NetApp

Advanced troubleshooting

OnCommand Insight

NetApp
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Table of Contents

Advanced troubleshooting

To complete your OnCommand Insight configuration, you must use the advanced troubleshooting tools. These tools run in the browser and are opened from the **Admin > Troubleshooting** page.

To open the advanced troubleshooting tools in the browser, click the **Advanced Troubleshooting** link at the bottom of the page.

The advanced troubleshooting tools allow you to view various reports, system information, installed packages, and logs, as well as perform numerous actions such as restarting the server or acquisition units, update DWH annotations, and import annotations.

See the Advanced Troubleshooting page for all available options.

Configuring the number of hours to ignore dynamic data

You can configure the number of hours during which OnCommand Insight ignores updating dynamic data, such as used capacity. If the default of six hours is used and no configuration changes occur, reports will not be updated with dynamic data until after the default number of hours. This option improves performance because this option defers updates when only the dynamic data changes.

About this task

If a value is set for this option, OnCommand Insight will update dynamic data based on the following rules:

- If no configuration changes occur but capacity data changes, data will not be updated.
- Dynamic data (other than configuration changes) will be updated only after the timeout specified in this option.
- If configuration changes occur, configuration and dynamic data is updated.

Dynamic data impacted by this option includes the following:

- Capacity violation data
- File Systems Allocated Capacity and Used Capacity
- Hypervisor
    - Virtual Disk Used Capacity
    - Virtual Machine Used Capacity
- Internal Volume
    - Data Allocated Capacity
    - Data Used Capacity
    - Deduplication Savings
    - Last Known Access Time
    - Last Snapshot Time

- ◦ Other Used Capacity
  - ◦ Snapshot Count
  - ◦ Snapshot Used Capacity
  - ◦ Total Used Capacity
- iSCSI Session Initiator IPs, Target Session ID, and Initiator Session ID
- Qtree Quota Used Capacity
- Quota Used Files and Used Capacity
- Storage Efficiency Technology, Gain/Loss, and Potential Gain/Loss
- Storage Pool
  - ◦ Data Used Capacity
  - ◦ Deduplication Savings
  - ◦ Other Used Capacity
  - ◦ Snapshot Used Capacity
  - ◦ Total Used Capacity
- Volume
  - ◦ Deduplication Savings
  - ◦ Last Known Access Time
  - ◦ Used Capacity

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.
3. Click the **Advanced settings** tab, in the Acquisition Dynamic Attributes section enter the number of hours that OnCommand Insight should ignore dynamic data for Acquisition Dynamic Attributes.
4. Click **Save**.
5. (Optional) To restart the acquisition unit, click the **Restart Acquisition Unit** link.

   Restating the local acquisition unit reloads all of the OnCommand Insight data source views. This change is applied during the next poll, so you do not have to restart the Acquisition Unit.

Generating logs for Customer Support

If requested by Customer Support, generate a server, acquisition, or remote log for troubleshooting purposes.

About this task

If NetApp Customer Support requests, use this option to generate the logs.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click **Advanced Troubleshooting**.
3. On the next page in the Advanced menu, click the **Troubleshooting** link.
4. Click the **Logs** tab and select the log file to download.

   A dialog box opens allowing you to open the log or save the log locally.

Displaying system information

You can display the Microsoft Windows IP configuration information about the system on which OnCommand Insight server is deployed.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.
3. On the Advanced Troubleshooting page, click the **Reports** tab.
4. Click **System Information**.

   The Windows IP configuration includes information such as the host name, DNS, IP address, subnet mask, OS information, memory, boot device, and connection name.

Listing installed OnCommand Insight components

You can display a list of the installed OnCommand Insight components including, among others, inventory, capacity, dimensions, and the Data Warehouse views. Customer Support might ask you for this information, or you might want to see what software versions were installed and when they were installed.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.
3. On the Advanced Troubleshooting page, click the **Reports** tab.
4. Click **Installed Software Packages**.

Calculating the number of database objects

To determine the number of objects in the OnCommand Insight database, use the Calculate Scale feature.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.
3. On the Advanced Troubleshooting page, click the **Reports** tab.
4. Click **Calculated Scale**.

