Troubleshooting

Active IQ Unified Manager 9.11

NetApp
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Troubleshooting

Troubleshooting information helps you to identify and resolve issues you encounter when using Unified Manager.

Adding disk space to the Unified Manager database directory

The Unified Manager database directory contains all of the health and performance data collected from ONTAP systems. Some circumstances may require that you increase the size of the database directory.

For example, the database directory may get full if Unified Manager is collecting data from a large number of clusters where each cluster has many nodes. You will receive a warning event when the database directory is 90% full, and a critical event when the directory is 95% full.

> (i) No additional data is collected from clusters after the directory reaches 95% full.

The steps required to add capacity to the data directory are different depending on whether Unified Manager is running on a VMware ESXi server, on a Red Hat or CentOS Linux server, or on a Microsoft Windows server.

Adding space to the data disk of the VMware virtual machine

If you need to increase the amount of space on the data disk for the Unified Manager database, you can add capacity after installation by increasing disk space using the Unified Manager maintenance console.

What you'll need

- You must have access to the vSphere Client.
- The virtual machine must have no snapshots stored locally.
- You must have the maintenance user credentials.

We recommend that you back up your virtual machine before increasing the size of virtual disks.

Steps

1. In the vSphere client, select the Unified Manager virtual machine, and then add more disk capacity to data `disk 3`. See the VMware documentation for details.

   In some rare cases the Unified Manager deployment uses "Hard Disk 2" for the data disk instead of "Hard Disk 3". If this has occurred in your deployment, increase the space of whichever disk is larger. The data disk will always have more space than the other disk.

2. In the vSphere client, select the Unified Manager virtual machine, and then select the **Console** tab.
3. Click in the console window, and then log in to the maintenance console using your user name and password.
4. In the **Main Menu**, enter the number for the **System Configuration** option.

5. In the **System Configuration Menu**, enter the number for the **Increase Data Disk Size** option.

Adding space to the data directory of the Linux host

If you allotted insufficient disk space to the `/opt/netapp/data` directory to support Unified Manager when you originally set up the Linux host and then installed Unified Manager, you can add disk space after installation by increasing disk space on the `/opt/netapp/data` directory.

What you'll need

You must have root user access to the Red Hat Enterprise Linux or CentOS Linux machine on which Unified Manager is installed.

We recommend that you back up the Unified Manager database before increasing the size of the data directory.

Steps

1. Log in as root user to the Linux machine on which you want to add disk space.

2. Stop the Unified Manager service and the associated MySQL software in the order shown: `systemctl stop ocieau ocie mysqld`

3. Create a temporary backup folder (for example, `/backup-data`) with sufficient disk space to contain the data in the current `/opt/netapp/data` directory.

4. Copy the content and privilege configuration of the existing `/opt/netapp/data` directory to the backup data directory:

   `cp -arp /opt/netapp/data/* /backup-data`

5. If SE Linux is enabled:

   a. Get the SE Linux type for folders on existing `/opt/netapp/data` folder:

   ```
   se_type=`ls -Z /opt/netapp/data| awk '{print $4}'| awk -F: '{print $3}'|
   head -1`
   ```

   The system returns a confirmation similar to the following:

   ```
   echo $se_type
   mysqld_db_t
   ```

   b. Run the `chcon` command to set the SE Linux type for the backup directory:

   `chcon -R --type=mysqld_db_t /backup-data`

6. Remove the contents of the `/opt/netapp/data` directory:

   a. `cd /opt/netapp/data`

   b. `rm -rf *`

7. Expand the size of the `/opt/netapp/data` directory to a minimum of 150 GB through LVM commands or by adding extra disks.

> (i) If you have created `/opt/netapp/data` from a disk, then you should not try to mount `/opt/netapp/data` as an NFS or CIFS share. Because, in this case, if you try to expand the disk space, some LVM commands, such as `resize` and `extend` might not work as expected.

8. Confirm that the `/opt/netapp/data` directory owner (mysql) and group (root) are unchanged:

`ls -ltr /opt/netapp/ | grep data`

The system returns a confirmation similar to the following:

```
drwxr-xr-x.   17 mysql root   4096 Aug 28 13:08 data
```

9. If SE Linux is enabled, confirm that the context for the `/opt/netapp/data` directory is still set to mysqld_db_t:

   a. `touch /opt/netapp/data/abc`

   b. `ls -Z /opt/netapp/data/abc`

   The system returns a confirmation similar to the following:

```
-rw-r--r--. root root unconfined_u:object_r:mysqld_db_t:s0
/opt/netapp/data/abc
```

10. Delete the file `abc` so that this extraneous file does not cause a database error in the future.

11. Copy the contents from `backup-data` back to the expanded `/opt/netapp/data` directory:

`cp -arp /backup-data/* /opt/netapp/data/`

12. If SE Linux is enabled, run the following command:

`chcon -R --type=mysqld_db_t /opt/netapp/data`

13. Start the MySQL service:

`systemctl start mysqld`

14. After the MySQL service is started, start the ocie and ocieau services in the order shown:

`systemctl start ocie ocieau`

15. After all of the services are started, delete the backup folder `/backup-data`:

`rm -rf /backup-data`

Adding space to the logical drive of the Microsoft Windows server

If you need to increase the amount of disk space for the Unified Manager database, you can add capacity to the logical drive on which Unified Manager is installed.

What you'll need

You must have Windows administrator privileges.

We recommend that you back up the Unified Manager database before adding disk space.

