OnCommand® Insight 7.2

Installation Guide

For Red Hat® Enterprise Linux®

n NetApp®

Contents

OnCommand Insight overview

OnCommand Insight enables you to simplify operational management of complex private and hybrid cloud and virtual IT environments. Insight is a single solution to enable cross-domain, multi-vendor resource management and analysis across networks, storage, and servers in physical and virtual environments.

Insight provides a "single pane of glass" for reporting on storage costs and provides the transparency needed to make decisions about performance and efficiency.

Insight architecture

OnCommand Insight enables you to administer your product easily, using a streamlined system architecture that includes the Insight Server, a collection engine, web-based and Java UIs, and data warehousing.

The major components of the Insight architecture are shown in this diagram and described after it:

OnCommand Insight Server

> The OnCommand Insight Server is the "brain" of the application. It includes main data repository and analysis components. The server is continuously building an end-to-end topology of the environment, analyzing it, and generating alerts when an incident or violation is detected.

Acquisition units

> The Insight collection engine is built of one or more acquisition units. Each acquisition unit is a service running in the network that accesses (through modules called *data sources*) and collects data from different devices in the data center. Information collected by the acquisition units is then sent to the server (in an XML, JSON, or native Java format) for analysis.

> The collection engine is designed to be highly modular and easily patched.

Web UI

The HTML5 web-based user interface (UI) for Insight enables you to set up your monitoring environment and data sources. You then use the web UI Asset Dashboard and asset pages to identify and research potential problems.

Java UI

This is the OnCommand Insight user interface (UI) or Client. You can use the Java UI to research issues like Fibre Channel mappings in your environment.

Data Warehouse (DWH)

Consolidates and prepares data for reporting for one or multiple installations of Insight. This includes history, trending, inventory, chargeback, show back and presenting the data in different ways to enable long-term planning of the data center's infrastructure.

IBM Cognos

This software is a reporting engine that provides a user interface for creating enterprise-level reports.

> **Note:** If you install Insight on a Linux server, you can only use Cognos if the Data Warehouse is installed on a Windows server. For information about installing the Data Warehouse on Windows, refer to the *OnCommand Insight Installation Guide for Microsoft Windows*.

Insight Data Warehouse architecture

In a large environment, the OnCommand Insight Data Warehouse (DWH) consolidates data across different installations and hence different Insight data centers.

As shown in this diagram, the architecture enables users to view their entire environment and generate meaningful reports through a "single pane of glass" interface:

> **Note:** If you install Insight on a Linux server, you can use Cognos only if the Data Warehouse is installed on a Windows server. For information about installing the Data Warehouse on Windows, refer to the *OnCommand Insight Installation Guide for Microsoft Windows*.

Firewall-friendly architecture

The OnCommand Insight architecture enables you to easily create firewalls around the product so that your assets are more secure.

As shown in the diagram, the architecture has these firewall features:

- All OCI clients use HTTPS to communicate with the server.

- The acquisition units enable only *outgoing* HTTPS connections; no ports are opened on the acquisition unit processes.

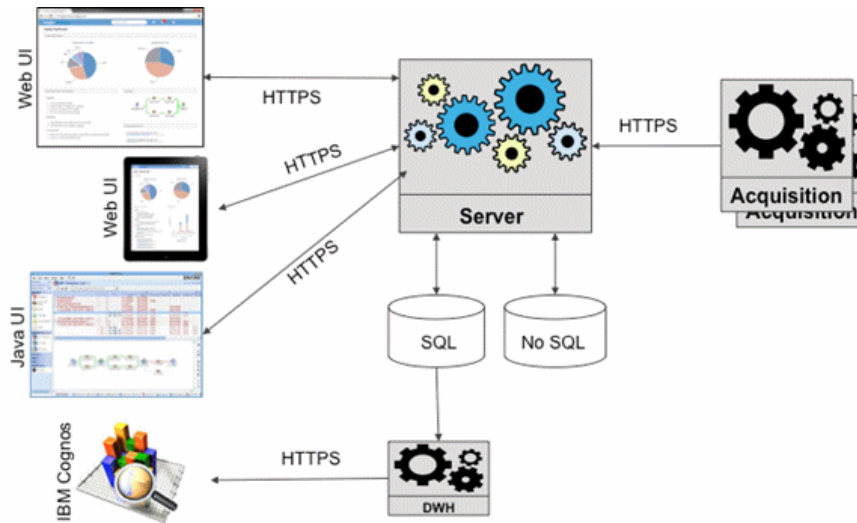**Note:** If you install Insight on a Linux server, you can only use Cognos if the Data Warehouse is installed on a Windows server. For information about installing the Data Warehouse on Windows, refer to the *OnCommand Insight Installation Guide for Microsoft Windows.*

How Insight is used by administrators, managers, and planners

OnCommand Insight supplies information that is vital for storage administrators, managers, and storage architects to perform troubleshooting and analysis.

