…než povoláte ZÁLOHY

#ransomware2024

Boris Mittelmann

Senior Systems Engineer
Veeam Software CEE

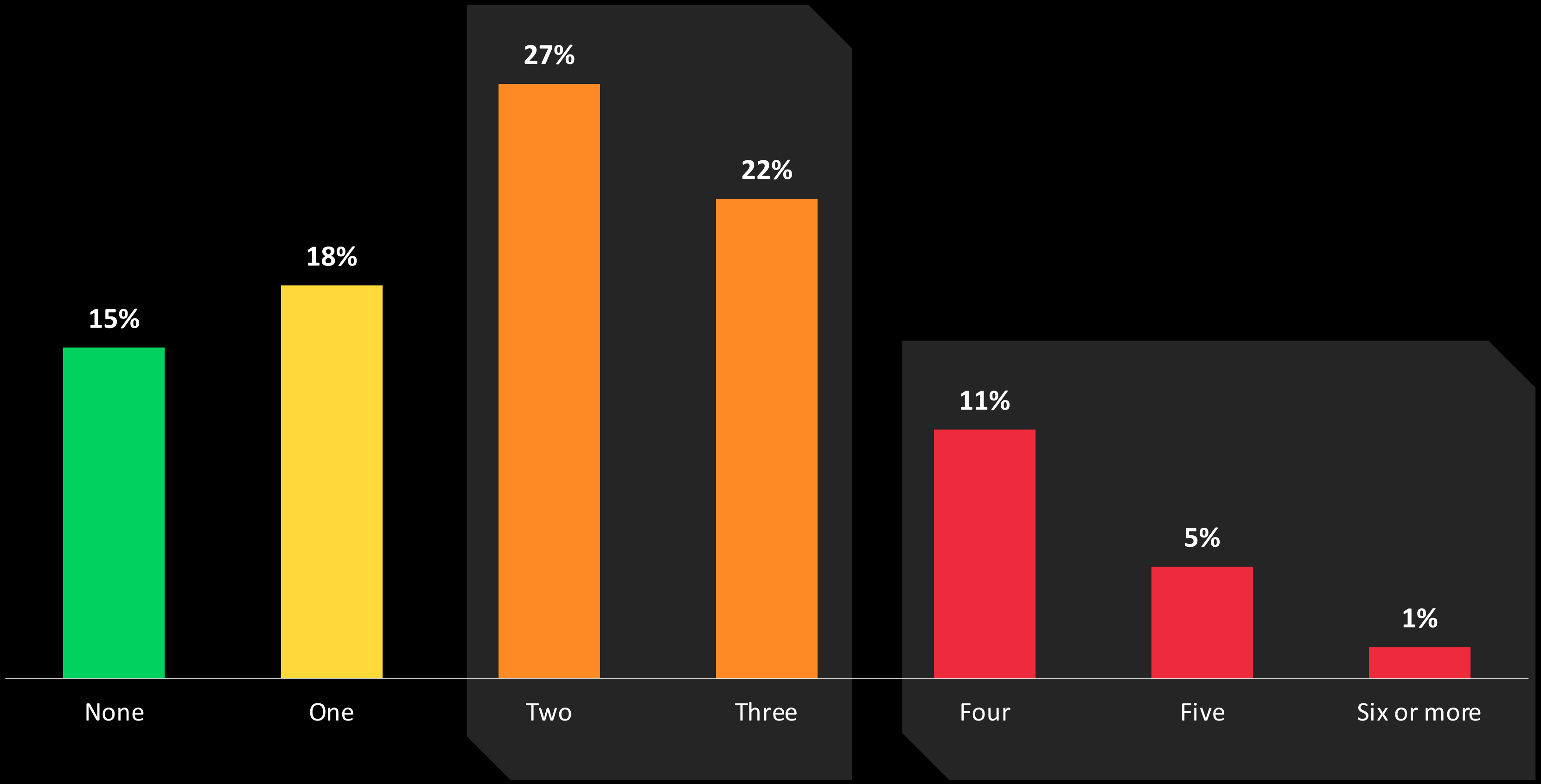
Frekvencia ransomvérových udalostí

75%

utrpelo ransomwarové útoky v roku 2023

Více organizací bylo zasaženo > 4x (26 %), než se domnívá, že nebylo zasaženo vůbec (25 %)

Koľko ransomvérových útokov zažila vaša organizácia za posledných 12 mesiacov? (n=1,932)



Source: Data Protection Trends Report 2023
https://vee.am/DPR23

VŽDY predpokladajte úspešný prienik útočníka

Nová správa zistila, že zločinci používajú umelú inteligenciu na škodlivé účely – a nejde len o deepfakes | (europa.eu)

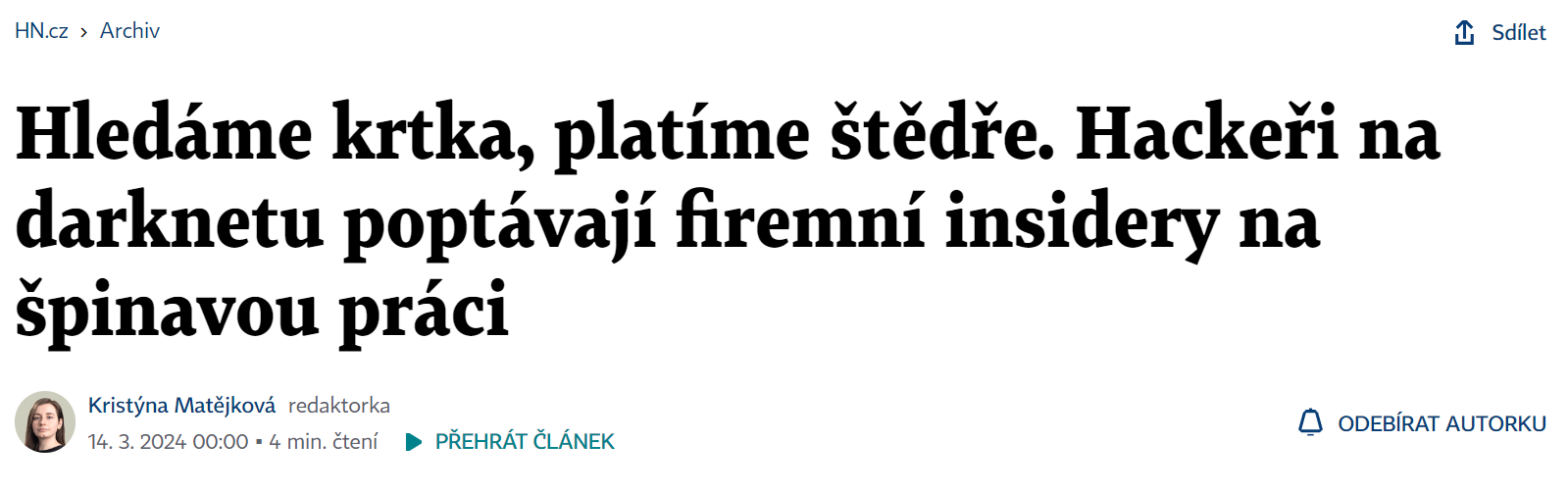
Počiatočné predpoklady návrhu kybernetickej bezpečnosti:

- Nemáte lepšie vybavenie ako útočník
- Nemáte viac vedomostí ako útočník
- Neviete viac o útočníkovi ako on o vás
- Nemáte ani zďaleka toľko času ako útočník
- Musíte minimalizovať dopad útoku

Platby ransomvéru dosiahli v roku 2023 rekordných 1,1 MLD USD

VŽDY předpokládejte úspěšný průnik útočníka

Nová zpráva zjistila, že zločinci využívají umělou inteligenci ke škodlivým účelům – a nejde jen o deep fakes |(europa.eu)



HN.cz › Archiv

Sdílet

Hledáme krtka, platíme štědře. Hackeři na darknetu poptávají firemní insidery na špinavou práci

Kristýna Matějková redaktorka

14. 3. 2024 00:00 ▪ 4 min. čtení

▶ PŘEHRÁT ČLÁNEK

ODEBÍRAT AUTORKU

Platby ransomwaru dosáhly v roce 2023 rekord 1,1 Mld. USD

UNDERSTANDING CYBERATTACKS

Understanding cyberattacks

Information is gathered on the victim's people, processes and technology in play

Gain access to the victim by sending phishing emails and let them click a link

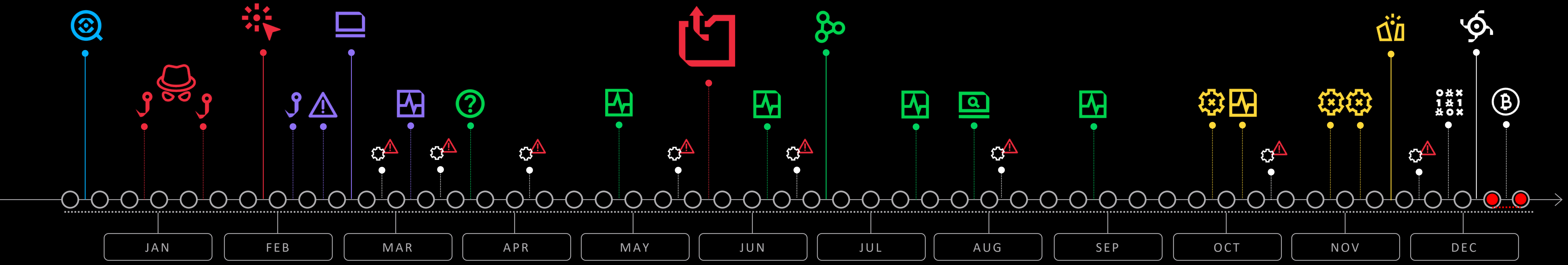
Creating a base of operations and let's make it redundant and highly available

Snooping around without being detected and compromise higher value targets

Alter routines, documentation and security systems to reduce / deny restore capabilities

Encrypt victim's data, wipe archives/backup/data, issue ransom demands!

