NetApp

Managing backup and restore operations

Active IQ Unified Manager 9.10

NetApp
October 22, 2024

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Managing backup and restore operations

You can create backups of Active IQ Unified Manager and use the restore feature to restore the backup to the same (local) system or a new (remote) system in case of a system failure or data loss.

There are three backup and restore methods depending on the operating system on which you have installed Unified Manager, and based on the number of clusters and nodes being managed:

Operating System	Size of Deployment	Recommended Backup Method
VMware vSphere	Any	VMware snapshot of the Unified Manager virtual appliance
Red Hat Enterprise Linux or CentOS Linux	Small	Unified Manager MySQL database dump
	Large	NetApp Snapshot of Unified Manager database
Microsoft Windows	Small	Unified Manager MySQL database dump
	Large	NetApp Snapshot of Unified Manager database with iSCSI protocol

These different methods are described in the sections that follow.

Backup and restore for Unified Manager on virtual appliance

The backup and restore model for Unified Manager when installed on a virtual appliance is to capture and restore an image of the full virtual application.

The following tasks enable you to complete a backup of the virtual appliance:

1. Power off the VM and take a VMware snapshot of the Unified Manager virtual appliance.
2. Make a NetApp Snapshot copy on the datastore to capture the VMware snapshot.

   If the datastore is not hosted on a system running ONTAP software, follow the storage vendor guidelines to create a backup of the VMware snapshot.

3. Replicate the NetApp Snapshot copy, or snapshot equivalent, to alternate storage.
4. Delete the VMware snapshot.

You should implement a backup schedule using these tasks to ensure that the Unified Manager virtual appliance is protected if issues arise.

To restore the VM, you can use the VMware snapshot you created to restore the VM to the backup point-in-time state.

Backup and restore using a MySQL database dump

A MySQL database dump backup is a copy of the Active IQ Unified Manager database and configuration files that you can use in case of a system failure or data loss. You can schedule a backup to be written to a local destination or to a remote destination. It is highly recommended that you define a remote location that is external to the Active IQ Unified Manager host system.

> ⓘ   MySQL database dump is the default backup mechanism when Unified Manager is installed on a Linux and Windows server. However, if Unified Manager is managing a large number of cluster and nodes, or if your MySQL backups are taking many hours to complete, you can back up using Snapshot copies. This functionality is available on Red Hat Enterprise Linux, CentOS Linux systems, and Windows.

A database dump backup consists of a single file in the backup directory and one or more files in the database repository directory. The file in the backup directory is very small because it contains only a pointer to the files located in the database repository directory that are required to recreate the backup.

The first time you generate a database backup a single file is created in the backup directory and a full backup file is created in the database repository directory. The next time you generate a backup a single file is created in the backup directory and an incremental backup file is created in the database repository directory that contains the differences from the full backup file. This process continues as you create additional backups, up to the maximum retention setting, as shown in the following figure.
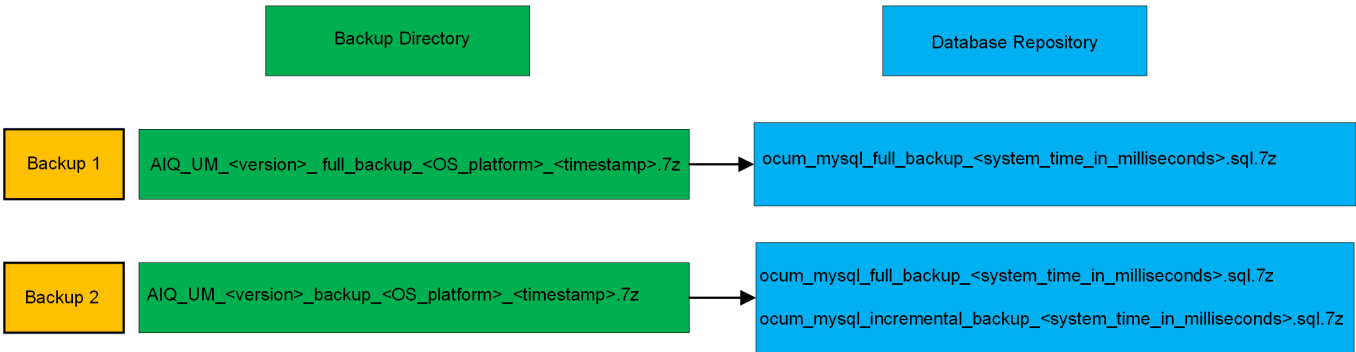
> ⓘ   Do not rename or remove any of the backup files in these two directories or any subsequent restore operation will fail.