Experienced storage administrators use OnCommand Insight along with their network storage knowledge to accomplish these typical tasks:

- Manage the SAN and NAS environment.

- Work with SAN engineers on network concerns.

- Evaluate, test, and integrate new storage technologies into the environment.

- Troubleshoot performance issues, alerts, policy breaches, violations, and vulnerabilities.

Managers and network planners use OnCommand Insight to perform these business tasks:

- Capacity planning

- Develop project budgets and timelines.

- Evaluate and revise project plans to meet changing project demands.

- Manage project planning and expenses.

- Purchase hardware and software.

- Provide business reports for capacity management, charge back billing, right sizing, and service level agreements.

Finding answers to your Insight questions

OnCommand Insight provides you with product documentation as online Help and PDF guides. The web UI Help includes all of the Insight installation and upgrade instructions and information about the new web UI.

About this task

You can access the Insight documentation from the Help menu.

Steps

1. To display the documentation within the web UI, open Insight in your browser.

2. On the toolbar, click the question mark and select either of these options from the menu:

   - **Help topics**
     Insight documentation including installation and configuration

   - **Java UI Help**
     Instructions for using the Insight Client

Accessing Help directly

If you want to search the OnCommand Insight Help without opening the software, you can run both WebHelp versions in your browser from their server locations.

Before you begin

OnCommand Insight 7.x must be installed.

Steps

1. Open your browser.

2. Enter the URL for your Insight server with the Help directory using these formats for the corresponding Insight versions:

   - Web UI Help: `https://<oci_server_name>/documentation/oci_webhelp/index.html`

   - Java UI Help: `https://<oci_server_name>/legacy/help/webhelp/index.html`

3. Use the Search function or Index to locate the information you want.

Locating product information on the NetApp Support Site

The NetApp Support Site maintains full documentation sets in different formats. Videos showing you how to perform tasks in Insight are available on the Communities site.

About this task

You must have a NetApp Customer Support login name and password to access the Support and Communities sites.

Steps

1. To view all Insight product documentation, navigate to the product libraries on the NetApp Support Site.

    a. Select OnCommand Insight.

    b. Locate the Release number that you installed in the list of Insight releases.

    c. Select the documents and formats that you want.

2. To run demonstration videos, open the NetApp Communities site.

    a. Navigate to the Insight Communities site.

    b. Select the **Content** tab.

    c. Select the **Videos** tab.

Installation prerequisites

Before you install OnCommand Insight, you must download the current software version, acquire the appropriate license, and set up your environment.

Before installing OnCommand Insight, ensure that you have the following:

* OnCommand Insight software files in the downloaded installation package for the current version

* A license to operate the downloaded OnCommand Insight version

* The minimum hardware and software environment
  The current product might consume additional hardware resources (due to enhanced OnCommand Insight product functionality) that were not consumed with earlier versions of the OnCommand Insight product.

* A deployment plan that includes the hardware and network configurations for the OnCommand Insight Server, Data Warehouse and Reporting, remote acquisition units, and the Client

* Java 8 for the OnCommand Insight Java UI

Planning the deployment

To ensure a successful deployment, you must consider certain system elements before you install OnCommand Insight.

About this task

Planning your Insight deployment includes considering these system elements:

* Insight architecture

* Your network components to be monitored

* Insight installation prerequisites and server requirements

* Insight web browser requirements

Data source support information

As part of your configuration planning, you should ensure that the devices in your environment can be monitored by Insight. To do so, you can check the Data source support matrix for details about operating systems, specific devices, and protocols. Some data sources might not be available on all operating systems.

To access the data source support matrix from the Insight web UI, click the **Help** icon on the toolbar and then click the **Data source support matrix** option.

Device identification and data source planning

As part of your deployment planning, you should collect information about the devices in your environment.