OBSERVATION | SNEAK IN | BASE OF OPERATIONS | ELEVATE ACCESS & LATERAL MOVEMENT | CRIPPLE RECOVERABILITY | RANSOM DECLARED



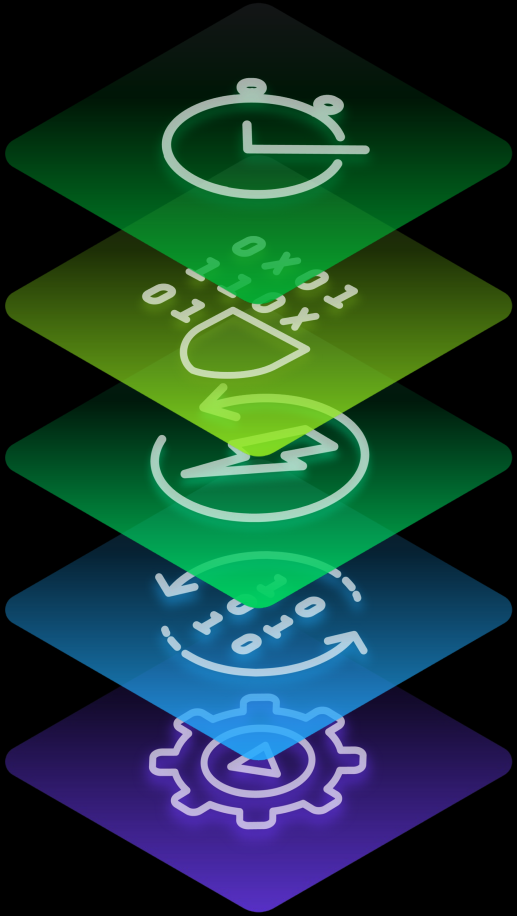
○ BACKUP

MALWARE/TOOLS

ReSTORE vs. ReCOVER – KnowBe4!!!

Immutable
Hardened
Air-gapped

<ins>...is NOT enough!!!</ins>



Multi-layered immutability

Comprehensive monitoring

Automatic recovery verification

Fastest recovery options

Complete data mobility

Multi-layered immutability

Veeam Ready Object
with Immutability

WORM (Write Once Read Many)
– Or Tape media
Physical air gap

WORM storage snapshots

Immutable device on either
dedupe or object repository

Veeam Cloud Connect
with Insider Protection

Veeam Hardened Repository
with Immutability and single
use credentials

Offline, Air-Gapped Media copies on disk
(Removable/rotating)

Snapshot and CDP replication
dependent on retention but fastest RTO

Backup Target Storage Vendor Immutability Integrations

Ensure that your data is protected from Ransomware

Integrated and Veeam Ready vendor qualified object storages with compliance immutability

11:11 SYSTEMS, aws, Azure, Backblaze, ceph

CLOUDIAN, DELL Technologies, DATACORE, HITACHI, IBM Cloud

IDrive, Infortrend, iTernity, MINIO, NetApp

NUTANIX, NGX, OBJECT FIRST, OSNEXUS, Quest

QNAP, OVHcloud, Quantum, PURESTORAGE, RSTOR

SCALITY, SEAGATE, STONEFLY, SOFTIRON, SPECTRA

SUSE, Ugloo, VAST, wasabi, zadara

Integrated and Veeam Ready block and deduplication storage vendors with immutability

DELL Technologies, Hewlett Packard Enterprise

veeam Veeam Hardened Linux Repository

Veeam Hardened Linux Repository is compatible with all major server vendors like …

CISCO, DELL Technologies, Hewlett Packard Enterprise, Lenovo, SUPERMICRO

External controlled immutability (compatible)

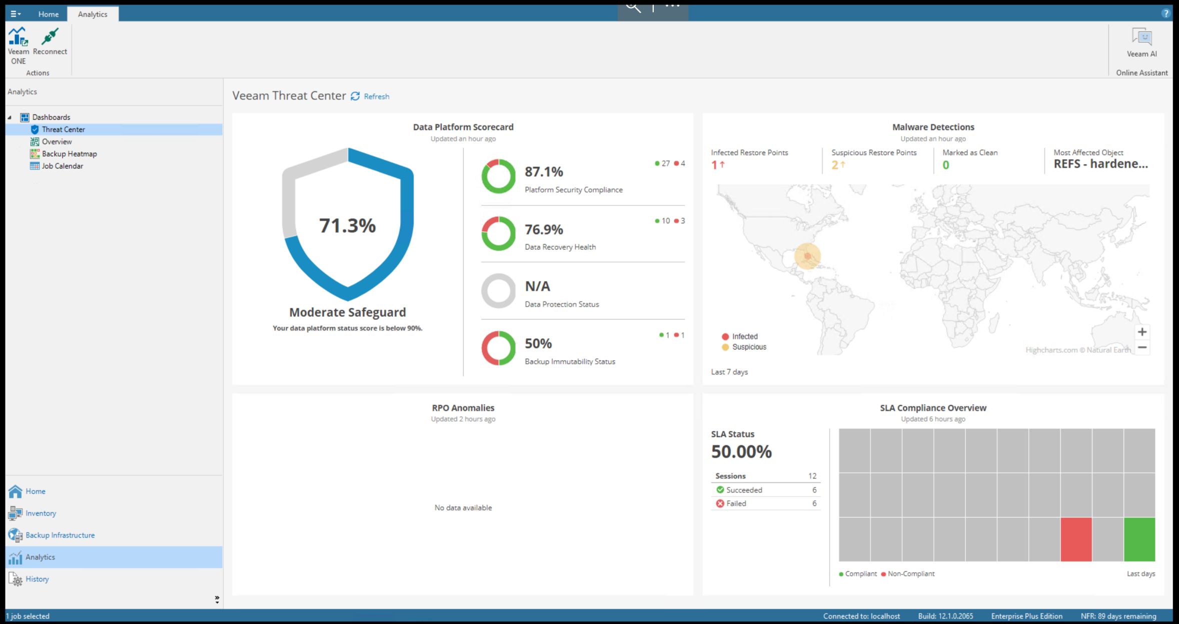
EXAGRID, FUJITSU

Hewlett Packard Enterprise, INFINIDAT

Lenovo, NetApp

PURESTORAGE, VAST

ReSTORE vs. ReCOVER – KnowBe4!!!



Veeam Threat Center

Data Platform Scorecard
Updated an hour ago

71.3%

Moderate Safeguard
Your data platform status score is below 90%.

87.1% — Platform Security Compliance — ● 27 ● 4

76.9% — Data Recovery Health — ● 10 ● 3

N/A — Data Protection Status

50% — Backup Immutability Status — ● 1 ● 1

Malware Detections
Updated an hour ago

Infected Restore Points	Suspicious Restore Points	Marked as Clean	Most Affected Object
1 ↑	2 ↑	0	REFS - hardene...

● Infected
● Suspicious

Last 7 days

RPO Anomalies
Updated 2 hours ago

No data available

SLA Compliance Overview
Updated 6 hours ago

SLA Status
50.00%

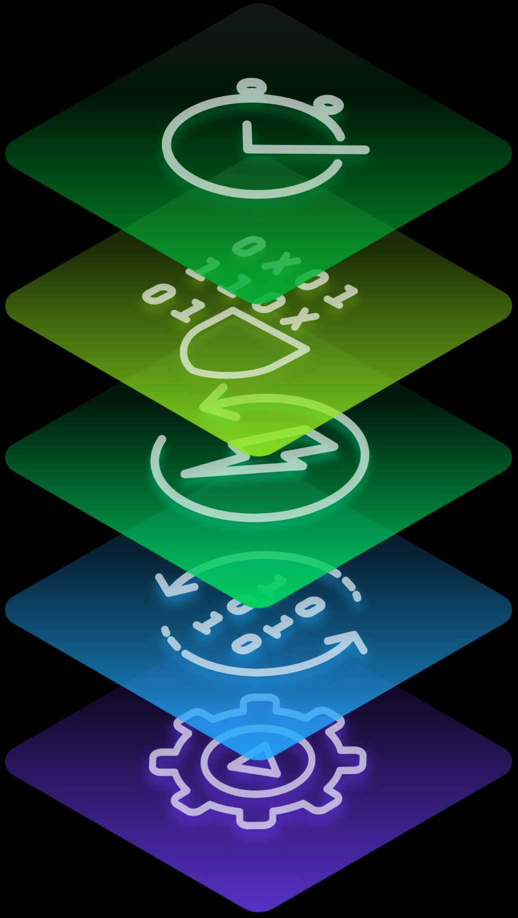
Sessions	12
✓ Succeeded	6
☒ Failed	6

● Compliant ● Non-Compliant

Last days

1 job selected

Connected to: localhost Build: 12.1.0.2065 Enterprise Plus Edition NFR: 89 days remaining



