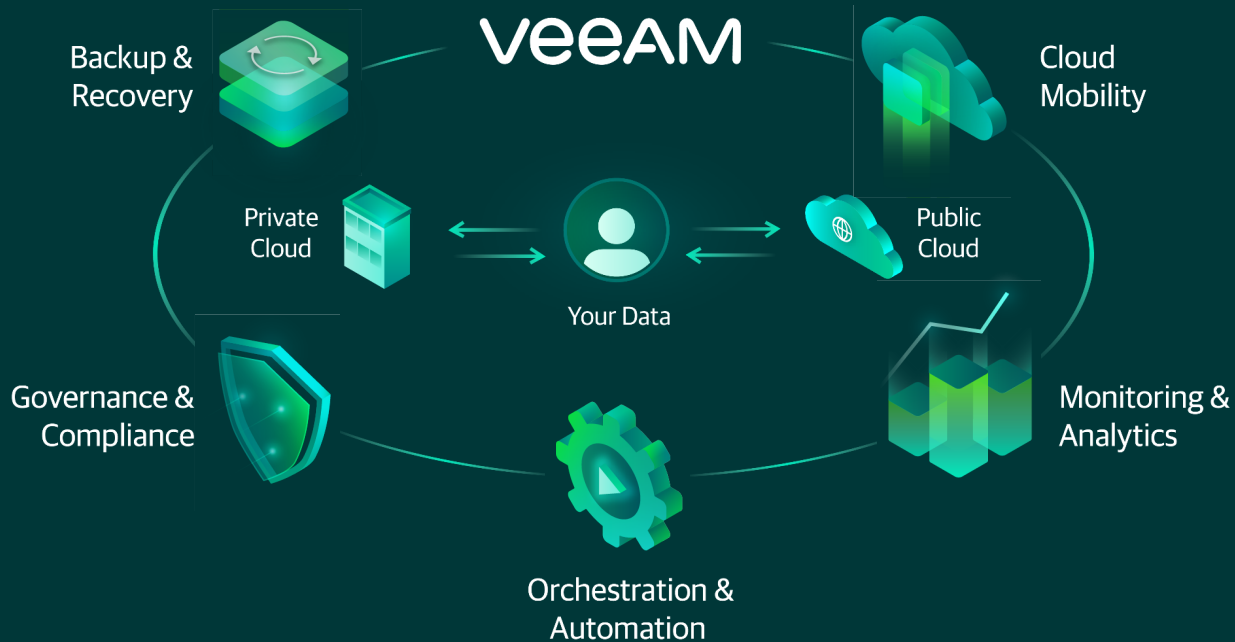




Backup to Object Storage

