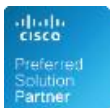




# Availability with Veeam

Cornel Popescu  
Systems Engineer – Veeam

IBS Compass – Sofia, 22<sup>nd</sup> November 2016



# Agenda

- Veeam Availability Suite v9.5 – what's new?
- Veeam Agents for Linux & Windows
- Veeam Availability Orchestrator
- Veeam Backup for Office365

24/7 operations



No patience for  
downtime and data loss



Growing amount  
of data



Enable the Always-On Business™

# Veeam® Availability Suite™ v9



**High-Speed  
Recovery**



**Data Loss  
Avoidance**



**Verified  
Protection**



**Leveraged  
Data**



**Complete  
Visibility**

## Modern Data Center

Virtualization

VM

Modern storage

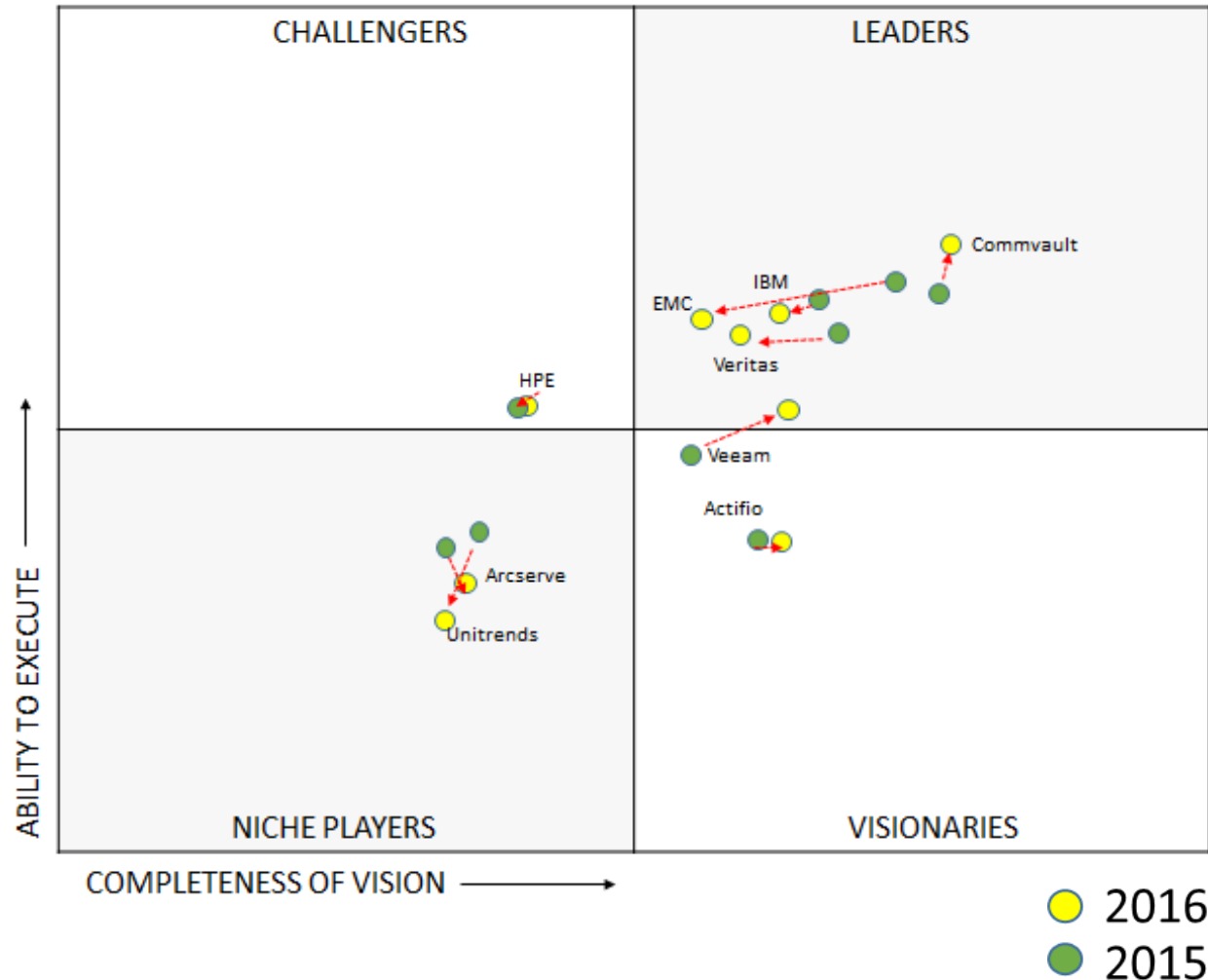


Cloud



# Gartner Magic Quadrant for Data Center Backup & Recovery Software: 2015-2016 Shifts

## HIGHLIGHTS



- VEEAM IS A LEADER!
- Veeam, by far experienced the biggest upward swing for the 2<sup>nd</sup> year in a row.
- Only 2 vendors moved up: Veeam and Commvault (The vast majority of vendors' positions have fallen).
- Gartner significantly reduced the number of participating vendors from 17 to 9.
- The **2016 Magic Quadrant for Data Center Backup & Recovery Software** is a refocus and rename of the prior Magic Quadrant for Enterprise Backup Software and Integrated Appliances. It more tightly focuses on on-premises backup and recovery software for the upper mid-sized to large enterprises that protects data center workloads managed by data center personnel. Therefore, backup as a service (BaaS) providers, as well as solutions that predominately address the small enterprise or remote office were no longer eligible for inclusion.

VAS 9.5

What's new?