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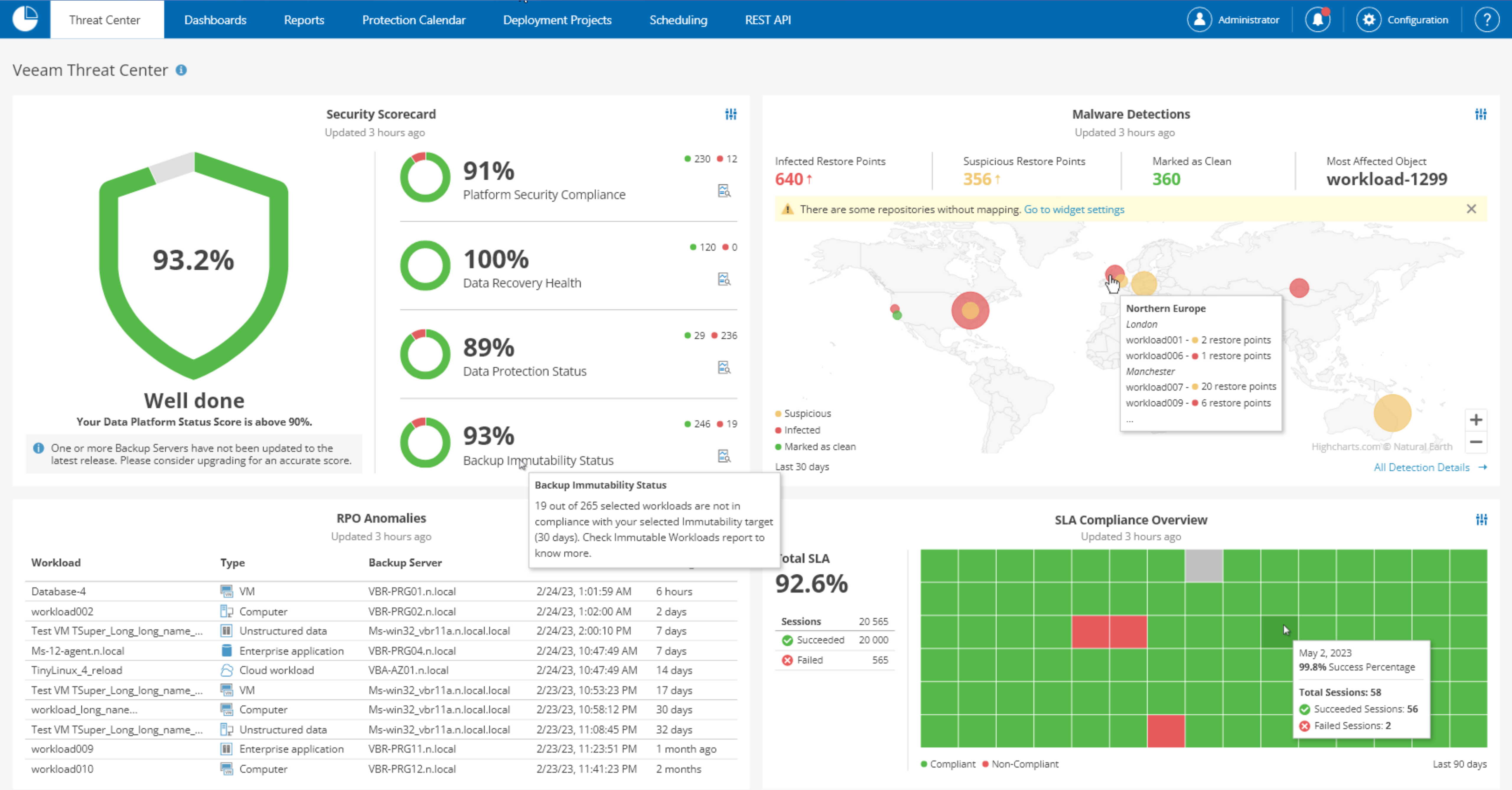
Fastest recovery options

Complete data mobility



Veeam Threat Center

Security Scorecard

Updated 3 hours ago

93.2%

Well done

Your Data Platform Status Score is above 90%.

One or more Backup Servers have not been updated to the latest release. Please consider upgrading for an accurate score.

91%	Platform Security Compliance	● 230 ● 12
100%	Data Recovery Health	● 120 ● 0
89%	Data Protection Status	● 29 ● 236
93%	Backup Immutability Status	● 246 ● 19

Backup Immutability Status

19 out of 265 selected workloads are not in compliance with your selected Immutability target (30 days). Check Immutable Workloads report to know more.

Malware Detections

Updated 3 hours ago

Infected Restore Points	Suspicious Restore Points	Marked as Clean	Most Affected Object
640 ↑	356 ↑	360	workload-1299

There are some repositories without mapping. Go to widget settings

Northern Europe

London

workload001 - ● 2 restore points

workload006 - ● 1 restore points

Manchester

workload007 - ● 20 restore points

workload009 - ● 6 restore points

...

● Suspicious

● Infected

● Marked as clean

Last 30 days

Highcharts.com © Natural Earth

All Detection Details →

RPO Anomalies

Updated 3 hours ago

Workload	Type	Backup Server		
Database-4	VM	VBR-PRG01.n.local	2/24/23, 1:01:59 AM	6 hours
workload002	Computer	VBR-PRG02.n.local	2/24/23, 1:02:00 AM	2 days
Test VM TSuper_Long_long_name_...	Unstructured data	Ms-win32_vbr11a.n.local.local	2/24/23, 2:00:10 PM	7 days
Ms-12-agent.n.local	Enterprise application	VBR-PRG04.n.local	2/24/23, 10:47:49 AM	7 days
TinyLinux_4_reload	Cloud workload	VBA-AZ01.n.local	2/24/23, 10:47:49 AM	14 days
Test VM TSuper_Long_long_name_...	VM	Ms-win32_vbr11a.n.local.local	2/23/23, 10:53:23 PM	17 days
workload_long_nane...	Computer	Ms-win32_vbr11a.n.local.local	2/23/23, 10:58:12 PM	30 days
Test VM TSuper_Long_long_name_...	Unstructured data	Ms-win32_vbr11a.n.local.local	2/23/23, 11:08:45 PM	32 days
workload009	Enterprise application	VBR-PRG11.n.local	2/23/23, 11:23:51 PM	1 month ago
workload010	Computer	VBR-PRG12.n.local	2/23/23, 11:41:23 PM	2 months