Restarting the OnCommand Insight Server

When you restart the OnCommand Insight Server, refresh the page and log into the OnCommand Insight Portal again.

About this task

ⓘ Both of these options should only be used upon request by NetApp Customer Support. There is no confirmation prior to restart.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.
2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.
3. On the next page in the Advanced menu, click the **Actions** tab.
4. Click **Restart Server**.

Moving MySQL data using the migrate option

You can use migrate MySQL data directory to a different directory. You can retain the current data directory. You can use the migrate option on the Troubleshooting menu or you can use the command line. This procedure describes how to use the **Troubleshooting** > **Migrate MySQL data** option.

About this task

If you retain the current data directory, it will be kept as a backup and renamed.

Steps

1. In the web UI, click **Admin** and select **Troubleshooting**.
2. Click **Advanced Troubleshooting**.
3. Select the **Actions** tab
4. Select **Migrate MySQL Data**.
5. Enter the path to which you want to migrate the data.
6. To retain the existing data directory, check **Keep existing data directory.**
7. Click **Migrate**.

Moving MySQL data using the command line

You can use migrate MySQL data directory to a different directory. You can retain the current data directory. You can use the migrate option on the Troubleshooting menu or alternatively, you can use the command line. This procedure describes how to use the command line.

About this task

If you retain the current data directory, it will be kept as a backup and renamed.

You can use the Migrate MySQL Data utility or you can use a `java -jar mysqldatamigrator.jar` option in the OnCommand Insight path of `\bin\mysqldatamigrator` where the following parameters should be used:

- Mandatory parameters
  - **-path**

    The new data path to which the data folder will be copied.

- Optional parameters
  - **-myCnf <my .cnf file>**

    The path for the .cnf file. The default is `<install path>\mysql\my.cnf`. Use this flag only if a non-default MySQL is used.

  - **-doBackup**

    If this flag is set, the current data folder will be renamed but not deleted.

Steps

1. Access the command line tool here: `<installation path>` \bin\mysqldatamigrator\mysqldatamigrator.jar``

Example usage

```
java -jar mysqldatamigrator.jar -path "C:\<new path>" -doBackup
```

Forcing annotation updates

If you have changed the annotations and want to use them in reports immediately, use one of the force annotation options.

Steps

1. In the web UI, click **Admin** and select **Troubleshooting**.
2. On the bottom of the page, click the **Advanced Troubleshooting** link.

3. Click the **Actions** tab.

4. Select one of these options:

    ◦ **Update DWH Annotations** to force the update of annotations in data warehouse to be used for reports.

    ◦ **Update DWH Annotations (incl. deleted)** to force an annotations update (including deleted objects) in the data warehouse to be used for reports.

Checking the status of server resources

This option displays the OnCommand Insight Server's information including server memory, disk space, OS, and CPU and OnCommand Insight database information including innoDB data size and the disk free space where the database resides.

Steps

1. On the Insight toolbar, click **Admin** and select **Troubleshooting**.

2. At the bottom of the page in the Other tasks area, click the **OnCommand Insight Portal** link.

3. On the next page in the Advanced menu, click the **Troubleshooting** link.

4. Click **Server Resources Status**.

    For advanced OnCommand Insight users: The administrator can run some SQL tests to check the database and server's response time from the button at the end of the information summary. This option displays a warning if server resource is low.

Finding ghost data sources

If you have removed a device but the device data remains, you can locate any ghost data sources so that you can remove them.

Steps

1. In the web UI, click **Admin** and select **Troubleshooting**.

2. At the bottom of the page in the Other tasks area, click the **Advanced Troubleshooting** link.

3. On the **Reports** tab, click the **Ghost Data Sources** link.

    OnCommand Insight produces a list of originators with their device information.

Adding a missing disk model

If acquisition fails due to an unknown disk model, you can add the missing disk model to the `new_disk_models.txt` file and run acquisition again.

About this task

As part of a poll of a storage device by OnCommand Insight acquisition, the disk models on the storage device

are read. If a vendor has added new disk models to their array that Insight doesn't know about, or if there is a mismatch between the model number Insight looks for and the one returned by the storage device, acquisition of that data source will fail with an error. In order to prevent these errors, it is necessary to update the disk model information known to Insight. New disk models are added to Insight with updates, patches and maintenance releases. However, you may decide to update this information manually instead of waiting for a patch or update.