# **NEW** Veeam Availability Suite 9.5

## Offers even more Enterprise Scalability



April 26

### **Veeam integration with Nimble**

Backup from Storage Snapshots

Veeam Explorer™ for Storage Snapshots

On-Demand Sandbox™ for Storage Snapshots

May 24

### **Veeam-Azure restore integration**

Direct Restore to Microsoft Azure

June 14

### **ENHANCED VMware vCloud Director Support**

Empower tenants with Self-service backup and restore capabilities

July 13

### **FULL integration with Microsoft 2016 data center technologies**

Windows Server 2016  
Microsoft Hyper-V 2016  
2016 Enterprise Applications

August 23

### **Enterprise Scalability Enhancements**

### **ReFS Integration**



# Optimize resource allocation to drive scalability and minimize cost

**NEW** Cloud restore for ANY Veeam backup

- Restore workloads to Azure
- Execute planned workload migrations
- Create an Azure-based test environment

# Direct Restore *to Microsoft Azure*

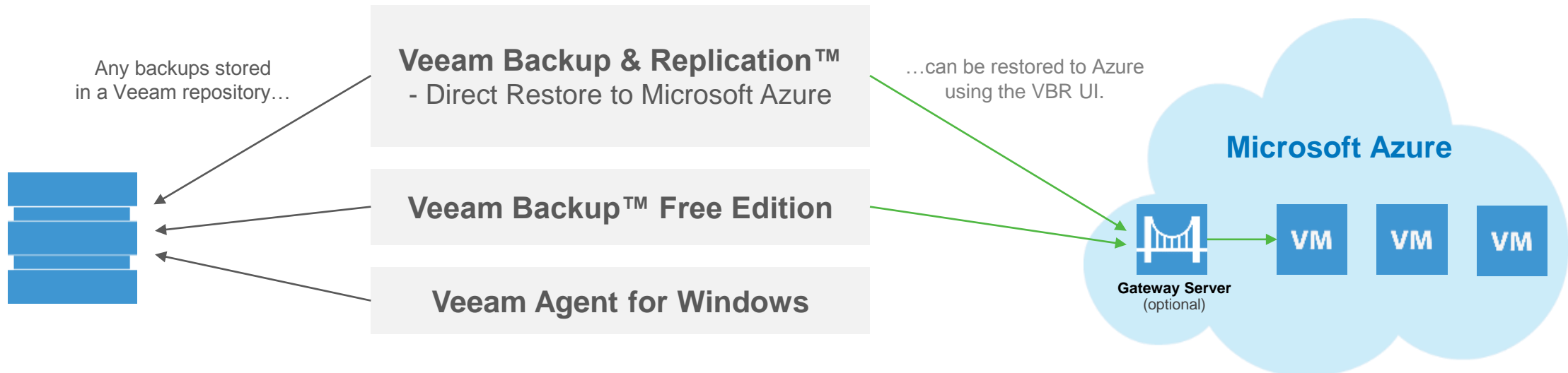
Take on-premises workloads and restore or migrate them to Microsoft Azure. With Direct Restore to Microsoft Azure you can:

- Quickly restore Windows- and Linux-based VMs, physical servers or endpoints to Azure to minimize business disruption
- Execute planned workload migrations from on-site to the cloud to reduce on-site resource constraints



# Direct Restore *to Microsoft Azure*

- **Quickly restore Windows- and Linux-based VMs, physical servers or endpoints** to Azure to minimize business disruption
- **Execute planned workload migrations from on-site to the cloud** to reduce on-site resource constraints
- **Easily create an Azure-based test environment for testing backup reliability**, as well as patches and critical updates to mitigate risks associated with application deployment



**ANNOUNCING**



# **FULL integration with Microsoft 2016 data center technologies**

**with NEW Veeam Availability Suite 9.5**

Helping enterprises modernize their private cloud platform and enterprise applications

**Includes complete support for:**

- Windows Server 2016
- Microsoft Hyper-V 2016
- 2016 releases of Microsoft enterprise applications

# Microsoft 2016 in VAS 9.5

Full and advanced support by Veeam provides these key capabilities for Microsoft 2016 Data Center Technologies:

- Windows Server 2016 support for installing Veeam components on and in protected VMs
- Microsoft Hyper-V 2016 support, including Resilient Change Tracking (RCT), Nano Server hosts, and Storage Spaces Direct
- Support for 2016 releases of Microsoft enterprise applications

# Hyper-V 2016

These updates require your VMs be running the new virtual VM hardware version

## Hyper-V hosts installed on Nano Server

Includes support for Storage Spaces Direct to deploy Microsoft's recommended Hyper-V 2016 architecture to

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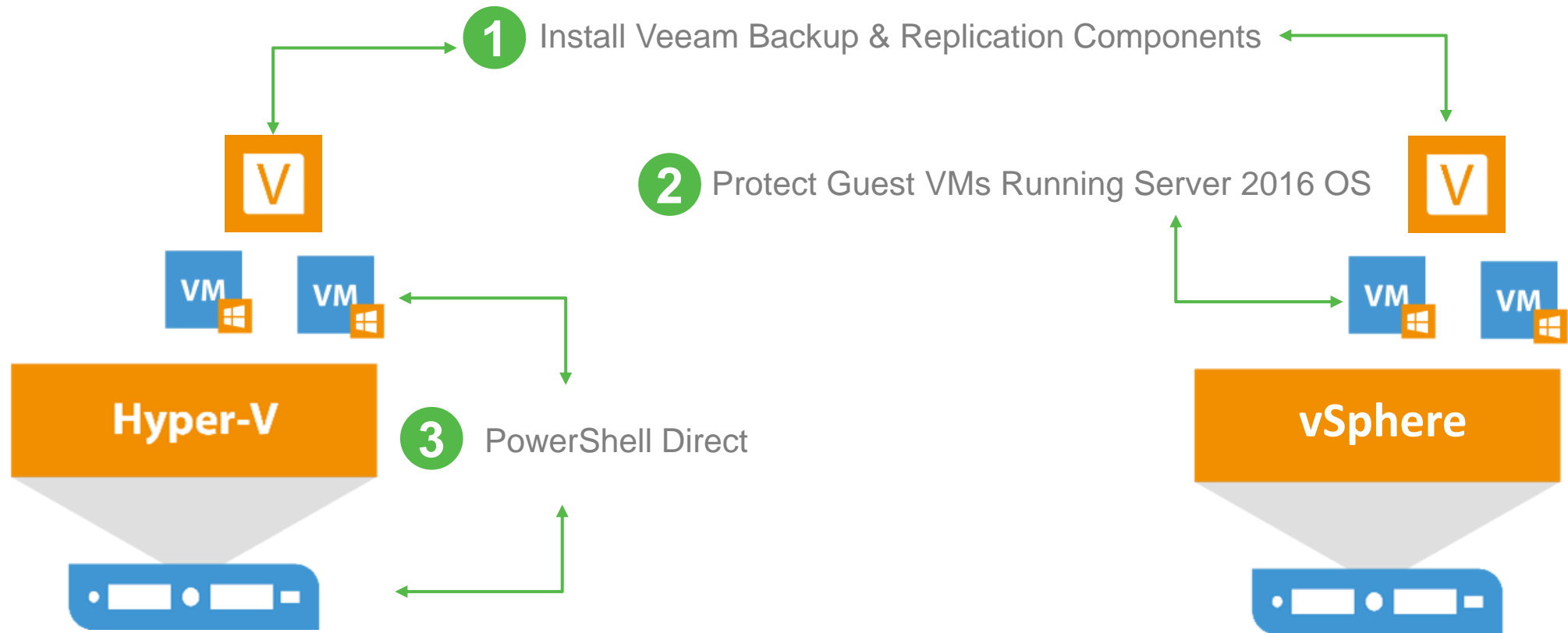
Reduce data center footprints