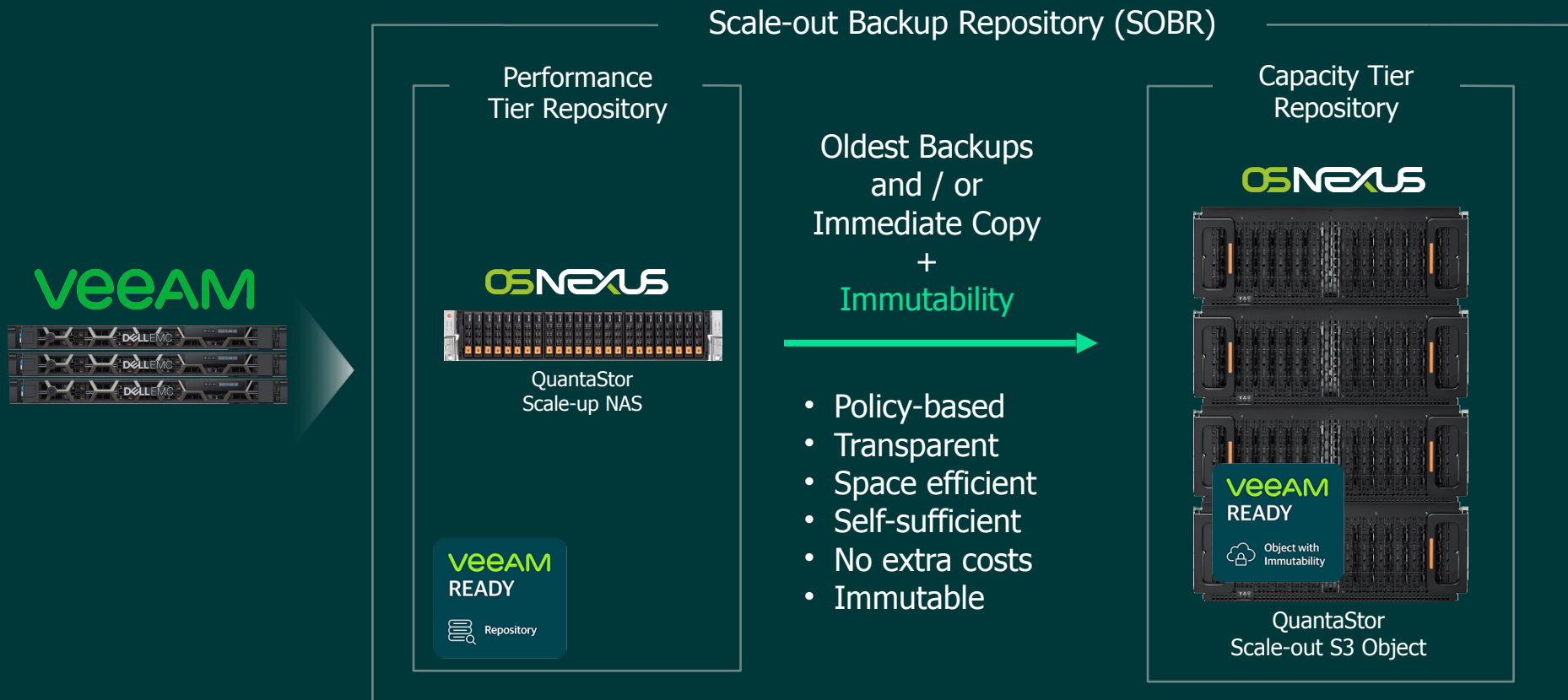
How Veeam & OSNexus Can Help

What is Cloud Data Management?