You need the following software, connectivity, and information about each device in your environment:

* IP address

* Login name and password (read-only access)

- Type of access to the device, for example, controller and management station. This should be read-only access.

- Port connectivity to the device depending on data source port requirements

- For switches, SNMP read-only community string (user ID or password to give access to the switches)

- Vendor access software

- Any third-party software required on the device, for example, Solutions Enabler. See the "Vendor-specific data source reference" in the web UI Help or in the *OnCommand Insight Configuration and Administration Guide* on the Customer Support site.

Network traffic generated by OnCommand Insight

The network traffic that OnCommand Insight generates, the amount of processed data traversing the network, and the load that OnCommand Insight places on devices differ based on many factors.

The traffic, data, and load differ across environments based on the following factors:

- The raw data

- Configuration of devices

- Deployment topology of OnCommand Insight

- Different inventory and performance data source polling intervals, which can be reduced to allow for slow devices to be discovered or bandwidth to be conserved

The raw configuration data that OnCommand Insight collects can vary significantly.

The following example illustrates how the configuration data can vary and how traffic, data, and load are affected by many configuration factors. For example, you might have two arrays each having 1,000 disks:

- Array 1: Has 1,000 SATA disks all 1 TB in size. All 1,000 disks are in one storage pool, and there are 1,000 LUNs, all presented (mapped and masked) to the same 32 nodes in an ESX cluster.

- Array 2: Has 400 2-TB data disks, 560 600-GB FC disks, and 40 SSD. There are 3 storage pools, but 320 of the FC disks are used in traditional RAID groups. The LUNs carved on the RAID groups use a traditional masking type (symmaskdb), while the thin provisioned, pool-based LUNs use a newer masking type (symaccess). There are 600 LUNs presented to 150 different hosts. There are 200 BCVs (full block replica volumes of 200 of the 600 LUNs). There are also 200 R2 volumes, remote replica volumes of volumes that exist on an array in a different site.

These arrays each have 1,000 disks and 1,000 logical volumes. They might be physically identical in the amount of rack space they consume in the data center, and they might even be running the same firmware, but the second array is much more complex in its configuration than the first array.

Uninstalling MariaDB

You must uninstall MariaDB on the Insight or Data Warehouse servers before you install OnCommand Insight or the Data Warehouse; otherwise, you can not proceed with the installation. MySQL is not compatible with MariaDB. If you attempt an installation on either server without removing MariaDB, the installation terminates with an error message instructing you to uninstall MariaDB.

Before you begin

You must have sudo privileges.

Steps

1. Log in to the Insight server.

2. Obtain a list of MariaDB components:

   ```
   rpm -qa | grep mariadb
   ```

3. Type the following for each MariaDB component that is installed on the server:

   ```
   yum remove component_name
   ```

Insight Server requirements

The Insight Server requires a specific operating system, specific amounts of memory, CPU cores, and disk space. You must adhere to these requirements to successfully install Insight.

> **Tip:** A dedicated server is recommended. Do not install Insight on a server that has any other applications installed. Both physical and virtual servers are supported, provided that the product requirements are met.

You must have sudo permissions to install the OnCommand Insight Server software.

The dedicated server must meet your company's security standards and include these components:

- The SQL database that stores information about your SAN configuration

- The impact analysis and simulation engine

- The local acquisition unit

> **Important:** Sizing for OnCommand Insight has multiple dependencies, such as data source type and data source size. Consequently, you should discuss and validate all sizing recommendations with a NetApp representative.

Component	Required
Operating system	• A computer running a licensed version of Red Hat Enterprise Linux 7 and that is running no other application-level software. A licensed version ensures that dependencies required by the installation are resolved automatically by the operating system. • You must uninstall MariaDB before installing Insight. **Note:** Uninstalling MariaDB also removes the Postfix Mail Transport Agent. A dedicated server is recommended.
Virtual machine (VM)	This component can also run on a virtual machine, provided that your environment allows for RAM reservations.