## Hyper-V's NEW Resilient Change Tracking (RCT)

Reduces complexity by eliminating the additional filter driver in parent partition for changed block tracking for:

- Backups
- Replicas
- Restores

# Windows Server 2016 Platform



# **NEW** Veeam Availability Suite 9.5

## Integration with 2016 Microsoft enterprise applications

Application-aware processing for:



Microsoft  
Active Directory



Microsoft  
Exchange



Microsoft  
SQL Server




Microsoft  
SharePoint

**Application item-level recovery through Veeam Explorers™**

Ensuring High-Speed Recovery through fast RTO's of <15 minutes





Greater performance and integrity for large-scale datasets

**NEW** Advanced ReFS Integration

- Even shorter backup windows and lower backup storage load
- Reduced backup storage capacity consumption that rivals that of a deduplication appliance
- More reliable forever-incremental data archiving with protection against silent data corruption



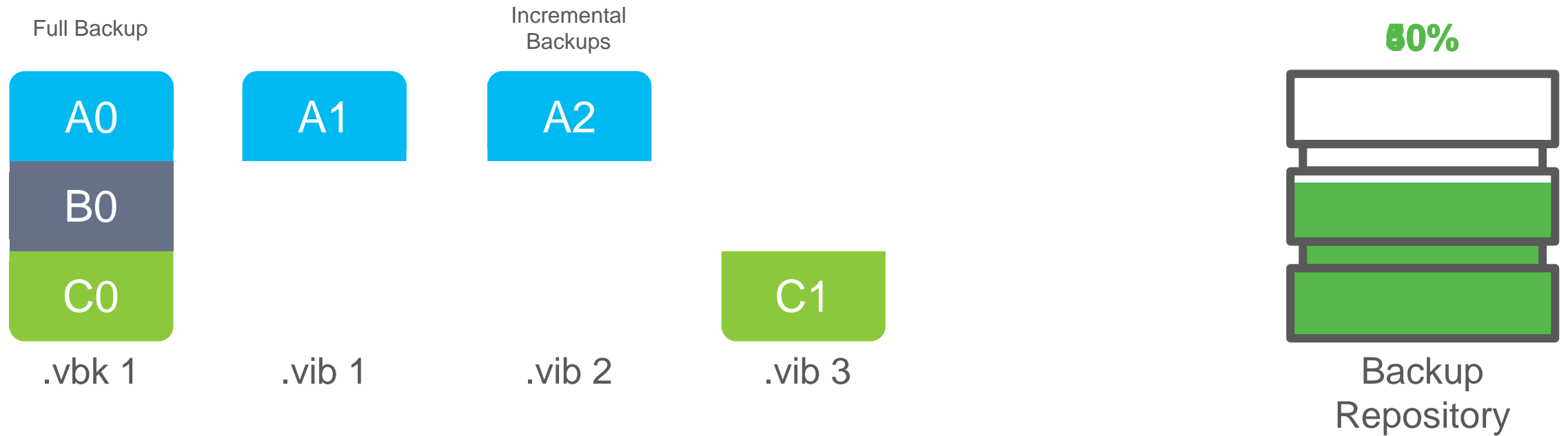
# Advanced ReFS Integration

**NEW Fast cloning technology** enables up to 10x faster creation and transformation of synthetic full backup files, all without physically moving data blocks between files, for even shorter backup windows and lower backup storage load

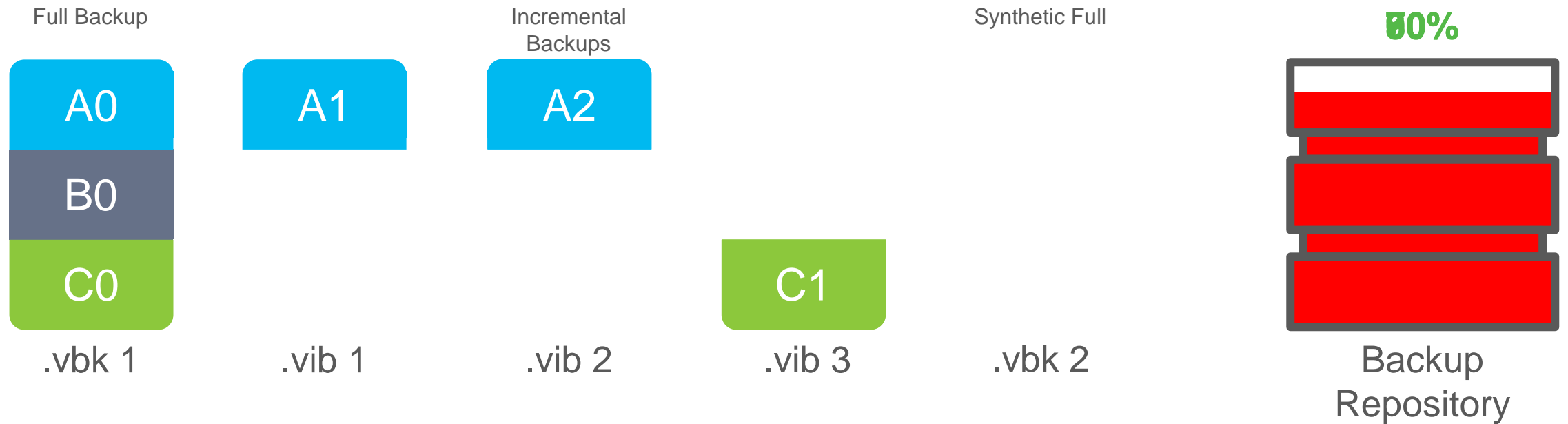
**NEW Spaceless full backup technology** allows multiple full backup files residing on the same ReFS volume to share the same physical data blocks, resulting in reduced backup storage capacity consumption that rivals that of a deduplication appliance

