



Insight installation instructions

OnCommand Insight

NetApp

October 24, 2024

This PDF was generated from <https://docs.netapp.com/us-en/oncommand-insight/install-windows/downloading-the-oncommand-insight-installer.html> on October 24, 2024. Always check docs.netapp.com for the latest.

Table of Contents

- Insight installation instructions 1
 - Downloading the OnCommand Insight installer 1
 - Installing the OnCommand Insight Server 1
 - Installing OnCommand Insight Data Warehouse and Reporting 3
 - Installing a Remote Acquisition Unit (RAU) 6
 - Checking the installation 8
 - Troubleshooting installations 15

Insight installation instructions

Installation requires you to install several OnCommand Insight components, including Insight Server, and Data Warehouse and Reporting. The installation includes the following major tasks:

- Downloading the OnCommand Insight installer
- Installing OnCommand Insight server
- Installing licenses
- Optionally, installing DWH and Reporting (must be installed on a separate machine or virtual machine)
- Optionally, installing a remote acquisition unit (RAU), which acquires information from your device resources that reside behind a firewall, are located at a remote site, or are on a private network
- For upgrades, upgrading OnCommand Insight reports.

After installation, you must configure Insight to acquire information about your environment. The tasks required are described in the *OnCommand Insight Configuration and Administration Guide*.

Downloading the OnCommand Insight installer

You can download the OnCommand Insight installer from the NetApp Support Site.

Before you begin

You must have a login to the NetApp Support Site at mysupport.netapp.com.

Steps

1. Log in to the server on which you want to install OnCommand Insight.
2. Download the installation file from the NetApp Support site.

Installing the OnCommand Insight Server

You can easily install the OnCommand Insight Server by using the OnCommand Insight Setup wizard.

Before you begin

You must have completed all of the installation prerequisites.



If you are upgrading OnCommand Insight, you **must back up the vault before uninstalling or upgrading** your current version.

Steps

1. Log in to the Insight server using an account with administrator privileges.
2. Open Windows Explorer and navigate to the directory where the installation files are located.

3. Double-click the .MSI file that you downloaded.
4. Click **Next** to continue.
5. Read the License Agreement, select **I accept the terms in the License Agreement** check box, and then click **Next**.
6. Enter the customer name and site name in the **Customer Information** window, and click **Next**.

Best Practice: Use the customer name as a prefix for the site: for example, NetApp.

7. Enter an Administrator password. Confirm the password.
8. In the **Customer Information: Configure NetApp ASUP** window, do the following:
 - a. Select the database containing the data that you want to upload to ASUP by selecting one of the following options:
 - **No database backup:** A backup is not sent to ASUP.
 - **Backup without Performance data:** A backup is made and sent to ASUP but does not include performance data.
 - **Backup with Performance data:** A backup is made that includes performance data, but this could generate a huge *.gz file.



ASUP is delivered using HTTPS protocol.

- a. In **Logs**, select whether you want no logs, base logs, or extended logs, which contain a data source recording.
 - b. Click **Next**.
9. If you are using the Insight consumption licensing model, you must check the box to **Enable sending usage information to NetApp** in the **Send usage information** section.
10. Click **Next**
11. In the **Configure Server** window, select or set the appropriate configuration parameters to configure the OnCommand Insight Server:

Option	Description
Portal Port (HTTP)	Ports used by the OnCommand Insight Server to support user Web services, including a portal to perform administration tasks. Use the default (80); however, if the default port is in use, change this to another port.
Portal Port (HTTPS)	Port used by remote acquisition units to send SAN change information to the OnCommand Insight Server through a secure channel. Use the default (443); however, if the default port is in use, change this to another port. You specify this same port number when configuring RAUs.

Internal Database Port (SQL)	Port used internally by the PC where the OnCommand Insight Server is running, to serve as an access point to the database. Use the default (3306); however, if the default port is in use, change this to another port.
------------------------------	---

12. Click **Next**.

13. Click **Install** to proceed.

The installation should take approximately 20 minutes, depending on the applications installed.