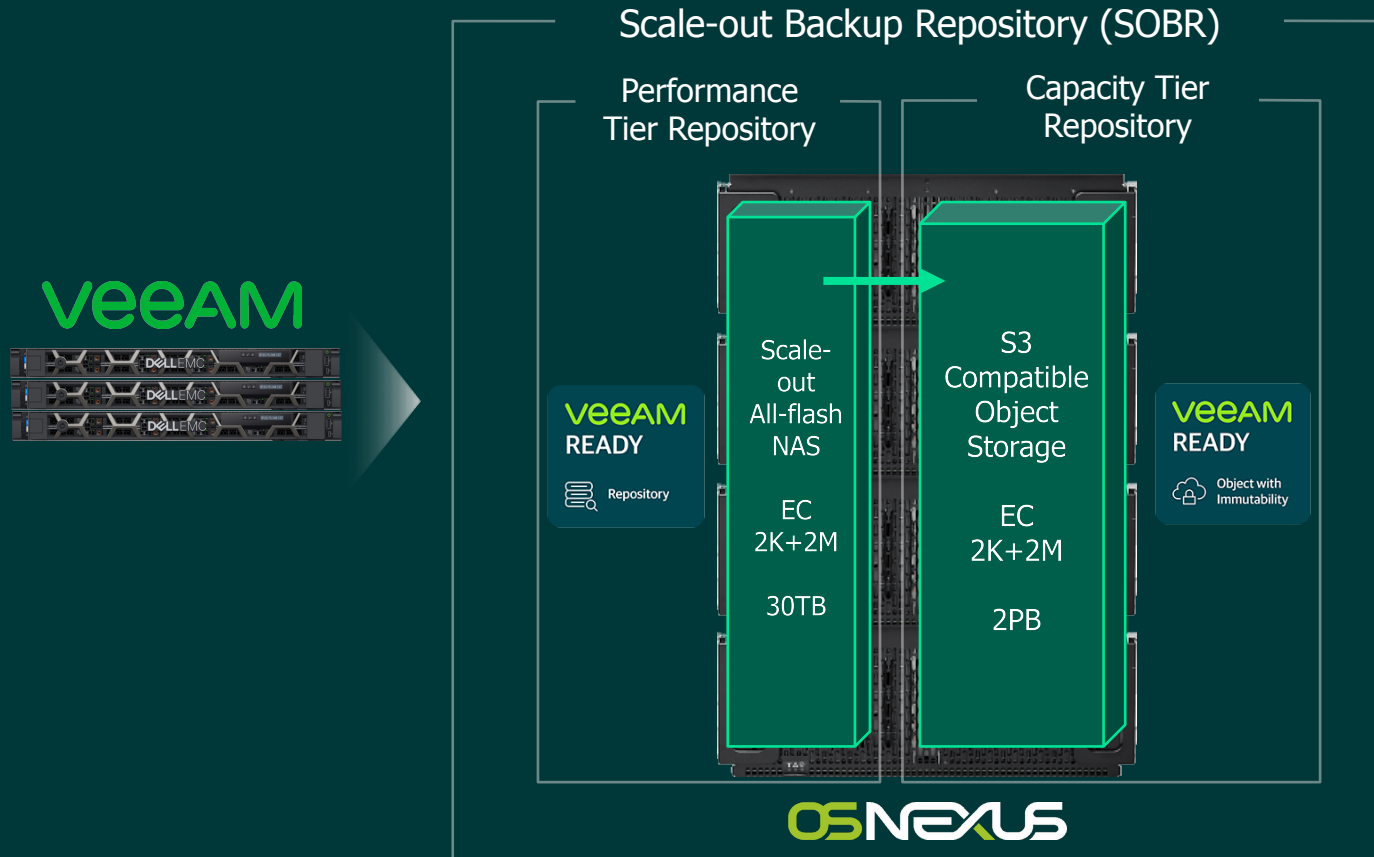


Achieve unmatched data management and protection, reusing your data to drive innovation across datacenters and cloud

OSNexus with Veeam SOBR



Single Cluster OSNexus with Veeam SOBR



OSNEXUS Object Storage Cluster Setup

Easy to setup

QuantaStor cluster setup steps

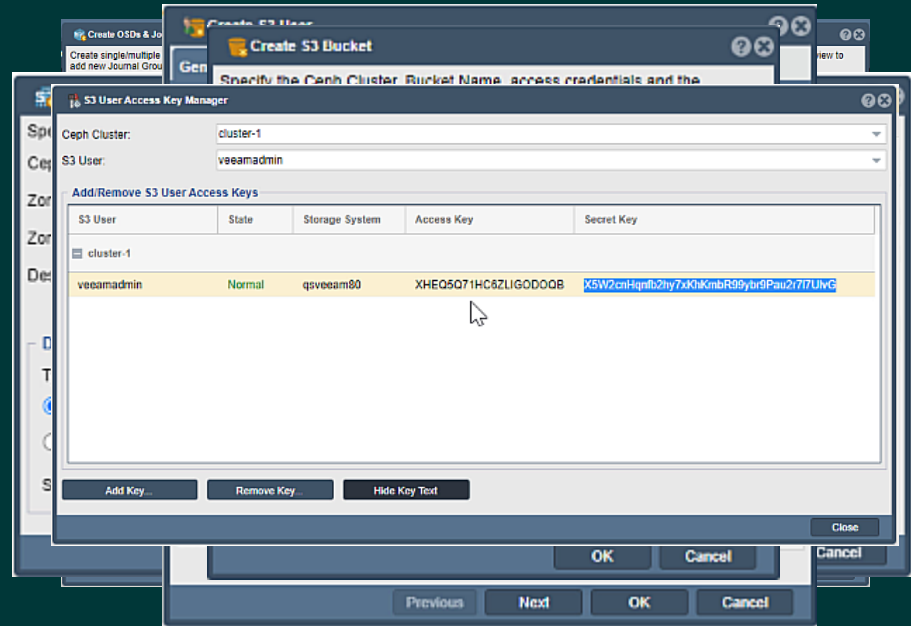
- Create the Scale-out Cluster
- Add Storage Media to Cluster
-