Because OnCommand Insight reads the disk model file every five minutes, any new data model information you enter is updated automatically. You do not need to restart the server for the changes to take effect, but you can opt to restart the server and any remote acquisition units (RAUs) to have the changes take effect before the next update.

Disk model updates are added to the `new_disk_models.txt` file located in the `<SANScreenInstallDir>\wildfly\standalone\deployments\datasources.war` directory. Understand the information needed to describe your new disk model before updating the `new_disk_models.txt` file. Inaccurate information in the file produces incorrect system data and could result in failed acquisition.

Follow these instructions to manually update Insight disk models:

Steps

1. Locate the proper information for your disk model.

2. Using a text editor, open the `new_disk_models.txt` file.

3. Add the required information for the new data source.

4. Save the file in the `<SANScreenInstallDir>\wildfly\standalone\deployments\datasources.war` directory on your server.

5. Back up the `new_disk_models.txt` file to a safe location. During any subsequent OnCommand Insight upgrade, this file will be overwritten. If your disk model information is not present in the upgraded file, you will need to re-enter it.

Locating required information for new disk model

To locate the disk model information, identify the vendor and model number and run an Internet search.

About this task

Locating disk model information is as simple as running an internet search. Be sure to note the vendor name and disk model number before searching.

Steps

1. It is recommended to use an advanced internet search for the vendor, model, and document type "PDF" to find the vendor's data sheet and/or installation guide for the drive. These data sheets are usually the best source for vendor disk information.

2. Vendor specifications do not always provide all of the necessary information based on the full model number. It is often useful to search for different parts of the model number string on the vendor's site to locate all of the information.

3. Locate the disk vendor name, full model number, disk size and speed, and the interface type in order to define the new disk model in OnCommand Insight You can use the following table as a guide to help note this information as you find it:

For this field:	Which is:	Enter this:
Model number (aka Key)	Required	
Vendor	Required	
Disk speed (RPM)	Required	
Size (in GB)	Required	
Interface Type (select one)	Required	ATA, SATA, SATA2, SATA3, FC, SAS, FATA, SSD, OTHER
Seek time in ms	Optional	
Maximum transfer rate in MB/sec	Optional	
Interface transfer rate in MB/sec	Optional	
Link to vendor/model information	Optional but recommended	

4. Enter that information into the `new_disk_models.txt` file. See Content of the new_disk_models.txt file for format, order, and examples.

Content of the new_disk_models.txt file

The `new_disk_models.txt` file has required and optional fields. The fields are comma separated, so do not use commas *within* the fields.

All fields are required except for seek time, transfer rates and additional_info. If available, include the vendor/model website link in the additional_info field.

Using a text editor, enter the following information in this order, separated by commas, for each new disk model you wish to add:

1. **key**: use the model number (required)
2. **vendor**: name (required)
3. **model number**: full number (usually the same value as in "key") (required)
4. **rpm of the disk**: for example 10000 or 15000 (required)
5. **size**: capacity in GB (required)
6. **interface type**: ATA, SATA, FC, SAS, FATA, SSD, OTHER (required)
7. **seek time**: in ms (optional)

8. **potential transfer rate**: the potential transfer rate in MB/sec. Maximum transfer rate of the disk itself. (optional)

9. **interface transfer rate**: the rate to and from the host in MB/sec (optional).

10. **Additional Info**: Any additional information you want to capture. Best practice is to enter the link to the vendor page where the specs are found, for reference (optional)

For any optional fields left blank, be sure to include the comma.

Examples (each on one line with no spaces):

```
ST373405,Seagate,ST373405,10000,73,FC,5.3,64,160,http://www.seagate.com/staticfiles/support/disc/manuals/enterprise/cheetah/73(LP)/100109943e.pdf
```

```
SLR5B-M400SS,HITACHI,SLR5B-M400SS,1000000,400,SSD,,,,
```

```
X477_THARX04TA07,TOSHIBA,X477_THARX04TA07,7200,4000,SATA,9.5,,,https://storage.toshiba.eu/export/sites/toshiba-sdd/media/products/datasheets/MG03ACAxxxY.pdf
```