SLA Compliance Overview

Updated 3 hours ago

Total SLA

92.6%

Sessions	20 565
✓ Succeeded	20 000
☒ Failed	565

May 2, 2023

99.8% Success Percentage

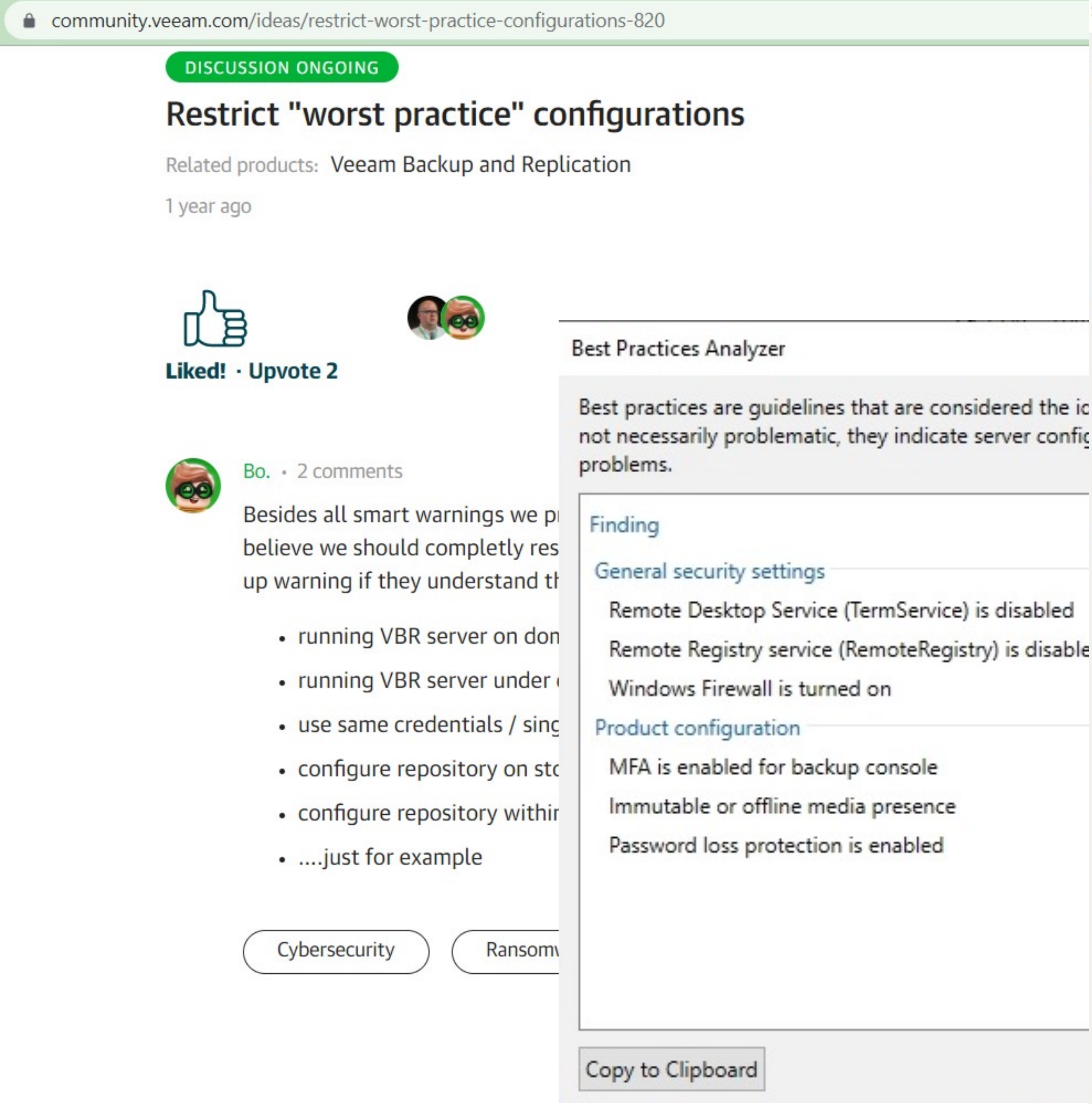
Total Sessions: 58

✓ Succeeded Sessions: **56**

☒ Failed Sessions: **2**

● Compliant ● Non-Compliant

Last 90 days



community.veeam.com/ideas/restrict-worst-practice-configurations-820

DISCUSSION ONGOING

Restrict "worst practice" configurations

Related products: Veeam Backup and Replication

1 year ago

Liked! · Upvote 2

Bo. · 2 comments

Besides all smart warnings we p
believe we should completly res
up warning if they understand th

- running VBR server on don
- running VBR server under
- use same credentials / sing
- configure repository on sto
- configure repository withir
- ....just for example

Best Practices Analyzer

Best practices are guidelines that are considered the id
not necessarily problematic, they indicate server config
problems.

Finding

General security settings

Remote Desktop Service (TermService) is disabled

Remote Registry service (RemoteRegistry) is disable

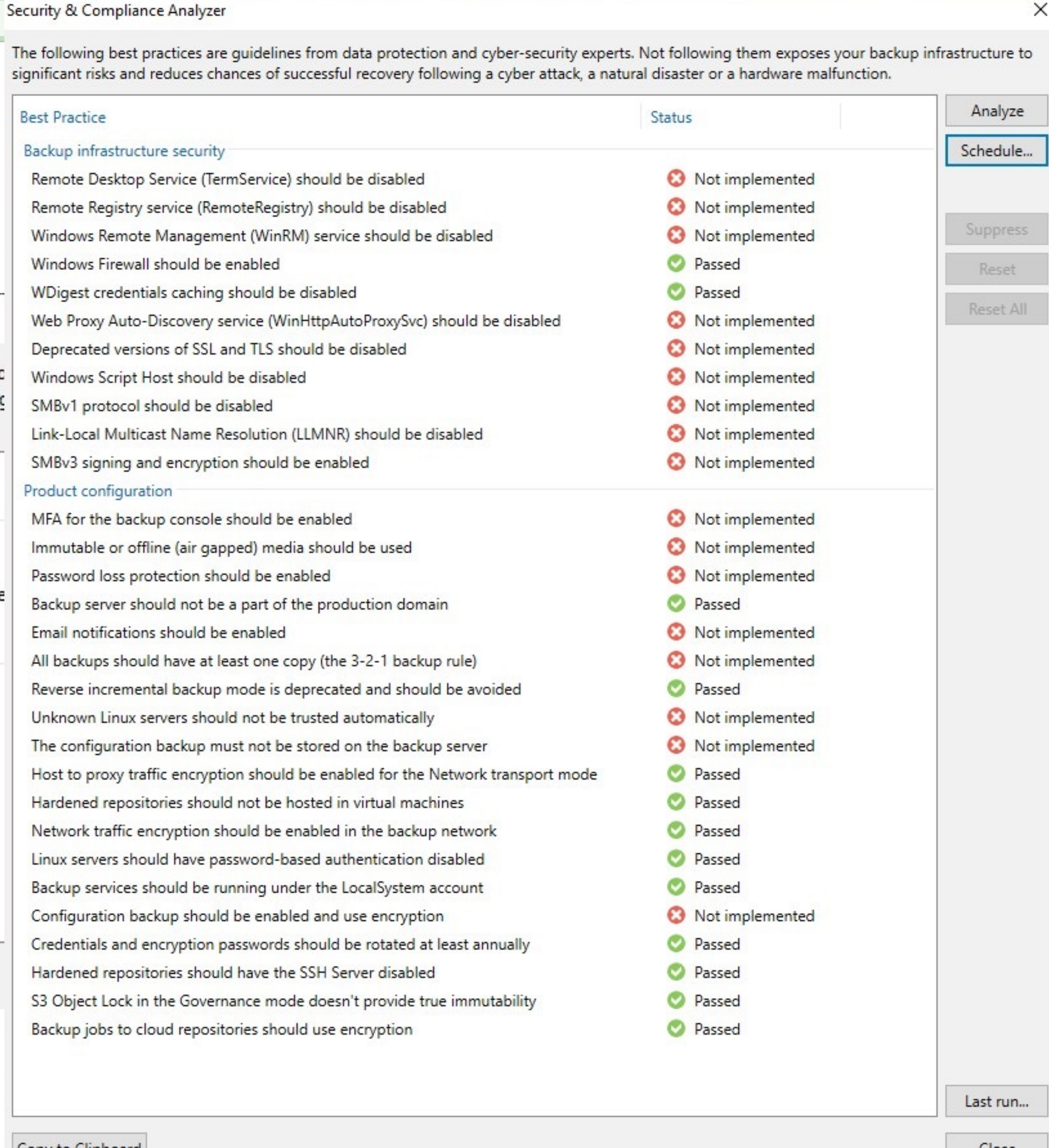
Windows Firewall is turned on

Product configuration

MFA is enabled for backup console

Immutable or offline media presence

Password loss protection is enabled

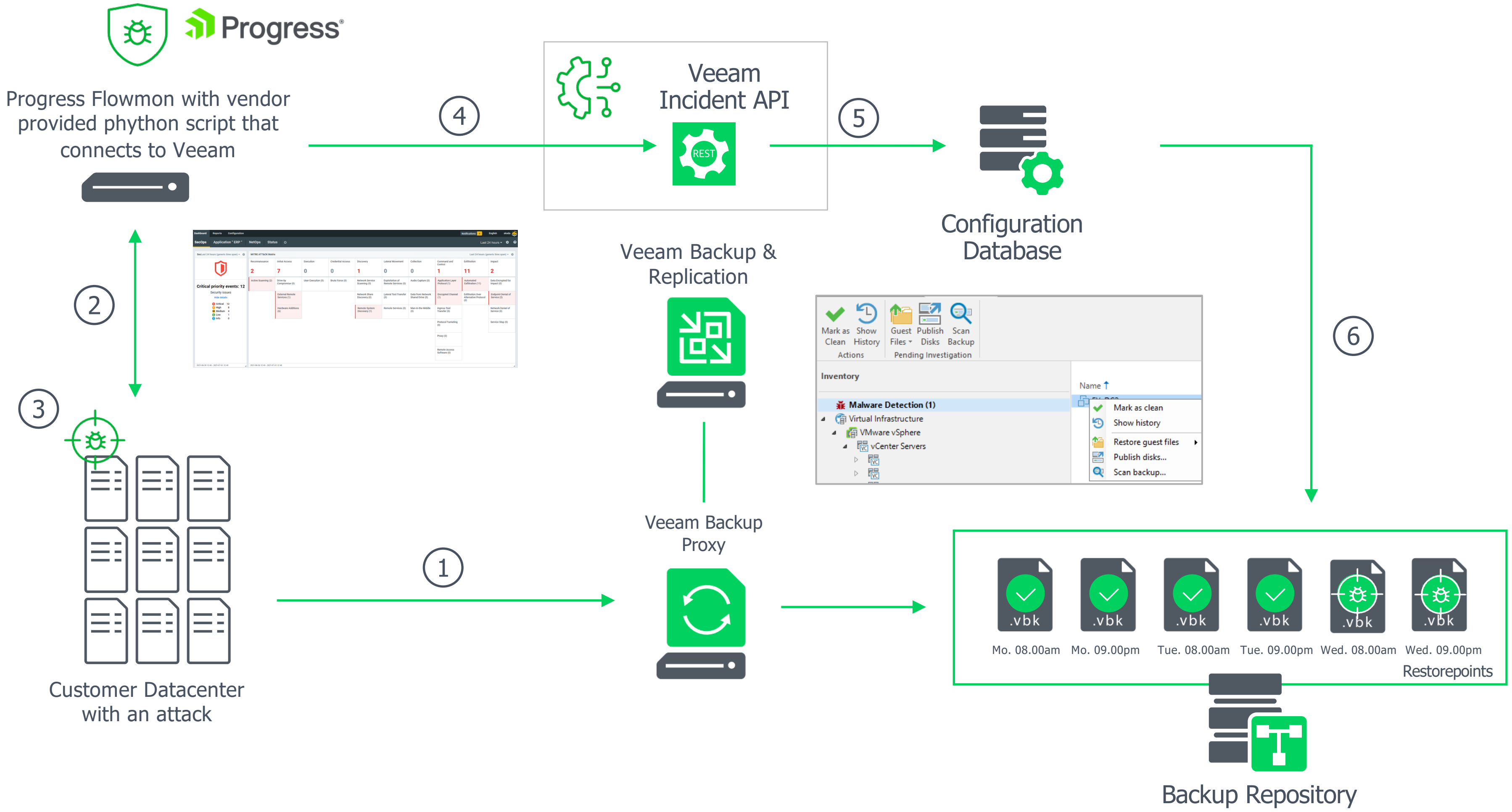


Security & Compliance Analyzer

The following best practices are guidelines from data protection and cyber-security experts. Not following them exposes your backup infrastructure to significant risks and reduces chances of successful recovery following a cyber attack, a natural disaster or a hardware malfunction.