**NEW Data integrity streams** integration leverages ReFS data integrity scanner and proactive error correction from Storage Spaces to protect backup files from silent corruption for more reliable forever-incremental archiving

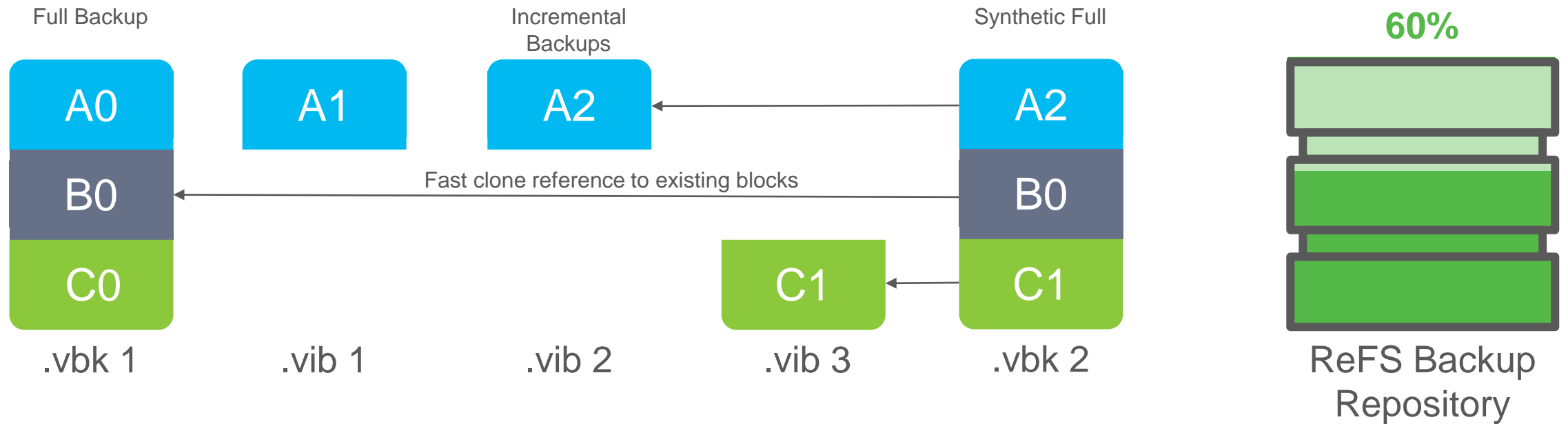
# Incremental Backup



# Synthetic Full Backup (Legacy)



# Synthetic Full Backup (ReFS)



The background of the slide is a photograph of an industrial facility, possibly a refinery or chemical plant, at night. The scene is filled with complex structures, including tall distillation columns, storage tanks, and a network of pipes and walkways. Numerous lights are visible throughout the facility, creating a bright, industrial atmosphere. A semi-transparent white rectangular box is overlaid on the left side of the image, containing the main text and a bulleted list. The entire image has a green color overlay.

## Veeam delivers enterprise scalability and other enterprise enhancements with **NEW** Enterprise Scalability

- Backup acceleration technologies
- Full VM restore acceleration technologies
- Processing engine enhancements

# Enterprise Scalability

**NEW Backup acceleration technologies** that double I/O performance and shorten backup windows by up to five times – all while reducing load on primary storage, backup storage and vCenter Servers

**NEW Full VM restore acceleration technologies** with custom-tailored logic for raw disk, deduplicating storage and tape, improving VM restore performance by several times

**NEW Processing engine enhancements** to scale for the largest environments and achieve efficient processing of jobs containing thousands of VMs or millions of files