Component	Required
Memory and CPU	For environments with up to 100 storage arrays, 5000 Fibre Channel switch ports, and 5000 virtual machines, use an 8 core 32 GB memory server. This is a general guideline. **Note:** If your environment is larger than this, contact your Sales Engineer for guidance.
Available disk space	There should be 50 GB of free disk space in the `/var/lib` partition, and 25 GB of free disk space in the `/opt` and `/var/log` partitions. It is a best practice to mount `/opt` and `/var` on separate disks from the root file system (`/`).
Network	Ethernet connection and ports: • 100 Mbps or 1 Gbps Ethernet connection with dedicated (static) IP address and IP connectivity to all components in the SAN, including FC devices and remote acquisition units. • Port requirements for the OnCommand Insight Server process are 80, 443, 1090 through 1100, 3873, 8083, 4444 through 4446, 5445, 5455, 4712 through 4714, 5500, and 5501. • Port requirements for the acquisition process are 12123 and 5679. • Port requirement for MySQL is 3306. Ports 443 and 3306 require external access through any firewall that is present.
Permissions	Sudo permissions are required on the OnCommand Insight Server.
Remote connectivity	Internet connectivity to allow WebEx access or a remote desktop connection to facilitate installation and postinstallation support.
Accessibility	HTTP, HTTPS, or FTP access to the Internet is highly recommended.
HTTP or HTTPS servers	Apache HTTP servers or other HTTP and HTTPS servers should not compete for the same ports (80 and 443) as the OnCommand Insight server and should not start automatically. If they must listen to port 80 or 443, then you must configure the OnCommand Insight server to use other ports.

Remote Acquisition Unit server requirements

You must install a Remote Acquisition Unit (RAU) to acquire information from SAN devices that are behind a firewall, at a remote site, on a private network, or in different network segments. Before you

install the RAU, you should ensure that your environment meets RAU operating system, CPU, memory, and disk space requirements.

Component	Requirement
Operating system	Computer running Red Hat Enterprise Linux 7 A dedicated server is recommended.
CPU	4 CPU cores
Memory	16 GB RAM
Available disk space	40 GB
Network	100 Mbps /1 Gbps Ethernet connection, static IP address, IP connectivity to all FC devices, and a required port to the OnCommand Insight server (80 or 443).
Permissions	Sudo permissions on the RAU server

Anomaly detection requirements

The anomaly detection software requires a specific operating system, amounts of memory, CPU cores, and disk space. You must adhere to certain requirements to successfully install the anomaly detection software.

Component	Required
Operating system	A computer running a licensed version of Red Hat Enterprise Linux 7 that is running no other application-level software. A licensed version ensures that dependencies required for the installation are resolved automatically by the operating system. A dedicated server is recommended.
Virtual machine (VM)	This component can also run on a virtual machine, provided that your environment allows for RAM reservations.
Memory and CPU	An 8 core 32 GB memory server.
Available disk space	The server requires 200 GB of free disk space. 5 GB of free disk space must be available in the /var/lib partition and 25 GB of free disk space must be available in the /opt and /var/log partitions. It is a best practice to mount /opt and /var on separate disks from the root file system (/).
Permissions	Sudo permissions are required on the anomaly detection server.
Network	The Insight server on which you want to perform anomaly detection must reside on the same network, or at least in the same site or Data Center as the server that is running the anomaly detection engine. The anomaly detection software does not support configuration in a WAN.

Component	Required
Prerequisites	You must be using OnCommand Insight 7.2 with a valid Perform license.
	You must have the IP address of the Insight server on which you want to perform the anomaly detection.
	You must have an alternate port number on the Insight server if you do not accept the default port.
	TCP ports 8080 and 9200 must be open on the VM.
	You must have a user name and password for an account with Administrator privileges on the VM.
	A user name containing a single backslash (company\user) must be entered with two backslashes (company\\user).
	A user name cannot contain a "t" following a backslash (company\\tom).

Tip: A dedicated server is recommended. You must not install anomaly detection software on a server that has any other applications installed. Both physical and virtual servers are supported, provided that the product requirements are met. You must have sudo permissions to install the anomaly detection software.

Important: You must discuss and validate all sizing recommendations with a NetApp representative.

Insight Java UI requirements

Because the OnCommand Insight Java UI Client operates in a Java run-time environment on your computer, it is important that you ensure that your environment meets specific operating system, CPU, and memory requirements.

To access the Java UI Client, you must install the Java run-time environment (JRE) on your computer.

Component	Requirement
Operating system	Any Java 8-enabled machine. The Java-based OnCommand Insight Client supports Windows, Macintosh, and Linux platforms.
CPU	1.8 GHz or faster is required.
Memory	2 GB or more is recommended.
	If you are monitoring the performance of complex data centers (over 50,000 switch ports), the server requires more memory. This is applicable only if the Perform license is installed.

