



## 安全性和数据加密 Cloud Volumes ONTAP

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# 安全性和数据加密

## 使用 NetApp 加密解决方案对卷进行加密

Cloud Volumes ONTAP 支持 NetApp 卷加密（NVE）和 NetApp 聚合加密（NAE）。NVE 和 NAE 是基于软件的解决方案，支持（FIPS）140-2 合规的卷空闲数据加密。"[详细了解这些加密解决方案](#)"。

外部密钥管理器支持 NVE 和 NAE。如果您使用 NVE，则可以选择使用 Azure 密钥存储（AKV）或 Google 云密钥管理服务来保护 ONTAP 加密密钥。

在设置外部密钥管理器后，新聚合将默认启用 NAE。默认情况下，不属于 NAE 聚合的新卷将启用 NVE（例如，如果您有在设置外部密钥管理器之前创建的现有聚合）。

Cloud Volumes ONTAP 不支持板载密钥管理。

您的 Cloud Volumes ONTAP 系统应向 NetApp 支持部门注册。向 NetApp 支持部门注册的每个 Cloud Volumes ONTAP 系统都会自动安装 NetApp 卷加密许可证。

- "[将 NetApp 支持站点帐户添加到 Cloud Manager](#)"
- "[注册按需购买的系统](#)"



Cloud Manager 不会在位于中国地区的系统上安装 NVE 许可证。

### 步骤

1. 查看中支持的密钥管理器列表 "[NetApp 互操作性表工具](#)"。



搜索 \* 密钥管理器 \* 解决方案。

2. "[连接到 Cloud Volumes ONTAP 命令行界面](#)"。
3. 配置外部密钥管理。

"[有关说明，请参见 ONTAP 文档](#)"。

## 提高防范勒索软件的能力

勒索软件攻击可能会耗费业务时间，资源和声誉。您可以通过 Cloud Manager 实施 NetApp 解决方案 for 勒索软件，它可以提供有效的工具来实现可见性，检测和补救。

### 步骤

1. 在工作环境中，单击 \* 勒索软件 \* 图标。



## 2. 实施 NetApp 解决方案 for 勒索软件：

- a. 如果卷未启用 Snapshot 策略，请单击 \* 激活 Snapshot 策略 \*。

NetApp Snapshot 技术可为勒索软件补救提供业内最佳的解决方案。成功恢复的关键在于从未受感染的备份中还原。Snapshot 副本为只读副本，可防止勒索软件损坏。它们还可以提供创建单个文件副本或完整灾难恢复解决方案映像的粒度。

- b. 单击 \* 激活 FPolicy\* 以启用 ONTAP 的 FPolicy 解决方案，它可以根据文件扩展名阻止文件操作。

此预防性解决方案可通过阻止常见的勒索软件文件类型来增强抵御勒索软件攻击的能力。

默认 FPolicy 范围会阻止具有以下扩展名的文件：

微型，加密，锁定，加密，加密 crinf，r5a，rxNT，XTbl，R16M01D05，pzdc，好，LOL！，OMG！，RDM，RRK，encryptedRS，crjoker，EnciPhErEd，LeChiffre



当您在 Cloud Volumes ONTAP 上激活 FPolicy 时，Cloud Manager 将创建此范围。此列表基于常见的勒索软件文件类型。您可以使用 Cloud Volumes ONTAP 命令行界面中的 `vserver fpolicy policy scopes` 命令来自定义阻止的文件扩展名。

### Ransomware Protection

Ransomware attacks can cost a business time, resources, and reputation. The NetApp solution for ransomware provides effective tools for visibility, detection, and remediation. [Learn More](#)

#### 1 Enable Snapshot Copy Protection

50 % Protection

1 Volumes without a Snapshot Policy

To protect your data, activate the default Snapshot policy for these volumes

Activate Snapshot Policy

#### 2 Block Ransomware File Extensions

ONTAP's native FPolicy configuration monitors and blocks file operations based on a file's extension.

View Denied File Names

Activate FPolicy

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