Capacity Tier bucket setup

- Create the Object Storage Zone
- Create the S3 Gateway service instances
- Create a S3 User (eg: veeamadmin)
- Create a S3 Bucket (eg: vcapacity)
-

Performance Tier network share setup

- Create a Scale-out File Storage Pool
- Create MDS service instances
- Create a management user (veeamadmin)
- Create a Network Share (eg: vperformance)



Veeam Performance Tier Repository Setup

Easy to setup

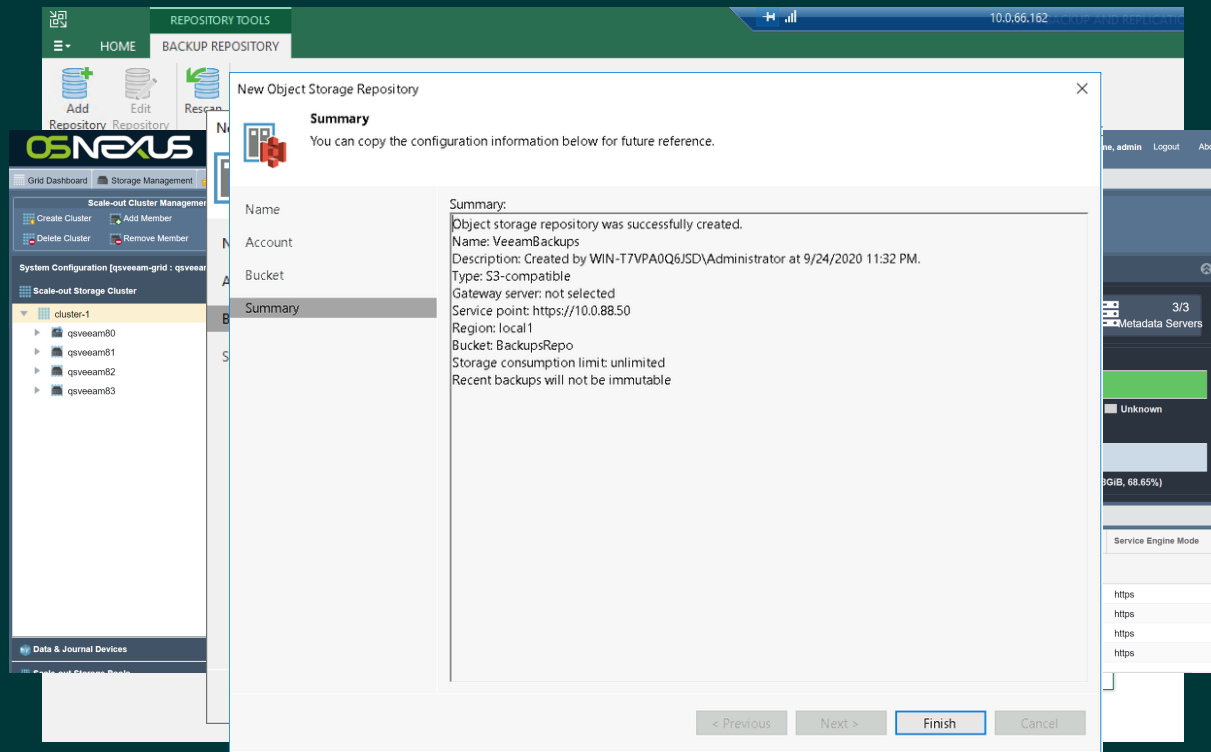
- Add Repository
- Choose 'Network attached storage'
- Choose 'SMB share'
- Name the repository (eg: vperformance)
- Enter the SMB URL (eg: \\10.0.8.80\vperformance)
- Click 'Finish'