14. Click **Finish**.

15. If you will be installing a Remote Acquisition Unit (RAU), you must run the SecurityAdmin Tool to create a password for the *acquisition* user. You will need this password when installing the RAU.

Note: If you have created this password, you do *not* need to Synchronize the Server and RAU as noted below.

Synchronize Server with DWH and RAU



After installing the Remote Acquisition Unit and/or the Data Warehouse, you must synchronize the RAU/DWH with the OnCommand Insight Server. Follow the steps as noted below:

[Synchronize Server and RAU \(Windows\)](#)

[Synchronize Server and DWH \(Windows\)](#)

[Synchronize Server and RAU \(Linux\)](#)

[Synchronize Server and DWH \(Linux\)](#)

Installing OnCommand Insight Data Warehouse and Reporting

The installation is self-contained and includes the elements required to run and operate OnCommand Insight Data Warehouse (DWH) and the Reporting utilities.

Before you begin

Please note the following before installing or upgrading.

- If you are upgrading, back up DWH.
- You must have local *administrator* permissions to install OnCommand Insight Data Warehouse with Reporting.
- Make sure Windows Modules Installer service is enabled (either automatically or manually).
- If installing on non-C: drive, Short File Names must be enabled. If it is not enabled, the installer will enable it.

- For the Db2 component, the Db2 User can be either *domain* user or *local* user.
 - If the Db2 User is a *domain* user, you must have the following:
 - Db2 User must have been already created, and you must know the user name and password
 - As the user who is installing DWH with Reporting, you must be able to query the Db2 User. You can validate this using the command:
 - `net user <db2 user name> /domain`
 - If Db2 User is a *local* user, you must have the following:
 - User name and password for the user which will be used to run as Db2 User. If this user does not exist, installation will create it.
 - [NOTE]

The Db2 user name as well as the Windows login name have the following restrictions: * Valid characters are: 'A' through 'Z'; 'a' through 'z'; '0' through '9'; '@'; ';'; '!'; ' ' (' '); '{'; '>'; '-'; and '!'. * *If using the special characters '!', ' ' (' '); '{'; '>'; '-'; and '!' you must use all uppercase letters for the user name.* * *The first character in the string must be an alphabetic character, @, #, or \$; it cannot be a number or the letter sequences _SYS, DBM, or IBM* * It cannot exceed 128 bytes in length. * It cannot be USERS, ADMINS, GUESTS, PUBLIC, LOCAL or any SQL reserved word.

- The Db2 user can not be the same as the user performing the installation.

Steps

1. Log in to the Data Warehouse server using an account with administrator privileges.
2. Download the Data Warehouse with Reporting .zip file and extract the files to an installation folder.
3. Navigate to the `<download location>\oci_dwh_installer\` folder and run the `install_oci_dwh.bat` script.



With OnCommand Insight 7.3.10 and later, you must run the script for proper DWH/Reporting installation. Do not run the .MSI installation executable.

4. Enter the Db2 domain, or press Enter for local domain.
5. Enter the Db2 User name. See above for user name restrictions.
6. Enter the password for the Db2 user. Re-enter the password when prompted.
7. Enter the installation path for the Db2 component, or press Enter for default.
8. You are presented with the information you entered. Verify all settings carefully. Press Enter to start installation.
9. If prompted, allow Windows to proceed with the Db2 installation.
10. Following Db2 Installation, the DWH installation wizard will run. Follow its directions to install DWH with Reporting.

Data Warehouse with Reporting Installation may take up to an hour to complete.