Best Practice	Status
Backup infrastructure security	
Remote Desktop Service (TermService) should be disabled	✗ Not implemented
Remote Registry service (RemoteRegistry) should be disabled	✗ Not implemented
Windows Remote Management (WinRM) service should be disabled	✗ Not implemented
Windows Firewall should be enabled	✓ Passed
WDigest credentials caching should be disabled	✓ Passed
Web Proxy Auto-Discovery service (WinHttpAutoProxySvc) should be disabled	✗ Not implemented
Deprecated versions of SSL and TLS should be disabled	✗ Not implemented
Windows Script Host should be disabled	✗ Not implemented
SMBv1 protocol should be disabled	✗ Not implemented
Link-Local Multicast Name Resolution (LLMNR) should be disabled	✗ Not implemented
SMBv3 signing and encryption should be enabled	✗ Not implemented
Product configuration	
MFA for the backup console should be enabled	✗ Not implemented
Immutable or offline (air gapped) media should be used	✗ Not implemented
Password loss protection should be enabled	✗ Not implemented
Backup server should not be a part of the production domain	✓ Passed
Email notifications should be enabled	✗ Not implemented
All backups should have at least one copy (the 3-2-1 backup rule)	✗ Not implemented
Reverse incremental backup mode is deprecated and should be avoided	✓ Passed
Unknown Linux servers should not be trusted automatically	✗ Not implemented
The configuration backup must not be stored on the backup server	✗ Not implemented
Host to proxy traffic encryption should be enabled for the Network transport mode	✓ Passed
Hardened repositories should not be hosted in virtual machines	✓ Passed
Network traffic encryption should be enabled in the backup network	✓ Passed
Linux servers should have password-based authentication disabled	✓ Passed
Backup services should be running under the LocalSystem account	✓ Passed
Configuration backup should be enabled and use encryption	✗ Not implemented
Credentials and encryption passwords should be rotated at least annually	✓ Passed
Hardened repositories should have the SSH Server disabled	✓ Passed
S3 Object Lock in the Governance mode doesn't provide true immutability	✓ Passed
Backup jobs to cloud repositories should use encryption	✓ Passed

Veeam Incident API with Progress Flowmon



1 Veeam Backup & Replication runs regular backups of the source systems

2 External CyberProtection solutions are monitoring the environment

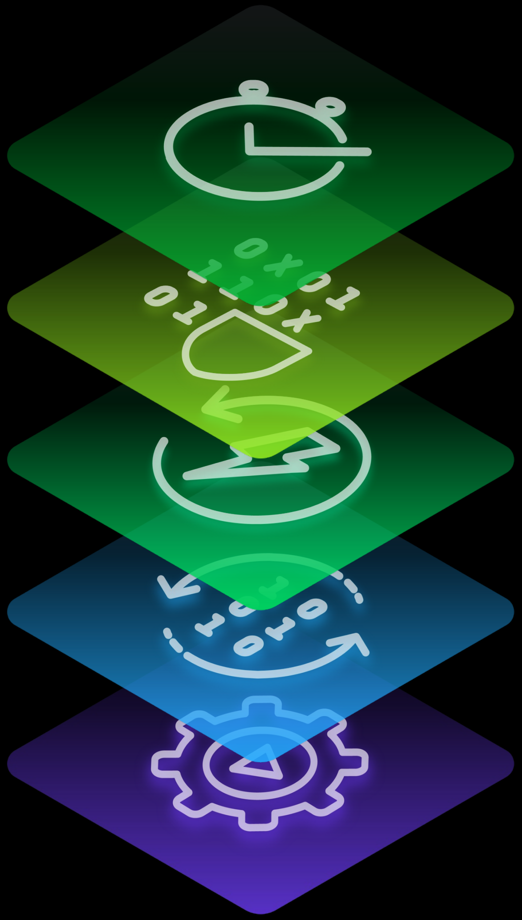
3 The external CyberProtection detects suspicious activities or a Ransomware attack

4 The external CyberProtection calls the Veeam Incident API and sends details of the incident

5 Veeam Backup & Replication flags any restore point created after the detection as potentially infected in the configuration database

6 This is also reflected in the GUI where those restore points now show up as clean or infected

ReSTORE vs. ReCOVER – KnowBe4!!!