The screenshot displays the Veeam Backup & Replication console interface. The top navigation bar includes 'HOME' and 'BACKUP REPOSITORY'. Below this, there are three buttons: 'Add Repository', 'Edit Repository', and 'Rescan'. The main area shows a tree view of 'BACKUP INFRASTRUCTURE' with various categories like 'Backup Proxies', 'Backup Repositories', 'External Repositories', etc. The 'Backup Repositories' folder is highlighted. A dialog box titled 'Add Backup Repository' is open, showing four options: 'Direct attached storage', 'Network attached storage', 'Deduplicating storage appliance', and 'Object storage'. The 'Network attached storage' option is selected. A 'Cancel' button is visible at the bottom right of the dialog box. Red arrows point to the 'Add Repository' button, the 'Backup Repositories' folder, and the 'Network attached storage' option.

Veeam Capacity Tier Repository Setup

Easy to setup

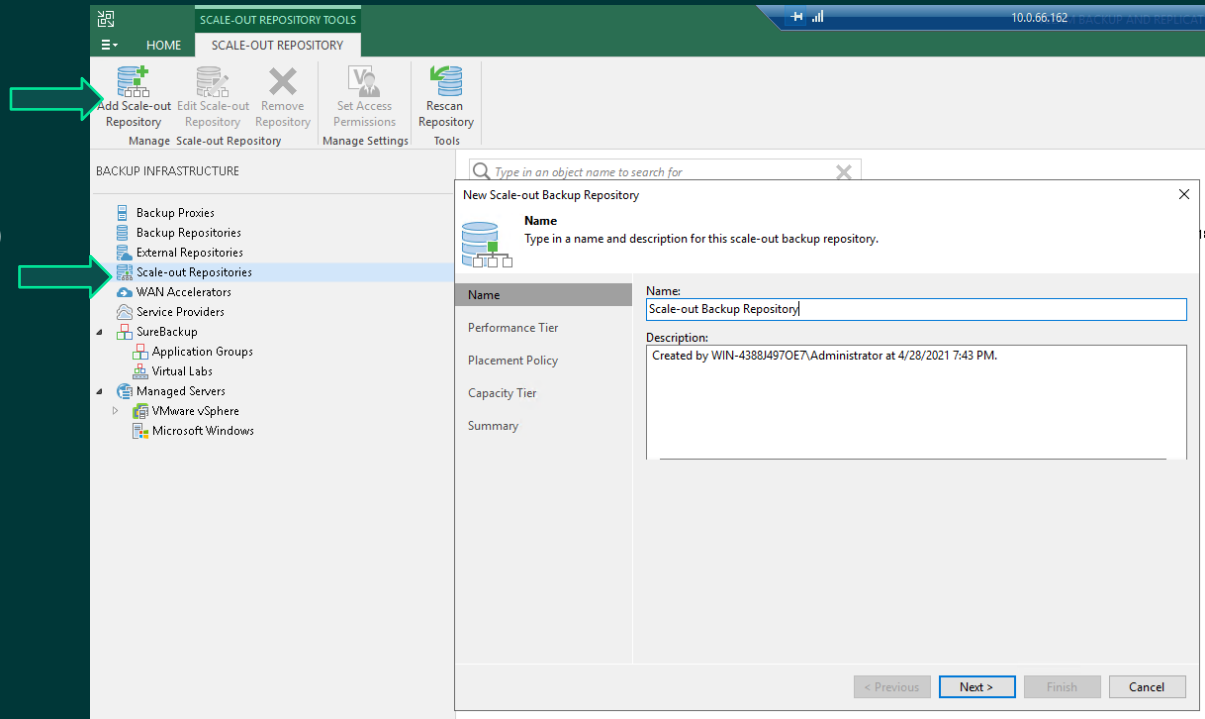
- Add Repository
- Choose 'Network attached storage'
- Choose 'Object storage'
- Choose 'S3 Compatible'
- Name the repository (eg: vcapacity)
- Enter the S3 URL (eg: <https://10.0.8.80:7480>)
- Enter Access Key/Secret Key for S3 User
- Select the bucket and folder
- Click 'Finish'



Veeam Scale-out Backup Repository Setup

Easy to setup

- Select 'Scale-out Repositories'
- Select 'Add Scale-out Repository'
- Name the repository (eg: vsobr)
- Select the performance tier (eg: vperformance)
- Select the capacity tier (eg: vcapacity)
- Click Finish



Veeam Immutability Configuration

Also, easy to setup

- Choose the bucket with object lock
- Create folder within bucket
- Select the option to make immutable
- Define immutable duration

New Object Storage Repository

Bucket
Specify object storage system bucket to use.