Veeam Agent *for Microsoft Windows*  
Veeam Agent *for Linux*



# Why Agents?

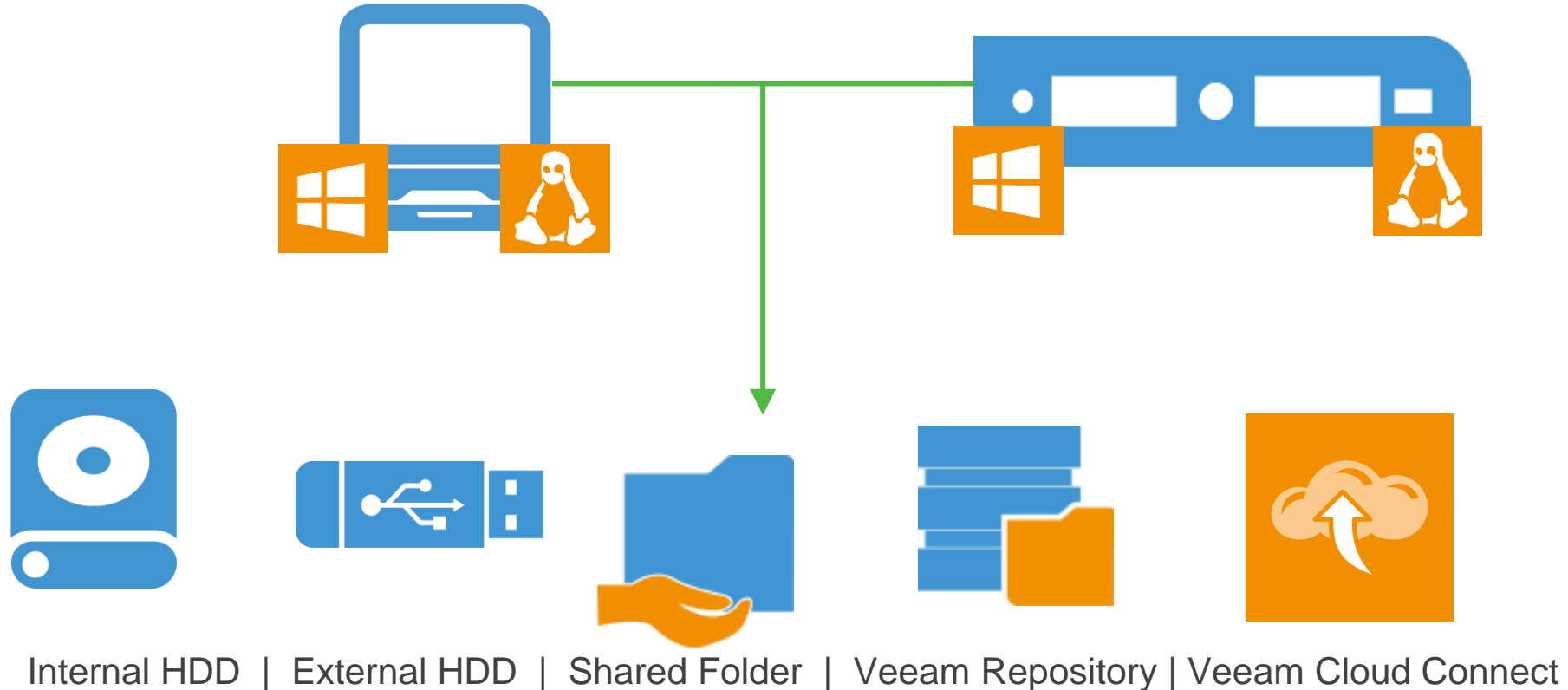
Agents are needed to interact with public cloud architectures

Agents allow for better interaction with physical servers and workstations

Agentless solutions, such as Veeam Availability Suite™, are designed for virtualized environments

# Veeam Agents

Protect servers and workstations  
on-premises and in the cloud



# Veeam Endpoint Backup FREE

Provides a simple solution for backing up Windows-based desktops and laptops

Back up to an external hard drive, NAS (network-attached storage) share or a Veeam Backup & Replication™ repository

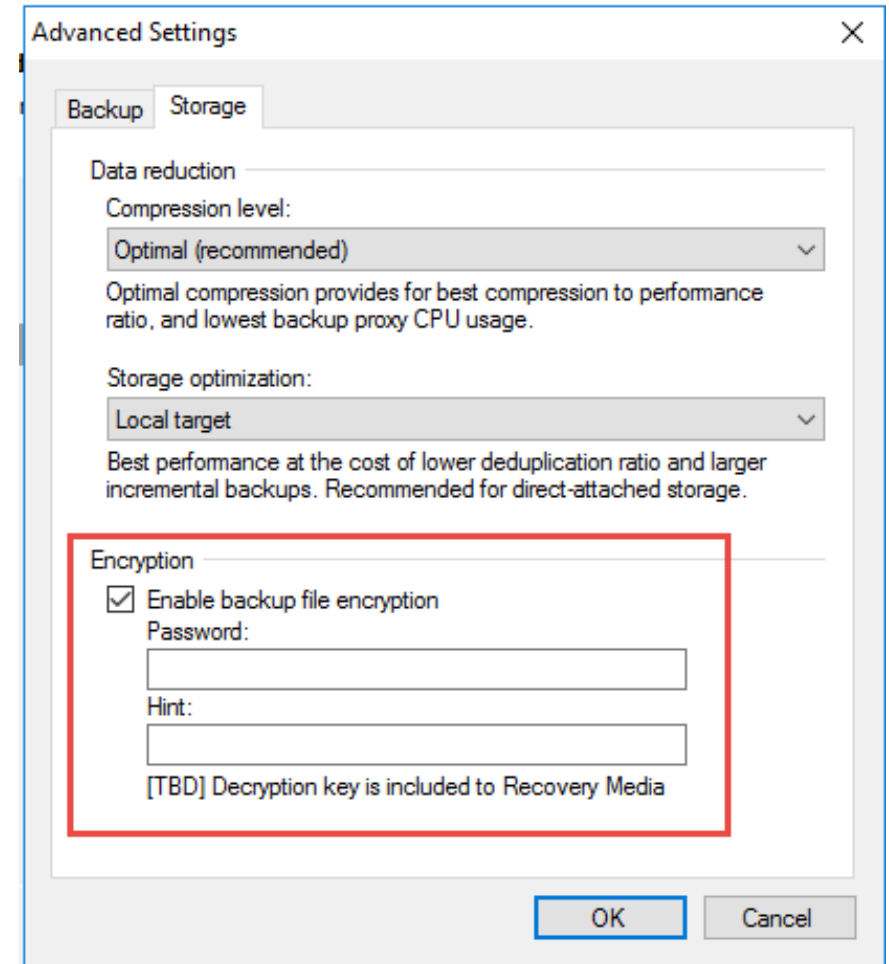
Recover what you need in minutes

# Veeam Agent *for Microsoft Windows*

## *Free Edition*

### **NEW** in v2:

- Instant Recovery to Hyper-V VM
- Direct Restore *to Microsoft Azure*
- Source-side encryption
- Flexible backup modes