Multi-layered immutability

Comprehensive monitoring

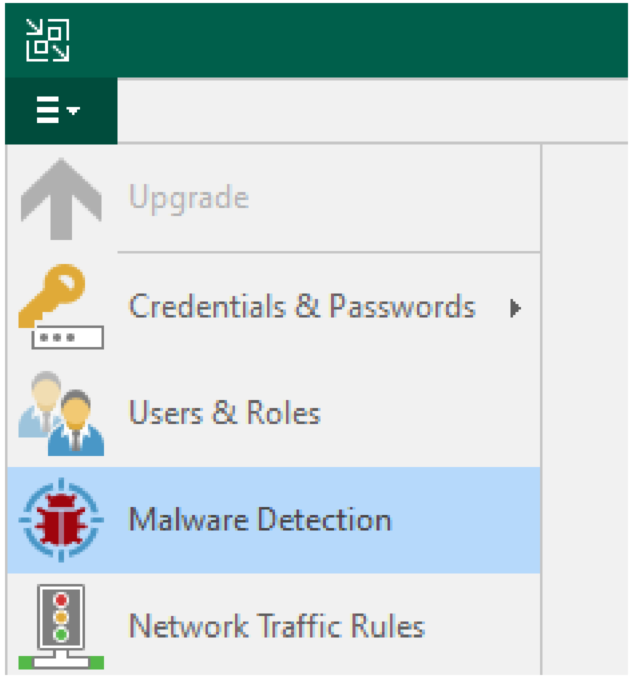
Automatic recovery verification

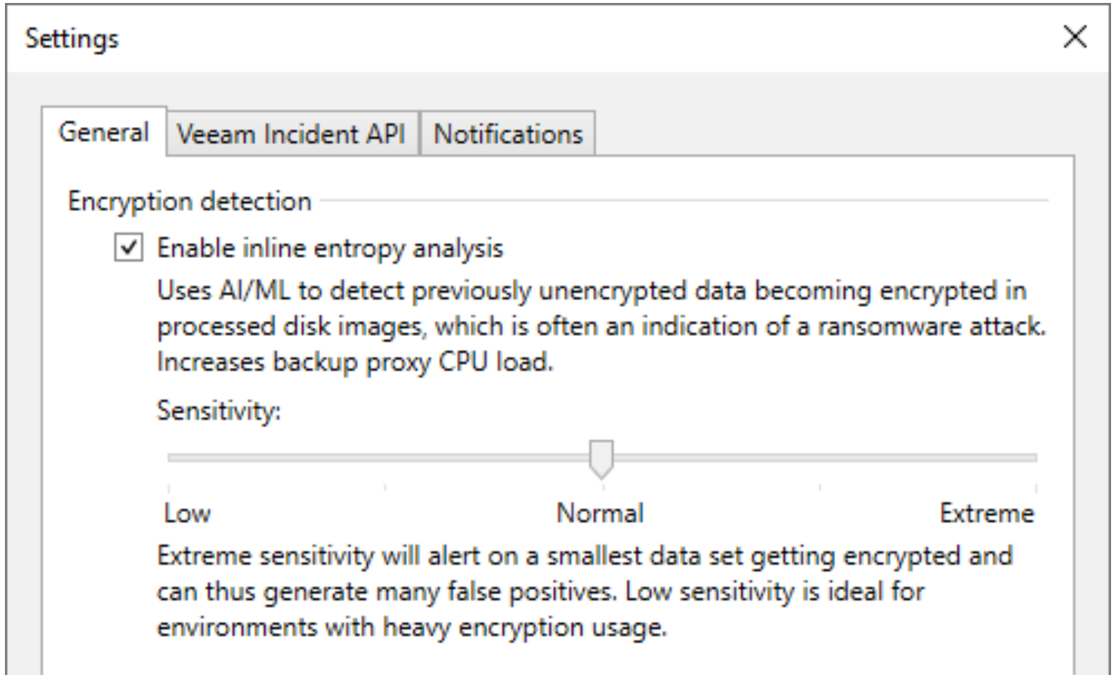
Fastest recovery options

Complete data mobility

Inline Malware Detection
encryption detection & text analysis

- analyzes block-level data during backup




Settings

General | Veeam Incident API | Notifications

Encryption detection

☑ Enable inline entropy analysis

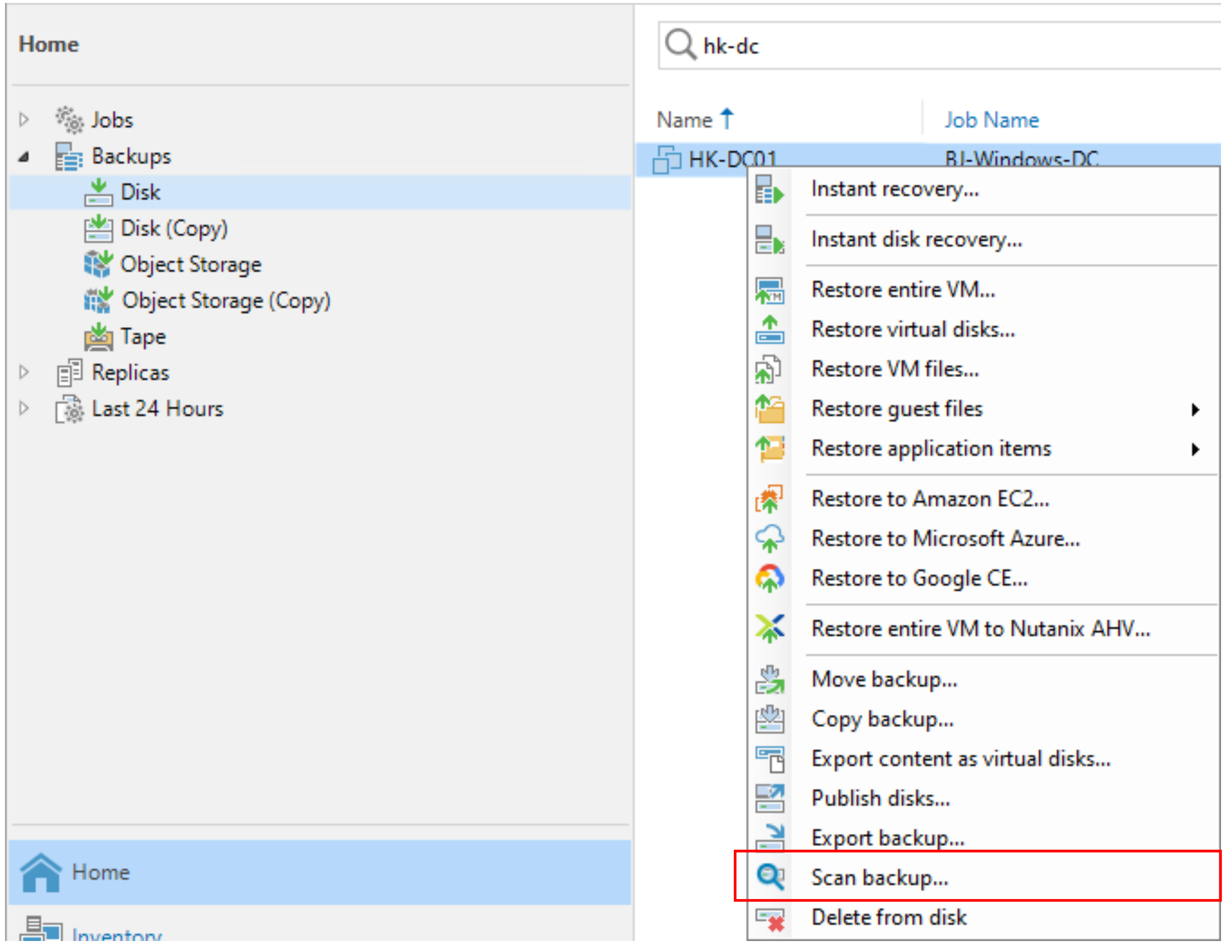
Uses AI/ML to detect previously unencrypted data becoming encrypted in processed disk images, which is often an indication of a ransomware attack. Increases backup proxy CPU load.

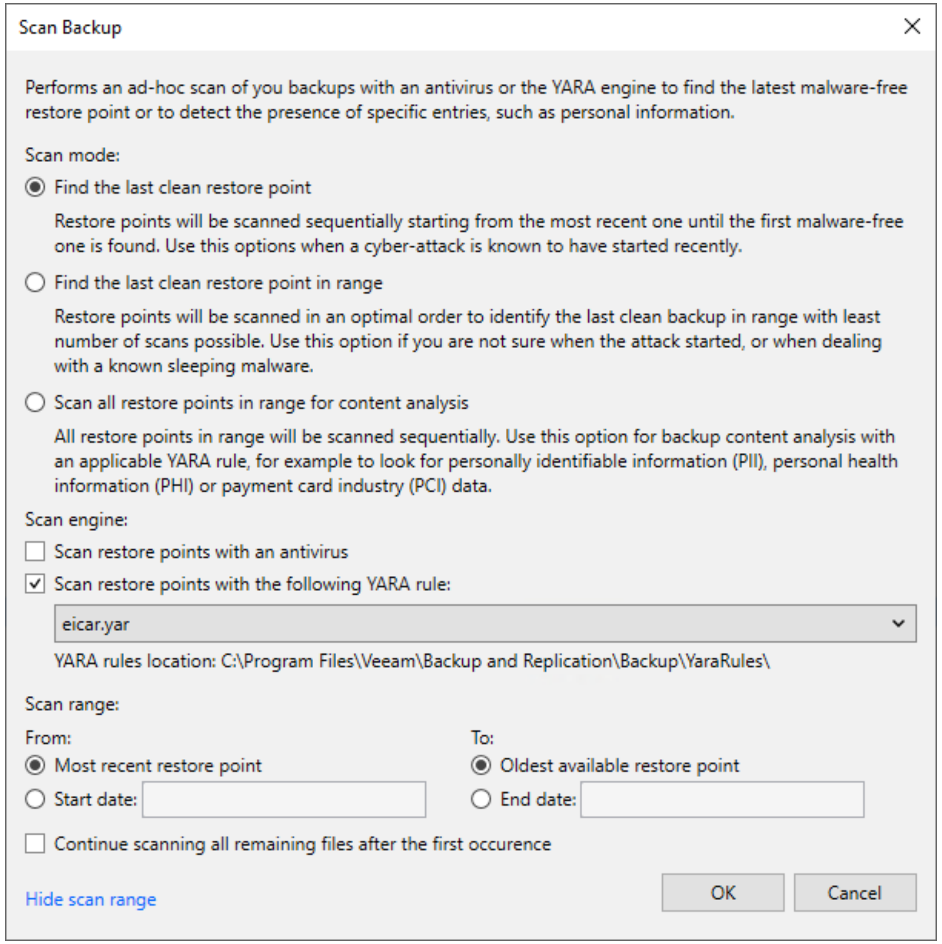
Sensitivity: Normal (Low – Normal – Extreme)

Extreme sensitivity will alert on a smallest data set getting encrypted and can thus generate many false positives. Low sensitivity is ideal for environments with heavy encryption usage.

On-Demand Scan For Malware & Content

in Backups section




Scan Backup

Performs an ad-hoc scan of you backups with an antivirus or the YARA engine to find the latest malware-free restore point or to detect the presence of specific entries, such as personal information.

Scan mode:

● Find the last clean restore point

Restore points will be scanned sequentially starting from the most recent one until the first malware-free one is found. Use this options when a cyber-attack is known to have started recently.

○ Find the last clean restore point in range

Restore points will be scanned in an optimal order to identify the last clean backup in range with least number of scans possible. Use this option if you are not sure when the attack started, or when dealing with a known sleeping malware.

○ Scan all restore points in range for content analysis

All restore points in range will be scanned sequentially. Use this option for backup content analysis with an applicable YARA rule, for example to look for personally identifiable information (PII), personal health information (PHI) or payment card industry (PCI) data.

Scan engine:

☐ Scan restore points with an antivirus

☑ Scan restore points with the following YARA rule:

eicar.yar

YARA rules location: C:\Program Files\Veeam\Backup and Replication\Backup\YaraRules\

Scan range:

From:

● Most recent restore point

○ Start date:

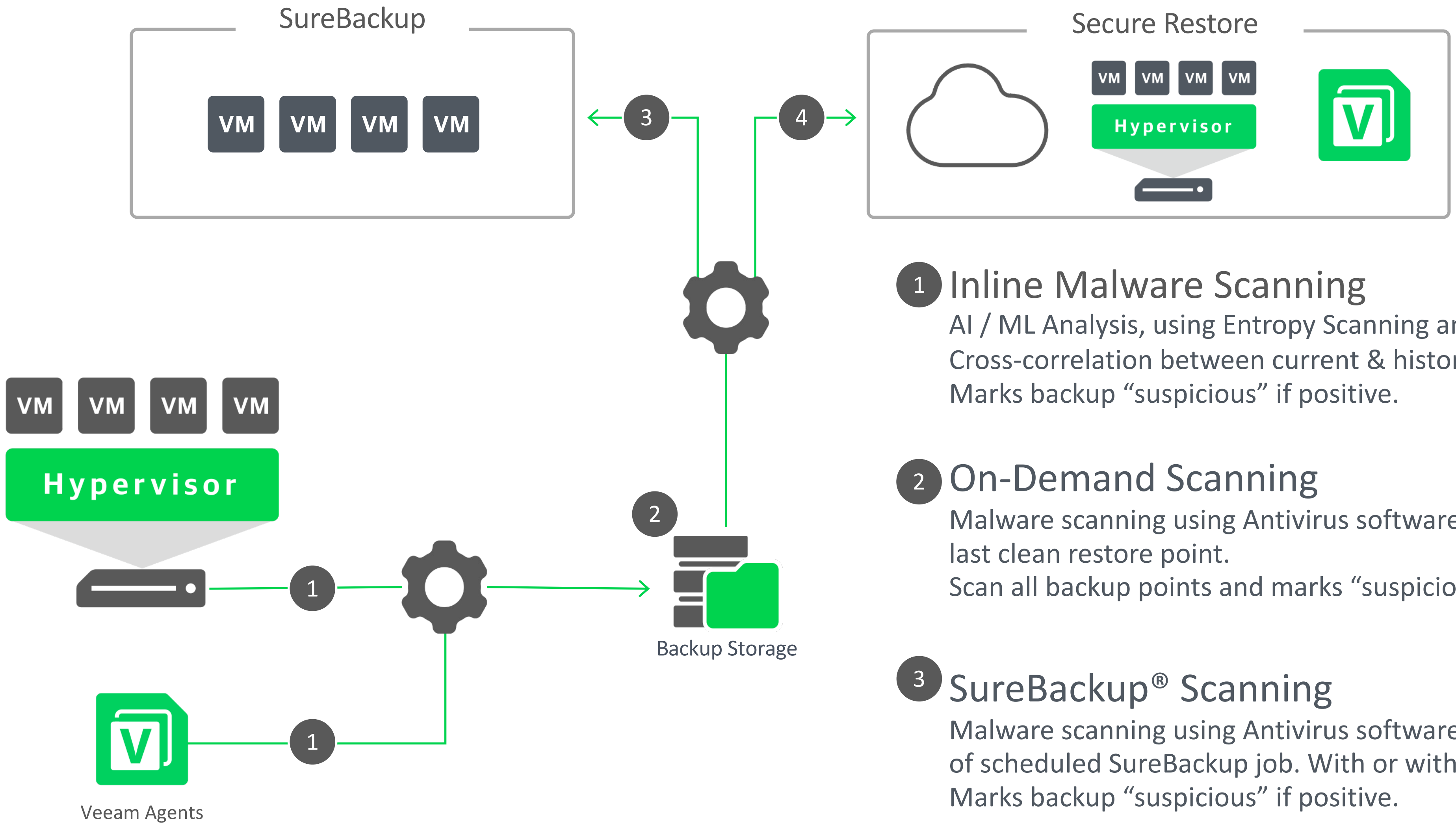
To:

● Oldest available restore point

○ End date:

☐ Continue scanning all remaining files after the first occurence

04032024



1 Inline Malware Scanning

AI / ML Analysis, using Entropy Scanning and in-guest filesystem index.
Cross-correlation between current & historic values.
Marks backup “suspicious” if positive.

2 On-Demand Scanning

Malware scanning using Antivirus software and/or YARA rules to find the last clean restore point.
Scan all backup points and marks “suspicious” if positive.

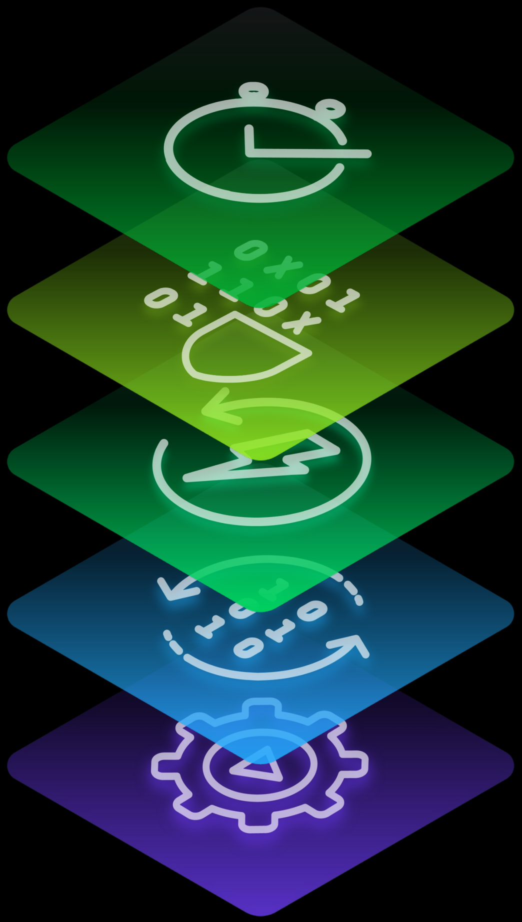
3 SureBackup® Scanning

Malware scanning using Antivirus software and/or YARA rules as a part of scheduled SureBackup job. With or without DataLabs.
Marks backup “suspicious” if positive.

4 Secure Restore Scanning

Malware scanning using Antivirus software and/or YARA rules on any Image based restore task. Marks backup “suspicious” if positive.

ReSTORE vs. ReCOVER – KnowBe4!!!



Multi-layered immutability

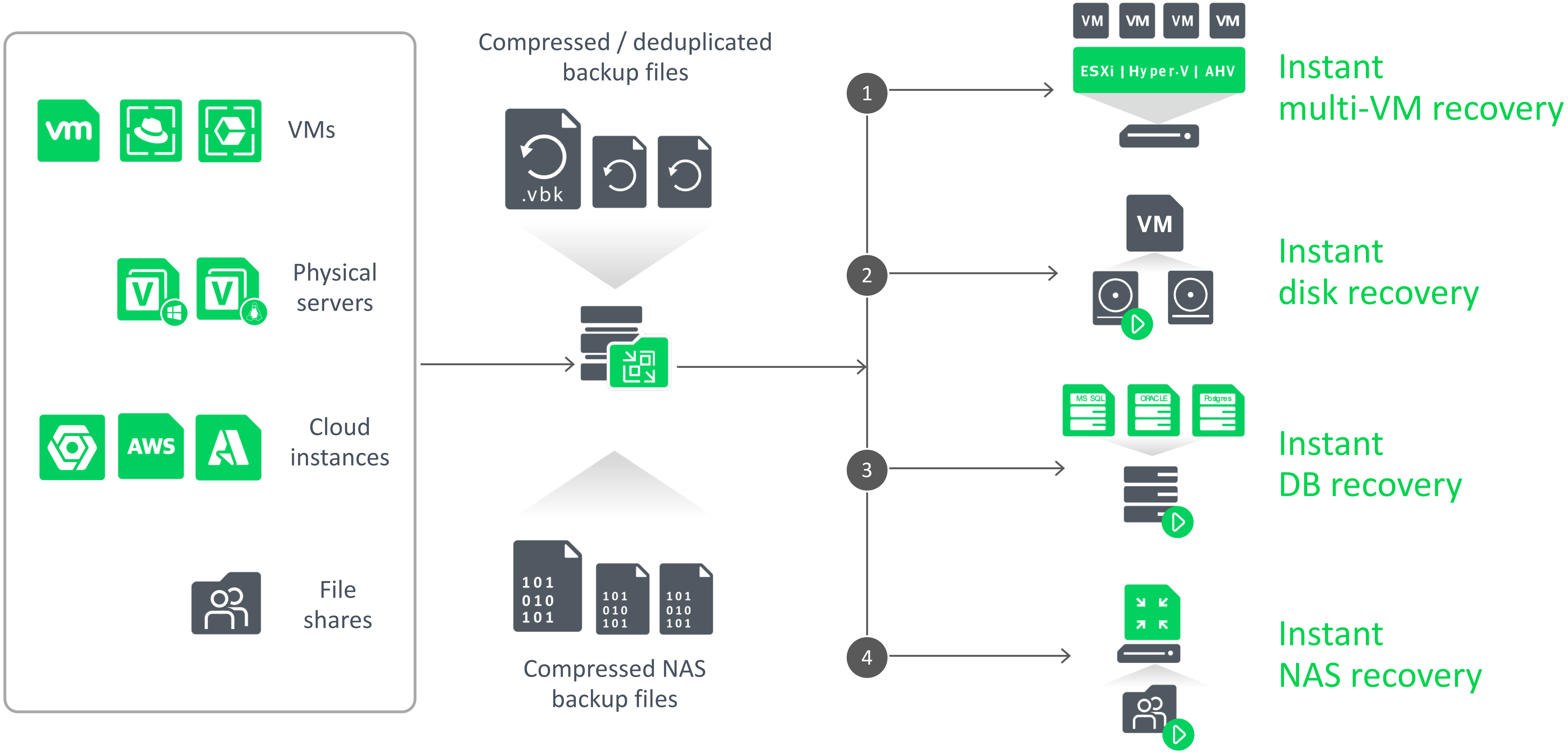
Comprehensive monitoring

Automatic recovery verification

Fastest recovery options

Complete data mobility

Instant recovery at scale



VMs

Physical servers

Cloud instances

File shares

Compressed / deduplicated backup files

Compressed NAS backup files

Instant multi-VM recovery

Instant disk recovery

Instant DB recovery

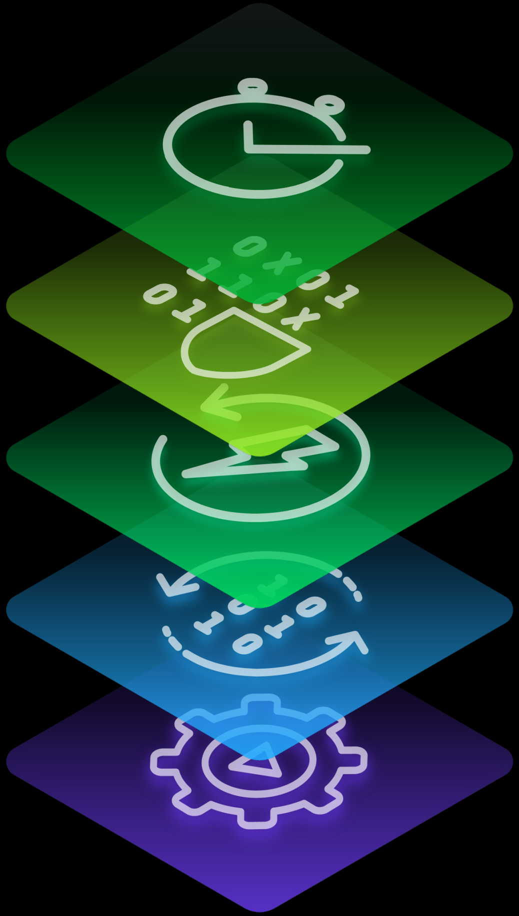
Instant NAS recovery

Veeam Explorers

Veeam Explorers Suite rozširuje funkčnosť Veeam Backup for Microsoft 365 a Veeam Backup & Replication, čo vám umožňuje obnoviť alebo exportovať údaje na úrovni aplikácie z image-based zálohovaných alebo replikových súborov.

