Using the maintenance console

Active IQ Unified Manager 9.13

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Table of Contents

Using the maintenance console

You can use the maintenance console to configure network settings, to configure and manage the system on which Unified Manager is installed, and to perform other maintenance tasks that help you prevent and troubleshoot possible issues.

What functionality the maintenance console provides

The Unified Manager maintenance console enables you to maintain the settings on your Unified Manager system and to make any necessary changes to prevent issues from occurring.

Depending on the operating system on which you have installed Unified Manager, the maintenance console provides the following functions:

- Troubleshoot any issues with your virtual appliance, especially if the Unified Manager web interface is not available
- Upgrade to newer versions of Unified Manager
- Generate support bundles to send to technical support
- Configure network settings
- Change the maintenance user password
- Connect to an external data provider to send performance statistics
- Change the performance data collection internal
- Restore the Unified Manager database and configuration settings from a previously backed up version.

What the maintenance user does

The maintenance user is created during the installation of Unified Manager on a Red Hat Enterprise Linux or CentOS system. The maintenance user name is the “umadmin” user. The maintenance user has the Application Administrator role in the web UI, and that user can create subsequent users and assign them roles.

The maintenance user, or umadmin user, can also access the Unified Manager maintenance console.

Diagnostic user capabilities

The purpose of diagnostic access is to enable technical support to assist you in troubleshooting, and you should only use it when directed by technical support.

The diagnostic user can execute OS-level commands when directed by technical support, for troubleshooting purposes.

Accessing the maintenance console

If the Unified Manager user interface is not in operation, or if you need to perform

functions that are not available in the user interface, you can access the maintenance console to manage your Unified Manager system.

What you'll need

You must have installed and configured Unified Manager.

After 15 minutes of inactivity, the maintenance console logs you out.

When installed on VMware, if you have already logged in as the maintenance user through the VMware console, you cannot simultaneously log in using Secure Shell.

Step

1. Follow these steps to access the maintenance console:

On this operating system…	Follow these steps…
VMware	a. Using Secure Shell, connect to the IP address or fully qualified domain name of the Unified Manager virtual appliance. b. Log in to the maintenance console using your maintenance user name and password.
Linux	a. Using Secure Shell, connect to the IP address or fully qualified domain name of the Unified Manager system. b. Log in to the system with the maintenance user (umadmin) name and password. c. Enter the command `maintenance_console` and press Enter.
Windows	a. Log in to the Unified Manager system with administrator credentials. b. Launch PowerShell as a Windows administrator. c. Enter the command `maintenance_console` and press Enter.

The Unified Manager maintenance console menu is displayed.

Accessing the maintenance console using the vSphere VM console

If the Unified Manager user interface is not in operation, or if you need to perform functions that are not available in the user interface, you can access the maintenance console to reconfigure your virtual appliance.

What you'll need

- You must be the maintenance user.
- The virtual appliance must be powered on to access the maintenance console.

Steps

1. In vSphere Client, locate the Unified Manager virtual appliance.
2. Click the **Console** tab.
3. Click inside the console window to log in.
4. Log in to the maintenance console using your user name and password.

   After 15 minutes of inactivity, the maintenance console logs you out.

Maintenance console menus

The maintenance console consists of different menus that enable you to maintain and manage special features and configuration settings of the Unified Manager server.

Depending on the operating system on which you have installed Unified Manager, the maintenance console consists of the following menus:

- Upgrade Unified Manager (VMware only)
- Network Configuration (VMware only)
- System Configuration (VMware only)
  1. Support/Diagnostics
  2. Reset Server Certificate
  3. External Data Provider
  4. Backup Restore
  5. Performance Polling Interval Configuration
  6. Disable SAML authentication
  7. View/Change Application Ports
  8. Debug Log Configuration
  9. Control access to MySQL port 3306
  10. Exit

You select the number from the list for accessing the specific menu option. For example, for backup and restore, you select *4*.

Network Configuration menu

The Network Configuration menu enables you to manage the network settings. You should use this menu when the Unified Manager user interface is not available.

This menu is not available if Unified Manager is installed on Red Hat Enterprise Linux, CentOS, or on Microsoft Windows.

The following menu choices are available.

- **Display IP Address Settings**

  Displays the current network settings for the virtual appliance, including the IP address, network, broadcast address, netmask, gateway, and DNS servers.

- **Change IP Address Settings**

  Enables you to change any of the network settings for the virtual appliance, including the IP address, netmask, gateway, or DNS servers. If you switch your network settings from DHCP to static networking using the maintenance console, you cannot edit the host name. You must select **Commit Changes** for the changes to take place.

- **Display Domain Name Search Settings**

  Displays the domain name search list used for resolving host names.