If you write your backup files to the local system, you should initiate a process to copy the backup files to a remote location so they will be available in case you have a system issue that requires a complete restore.

Before beginning a backup operation, Active IQ Unified Manager performs an integrity check to verify that all the required backup files and backup directories exist and are writable. It also checks that there is enough space on the system to create the backup file.

Configuring the destination and schedule for database dump backups

You can configure the Unified Manager database dump backup settings to set the database backup path, retention count, and backup schedule. You can enable daily or weekly scheduled backups. By default, scheduled backups are disabled, but you should set a backup schedule.

What you'll need

- You must have the Operator, Application Administrator, or Storage Administrator role.

- You must have a minimum of 150 GB of space available in the location you define as the backup path.

  It is recommended that you use a remote location that is external to the Unified Manager host system.

- When Unified Manager is installed on a Linux system, and using MySQL backup, ensure that the following permissions and ownerships are set on the backup directory.

  Permissions: 0750, Ownership: jboss:maintenance

- When Unified Manager is installed on a Windows system, and using MySQL backup, ensure that only the administrator has access to the backup directory.

More time is required the first time a backup is performed than for subsequent backups because the first backup is a full backup. A full backup can be over 1 GB and can take three to four hours. Subsequent backups are incremental and require less time.

> - If you find the number of incremental backup files to be too large for the space you have allocated for backups, you can take a full backup periodically to replace the old backup and its incremental files. As another option, you can take a backup by using Snapshot copies.
>
> - Backup taken during initial 15 days of a new cluster addition might not be accurate enough to get the historical performance data.

Steps

1. In the left navigation pane, click **General** > **Database Backup**.
2. In the **Database Backup** page, click **Backup Settings**.
3. Configure the appropriate values for a backup path, retention count, and schedule.

   The default value for retention count is 10; you can use 0 for creating unlimited backups.

4. Select the **Scheduled Daily** or **Scheduled Weekly** button, and then specify the schedule details.
5. Click **Apply**.

Database dump backup files are created based on the schedule. You can see the available backup files in the Database Backup page.

What a database restore is

A MySQL database restore is the process of restoring an existing Unified Manager backup file to the same or a different Unified Manager server. You perform the restore operation from the Unified Manager maintenance console.

If you are performing a restore operation on the same (local) system, and the backup files are all stored locally, you can run the restore option using the default location. If you are performing a restore operation on a different Unified Manager system (a remote system), you must copy the backup file, or files, from secondary storage to the local disk before running the restore option.

During the restore process, you are logged out of Unified Manager. You can log in to the system after the restore process is complete.

If you are restoring the backup image to a new server, after the restore operation completes you need to generate a new HTTPS security certificate and restart the Unified Manager server. You will also need to reconfigure SAML authentication settings, if they are required, when restoring the backup image to a new server.

> (i) Old backup files cannot be used to restore an image after Unified Manager has been upgraded to a newer version of software. To save space, all old backup files, except the newest file, are removed automatically when you upgrade Unified Manager.

Related information

[Generating an HTTPS security certificate](#)

[Enabling SAML authentication](#)

[Authentication with Active Directory or OpenLDAP](#)

Restoring a MySQL database backup on a Linux system

If data loss or data corruption occurs, you can restore Unified Manager to the previous stable state with minimum loss of data. You can restore the Unified Manager database to a local or remote Red Hat Enterprise Linux or CentOS system by using the Unified Manager maintenance console.

What you'll need

- You must have the root user credentials for the Linux host on which Unified Manager is installed.
- You must have a user ID and password authorized to log in to the maintenance console of the Unified Manager server.
- You must have copied the Unified Manager backup file and the contents of the database repository directory to the system on which you will perform the restore operation.