Synchronize Server and DWH



After installing the Data Warehouse, you **must** synchronize the Data Warehouse with the OnCommand Insight Server. Follow these steps:

1. On the OnCommand Insight Server system, start the **SecurityAdmin** tool in interactive mode

```
securityadmin -i
```

2. Change the password for the *inventory* and *dwh_internal* users to passwords of your choice. **Make note of these passwords** as you will require them below.
3. Restart the DWH service.
4. On **each Connector** start the **SecurityAdmin** tool in interactive mode. You will need the passwords you noted from step 2 above.

```
securityadmin -i
```

5. Change the passwords for the *inventory* and *dwh_internal* users to the passwords used in step 2.
6. Restart services on the Connectors.
7. Add the Connectors to DWH, using the passwords for *inventory* and *dwh_internal* users from step 2

Locating IBM Cognos documentation

For basic information such as how to start and stop the Reporting portal software, see the IBM Cognos documentation installed with the product. You can search with a web browser for information about any of the IBM Cognos reporting products, such as Query Studio, Report Studio, Business Insight, or Business Insight Advanced on the IBM website in the Information Centers for those software products.

Steps

1. To locate the IBM Cognos documentation installed with OnCommand Insight, navigate to this directory.

```
<install_dir>\cognos\c10_64\webcontent\documentation\help_docs.html
```

2. You can also display topics describing individual IBM Cognos windows used in the OnCommand Insight Reporting Portal. Click the ? icon on the window toolbar.

Verifying the Data Warehouse and Reporting installation

After a successful OnCommand Insight Data Warehouse installation, you should ensure that all of the DWH and Reporting services are available in your Microsoft Windows services.

Steps

1. From the Windows Start menu, select **Control Panel > System and Security > Administrative Tools > Services**.

2. Ensure that the following entries appear in the list of services:

Name / State	Description
SANScreen Server / Running	The OnCommand Insight DWH server
MySQL / Running	The OnCommand Insight SQL database
IBM Cognos / Running	IBM Cognos Content Database
DB2- DB2COPY1 - DB2-0 / Running	Manage Db2 databases
DB2 Governor (DB2COPY1) / Not running	Collects statistics for applications connected to Db2 databases.
DB2 License Server (DB2COPY1) / Not running	Monitors Db2 license compliance.
DB2 Management Service (DB2COPY1) / Running	Manages Db2 registry entries for compatibility with earlier Db2 copy versions.
DB2 Remote Command Server (DB2COPY1) / Running	Supports remote Db2 command execution.
IBM Secure Shell Server for Windows / Not running	IBM Secure Shell Server for Windows

Installing a Remote Acquisition Unit (RAU)

Install one or more RAUs in your OnCommand Insight environment.

Before you begin

You must have completed all of the installation prerequisites.

At least one port needs to be open and available between the RAU server and the OnCommand Insight Server in order to forward change information to the server. If you are unsure about this, validate it by opening a Web browser on the RAU computer and directing it to the OnCommand Insight server:

```
https://< OnCommand Insight Server hostname >:< acquisition_port >
```

The acquisition port defaults to 443, but it may have been changed during the server installation. If the connection is successful, you see a OnCommand Insight response page indicating an open and available port between the RAU and the OnCommand Insight server.

Steps

1. Log in to the RAU server using an account with administrator privileges.
2. Open Windows Explorer and navigate to the directory where the RAU installation file is located.
3. Double-click `.MSI` file to start the installation.
4. Click **Next** to continue to the window that shows the License Agreement. Read this and accept the terms of the License Agreement and click **Next**.
5. Select to install the RAU on a local hard drive or the entire feature on a local hard drive. (You can check the Disk Usage link to ensure you have enough space - 116MB is required.) Click **Next**.
6. In the Configure window, set these parameters that are specific to your site:
 - **OnCommand Insight Server Name or Address** - hostname or IP address to identify the OnCommand Insight Server. The RAU uses this name/IP to open a communications link with the server. If you specify a hostname, make sure it can be resolved through DNS.
 - **Acquisition Unit Name** - unique name that identifies the RAU.
 - **OnCommand Insight Secured Remote Acquisition Port (HTTPS)** - Port used by Remote Acquisition Units to send environment change information to the OnCommand Insight server. This setting should match the value entered when installing the OnCommand Insight server and must be the same on all RAUs.
 - Enter the *acquisition* user password.
7. Review your selections. Click **Back** to go back and make changes. Click **Next**.
8. Click **Install** to start the installation.