- **Change Domain Name Search Settings**

  Enables you to change the domain names for which you want to search when resolving host names. You must select **Commit Changes** for the changes to take place.

- **Display Static Routes**

  Displays the current static network routes.

- **Change Static Routes**

  Enables you to add or delete static network routes. You must select **Commit Changes** for the changes to take place.

  - **Add Route**

    Enables you to add a static route.

  - **Delete Route**

    Enables you to delete a static route.

  - **Back**

    Takes you back to the **Main Menu**.

  - **Exit**

    Exits the maintenance console.

- **Disable Network Interface**

  Disables any available network interfaces. If only one network interface is available, you cannot disable it. You must select **Commit Changes** for the changes to take place.

- **Enable Network Interface**

  Enables available network interfaces. You must select **Commit Changes** for the changes to take place.

- **Commit Changes**

  Applies any changes made to the network settings for the virtual appliance. You must select this option to enact any changes made, or the changes do not occur.

- **Ping a Host**

  Pings a target host to confirm IP address changes or DNS configurations.

- **Restore to Default Settings**

  Resets all settings to the factory default. You must select **Commit Changes** for the changes to take place.

- **Back**

  Takes you back to the **Main Menu**.

- **Exit**

  Exits the maintenance console.

System Configuration menu

The System Configuration menu enables you to manage your virtual appliance by providing various options, such as viewing the server status, and rebooting and shutting down the virtual machine.

When Unified Manager is installed on a Linux or Microsoft Windows system, only the “Restore from a Unified Manager Backup” option is available from this menu.

The following menu choices are available:

- **Display Server Status**

  Displays the current server status. Status options include Running and Not Running.

  If the server is not running, you might need to contact technical support.

- **Reboot Virtual Machine**

  Reboots the virtual machine, stopping all services. After rebooting, the virtual machine and services restart.

- **Shut Down Virtual Machine**

  Shuts down the virtual machine, stopping all services.

  You can select this option only from the virtual machine console.

- **Change <logged in user> User Password**

  Changes the password of the user that is currently logged in, which can only be the maintenance user.

- **Increase Data Disk Size**

Increases the size of the data disk (disk 3) in the virtual machine.

- **Increase Swap Disk Size**

  Increases the size of the swap disk (disk 2) in the virtual machine.

- **Change Time Zone**

  Changes the time zone to your location.

- **Change NTP Server**

  Changes the NTP Server settings, such as IP address or fully qualified domain name (FQDN).

- **Change NTP Service**

  Switches between the `ntp` and `systemd-timesyncd` services.

- **Restore from a Unified Manager Backup**

  Restores the Unified Manager database and configuration settings from a previously backed up version.

- **Reset Server Certificate**

  Resets the server security certificate.

- **Change hostname**

  Changes the name of the host on which the virtual appliance is installed.

- **Back**

  Exits the System Configuration menu and returns to the Main Menu.

- **Exit**

  Exits the maintenance console menu.

Support and Diagnostics menu

The Support and Diagnostics menu enables you to generate a support bundle that you can send to technical support for troubleshooting assistance.

The following menu options are available:

- **Generate Light Support Bundle**

  Enables you to produce a lightweight support bundle that contains just 30 days of logs and configuration database records — it excludes performance data, acquisition recording files, and server heap dump.

- **Generate Support Bundle**

  Enables you to create a full support bundle (7-Zip file) containing diagnostic information in the diagnostic user's home directory. If your system is connected to the internet you can also upload the support bundle to NetApp.

The file includes information generated by an AutoSupport message, the contents of the Unified Manager database, detailed data about the Unified Manager server internals, and verbose-level logs not normally included in AutoSupport messages or in the lightweight support bundle.

Additional menu options

The following menu options enable you to perform various administrative tasks on the Unified Manager server.

The following menu choices are available:

- **Reset Server Certificate**

  Regenerates the HTTPS server certificate.

  You can regenerate the server certificate in the Unified Manager GUI by clicking **General** > **HTTPS Certificates** > **Regenerate HTTPS Certificate**.

- **Disable SAML authentication**

  Disables SAML authentication so that the identity provider (IdP) no longer provides sign-on authentication for users accessing the Unified Manager GUI. This console option is typically used when an issue with the IdP server or SAML configuration blocks users from accessing the Unified Manager GUI.

- **External Data Provider**

  Provides options for connecting Unified Manager to an external data provider. After you establish the connection, performance data is sent to an external server so that storage performance experts can chart the performance metrics using third-party software. The following options are displayed:

  - **Display Server Configuration**--Displays the current connection and configuration settings for an external data provider.
  - **Add / Modify Server Connection**--Enables you to enter new connection settings for an external data provider, or change existing settings.
  - **Modify Server Configuration**--Enables you to enter new configuration settings for an external data provider, or change existing settings.
  - **Delete Server Connection**--Deletes the connection to an external data provider.