Data Warehouse server requirements

The Data Warehouse server must run on a computer that is compatible with established hardware and software requirements. You must ensure that Apache web server or reporting software is not already installed on this machine.

Component	Required
Operating system	Computer running Red Hat Enterprise Linux 7
	This must be a dedicated server.
Virtual machine (VM)	None: optional

Component	Required
CPU	8 CPU core
Memory	40 GB RAM
Available Disk Space	There should be 50 GB of free disk space in the `/var/lib` partition and 25 GB of free disk space in the `/opt` and `/var/log` partitions.
Network	• 100 Mbps or 1 Gbps Ethernet connection • Static IP address • For the OnCommand Insight DWH server process, ports 80, 443, 1098, 1099, 3873, 8083, and 4444 through 4446 • For the reporting engine, ports 1527, 9362, 9300, and 9399 • For MySQL, port 3306

Browsers supported by OnCommand Insight

The OnCommand Insight web UI is browser-based and can operate on several different browsers.

Insight supports the following browsers:

Insight component	Requirement
Insight web UI	Microsoft Internet Explorer 11 and later Mozilla Firefox 37 and later Google Chrome 41 and later Edge 25 and later
Reporting Connection (IBM Cognos)	Microsoft Internet Explorer 9 and later Mozilla Firefox ESR 38 and future fix packs Google Chrome 41 and future versions, releases, and fix packs

Insight installation instructions

Installation requires installing several OnCommand Insight components, including Client and Data Warehouse services.

The installation includes the following major tasks:

- Downloading the OnCommand Insight installer

- Installing OnCommand Insight
  OnCommand Insight is installed as the OnCommand Insight Server and Data Warehouse (DWH). The Server and DWH are installed on separate machines.

- Installing licenses

- Optionally, installing DWH

- 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

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*.

Additionally, you must have an unzip utility with which to open the installation .ZIP files.

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 OnCommand Insight components

You install the OnCommand Insight software by running a script on the command line in which the installation is self-contained; however, two of the typical OnCommand Insight elements used to operate OnCommand Insight, the OnCommand Insight remote acquisition unit (RAU) and the OnCommand Insight Server must be installed separately. This installation includes both the web UI and Java UI.

You can install any number of additional RAUs to add remote data centers and private networks to the SAN devices that are managed by OnCommand Insight.

Installing the OnCommand Insight Server

You install OnCommand Insight Server by using the command line.

Before you begin

You must have completed all of the installation prerequisites.

Steps

1. Log in to the server using an account with sudo privileges.

2. Navigate to the directory on the server where the installation files are located and type the following command:

    ```
    unzip oci-7.2.0.0.40-linux-x86_64.zip
    ```

    Ensure that you check the version number of the installation file; the version number might be different than the one shown in the command.

3. You can view syntax, command arguments, and parameter usage for `oci-install.sh`:

    ```
    sudo ./oci-7.2.0.0.40-linux-x86_64/oci-install.sh --help
    ```

4. Run the installation script:

    ```
    sudo ./oci-7.2.0.0.40-linux-x86_64/oci-install.sh
    ```

5. Read the License Agreement, accept it, and follow the prompts.

Result

After you answer all the prompts, the installation begins and should take approximately 10 minutes, depending on the applications installed.

Installing OnCommand Insight Data Warehouse

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

Before you begin

You must already have the Data Warehouse installation file, the required hardware and software environment, and a deployment plan for the hardware, network, and OnCommand Insight Data Warehouse configuration.

About this task

Data Warehouse has Cognos reporting capabilities. If you install Insight on a Linux server, you can use these capabilities, however, only if you install the Data Warehouse on a Windows server. For information about installing the Data Warehouse on Windows and Cognos reporting capabilities, refer to the *OnCommand Insight Installation Guide for Microsoft Windows*.

Steps

1. Log in to the server using an account with sudo privileges.

2. Navigate to the directory on the server where the installation files are located and type the following command:

```
unzip oci-dwh-7.2.0.0.40-linux-x86_64.zip
```

Ensure that you check the version number of the installation file; the version number might be different than the one shown in the command.