  It is recommended that you copy the backup file to the default directory `/data/ocum`-backup. The database repository files must be copied to the `/database-dumps-repo` subdirectory under the `/ocum-backup` directory.

- The backup files must be of `.7z` type.

The restore feature is platform-specific and version-specific. You can restore a Unified Manager backup only on the same version of Unified Manager. You can restore a Linux backup file or a virtual appliance backup file to a Red Hat Enterprise Linux or CentOS system.

> 💡 If the backup folder name contains a space, you must include the absolute path or relative path in double quotation marks.

Steps

1. If you are performing a restore onto a new server, after installing Unified Manager do not launch the UI or configure any clusters, users, or authentication settings when the installation is complete. The backup file populates this information during the restore process.

2. Using Secure Shell, connect to the IP address or fully qualified domain name of the Unified Manager system.

3. Log in to the system with the maintenance user (umadmin) name and password.

4. Enter the command `maintenance_console` and press Enter.

5. In the maintenance console **Main Menu**, enter the number for the **Backup Restore** option.

6. Enter the number for the **Restore MySQL Backup**.

7. When prompted, enter the absolute path of the backup file.

```
Bundle to restore from: /data/ocum-
backup/UM_9.8.N151113.1348_backup_rhel_02-20-2020-04-45.7z
```

After the restore operation is complete, you can log in to Unified Manager.

After you restore the backup, if the OnCommand Workflow Automation server does not work, perform the following steps:

1. On the Workflow Automation server, change the IP address of the Unified Manager server to point to the latest machine.

2. On the Unified Manager server, reset the database password if the acquisition fails in step 1.

Restoring a MySQL database backup on Windows

In case of data loss or data corruption, you can use the restore feature to restore Unified Manager to the previous stable state with minimal loss. You can restore the Unified Manager MySQL database to a local Windows system or a remote Windows system by using the Unified Manager maintenance console.

What you'll need

- You must have Windows administrator privileges.

- You must have copied the Unified Manager backup file and the contents of the database repository directory to the system on which you will perform the restore operation.

  It is recommended that you copy the backup file to the default directory `\ProgramData\NetApp\OnCommandAppData\ocum\backup`. The database repository files must be copied to the `\database_dumps_repo` subdirectory under the `\backup` directory.

- The backup files must be of `.7z` type.

The restore feature is platform-specific and version-specific. You can restore a Unified Manager MySQL backup only on the same version of Unified Manager, and a Windows backup can be restored only on a Windows platform.

> 💡 If the folder names contain a space, you must include the absolute path or relative path of the backup file in double quotation marks.

Steps

1. If you are performing a restore onto a new server, after installing Unified Manager do not launch the UI or configure any clusters, users, or authentication settings when the installation is complete. The backup file populates this information during the restore process.

2. Log in to the Unified Manager system with administrator credentials.

3. Launch PowerShell as a Windows administrator.

4. Enter the command `maintenance_console` and press Enter.

5. In the maintenance console **Main Menu**, enter the number for the **Backup Restore** option.

6. Enter the number for the **Restore MySQL Backup**.

7. When prompted, enter the absolute path of the backup file.

   ```
   Bundle to restore from:
   \ProgramData\NetApp\OnCommandAppData\ocum\backup\UM_9.8.N151118.2300_bac
   kup_windows_02-20-2020-02-51.7z
   ```

   After the restore operation is complete, you can log in to Unified Manager.

After you restore the backup, if the OnCommand Workflow Automation server does not work, perform the following steps:

1. On the Workflow Automation server, change the IP address of the Unified Manager server to point to the latest machine.

2. On the Unified Manager server, reset the database password if the acquisition fails in step 1.

Backup and restore using NetApp Snapshots

A NetApp Snapshot copy creates a point-in-time image of the Unified Manager database and configuration files that you can use to restore in case of a system failure or data loss. You schedule a Snapshot copy to be written to a volume on one of your ONTAP clusters periodically so that you always have a current copy.