Wait for the installation to complete. This should take approximately 5 to 10 minutes.

After you finish

When the installation is complete, a final window appears. Click the **Start Remote Acquisition Service** box to start the RAU, and click **Finish** to end this operation.

If your data begins acquiring, you are all set; you do *not* need to synchronize the Server and RAU as noted below.

Synchronize Server and RAU



If data does not begin acquiring after installing the Remote Acquisition Unit, synchronize the RAU with the OnCommand Insight Server. Follow these steps:

1. On the OnCommand Insight Server system, start the **SecurityAdmin** tool in interactive mode

```
securityadmin -i
```

2. Change the password for the *acquisition* user for the Insight Server to a password of your choice. **Make note of this password** as you will require it below.
3. Restart the server/LAU.
4. On the Remote Acquisition Unit (RAU) system, start the **SecurityAdmin** tool in interactive mode. You will

need the password you noted from step 2 above.

```
securityadmin -i
```

5. Change the password for the *acquisition* user to the password used in step 2.
6. Restart the RAU.

Verifying the remote acquisition unit service

After a successful remote acquisition unit (RAU) installation, the OnCommand Insight RAU service should be available in the Microsoft Windows services environment.

Steps

1. To verify that the RAU was added to the Windows services, open the Windows Start menu and select the **Control Panel > Administrative Tools > Services**.
2. Locate the **OnCommand Insight Acq - OnCommand Insight's Remote Acquisition Unit (RAU)** in the list.

Validating the remote acquisition unit installation

To validate proper installation of the Remote Acquisition Unit, you can view the status of the Remote Acquisition Units connected to your server.

Steps

1. On the Insight toolbar, click **Admin**.
2. Click **Acquisition Units**.
3. Verify that the new Remote Acquisition Unit was registered correctly and that it has a Connected status.

If it does not, you must contact technical support.

Checking the installation

You can open Insight in a supported browser to check the installation. You might also want to check the Insight log files.

When you first open Insight, the license setup page opens. After you enter the license information, you must set up the data sources. See the *OnCommand Insight Configuration and Administration Guide* for information about entering data source definitions and setting up Insight users and notifications.

If you have experienced installation problems, contact technical support and provide the requested information.

Verifying new Insight services

After a successful installation, you should verify that the services for the Insight components are operating on your server.

Steps

1. To display a list of services that are currently operating:

- a. Click the **Start** button.
- b. Click **Run**.
- c. Type the following:

```
cmd
```

- d. Press Enter.
- e. Type the following in the **Command Prompt** window:

```
net start
```

2. Check for these Insight services in the list:

- **SANscreen Server**
- **SANscreen Acq** (the acquisition process)
- **MySql** (Insight SQL database)
- **Elasticsearch** (Data store for Insight data) If these services do not display in the list, contact technical support.

Insight logs

Insight supplies many log files to assist you with research and troubleshooting. The available logs are listed in the log directory. You might want to use a log monitoring tool, such as BareTail, to display all of the logs at one time.

The log files are located in the <install directory>\SANscreen\wildfly\standalone\log directory. Acquisition logs are located in the <install directory>\SANscreen\Acq\Log directory.

Accessing the web UI

After you install OnCommand Insight, you must install your licenses and then set up Insight to monitor your environment. To do this, you use a web browser to access the Insight web UI.

Steps

1. Do one of the following:

- Open Insight on the Insight server:

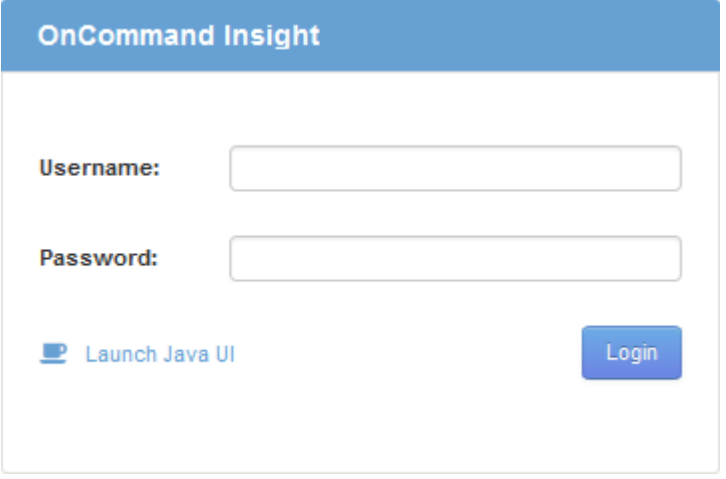
```
https://fqdn
```

- Open Insight from any other location:

```
https://fqdn:port
```

The port number is either 443 or another port configured when the Insight server was installed. The

port number defaults to 443 if you do not specify it in the URL.

The image shows a login dialog box for OnCommand Insight. It has a blue header bar with the text "OnCommand Insight". Below the header, there are two input fields: "Username:" and "Password:". To the right of the "Password:" field is a blue button labeled "Login". Below the input fields, there is a link that says "Launch Java UI" with a small icon of a laptop and a document.

The OnCommand Insight dialog box displays:

2. Enter your user name and password and click **Login**.

If the licenses have been installed, the data source setup page displays.



An Insight browser session that is inactive for 30 minutes is timed out and you are automatically logged out of the system. For added security, it is recommended to close your browser after logging out of Insight.

Installing your Insight licenses

After you receive the license file containing the Insight license keys from NetApp, you can use the setup features to install all of your licenses at the same time.

About this task

Insight license keys are stored in a `.txt` or `.lic` file.

Steps

1. Open the license file in a text editor and copy the text.
2. Open Insight in your browser.
3. On the Insight toolbar, click **Admin**.
4. Click **Setup**.
5. Click the **Licenses** tab.
6. Click **Update License**.
7. Copy the license key text into the **License** text box.
8. Select the **Update (most common)** operation.
9. Click **Save**.
10. If you are using the Insight consumption licensing model, you must check the box to **Enable sending usage information to NetApp** in the **Send usage information** section. Proxy must be properly configured and enabled for your environment.

After you finish

After installing the licenses, you can perform these configuration tasks:

- Configure data sources.
- Create OnCommand Insight user accounts.

OnCommand Insight licenses

OnCommand Insight operates with licenses that enable specific features on the Insight Server.

- **Discover**

Discover is the basic Insight license that supports inventory. You must have a Discover license to use OnCommand Insight, and the Discover license must be paired with at least one of the Assure, Perform, or Plan licenses.

- **Assure**

An Assure license provides support for assurance functionality, including global and SAN path policy, and violation management. An Assure license also enables you to view and manage vulnerabilities.

- **Perform**

A Perform license supports performance monitoring on asset pages, dashboard widgets, queries, and so on, as well as managing performance policies and violations.

- **Plan**

A Plan license supports planning functions, including resource usage and allocation.

- **Host Utilization pack**

A Host Utilization license supports file system utilization on hosts and virtual machines.

- **Report Authoring**

A Report Authoring license supports additional authors for reporting. This license requires the Plan license.

OnCommand Insight modules are licensed for annual term or perpetual:

- By terabyte of monitored capacity for Discover, Assure, Plan, Perform modules
- By number of hosts for Host Utilization pack
- By number of additional units of Cognos pro-authors required for Report Authoring

License keys are a set of unique strings that are generated for each customer. You can obtain license keys from your OnCommand Insight representative.

Your installed licenses control the following options that are available in the software:

- **Discover**

Acquire and manage inventory (Foundation)

Monitor changes and manage inventory policies

- **Assure**

View and manage SAN path policies and violations

View and manage vulnerabilities

View and manage tasks and migrations

- **Plan**

View and manage requests

View and manage pending tasks

View and manage reservation violations

View and manage port balance violations

- **Perform**

Monitor performance data, including data in dashboard widgets, asset pages, and queries

View and manage performance policies and violations

The following tables provide details of the features that are available with and without the Perform license for admin users and non-admin users.

