



# Troubleshooting Data Warehouse

## OnCommand Insight

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# Troubleshooting Data Warehouse

You can do various tasks related to troubleshooting Data Warehouse.

- Use OnCommand Insight ASUP.
- View OnCommand Insight logs.
- Resolve issues related to upgrades and business entities.
- Resolve issues related to the consolidation of multiple OnCommand Insight servers.

You can consolidate multiple OnCommand Insight servers into the same Data Warehouse database. Many configurations may report the same object from multiple connectors (that is, the same switch exists in two OnCommand Insight instances). In such cases, Data Warehouse consolidates the multiple objects into one (a primary connector is chosen and the object's data will be taken from that connector only).

The storage administrator can use the Troubleshooting page to solve problems related to consolidation issues.

## Issue resolution with ASUP

You can send ASUP logs to technical support for assistance in troubleshooting. ASUP for Data Warehouse is configured to run automatically. In the Data Warehouse Portal, you can disable the automatic send process, choose to include a backup of the Data Warehouse database, or initiate a transmittal to ASUP.

The information in the logs is forwarded to technical support by using HTTPS protocol. No data is forwarded using ASUP unless you first configure it on the Insight Server.

Data Warehouse sends the logs to the OnCommand Insight Server that is the first connector listed in the Data Warehouse Portal Connectors page. The automatic process sends the following files:

- Data Warehouse logs, which includes the following:
  - boot.log (including backups)
  - dwh.log (including backups such as dwh.log.1)
  - dhw\_troubleshoot.log
  - dwh\_upgrade.log (including backups)
  - WildFly.log (including backups)
  - ldap.log (including backups)
  - SQL dump of the Data Warehouse management database
  - mysql: my.cnf, .err and slow query logs
  - full innodb status
- Cognos logs, which include the following:
  - cognos-logs.zip

Contains the Cognos log files from the <install>\cognos\c10\_64\logs directory. It also contains the logs generated by Cognos as well as the OnCommand InsightAP.log file that contains all logging from users logging in to and out of OnCommand Insight reporting.

- DailyBackup.zip

Contains the backup of the reporting artifacts in the Public Folders. The contents of My Folders is not included in this.

- cognos\_version\_site\_name\_content\_store.zip

Contains a full backup of the Cognos Content Store.

You can generate a troubleshooting report manually. The Troubleshooting Report .zip file contains the following Data Warehouse information:

- boot.log (including backups)
- dwh.log (including backups such as dwh.log.1)
- dwh\_upgrade.log (including backups)
- wildfly.log (including backups)
- ldap.log (including backups)
- dump files in c:\Program Files\SANscreen\wildfly\standalone\log\dwh\
- SQL dump of the Data Warehouse management database
- mysql: my.cnf, .err and slow query logs
- full innodb status



ASUP does not automatically send a backup of the OnCommand Insight database to technical support.

## Disabling automatic ASUP transmissions

All NetApp products are equipped with automated capabilities to provide the best possible support to troubleshoot issues that occur in your environment. ASUP periodically sends predefined, specific, information to Customer Support. By default, ASUP is enabled for Data Warehouse; however, you can disable it if you no longer want the information sent.

### Steps

1. From the navigation pane on the left, click **Troubleshooting**.
2. Click **Disable** to prevent ASUP from sending a daily report.

A message displays saying ASUP is disabled.

## Including a backup of the Data Warehouse database

By default, ASUP sends only the Data Warehouse log files to technical support for assistance in troubleshooting; however, you can also choose to include a backup of the Data Warehouse database and select the type of data that is sent.

## Steps

1. Log in to the Data Warehouse portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. From the navigation pane on the left, click **Troubleshooting**.
3. To specify that ASUP should include a backup of the Data Warehouse database, click the **Include DWH Database Backup** list and select one of the following options for the type of data that the backup should include:
  - All (including Performance)
  - All Except Performance
  - Inventory Only
4. Click **Update**.

## Sending Insight logs to ASUP

You can send ASUP logs to technical support for assistance in troubleshooting. ASUP for Data Warehouse is configured to run automatically. In the Data Warehouse portal, you can disable the automatic send process, choose to include a backup of the Data Warehouse database, or initiate a transmittal to ASUP. When you request an ASUP report, the report request appears as a job in the Data Warehouse portal Jobs page.

### About this task

The job is managed by the job queue similar to the processing of other jobs. If an ASUP job is in a Pending or Running state already, an error message appears indicating that the ASUP report request cannot be added to the job request, because the job queue contains pending or running requests.