> ℹ️ This functionality is not available for Active IQ Unified Manager installed on a virtual appliance.

Configuring backup on Linux

If your Active IQ Unified Manager is installed on a Linux machine, then you can decide to configure your backup and restore using NetApp Snapshots.

Snapshot copies take very little time, usually just a few minutes, and the Unified Manager database is locked for a very short timeframe, so there is very little disruption to your installation. The image consumes minimal storage space and incurs negligible performance overhead because it records only changes to files since the last Snapshot copy was made. Because the Snapshot is created on an ONTAP cluster, you can take advantage of other NetApp features such as SnapMirror to create secondary protection, if needed.

Before beginning a backup operation, Unified Manager performs an integrity check to verify that the destination system is available.

> ℹ️ • You can restore a Snapshot copy only on the same version of Active IQ Unified Manager.
>
>   For example, if you created a backup on Unified Manager 9.9, the backup can be restored only on Unified Manager 9.9 systems.
>
>   • If there is any change in the Snapshot configuration, it might cause the snapshot to be invalid.

Configuring Snapshot copy location

You can configure the volume where Snapshot copies will be stored on one of your ONTAP clusters using ONTAP System Manager or using the ONTAP CLI.

What you'll need

The cluster, storage VM, and volume must meet the following requirements:

- Cluster requirements:
    - ONTAP 9.3 or greater must be installed
    - It should be geographically close to the Unified Manager server
    - It can be monitored by Unified Manager, but it is not required
- Storage VM requirements:
    - The name switch and name mapping must be set to use "files"
    - Local users created to correspond with client-side users
    - Make sure All Read/Write access is selected
    - Make sure that Superuser Access is set to "any" in the export policy
    - NFS for NetApp Snapshot for Linux
    - NFSv4 must be enabled on the NFS server and NFSv4 ID domain specified on the client and storage VM
    - The volume should be at least double the size of the Unified Manager/opt/netapp/data directory

      Use the command du -sh /opt/netapp/data/ to check the current size.
- Volume requirements:
    - The volume should be at least double the size of the Unified Manager /opt/netapp/data directory
    - The security style must be set to UNIX
    - The local snapshot policy must be disabled
    - Volume autosize should be enabled

◦ The performance service level should be set to a policy with high IOPS and low latency, such as "Extreme"

For detailed steps to create the NFS volume, see How to configure NFSv4 in ONTAP 9 and the ONTAP 9 NFS Configuration Express Guide.

Specifying the destination location for Snapshot copies

You should configure the destination location for Active IQ Unified Manager Snapshot copies on a volume that you have already configured in one of your ONTAP clusters. You should use maintenance console to define the location.

- You must have the root user credentials for the Linux host on which Active IQ Unified Manager is installed.
- You must have a user ID and password authorized to log in to the maintenance console of the Unified Manager server.
- You must have the Cluster Management IP address, the name of the storage VM, the name of the volume, and the storage system user name and password.
- You must have mounted the volume to the Active IQ Unified Manager host, and you must have the mount path.

Steps

1. Use Secure Shell to connect to the IP address or FQDN of the Active IQ Unified Manager system.

2. Log in to the system with the maintenance user (umadmin) name and password.

3. Enter the command `maintenance_console` and press Enter.

4. In the maintenance console **Main Menu**, enter the number for the **Backup Restore** option.

5. Enter the number for **Configure NetApp Snapshot Backup**.

6. Enter the number to configure NFS.

7. Review the information that you will need to provide and then enter the number for **Enter Backup Configuration Details**.

8. To identify the volume where the Snapshot will be written, enter the IP address of the Cluster Management interface, the name of the storage VM, the name of the volume, LUN name, the storage system user name and password, and the mount path.

9. Verify this information and enter `y`.

   The system performs the following tasks:

   ◦ Establishes the connection to the cluster

   ◦ Stops all the services

   ◦ Creates a new directory in the volume and copies the Active IQ Unified Manager database configuration files

   ◦ Deletes the files from Active IQ Unified Manager and creates a symlink to the new database directory

   ◦ Restarts all the services

10. Exit the maintenance console and launch the Active IQ Unified Manager interface to create a schedule for the Snapshot copy if you have not already done this.