3. You can view syntax, command arguments, and parameter usage for `oci-install.sh` before you begin the installation:

```
sudo ./oci-dwh-7.2.0.0.40-linux-x86_64/oci-install.sh --help
```

4. Run the installation script:

```
sudo ./oci-dwh-7.2.0.0.40-linux-x86_64/oci-install.sh
```

5. Read the License Agreement, accept it, and follow the prompts.

Result

After you answer all the prompts, the installation begins and should take approximately 10 minutes, depending on the applications installed.

Installing the anomaly detection software

OnCommand Insight contains software that applies machine-learning anomaly detection to your Insight data. You can install this software separately from other OnCommand Insight products.

Before you begin

- Your environment must include a dedicated virtual machine (VM) with the following specifications:

Operating system	Red Hat Enterprise Linux 7
Memory	32 GB
CPU	8 cores
Disk space	200 GB

- You must be using OnCommand Insight 7.2 with a valid Perform license.

- You must have the IP address of the Insight server on which you want to perform anomaly detection.

- The Insight server on which you want to perform anomaly detection must reside on the same network, or at least in the same site or Data Center as that of the server running the anomaly detection engine.
  The anomaly detection software does not supported configuration in a WAN.

- You must have an alternate port number available on the Insight server if you do not accept the default port.

- TCP ports 8080 and 9200 must be open on the VM.

- You must have the user name and password for an account with Administrator privileges on the VM.

- A user name containing a single backslash (company\user) must be entered with two backslashes (company\\user).

- The user name cannot contain a "t" following a backslash (company\\tom).

Steps

1. Log in as an Administrator to the Linux server on which you want to run the anomaly detection software.

2. Copy the .zip file that contains the anomaly detection software to the Linux server.

3. Extract the files to the `oci-prelert-7.2.0.0.494-linux-x86_64` directory.

4. Navigate to the directory where the installer is located:

   `cd oci-prelert-7.2.0.0.494-linux-x86_64`

5. Install the anomaly detection software:

   `sudo ./oci-prelert-install.sh`

   During the installation, you are prompted to enter the server name or IP address of the OnCommand Insight server, and the user name and password for an account with Administrator privileges.

   You can remove the anomaly detection software using the following command:

   `sudo /usr/bin/oci-prelert-uninstall.sh`

Result

The software is automatically registered with the instance of OnCommand Insight that is specified in the installation. The software can communicate only with the OnCommand Insight instance that it is registered with, and only one instance of the software can be registered with an OnCommand Insight server.

If you restart either the server that is running the anomaly detection software or the Insight server, the anomaly detection process restarts automatically.

Checking the installation

After you complete the installation, the installation directory is located in `/opt/netapp/oci`. 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 that new Insight components are installed

After installation, you should verify the existence of the new components on your server.

Steps

1. To display a list of services that are currently operating on the server you are logged in to, type:

   `sudo oci-service.sh status all`

2. Depending on the server you are logged in to, check for the following Insight services in the list and ensure they have a status of "running".

   • Insight server: jboss, acquisition, mysql, cassandra

- Data Warehouse server: jboss, mysql

- Remote Acquisition server: acquisition

Result

If these components are not listed, 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 `/var/log/netapp/oci` directory. The data files are located in `/var/lib/netapp/oci`.

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 client (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 OnCommand Insight dialog box displays:

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

   The following table shows the default user name and password. Change these defaults as soon as possible after installation:

Data	Value
Default user name	`admin`
Default password	`admin123`

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

Note: An Insight browser session that is inactive for 30 minutes is timed out and you are logged out of the system.

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 `.lcn` file.

Steps

1. Open the license file in a text editor and copy the text.

2. Open Insight in your browser.

3. Click the **Admin** icon on the toolbar.

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**.

After you finish

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

- Configure data sources.

- Create OnCommand Insight user accounts.

See the Insight Help or the *OnCommand Insight Configuration and Administration Guide* for instructions.

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; no anomaly detection-related widgets
Virtual machine	Yes	No performance data or charts

Feature (admin)	With Perform license	Without Perform license
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
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)

In some cases, you can also install a Replication Assurance license, which enables you to collect disaster recovery (DR) information. DR information can be monitored in the Java UI in the following views:

- Inventory > DR Paths

- Inventory > Replications Dashboard

- Assurance > DR Rules

- Assurance > DR Violations

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.