Feature (admin)	With Perform license	Without Perform license
Application	Yes	No performance data or charts
Virtual machine	Yes	No performance data or charts
Hypervisor	Yes	No performance data or charts
Host	Yes	No performance data or charts
Datastore	Yes	No performance data or charts
VMDK	Yes	No performance data or charts
Internal volume	Yes	No performance data or charts
Volume	Yes	No performance data or charts
Storage pool	Yes	No performance data or charts
Disk	Yes	No performance data or charts

Storage	Yes	No performance data or charts
Storage node	Yes	No performance data or charts
Fabric	Yes	No performance data or charts
Switch port	Yes	No performance data or charts; “Port Errors” shows “N/A”
Storage port	Yes	Yes
NPV port	Yes	No performance data or charts
Switch	Yes	No performance data or charts
NPV switch	Yes	No performance data or charts
Qtrees	Yes	No performance data or charts
Quota	Yes	No performance data or charts
Path	Yes	No performance data or charts
Zone	Yes	No performance data or charts
Zone member	Yes	No performance data or charts
Generic device	Yes	No performance data or charts
Tape	Yes	No performance data or charts
Masking	Yes	No performance data or charts
ISCSI sessions	Yes	No performance data or charts
ICSI network portals	Yes	No performance data or charts
Search	Yes	Yes
Admin	Yes	Yes
Dashboard	Yes	Yes

Widgets	Yes	Partially available (only asset, query, and admin widgets are available)
Violations dashboard	Yes	Hidden
Assets dashboard	Yes	Partially available (storage IOPS and VM IOPS widgets are hidden)
Manage performance policies	Yes	Hidden
Manage annotations	Yes	Yes
Manage annotation rules	Yes	Yes
Manage applications	Yes	Yes
Queries	Yes	Yes
Manage business entities	Yes	Yes

Feature	User - with Perform license	Guest - with Perform license	User - without Perform license	Guest - without Perform license
Assets dashboard	Yes	Yes	Partially available (storage IOPS and VM IOPS widgets are hidden)	Partially available (storage IOPS and VM IOPS widgets are hidden)
Custom dashboard	View only (no create, edit, or save options)	View only (no create, edit, or save options)	View only (no create, edit, or save options)	View only (no create, edit, or save options)
Manage performance policies	Yes	Hidden	Hidden	Hidden
Manage annotations	Yes	Hidden	Yes	Hidden
Manage applications	Yes	Hidden	Yes	Hidden
Manage business entities	Yes	Hidden	Yes	Hidden
Queries	Yes	View and edit only (no save option)	Yes	View and edit only (no save option)

Troubleshooting installations

OnCommand Insight installations are generally managed through the installation wizards. However, customers might experience problems during upgrades or with conflicts due to computer environments.

You should also be certain that you install all of the necessary OnCommand Insight licenses for installing the software.

Missing licenses

Different licenses are required for different OnCommand Insight functionality. What you see displayed in OnCommand Insight is controlled by your installed licenses. Refer to the OnCommand Insight licenses section for information on functionality controlled by each license.

Refer to the OnCommand Insight licenses section for information on functionality controlled by each license.

Submitting an online technical support request

If you have problems with the Insight installation, as a registered support customer, you can submit an online technical support request.

Before you begin

Using your corporate email address, you must register as a support customer to obtain online support services. Registration is performed through the support site (<http://support.netapp.com>).

About this task

To assist customer support in solving the installation problem, you should gather as much information as possible, including these items:

- Insight serial number
- Description of the problem
- All Insight log files
- Screen capture of any error messages

Steps

1. Create a .zip file of the information you gathered to create a troubleshooting package.
2. Log in to the support site at mysupport.netapp.com and select **Technical Assistance**.
3. Click **Open a Case**.
4. Follow the instructions to your package of data.

After you finish

You can use **Check Case Status** on the Technical Assistance page to follow your request.

Copyright information

Copyright © 2024 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.