Hewlett Packard Enterprise | Veeam

Solution brief

Countering ransomware with HPE and Veeam

Ransomware is a maliciously created malware that finds and encrypts an organization's files and storage. Last year, 85% of organizations were hit by a ransomware attack, with two-thirds of those organizations being hit more than once. 93% of ransomware attacks targeted backups, with 75% being at least partially successful.[1]

The threat landscape has increased beyond merely encrypting data to now stealing the data and threatening to publish the data publicly if the ransom is not paid. It's clear that effective ransomware protection includes a multilayer defense.

Organizations must plan for prevention and detection of a ransomware threat. Planning and restoring speeds are vital for recovering from a ransomware attack. Hewlett Packard Enterprise and Veeam® can help organizations create a data recovery solution that helps ensure data can rapidly and easily recover should a situation arise. The native integration of Veeam with HPE hardware-enforced data immutability is one of the key components of this solution and is available not only for backup repositories (HPE StoreOnce, Veeam Hardened Repository with Linux®, and object storage) but also for HPE primary storage snapshots. HPE Virtual Lock in HPE Alletra Storage MP features immutable snapshots that hackers and administrators alike cannot change, thereby providing reliable, consistent, and fast restore points. With this unique technology innovation, users can take hourly immutable snapshots and normal immutable backup from within the easy-to-use Veeam GUI.

Veeam SureBackup® provides immediate notice when a system may not be recoverable due to an undetected ransomware or malware threat while Veeam Secure Restore enables a complete antivirus scan of backups when restoring.

Data is the heart of everything we do. Together HPE and Veeam help safeguard data for availability and protection at all times. Figure 1 illustrates how HPE solutions with Veeam protect, detect, and recover from ransomware attacks.

Countering the ransomware threat

Protect
- 3-2-1-1-0 backup rule and SureBackup
- Backup immutability
- HPE Storage immutable snapshots with HPE Virtual Lock
- HPE StoreOnce Catalyst
- Veeam Hardened Repository with Linux on HPE Storage servers

Detect
- Veeam ONE™
- Veeam SureBackup
- Veeam Data Integration API

Recover
- HPE Storage snapshots
- HPE StoreOnce Catalyst
- HPE Alletra Storage Server 4000
- Veeam DataLabs™ and Secure Restore

Graphic provided by Veeam

Figure 1. Countering ransomware with HPE and Veeam summary

[1] "2023 Global Report Ransomware Trends," Veeam, 2023

Protect

3-2-1-1-0 backup rule and SureBackup

Good backup hygiene is critical for protecting against all threats. Veeam strongly recommends the 3-2-1-1-0 rule of backup.

- Three copies of your data (one production and two backup)
- Two different media types
- One copy off-site
- One copy offline, air gapped or immutable
- Zero errors with SureBackup recovery verification.

Backup immutability

Veeam supports immutable backups on HPE StoreOnce and immutable HPE primary storage snapshots enabled by HPE Virtual Lock that cannot be discovered by ransomware. Veeam's support of backup immutability includes both on- and off-premises backups and those stored in Amazon Web Services (AWS) cloud object storage. Veeam Hardened Repository with Linux provides immutability for backups, both on- and off-premises. For backups stored in cloud object storage, Veeam supports AWS S3 Object Lock to provide immutability that even the system administrators will be unable to change or undo.

Detect

Veeam ONE

Veeam ONE is a powerful monitoring and analytics tool for your IT environment. By leveraging real-time monitoring, Veeam ONE can see when a virtual machine (VM) or host is displaying behavior consistent with files being encrypted by ransomware. If this occurs, Veeam ONE will raise the alert and will take action.

Veeam SureBackup

Veeam SureBackup is a tool that spins up machines from backup files or replicas in an environment that is isolated from your production network so data can be tested with various scripts. Backup files can also be scanned offline for detection of malware. As a result, organizations can automate and schedule the recovery testing of their backup and receive reports showing the health of VM, operating system (OS), and application.

Veeam Data Integration API

Veeam Data Integration API allows third-party integration into backups and opens an expanding list of possibilities including security analysis. For example, Veeam integrates with third-party security applications to look for ransomware infections in the backup files. The Veeam Data Integration API provides an automated way to boot machines from recent backups in Veeam DataLabs and present them to the third-party security applications for analysis. As a result, users can access data to mine for patterns or discover anomalies providing proactive insight.

Recover

HPE Storage snapshots

Veeam Data Platform integrates with HPE primary storage snapshots, created by HPE Virtual Lock to provide an additional layer of protection against malicious threats. These snapshots are read-only and cannot be deleted or altered by ransomware or any IT administrator.

HPE StoreOnce Catalyst

When ransomware searches and scans for backup files to delete prior to encrypting production files, it cannot find the backups sent to HPE StoreOnce backup appliances, thanks to the HPE StoreOnce Catalyst protocol.

HPE Alletra Storage Server 4000

Veeam Data Platform was purpose-built to drive integration with HPE Alletra Storage Server 4000 Non-Uniform Memory Access (NUMA) memory architecture. Veeam Data Platform hardened backup repository provides immutability for backups.

Veeam DataLabs and Secure Restore

Should an organization become infected with ransomware, Veeam DataLabs and Secure Restore perform antimalware scans on recent backups in an isolated network. If backups are clean, they can then be restored into production. If they are not clean, then there are a number of options for data recovery.

Learn more at

HPE.com/us/en/alliance/Veeam

Chat now (sales)

a50009131ENW

Hewlett Packard Enterprise