## Steps

1. Log in to the Data Warehouse portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. From the navigation pane on the left, click **Troubleshooting**.
3. In the **OnCommand Insight ASUP** section of the **Troubleshooting** page, click **Download DWH Troubleshooting Report** to retrieve the troubleshooting report.
4. To send the report to the OnCommand Insight Server listed as the first connector in the Data Warehouse Portal **Connectors** page, click **Send Now**.

## Viewing OnCommand Insight logs

You can view various Data Warehouse and Cognos logs in OnCommand Insight.

### About this task

You can examine troubleshooting and status information in Cognos and Data Warehouse log files.

## Steps

1. Log in to the Data Warehouse portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. In the navigation pane on the left, click **Troubleshooting**.
3. In the **Logs** section, click **Log Files**.

The following log files are displayed:

dwh.log
Lists the status of Data Warehouse jobs
wildfly.log
Provides information about the WildFly application server
dwh_upgrade log
Provides information about the upgrade on Data Warehouse
ldap.log
Logs messages related to LDAP authentication
dwh_troubleshoot.log
Logs messages that can help troubleshooting DWH problems
sansscreenap.log
Provides information about connection to the server, authentication and access to the Cognos repository, and information about other processes
cognosserver.log
Cognos log

4. Click on the name of the log file you want to view.

## Multiple server chassis consolidation issues

You can view the connectors that report on hosts and adapters and SAN switches and storage arrays. You can also see the various connectors that report on an object and identify the primary connector, which is the connector that was chosen for the object.

## Viewing hosts and adapters consolidation issues

The reported data for hosts and their associated adapters is derived from the Inventory data mart.

### Steps

1. Log in to the Data Warehouse Portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. In the navigation pane to the left, click **Troubleshooting**.
3. In the **Chassis Consolidation** section, click **Hosts and Adapters**.



The configuration shown in this example is not a valid configuration. Principal and Available connectors on localhost suggest that the Insight server and DWH are both installed on the same server. The intent of this example is to familiarize you with the consolidation table.

## Hosts and Adapters Consolidation

 Filter

Host GUID	Host Name	Host IP	Adapter GUID	Adapter WWN	Principal Connector	Available Connectors	Insight ID	Insight Change Time
288	Agassi	192.1.168.71			<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	9927	11/18/10 1:36 PM
			576	40:A0:00:00:00:00:84	<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	9928	11/18/10 1:36 PM
			577	40:A0:00:00:00:00:85	<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	9930	11/18/10 1:36 PM
305	AI_Host1	192.1.168.88			<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	12254	11/18/10 1:38 PM
			597	40:A0:00:00:00:00:01:05	<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	12255	11/18/10 1:38 PM
306	AI_Host2	192.1.168.89			<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	12257	11/18/10 1:38 PM
			598	40:A0:00:00:00:00:01:06	<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	12258	11/18/10 1:38 PM
307	AI_Host3	192.1.168.90			<a href="#">localhost (1)</a>	<a href="#">localhost (1)</a>	12260	11/18/10 1:38 PM

For all hosts and adapters there is a row for each connector that reports on them, as well as the Primary Connector from which the host and adapter are taken. For hosts and adapters only, a host that is reported by one connector may have its adapters reported by a different connector.

You can also see the OnCommand Insight change time of a host/adaptor for each connector. Using this parameter, you can discover when an update has occurred in OnCommand Insight for the host/adaptor and when the same host/adaptor has been updated in other OnCommand Insight servers.

4. Optionally, filter data in this view by typing a portion of the text and clicking **Filter**. To clear the filter, delete the text in the **Filter** box and click **Filter**. You can filter by host name, host IP, adapter WWN, or OnCommand Insight object ID.

The filter is case sensitive.

5. Review the following data:

- **Host GUID**

Global Unique Identifier for this type of consolidated device (hosts)

- **Host Name**

Name of the consolidated host as it appears in the data warehouse

- **Host IP**

IP address of the consolidated host

- **Adapter GUID**

Global Unique identifier for the host adapter

- **Adapter WWN**

WWN of the host adapter

- **Principal Connector**

Name of the OnCommand Insight connector that was the actual source of the data

- **Available Connectors**

All OnCommand Insight connectors where the consolidated host / adapter reside

- **Insight ID**

OnCommand Insight ID of the consolidated host/adaptor for the relevant reporting connector

- **Insight Change Time**

When an update has occurred in OnCommand Insight for the host/adaptor and when the same host/adaptor has been updated in other OnCommand Insight servers

6. To obtain detail about the connector, click on the connector.

You can see the following information for the connector:

- Host name
- The last time a Data Warehouse job was run on that connector



- The last time a change was received from that connector
- The version of the OnCommand Insight server pointed to by that connector

## Viewing storage arrays consolidation issues

The reported data for storage arrays is derived from the Inventory data mart. For all storage arrays, there is a row for each connector that reports on them, as well as the Primary Connector from which each array is taken.