Configuring backup on Windows

Active IQ Unified Manager supports backup and restore using NetApp Snapshots on Windows operating system with the help of LUN using iSCSI protocol.

Snapshot based backup can be taken while all UM services are running. A consistent state of database is captured as part of the Snapshot as the backup puts a global read lock on the entire database that prevents any concurrent write. For your Unified Manager system installed on Windows OS to perform backup and restore using NetApp Snapshots, you should first configure Unified Manager backup to Snapshot based using the maintenance console.

Before you configure Unified Manager for creating Snapshot copies, you should perform the following configuration tasks.

- Configure ONTAP cluster
- Configure Windows host machine

Configuring backup location for Windows

You should configure the volume for storing Snapshot copies after backing up Unified Manager on Windows.

What you'll need

The cluster, storage VM, and volume must meet the following requirements:

- Cluster requirements:
  - ONTAP 9.3 or greater must be installed
  - It should be geographically close to the Unified Manager server
  - It is monitored by Unified Manager
- Storage VM requirements:
  - iSCSI connectivity on ONTAP cluster
  - iSCSI protocol must be enabled for the configured machine
  - You should have a dedicated volume and LUN for backup configuration. The selected volume should contain only one LUN and nothing else.
  - The size of the LUN should be at least twice the data size expected to be handled in the 9.9 Active IQ Unified Manager.

    This sets the same size requirement on volume as well.

  - Make sure All Read/Write access is selected
  - Make sure that Superuser Access is set to "any" in the export policy
- Volume and LUN requirements:
  - The volume should be at least double the size of the Unified Manager MySQL data directory.
  - The security style must be set to Windows
  - The local snapshot policy must be disabled
  - Volume autosize should be enabled

◦ The performance service level should be set to a policy with high IOPS and low latency, such as "Extreme"

Configuring ONTAP cluster

You need to perform few pre-configuration steps on ONTAP clusters before you can back up and restore Active IQ Unified Manager using Snapshot copy on Windows systems.

You can configure ONTAP cluster using either the command prompt or System Manager user interface. The configuration of ONTAP cluster involves configuring Data LIFs to be available to be assigned as iSCSI LIFs to the storage VM. The next step is to configure an iSCSI enabled storage VM using the System Manager user interface. You will need to configure a static network route for this storage VM to control how LIFs use the network for outbound traffic.

> ⓘ You should have a dedicated volume and a LUN for backup configuration. The selected volume should include only one LUN. The size of the LUN should be at least twice the data size expected to be handled by Active IQ Unified Manager.

You need to perform the following configuration:

Steps

1. Configure a iSCSI enabled storage VM or use an existing storage VM that has the same configuration.

2. Configure a network route for the configured storage VM.

3. Configure a volume of appropriate capacity and a single LUN inside ensuring that the volume is dedicated only for this LUN.

   > ⓘ In a scenario when the LUN is created on System Manager, unmapping the LUN might delete the igroup, and restore might fail. To avoid this scenario, ensure that while creating a LUN, it is created explicitly and is not deleted when the LUN is unmapped.

4. Configure an initiator group in the storage VM.

5. Configure a port set.

6. Integrate the igroup with the portset.

7. Map the LUN to the igroup.

Configuring Windows host machine

You need to configure your Windows host machine before you can use NetApp Snapshot to back up and restore Active IQ Unified Manager.

To start the Microsoft iSCSI initiator on a Windows host machine, type "iscsi" in the search bar and click **iSCSI Initiator**.

What you'll need

You should clean up any previous configurations on the host machine.

If you are trying to start the iSCSI initiator on a fresh installation of Windows, you are prompted for confirmation, and on your confirmation, the iSCSI Properties dialog box is displayed. If it is an existing Windows installation, then the iSCSI Properties dialog box displayed with a target that is either inactive or

trying to connect. So, you will need to ensure that all the previous configurations on the Windows host are removed.