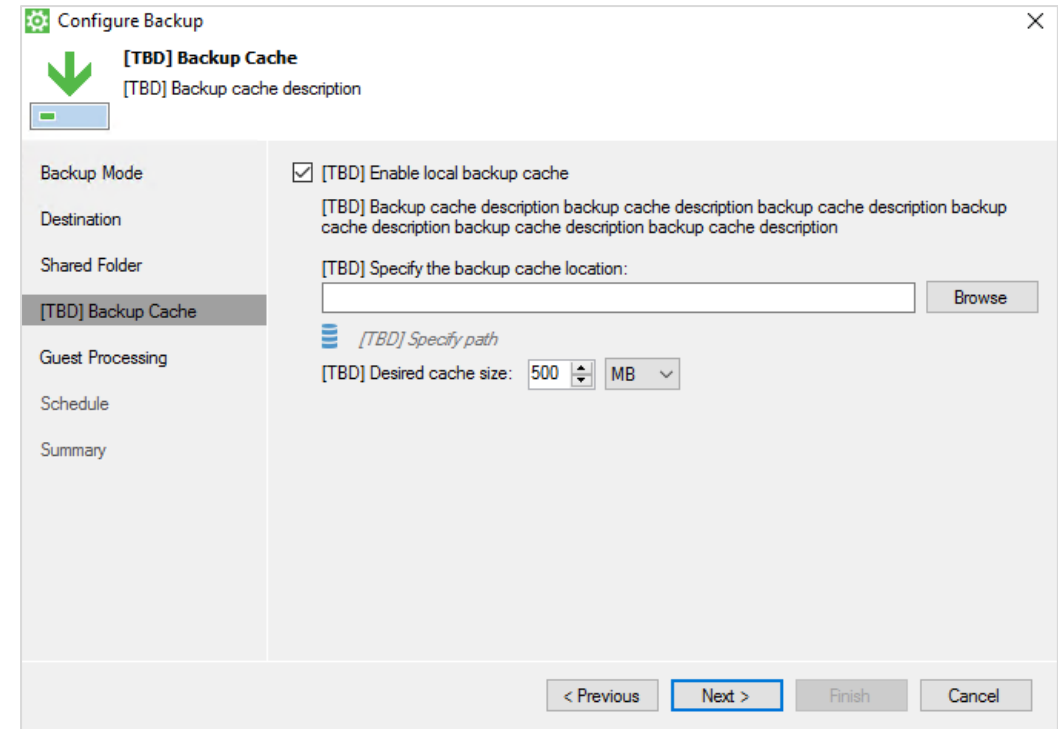


# Veeam Agent *for Microsoft Windows*

## **NEW** *Workstation Edition*

### Free Edition, **plus...**

- 24.7.365 technical support
- Remote configuration and management API
- Endpoint protection for mobile users
- Back up directly to Veeam Cloud Connect repository



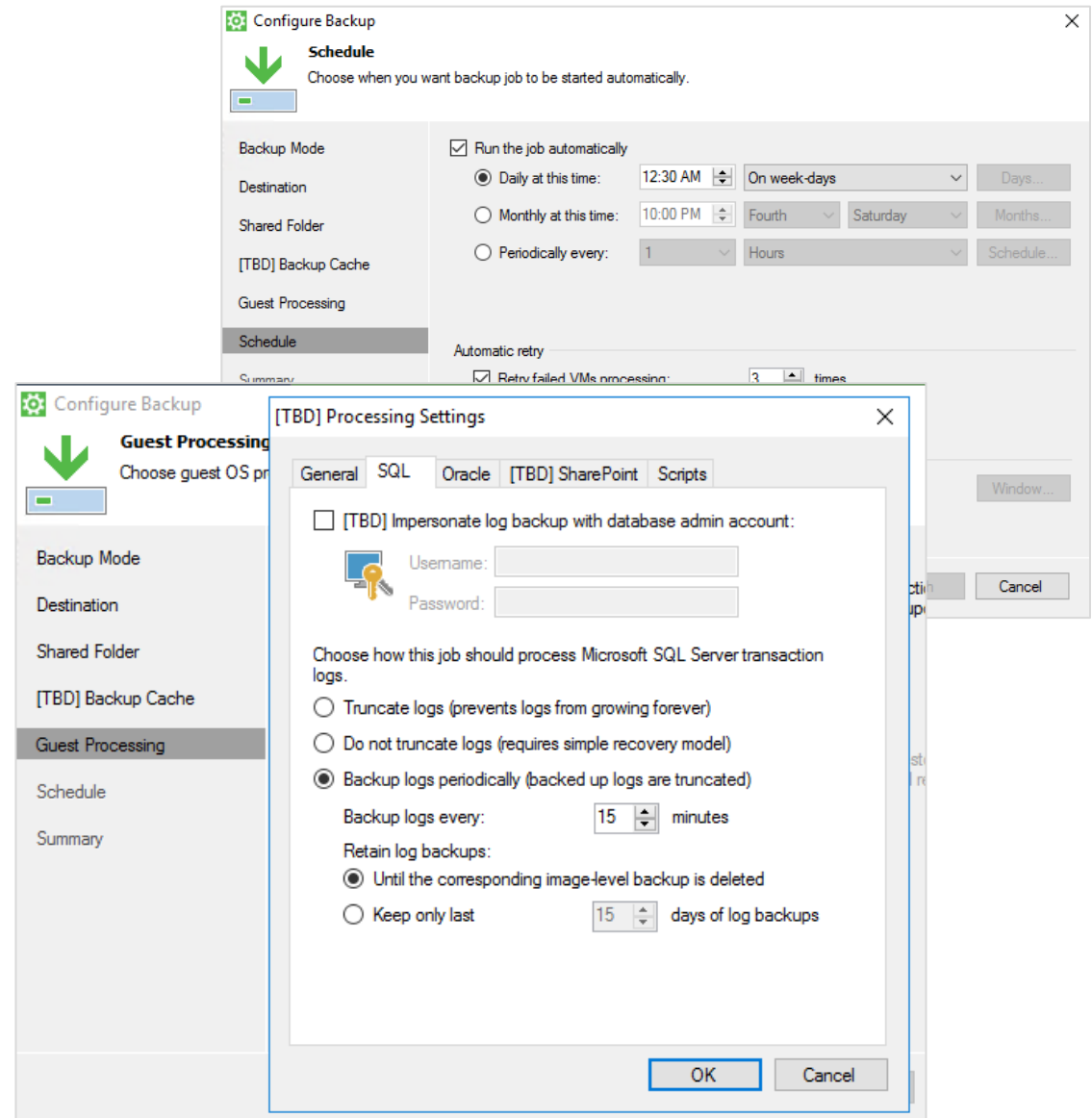
# Veeam Agent for Microsoft Windows

## **NEW** Server Edition

Workstation Edition, **plus...**

## **FULL server support!**

- Application-aware processing
- Transaction log backup
- Guest file system indexing and catalog search



