



Security and data encryption

Cloud Volumes ONTAP

NetApp

January 24, 2023

This PDF was generated from <https://docs.netapp.com/us-en/cloud-manager-cloud-volumes-ontap/aws/task-encrypting-volumes.html> on January 24, 2023. Always check docs.netapp.com for the latest.

Table of Contents

- Security and data encryption 1
 - Encrypting volumes with NetApp encryption solutions. 1
 - Improving protection against ransomware 1

Security and data encryption

Encrypting volumes with NetApp encryption solutions

Cloud Volumes ONTAP supports NetApp Volume Encryption (NVE) and NetApp Aggregate Encryption (NAE). NVE and NAE are software-based solutions that enable FIPS 140-2–compliant data-at-rest encryption of volumes. [Learn more about these encryption solutions.](#)

Both NVE and NAE are supported with an external key manager.

New aggregates will have NAE enabled by default after you set up an external key manager. New volumes that aren't part of an NAE aggregate will have NVE enabled by default (for example, if you have existing aggregates that were created before setting up an external key manager).

Cloud Volumes ONTAP doesn't support onboard key management.

What you'll need

Your Cloud Volumes ONTAP system should be registered with NetApp support. A NetApp Volume Encryption license is automatically installed on each Cloud Volumes ONTAP system that is registered with NetApp Support.

- [Adding NetApp Support Site accounts to BlueXP](#)
- [Registering pay-as-you-go systems](#)



BlueXP doesn't install the NVE license on systems that reside in the China region.

Steps

1. Review the list of supported key managers in the [NetApp Interoperability Matrix Tool](#).



Search for the **Key Managers** solution.

2. [Connect to the Cloud Volumes ONTAP CLI.](#)
3. Configure external key management.
 - AWS: [Go to the ONTAP documentation for instructions](#)

Improving protection against ransomware

Ransomware attacks can cost a business time, resources, and reputation. BlueXP enables you to implement the NetApp solution for ransomware, which provides effective tools for visibility, detection, and remediation.

Steps

1. From the working environment, click the **Ransomware** icon.



2. Implement the NetApp solution for ransomware:

- a. Click **Activate Snapshot Policy**, if you have volumes that do not have a Snapshot policy enabled.

NetApp Snapshot technology provides the industry's best solution for ransomware remediation. The key to a successful recovery is restoring from uninfected backups. Snapshot copies are read-only, which prevents ransomware corruption. They can also provide the granularity to create images of a single file copy or a complete disaster recovery solution.

- b. Click **Activate FPolicy** to enable ONTAP's FPolicy solution, which can block file operations based on a file's extension.

This preventative solution improves protection from ransomware attacks by blocking common ransomware file types.

The default FPolicy scope blocks files that have the following extensions:

micro, encrypted, locked, crypto, crypt, crinf, r5a, XRNT, XTBL, R16M01D05, pzdc, good, LOL!, OMG!, RDM, RRK, encryptedRS, crjoker, EnCiPhErEd, LeChiffre



BlueXP creates this scope when you activate FPolicy on Cloud Volumes ONTAP. The list is based on common ransomware file types. You can customize the blocked file extensions by using the `vserver fpolicy policy scope` commands from the Cloud Volumes ONTAP CLI.

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

Copyright information

Copyright © 2023 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.