### Steps

1. Log in to the Data Warehouse Portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. From the navigation pane on the left, click **Troubleshooting**.
3. In the **Chassis Consolidation** section, click **SAN Storage Arrays**.
4. Optionally, to filter data in this view, type a portion of the text in the Filter box and click **Filter**. To clear the filter, delete the text in the Filter box and click **Filter**. You can filter by storage name, storage IP, vendor model, or OnCommand Insight object ID.

The filter is case sensitive.

5. Review the following data:

- **GUID**

Global Unique Identifier for this type of consolidated device (storage array)

- **Name**

Name of the consolidated storage array as it appears in the Data Warehouse

- **IP**

IP address of the consolidated storage array

- **Vendor and Model**

Name of the vendor who sells the consolidated storage array and the manufacturer's model number

- **Principal Connector**

Name of the OnCommand Insight connector that was the actual source of the data

- **Available Connectors**

All OnCommand Insight connectors where the consolidated storage array resides

- **Insight ID**

ID of the consolidated storage array on the OnCommand Insight chassis where the Principal Connector resides

- **Insight Change Time**

When an update has occurred in OnCommand Insight for the storage array and when the same storage array has been updated in other OnCommand Insight servers

## Viewing switches consolidation issues

The reported data for switches is derived from the Inventory data mart. For all switches, there is a row for each connector that reports on them, as well as the Primary Connector from which each switch is taken.

### Steps

1. Log in to the Data Warehouse Portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. From the navigation pane on the left, click **Troubleshooting**.
3. In the **Chassis Consolidation** section, click **SAN Switches**.
4. Optionally, filter data in this view by typing a portion of the text and clicking **Filter**. To clear the filter, clear the Filter box and click **Filter**. You can filter by switch name, switch IP, vendor model, or OnCommand Insight object ID.

The filter is case sensitive.

5. Review the following data:

- **GUID**

Global Unique Identifier for this type of consolidated device (storage array)

- **Name**

Name of the consolidated storage array as it appears in the data warehouse

- **IP**

IP address of the consolidated storage array

- **Vendor and Model**

Name of the vendor who sells the consolidated storage array and the manufacturer's model number

- **WWN**

WWN for the consolidation switch

- **Principal Connector**

Name of the OnCommand Insight connector that was the actual source of the data

- **Available Connectors**

All OnCommand Insight connectors where the consolidated storage array resides

- **Insight ID**

ID of the consolidated storage array on the OnCommand Insight chassis where the Principal Connector resides

- **Insight Change Time**

When an update has occurred in OnCommand Insight for the storage array and when the same storage array has been updated in other OnCommand Insight servers

## Resolving multiple server annotation consolidation issues

The Annotation Consolidation view in the Data Warehouse Troubleshooting view displays a table that contains all the available Annotation Types and the Object Types to which they can be applied.

### About this task

The consolidation of annotation values is based on the value of the Annotation Type. A storage array could have two different tier values, each coming from a different connector. Thus, if in one connector there is a tier defined by the name gold and in a second connector a tier is defined with the name goldy, this information appears in Data Warehouse as two separate tiers.

Because some Annotation Types allow assignment of multiple annotation values to the same object, Data Warehouse allows objects (for example, "host") to have multiple annotation values assigned to them (for example, "data center 1" and "data center 2" could be assigned to the same host).

Tier annotation on volumes functions somewhat differently from the general annotation tables. Potentially, there could be a very large number of volumes in the environment and displaying all of them in the Data Warehouse would affect the usability of the information. Therefore, the Annotations Consolidation view displays only the volumes that have multiple tier values assigned to them, and the storage containing each such volume.

### Steps

1. Log in to the Data Warehouse Portal at `https://hostname/dwh`, where `hostname` is the name of the system where OnCommand Insight Data Warehouse is installed.
2. From the navigation pane on the left, click **Troubleshooting**.
3. In the **Annotation Consolidation** section, click **Show** in the row for the object.

The following shows an example of the annotations for Data\_Center:

# Troubleshooting Annotations Consolidation

Annotation Type: Data\_Center

Object Type: Host

Host GUID	Host Name	Host Natural Key	Data_Center Value	Connector
305	AI_Host1	192.1.168.88	New York	<a href="#">localhost (1)</a>
306	AI_Host2	192.1.168.89	New York	<a href="#">localhost (1)</a>
307	AI_Host3	192.1.168.90	New York	<a href="#">localhost (1)</a>

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