# Veeam Agent *for Microsoft Windows*

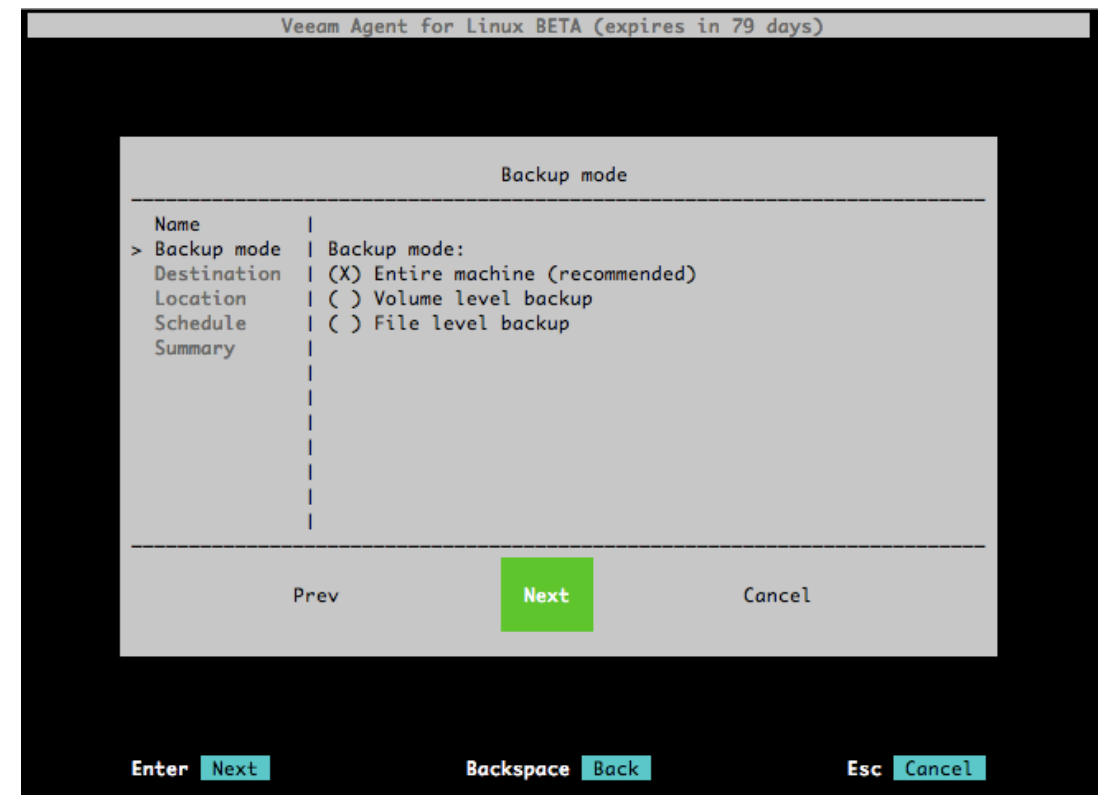
	Free	Workstation	Server
Instant Recovery to Microsoft Hyper-V VM	●	●	●
Direct Restore <i>to Microsoft Azure</i>	●	●	●
Source-side encryption	●	●	●
Endpoint protection for mobile users		●	●
Back up directly to Veeam Cloud Connect		●	●
Remote configuration and management API		●	●
Application-aware processing			●
Transaction log backup for databases			●
Guest file indexing and search			●
24.7.365 technical support		●	●



# Veeam Agent *for Linux*

Simple and free backup agent for Linux — anywhere

- Protect entire computer, or create volume-level and file-level backups
- Built-in snapshot and change tracking drivers delivered as a dynamically loadable kernel module
- Integrated directly into Veeam Backup & Replication (backup repository, basic centralized monitoring)



# Veeam Agent *for Linux*

	Free	Workstation	Server
Entire computer, volume-level and file-level image-based backup	●	●	●
Built-in volume snapshot and changed block tracking drivers	●	●	●
File-level, volume-level and bare metal recovery (same or different hardware)	●	●	●
Backup and recovery using console UI or command line	●	●	●
Integration with Veeam Backup & Replication	●	●	●
Support for multiple jobs			●
Pre-freeze/post-thaw snapshot scripts for application processing			●
Guest file indexing, catalog search and restore with Veeam Backup Enterprise Manager			●
24.7.365 technical support		●	●

# Summary

## Veeam Agents *for Microsoft Windows and Linux*:

Ensure the Availability of your Windows or Linux server instances on-premises or in the public cloud

Provide complete protection for both workstation and physical servers, including full application awareness

Avoid data loss and meet RPOs by seamlessly protecting mobile users and devices outside the corporate network

Offer 24.7.365 technical support with Workstation and Server licenses

# Introducing: VAO

## Veeam Availability Orchestrator

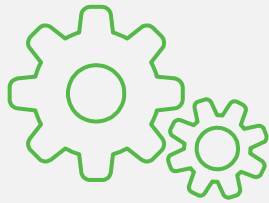
# Veeam Availability Orchestrator

**Orchestration of Veeam backups and replicas** through a defined DR plan that meets modern service level agreements with near-zero downtime tolerances, mitigating risk and ensuring business continuity

**Automated non-disruptive DR testing** to ensure Availability through the verification of recoverability, maintaining reliability and avoiding expensive manual processes