- Veeam Explorer for Microsoft Active Directory
- Veeam Explorer for Microsoft SQL Server
- Veeam Explorer for Oracle
- Veeam Explorer for PostgreSQL
- Veeam Explorer for SAP HANA (NEW in v12.1)
- Veeam Explorer for Storage Snapshots
- Veeam Explorer for Microsoft Exchange
- Veeam Explorer for Microsoft Sharepoint
- Veeam Explorer for OneDrive for Business
- Veeam Explorer for Microsoft Teams

ReSTORE vs. ReCOVER – KnowBe4!!!



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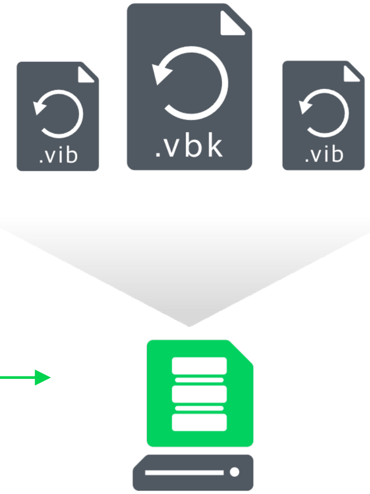
Veeam Backup File Format

- Veeam Backup & Replication
- Veeam Backup & Replication Community Edition
- Veeam Agent for Microsoft Windows
- Veeam Agent for Linux
- Veeam Backup for AHV
- Veeam Backup for RHEV
- Veeam Backup for Cloud



Any on-premises VMware vSphere, Microsoft Hyper-V, Nutanix AHV VMs, physical servers and workstations…

Veeam mobility matrix

To From	vSphere	Hyper-V	Nutanix AHV	Azure VM	AWS EC2	Google Cloud VM
vSphere	✔	✔	✔	✔	✔	✔
Hyper-V	✔	✔	✔	✔	✔	✔
Nutanix AHV	✔	✔	✔	✔	✔	✔
Red Hat KVM	✔	✔	✔	✔	✔	✔
Windows Agent	✔	✔	✔	✔	✔	✔
Linux Agent	✔	✔	✔	✔	✔	✔
Azure VM	✔	✔	✓	✔	✔	✔
AWS EC2	✔	✔	✓	✔	✔	✔
GCP VM	✔	✔	✓	✔	✔	✔
Other Clouds (agent based)	✔	✔	✔	✔	✔	✔

✔ Supported ✓ Supported via Backup Copy

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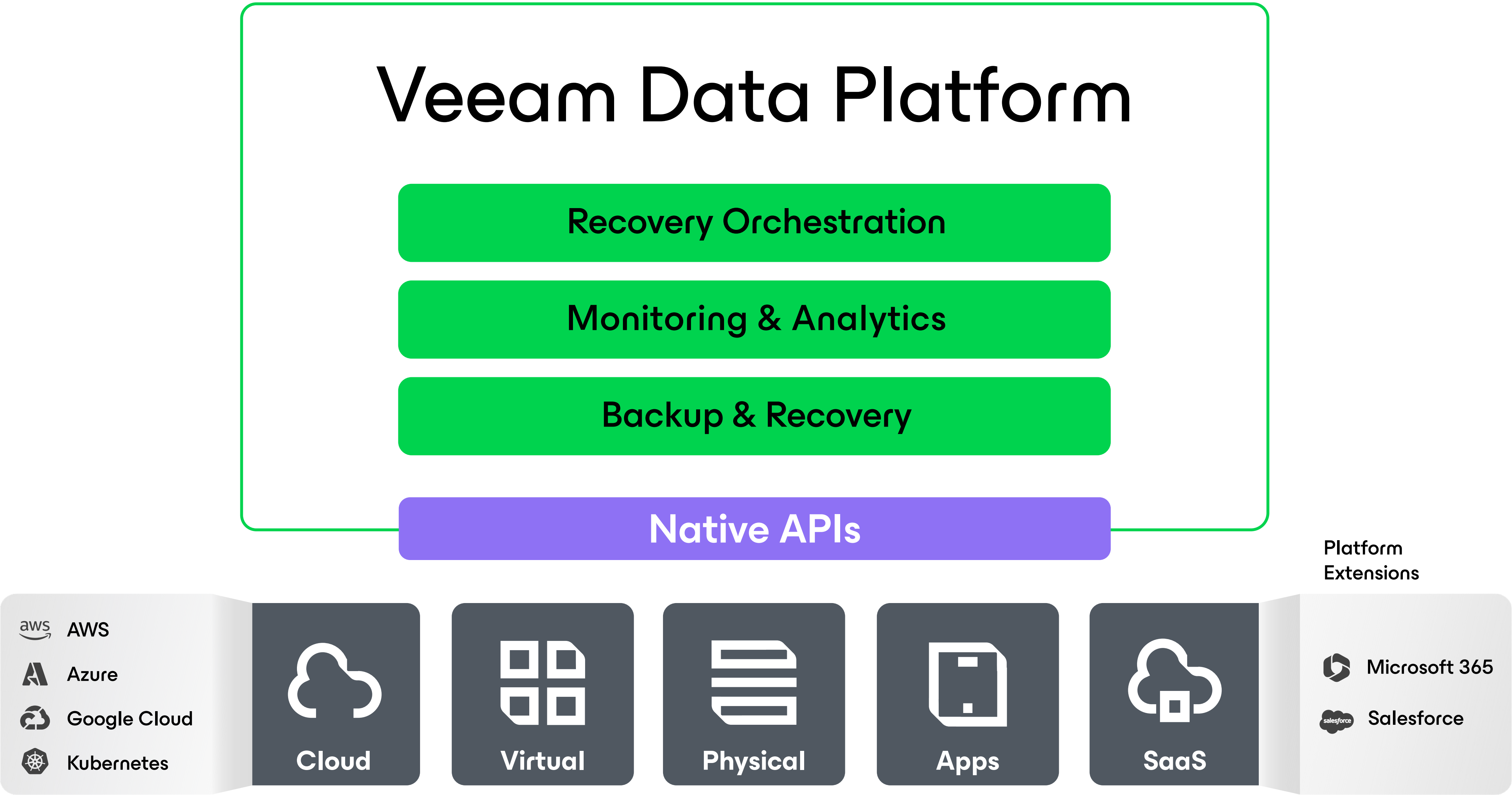


Veeam Data Platform

Recovery Orchestration

Monitoring & Analytics

Backup & Recovery

Native APIs

AWS

Azure

Google Cloud

Kubernetes

Cloud

Virtual

Physical

Apps

SaaS

Platform Extensions

Microsoft 365

Salesforce

On-Premises • In the Cloud • XaaS

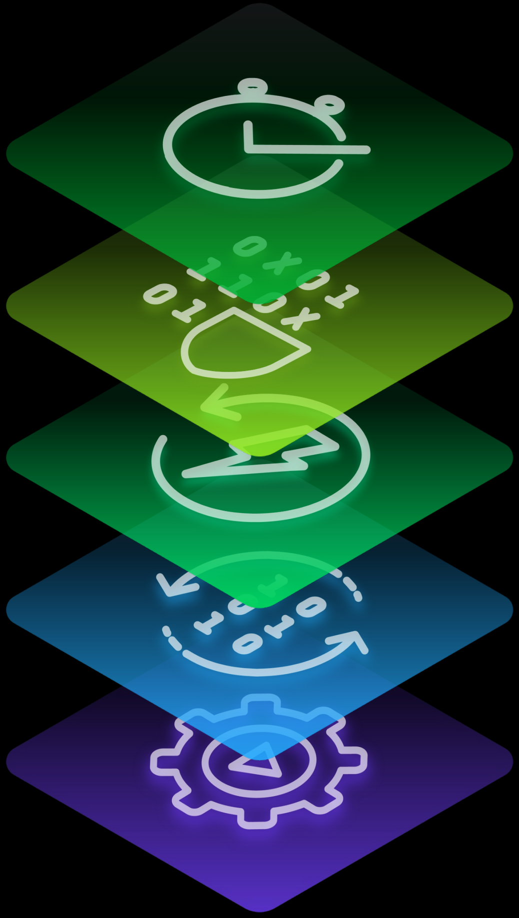
ReSTORE vs. ReCOVER – KnowBe4!!!

Immutable

Hardened

Air-gapped

...is NOT enough!!!



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NOW AVAILABLE

Veeam Data Platform 23H2 Update

- Detect and identify cyberthreats
- Respond and recover faster from ransomware
- Gain secure and compliant protection for your data

TRY NOW

Q&A

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