Steps

1. Log in as administrator to the Windows server on which you want to add disk space.
2. Follow the step that corresponds to method you want to use to add more space:

Option	Description
On a physical server, add capacity to the logical drive on which the Unified Manager server is installed.	Follow the steps in the Microsoft topic: Extend a Basic Volume
On a physical server, add a hard disk drive.	Follow the steps in the Microsoft topic: Adding Hard Disk Drives
On a virtual machine, increase the size of a disk partition.	Follow the steps in the VMware topic: Increasing the size of a disk partition

Changing the performance statistics collection interval

The default collection interval for performance statistics is 5 minutes. You can change this interval to 10 or 15 minutes if you find that collections from large clusters are not finishing within the default time. This setting affects the collection of statistics from all clusters that this instance of Unified Manager is monitoring.

What you'll need

You must have a user ID and password authorized to log in to the maintenance console of the Unified Manager server.

The issue of performance statistics collections not finishing on time is indicated by the banner messages `Unable to consistently collect from cluster <cluster_name>` or `Data collection is taking too long on cluster <cluster_name>`.

You should change the collection interval only when required because of a statistics collections issue. Do not change this setting for any other reason.

(i) Changing this value from the default setting of 5 minutes can affect the number and frequency of performance events that Unified Manager reports. For example, system-defined performance thresholds trigger events when the policy is exceeded for 30 minutes. When using 5-minute collections, the policy must be exceeded for six consecutive collections. For 15-minute collections the policy must be exceeded for only two collection periods.

A message at the bottom of the Cluster Setup page indicates the current statistical data collection interval.

Steps

1. Log in using SSH as the maintenance user to the Unified Manager host.

   The Unified Managermaintenance console prompts are displayed.

2. Type the number of the menu option labeled **Performance Polling Interval Configuration**, and then press Enter.

3. If prompted, enter the maintenance user password again.

4. Type the number for the new polling interval that you want to set, and then press Enter.

If you changed the Unified Manager collection interval to 10 or 15 minutes, and you have a current connection to an external data provider (such as Graphite), you must change the data provider transmit interval so that it is equal to, or greater, than the Unified Manager collection interval.

Changing the length of time Unified Manager retains event and performance data

By default, Unified Manager stores event data and performance data for 6 months for all monitored clusters. After this time, older data is automatically deleted to make room for new data. This default timeframe works well for most configurations, but very large configurations with many clusters and nodes may need to reduce the retention period so that Unified Manager operates optimally.

What you'll need

You must have the Application Administrator role.

You can change the retention periods for these two types of data in the Data Retention page. These settings affect the retention of data from all clusters that this instance of Unified Manager is monitoring.

(i) Unified Manager collects performance statistics every 5 minutes. Each day the 5-minute statistics are summarized into hourly performance statistics. It retains 30 days of 5-minute historical performance data and 6 months of hourly summarized performance data (by default).

You should reduce the retention period only if you are running out of space or if backup and other operations are taking a very long time to complete. Reducing the retention period has the following effects:

- Old performance data is deleted from the Unified Manager database after midnight.
- Old event data is deleted from the Unified Manager database immediately.
- Events prior to the retention period will no longer be available to view in the user interface.
- Locations in the UI where hourly performance statistics are displayed will be blank prior to the retention

period.

- If the event retention period exceeds the performance data retention period, a message will be displayed under the performance slider warning that older performance events may not have backing data in their associated charts.

Steps

1. In the left navigation pane, click **Policies** > **Data Retention**.

2. In the **Data Retention** page, select the slider tool in the Event Retention or Performance Data Retention area and move it to the number of months that data should be retained, and click **Save**.

Unknown authentication error

When you are performing an authentication-related operation such as adding, editing, deleting, or testing remote users or groups, the following error message might be displayed: `Unknown authentication error.`

Cause

This problem can occur if you have set an incorrect value for the following options:

- Administrator Name of the Active Directory authentication service
- Bind Distinguished Name of the OpenLDAP authentication service

Corrective action

a. In the left navigation pane, click **General** > **Remote Authentication**.

b. Based on the authentication service that you have selected, enter the appropriate information for Administrator Name or Bind Distinguished Name.

c. Click **Test Authentication** to test the authentication with the details that you specified.

d. Click **Save**.

User not found

When you are performing an authentication-related operation such as adding, editing, deleting, or testing remote users or groups, the following error message is displayed: `User not found.`

Cause

This problem can occur if the user exists in the AD server or LDAP server, and if you have set the base distinguished name to an incorrect value.

Corrective action

a. In the left navigation pane, click **General** > **Remote Authentication**.

b. Enter the appropriate information for base distinguished name.

c. Click **Save**.

Issue with adding LDAP using Other authentication services

When you select Others as the Authentication service, the user and group Object Class retain the values from the previously selected template. If the LDAP server does not use the same values, the operation might fail.

Cause

The users are not configured correctly in OpenLDAP.

Corrective action

You can manually fix this issue by using one of the following workarounds.

If your LDAP user object class and group object class are user and group, respectively, perform the following steps:

a. In the left navigation pane, click**General** > **Remote Authentication**.

b. In the **Authentication Service** drop-down menu, select **Active Directory**, and then select **Others**.

c. Complete the text fields.

If your LDAP user object class and group object class are posixAccount and posixGroup, respectively, perform the following steps:

a. In the left navigation pane, click **General** > **Remote Authentication**.

b. In the **Authentication Service** drop-down menu, select **OpenLDAP**, and then select **Others**.

c. Complete the text fields.

If the first two workarounds do not apply, call the `option-set` API, and set the `auth.ldap.userObjectClass` and `auth.ldap.groupObjectClass` options to the correct values.