Upgrading Insight

When a new version of OnCommand Insight is available, you might want to upgrade to take advantage of new features and fixes to issues. You must upgrade the Insight server and Data Warehouse (DWH) separately.

Important: You should not store any automatic or manual backups in Insight installation directories, because the entire installation folder is overwritten during the upgrade process. If you have stored backup files in any of those directories, you must move your backups to a different location before you perform any upgrade or uninstall process.

Upgrading Insight Server software

You can check for OnCommand Insight server updates after you log into the server.

Steps

1. On the Insight toolbar, click the **Help** icon.

2. Select **Check for updates**.

3. Click **OK** if the
   ```
   Version is up to date
   ```
   message displays.

4. If a newer update is detected, click the **download here** link in the message box.

5. In the **Download** page, click **download**.

6. Complete the upgrade.

Upgrading from an earlier version of Insight to 7.2

To upgrade from an earlier version of OnCommand Insight to 7.2, you must migrate your Windows installation to Linux.

Migrating from Windows to Linux

To use Insight on Linux when you have an existing Windows installation, you must perform a migration. You must perform this procedure on both the Insight server and Data Warehouse components.

Steps

1. Back up your current Insight installation on your server.

   Refer to the *OnCommand Insight Configuration and Administration Guide* for information about how to back up the OCI database.

2. Install Insight for Linux.

3. Restore the database for your previous version.

   Refer to the *OnCommand Insight Configuration and Administration Guide* for information about how to restore the OCI database.

4. Uninstall your previous version of Insight for Windows.

Related concepts

Installing OnCommand Insight components on page 17

Uninstalling OnCommand Insight on page 29

Upgrading Insight to a version later than 7.2

You can upgrade OnCommand Insight to a version later than 7.2 (for example, 7.2.x).

About this task

You must perform this procedure on both the Insight server and Data Warehouse components.

Steps

1. Log in to the server where you want to install Insight.

2. Back up your current Insight installation on your server.

Refer to the *OnCommand Insight Configuration and Administration Guide* for information about how to back up the OnCommand Insight database.

3. Download the installation file from the NetApp Support Site.

4. Unzip the installation file.

5. Run the installation script.

6. Accept the license agreement and follow the prompts.

The installer prompts you to create the database backup. If you decide create a backup, Insight stores the backup in `/var/log/netapp/oci/backup`.

Related concepts

Installing OnCommand Insight components on page 17

Related tasks

Downloading the OnCommand Insight installer on page 17

Uninstalling OnCommand Insight

You can uninstall the OnCommand Insight components if needed. You must uninstall the OnCommand Insight components separately.

Uninstalling the OnCommand Insight Server

You can uninstall the OnCommand Insight server if needed.

Before you begin

You must have backed up the current version of the OnCommand Insight database.

Steps

1. Log in to the OnCommand Insight server using an account with sudo privileges.

2. Ensure that any OnCommand Insight windows are closed.

3. You can view syntax, command arguments, and parameter usage for `oci-uninstall.sh` by entering the following command:

   sudo /usr/bin/oci-uninstall.sh --help

   A normal uninstall does not remove the Insight license or any daily backups. To remove the entire installation, use the `--purge` optioon with the `oci-install.sh` command.

4. Type the following command:

   sudo /usr/bin/oci-uninstall.sh

Uninstalling Data Warehouse

You can uninstall Data Warehouse if needed.

Before you begin

Back up the current version of the OnCommand Insight Data Warehouse (DWH) database.

About this task

Uninstalling the OnCommand Insight Data Warehouse permanently deletes all previously collected data.

Steps

1. Log in to the Data Warehouse server using an account with sudo privileges.

2. Ensure that any OnCommand Insight windows are closed.

3. You can view syntax, command arguments, and parameter usage for `uninstall.sh` by entering the following command:

   sudo /usr/bin/oci-uninstall.sh --help

4. Type the following command:

   sudo /usr/bin/oci-uninstall.sh

Uninstalling a Remote Acquisition Unit

You can uninstall a Remote Acquisition Unit when you no longer need it.

Steps

1. Log in to the Remote Acquisition Unit server using an account with sudo privileges.

2. Ensure that any OnCommand Insight windows are closed.

3. You can view syntax, command arguments, and parameter usage for uninstall.sh by entering the following command:

   sudo /usr/bin/oci-uninstall.sh --help

4. Type the following command:

   sudo /usr/bin/oci-uninstall.sh

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