    After the connection is deleted, Unified Manager loses its connection to the external server.

- **Backup Restore**

  For information, see the topics under Managing backup and restore operations.

- **Performance Polling Interval Configuration**

  Provides an option for configuring how frequently Unified Manager collects performance statistical data from clusters. The default collection interval is 5 minutes.

  You can change this interval to 10 or 15 minutes if you find that collections from large clusters are not completing on time.

- **View/Change Application Ports**

Provides an option to change the default ports that Unified Manager uses for HTTP and HTTPS protocols, if required for security. The default ports are 80 for HTTP and 443 for HTTPS.

- **Control access to MySQL port 3306**

  Controls host access to the default MySQL port 3306. For reasons of security, the access through this port is restricted only to localhost during a fresh installation of Unified Manager on Linux, Windows, and VMware vSphere systems. This option enables you to toggle the visibility of this port between the localhost and remote hosts, that is, if it is enabled for localhost only in your environment, you can make this port available to remote hosts as well. Alternately, when enabled for all hosts, you can restrict the access of this port to localhost only. If the access was enabled on remote hosts previously, the configuration is retained in an upgrade scenario. You should check the firewall settings on Windows systems after toggling the port visibility, and disable the firewall settings if the settings are configured to restrict access to MySQL port 3306.

- **Exit**

  Exits the maintenance console menu.

Changing the maintenance user password on Windows

You can change the Unified Manager maintenance user password when required.

Steps

1. From the Unified Manager web UI login page, click **Forgot Password**.

   A page is displayed that prompts for the name of the user whose password you want to reset.

2. Enter the user name and click **Submit**.

   An email with a link to reset the password is sent to the email address that is defined for that user name.

3. Click the **reset password link** in the email and define the new password.
4. Return to the web UI and log in to Unified Manager using the new password.

Changing the umadmin password on Linux systems

For security reasons, you must change the default password for the Unified Manager umadmin user immediately after completing the installation process. If necessary, you can change the password again anytime later.

What you'll need

- Unified Manager must be installed on a Red Hat Enterprise Linux or CentOS Linux system.
- You must have the root user credentials for the Linux system on which Unified Manager is installed.

Steps

1. Log in as the root user to the Linux system on which Unified Manager is running.
2. Change the umadmin password:

```
passwd umadmin
```

The system prompts you to enter a new password for the umadmin user.

Changing the ports Unified Manager uses for HTTP and HTTPS protocols

The default ports that Unified Manager uses for HTTP and HTTPS protocols can be changed after installation if required for security. The default ports are 80 for HTTP and 443 for HTTPS.

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.

> There are some ports that are considered unsafe when using the Mozilla Firefox or Google Chrome browsers. Check with your browser before assigning a new port number for HTTP and HTTPS traffic. Selecting an unsafe port could make the system inaccessible, which would require that you contact customer support for a resolution.

The instance of Unified Manager is restarted automatically after you change the port, so make sure this is a good time to take the system down for a short amount of time.

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 **View/Change Application Ports**, and then press Enter.
3. If prompted, enter the maintenance user password again.
4. Type the new port numbers for the HTTP and HTTPS ports, and then press Enter.

   Leaving a port number blank assigns the default port for the protocol.

   You are prompted whether you want to change the ports and restart Unified Manager now.

5. Type **y** to change the ports and restart Unified Manager.
6. Exit out of the maintenance console.

After this change, users must include the new port number in the URL to access the Unified Manager web UI, for example https://host.company.com:1234, https://12.13.14.15:1122, or https://[2001:db8:0:1]:2123.

Adding network interfaces

You can add new network interfaces if you need to separate network traffic.

What you'll need

You must have added the network interface to the virtual appliance using vSphere.

The virtual appliance must be powered on.

> You cannot perform this operation if Unified Manager is installed on Red Hat Enterprise Linux or on Microsoft Windows.

Steps

1. In the vSphere console Main Menu, select **System Configuration** > **Reboot Operating System**.

   After rebooting, the maintenance console can detect the newly added network interface.

2. Access the maintenance console.
3. Select **Network Configuration** > **Enable Network Interface**.
4. Select the new network interface and press **Enter**.

   Select **eth1** and press **Enter**.

5. Type **y** to enable the network interface.
6. Enter the network settings.

   You are prompted to enter the network settings if using a static interface, or if DHCP is not detected.

   After entering the network settings, you automatically return to the **Network Configuration** menu.

7. Select **Commit Changes**.

   You must commit the changes to add the network interface.

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.

> 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 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.

   > 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 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 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

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