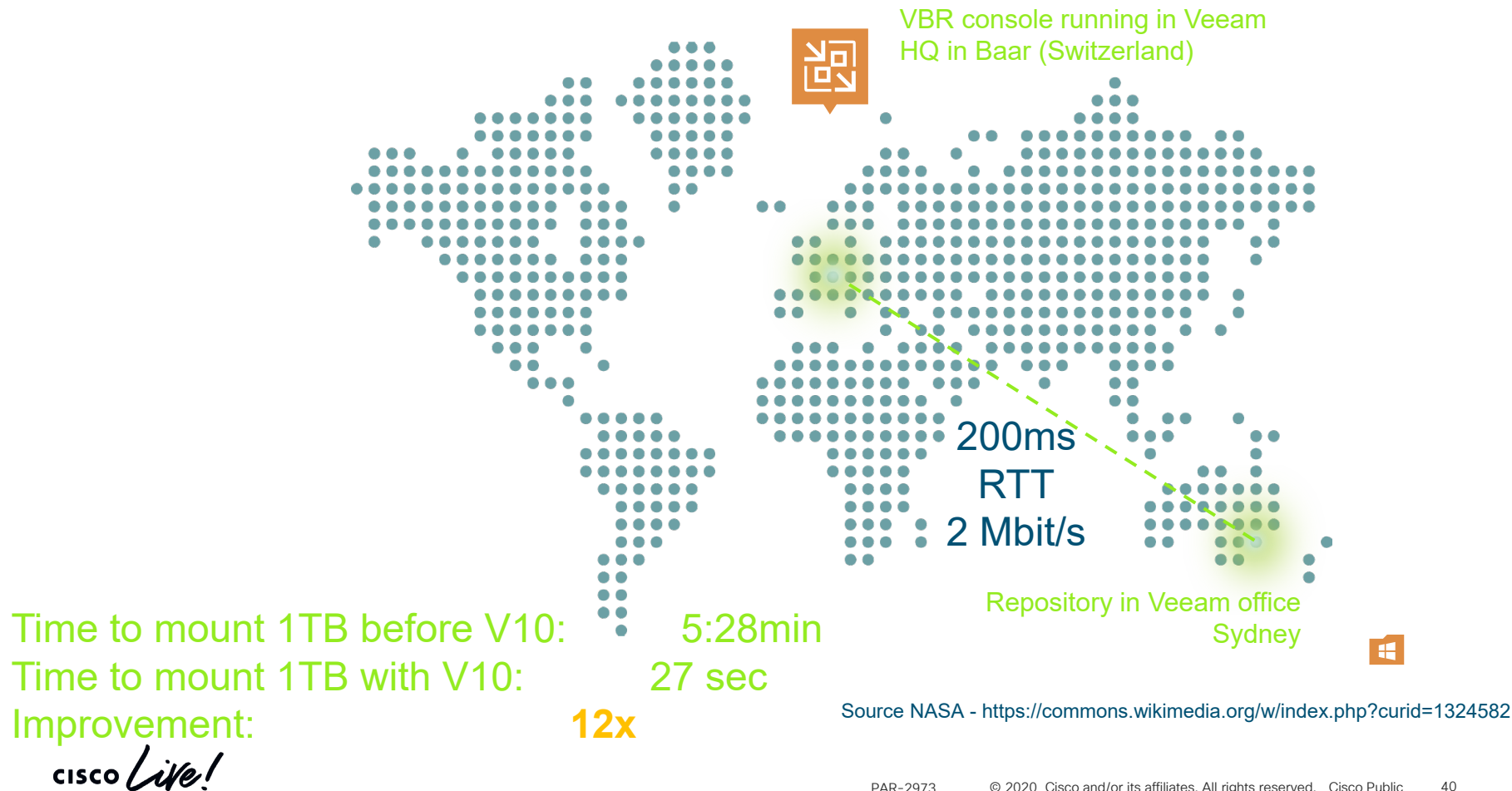
Remote Mount

- No backup console mount in c:\veeamflr anymore
 - Mount server* mounts per default
 - Only content delivered to console
 - Important for branch office deployments with central console



*mount server role is available on managed Windows servers

The Benefit





WAN Accelerator Improvements

Faster WAN-Accelerator

Why is it important?

- More performance
- Currently limited to 50-100MBit/s
- High-Bandwidth-Mode: up to 1GBit/s and more
 - Recommended with 100MBit/s and faster
- Low-Bandwidth-Mode: improved by 2x
 - Recommended up to 100MBit/s





Questions?

Complete your online session survey



- Please complete your session survey after each session. Your feedback is very important.
- Complete a minimum of 4 session surveys and the Overall Conference survey (starting on Thursday) to receive your Cisco Live t-shirt.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Content Catalog on ciscolive.com/emea.

Cisco Live sessions will be available for viewing on demand after the event at ciscolive.com.

Continue your education



Demos in the
Cisco Showcase



Walk-In Labs



Meet the Engineer
1:1 meetings



Related sessions



Thank you





You make **possible**