Name

Account

Bucket

Summary

Bucket: lockedbucket

Folder: immutablebackups

Limit object storage consumption to: 10 TB

This is a soft limit to help control your object storage spend. If the specified limit is exceeded, already running backup offload tasks will be allowed to complete, but no new tasks will be started.

Make recent backups immutable for: 30 days

Protects recent backups from modification or deletion by ransomware, malicious insiders and hackers using native object storage capabilities. Object storage must support S3 Object Lock feature.

< Previous Apply Finish Cancel

Designing Scale-out Object Storage

Design Guidelines

- 4 servers per cluster minimum (6+ recommended)
- 2+2 erasure coding minimum (4+2 recommended)
- 2x NVMe SSDs for each 15x to 20x HDDs
- +1 SSD per server for offloading bucket index pool
- 64GB RAM + 4GB RAM per OSD

Design Utility Demo!

OSNEXUS
QuantaStor Scale-out Storage Solution Designer

QuantaStor solutions provide scale-out file (NFS/SMB/CephFS), block (iSCSI/FC/CephRBD) and S3 compatible object storage. Storage is made highly-available using 3x or more servers and a storage layout support includes erasure-coding and replicas. QuantaStor bare-metal installs onto servers and this utility enables designing solutions around reference hardware from Dell/EMC, HPE, Western Digital, Intel, Supermicro, Seagate and Cisco servers and JBODs. QuantaStor integrates with Ceph (Nautilus) open storage technology.

Usable Capacity: 0 TB / 41,000 TB (2000 TB)

Use Cases: General Backup & Archive

Server/Cluster Specification

Server Model: Western Digital Serv0-0 Hybrid Storage Server (4U02) (60 Drives) \$/Server

Data Device: 18TB HDD \$/Device

Journal & Metadata: 1.92TB SSD 0 7 20 \$/Device

Storage Configuration

Storage Layout: Erasure Coding (2k+2m) Layout Usable: 50%

Data Compression (%): 0

Backfill Reserved Space (%): 6

Reserved Drive Slots (%): 0

License Summary

License Duration: 3 Years

Support Level: Enterprise Edition - Gold Support (24/7 with max 4 hour response time)

License Capacity: 4320TB

Rack Summary

Solution Summary

Item	Value
Servers	4
Data Devices (per server)	240 (60)
Journal/Metadata SSDs (per server)	20 (5)
Rack Space Required	16 RU
Usable Capacity	2160 TB
Usable w/ Compression	2160 TB
Raw Capacity	4320 TB
Estimated Power Req	5202 W
Estimated Power Cost/mo	\$398
Estimated HW Cost	N/A
HW Price/TB (raw)	N/A
MSRP (\$M Price/TB) (p/used)	N/A
HW+SW+Pwr (\$/GB/mo (usable)	N/A

Server Specification

4x Western Digital Ultrastar Serv0-0 Hybrid Storage Server

2x Intel Xeon Gold 6238 (22 core) processors

384GB DDR4 ECC RAM

2x SAS3000 M.2 100GB (boot)

Dual-port 50/100GbE

Dual redundant power supplies

Device Specification

24x 18TB HDD (data)

20x 1.92TB SSD (journal/obj)

<https://link.osnexus.com/veeam2pb>

<https://link.osnexus.com/veeam600tb>

Successful Implementation Resources



OSNEXUS Veeam Deployment Guide

<https://link.osnexus.com/veeam>



Ransomware Education Site

<https://www.veeam.com/ransomware-protection.html>



Content Library (Executive & Technical)

<https://www.veeam.com/blog/first-step-to-protecting-your-backups-from-ransomware.html>