**Built-in documenting, updating and reporting** of DR plans that streamline management and reduce cost while satisfying both corporate and regulatory compliance requirements

# Veeam Availability Orchestrator



## BUILD

Multi-site DR plans, role delegation, dynamically managed



## TEST

Automated plan testing, application verification, detailed reporting



## DOCUMENT

Template-based DR Documentation, automatically updated

- WELCOME
- DASHBOARD
- Failover Plans
- BUILD AND RUN
- TEST
- DR Documentation
- GENERATE DOCUMENTS
- MANAGE TEMPLATES
- PLAN HISTORY

Failover plan details CORE\_EXCH

Current state: **FAILOVER IN PROGRESS**

37%

Run Halt Undo

Search for VM group

by name

PLAN RECOVERY GROUPS			VIRTUAL MACHINES		
Pre-Plan steps			Success: 12 Warning: 3 Error: 1		
Dev/QA Servers	Complete	✓	PRODEXCH1	Complete	✓
Corporate AD Servers	Complete	✗	PRODEXCH2	Complete	✓
Corporate Exchange Servers	Complete	⚠	PRODEXCH3	Complete	✗
Data streaming servers	Complete	✓	pd2012r2rm01	Complete	⚠
Other servers	Running...		pd2012r2rm02	Complete	✓
Post-Plan steps	Pending		pd2012r2rm03	Complete	✓
			pd2012r2rm01	Complete	✓
			veeamda01	Complete	✓
			veeamda02	Complete	⚠
			veeamda03	Complete	⚠
			corpdev_csdpt2015design01	Complete	✓
			corpdev_csdpt2015design02	Complete	✓
			veeamcom01	Complete	✓
			corpdev_csdpt2015marketing01	Complete	✓
			corpdev_csdpt2015marketing02	Complete	✓
			corpdev_csdpt2015marketing03	Running...	

STEPS for several selected VMs

Success: 4 Warning: 1 Error: 0

Recover VM	Complete	✓
Check VM heartbeat	Complete	✓
Ping VM	Complete	✓
Verify Exchange	Complete	⚠
finalizationScript	Complete	✓
vmprepareascript	Running...	ⓘ
fixconfig	Pending	
Verify Ready	Pending	
Check Disk Space	Pending	
overrideDftConf	Pending	
Send notifications	Pending	

VAO – Sample Screen

Alpha Screen shot!

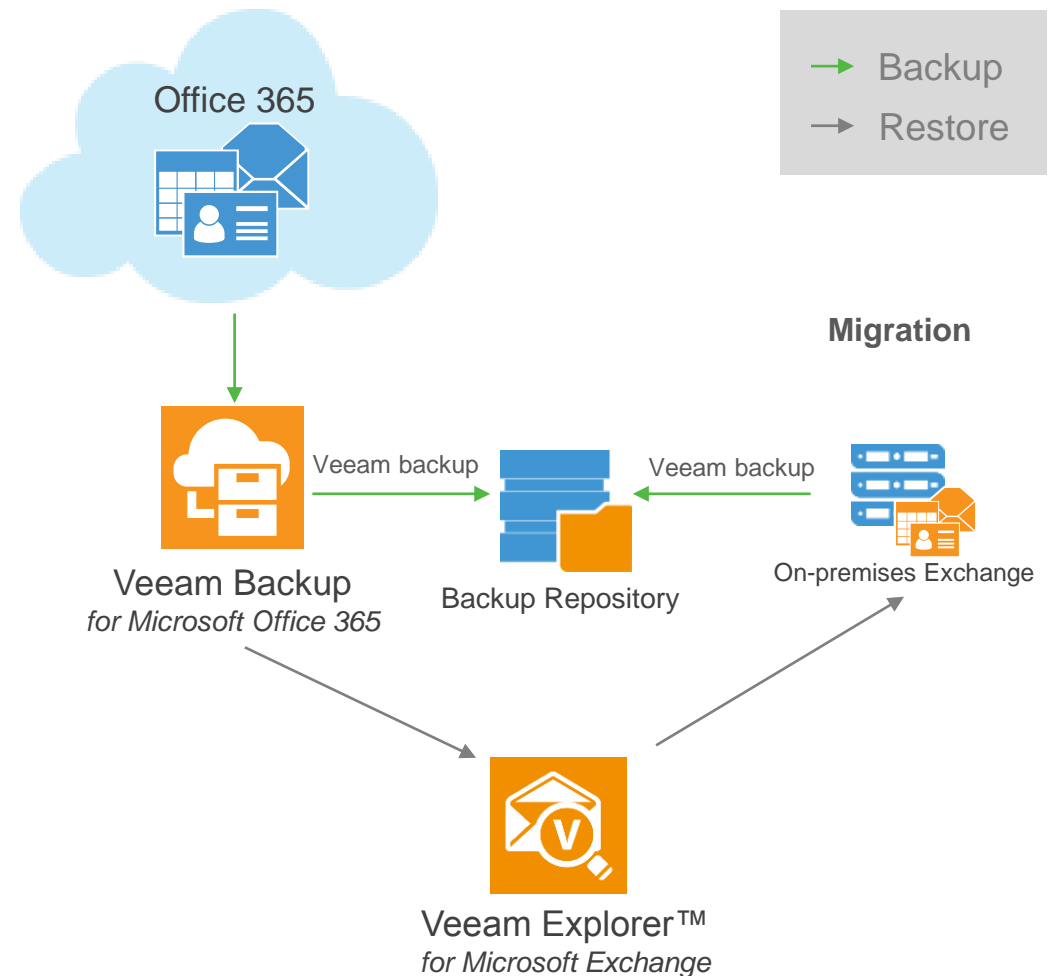
GA may not look like this!



# Introducing: Veeam Backup *for Microsoft Office 365*

# Veeam Backup *for Microsoft Office 365*

Integrated with Veeam Backup & Replication, you can backup hybrid cloud environments and migrate mailbox data between Office 365 and on-premises Exchange.



# Questions?



# Thank You