Steps

1. Clean up any previous configurations on the host machine.

2. Discover the target portal.

3. Connect to the target portal.

4. Connect using multipath to the target portal.

5. Discover both the LIFs.

6. Discover the LUN configured in the Windows machine as a device.

7. Configure the discovered LUN as a new volume drive in Windows.

Specifying the destination location for Snapshot copies on Windows

You should configure the destination location for Active IQ Unified Manager Snapshot copies on a volume that you have already configured in one of your ONTAP clusters. You should use maintenance console to define the location.

- You must have the administrator privilege for Windows host on which Active IQ Unified Manager is installed.

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

- You must have the Cluster Management IP address, the name of the storage VM, the name of the volume, LUN name, and the storage system user name and password.

- You must have mounted the volume as a network drive to the Active IQ Unified Manager host, and you must have the mount drive.

Steps

1. Using Power Shell, connect to the IP address or fully qualified domain name of the Active IQ Unified Manager system.

2. Log in to the system with the maintenance user (umadmin) name and password.

3. Enter the command `maintenance_console` and press Enter.

4. In the maintenance console **Main Menu**, enter the number for the **Backup Restore** option.

5. Enter the number for **Configure NetApp Snapshot Backup**.

6. Enter the number to configure iSCSI.

7. Review the information that you will need to provide and then enter the number for **Enter Backup Configuration Details**.

8. To identify the volume where the Snapshot will be written, enter the IP address of the Cluster Management interface, the name of the storage VM, the name of the volume, LUN name, the storage system user name and password, and the mount drive.

9. Verify this information and enter `y`.

    The system performs the following tasks:

    ◦ Storage VM is validated

- Volume is validated
- Mount drive and status is validated
- LUN existence and status
- Network drive existence
- Existence of recommend space (more than twice of mysql data directory) at mounted volume is validated
- LUN path corresponding to the dedicated LUN in the volume
- igroup name
- GUID of the volume where the network drive is mounted
- iSCSI initiator used to communicate with ONTAP

10. Exit the maintenance console and launch the Active IQ Unified Manager interface to create a schedule for the Snapshot copies.

Configuring backup by Snapshot copy from maintenance console

To take Active IQ Unified Manager backup by using Snapshot copy, you should perform a few configuration steps from the maintenance console.

What you'll need

You should have the following details for your system:

- Cluster IP address
- Storage VM name
- Volume name
- LUN name
- Mount path
- Storage system credentials

Steps

1. Access the maintenance console of Unified Manager.
2. Enter 4 to select **Backup Restore**.
3. Enter 2 to select **Backup and Restore using NetApp Snapshot**.

   (i) If you want to change the backup configuration, then enter 3 for selecting **Update NetApp Snapshot Backup Configuration**. You can only update the password.

4. From the menu, enter 1 to select the **Configure NetApp Snapshot Backup**.
5. Enter 1 to provide the required information.
6. Provide the username and password for the maintenance console, and then provide the confirmation that LUN is mounted on host.

   The process then verifies that the data directory, LUN path, storage VM, volumes, space availability, drive, and so on provided by you are correct. The operations that proceed in the background are:

◦ Services are stopped

◦ Database directory is moved to mounted storage

◦ Database directory is deleted and symlinks are established

◦ Services are restarted After the configuration completes in the Active IQ Unified Manager interface, the backup type is modified to NetApp Snapshot and reflects in the user interface as Database backup (Snapshot based).

Before beginning a backup operation, you must check whether there is any change in the Snapshot configuration because it might cause the snapshot to be invalid. Suppose you configured backup in G drive and Snapshot taken. You later reconfigured the backup to E drive and data is saved to E drive as per the new configuration. If you try to restore Snapshot taken while it was in G drive, it fails with error that G drive does not exist.

Defining a backup schedule for Linux and Windows

You can configure the schedule at which Unified Manager Snapshot copies are created by using the Unified Manager UI.

What you'll need

- You must have the Operator, Application Administrator, or Storage Administrator role.
- You must have configured the settings for creating Snapshot copies from the maintenance console to identify the destination where the snapshots will be created.

Snapshot copies are created in just a few minutes and the Unified Manager database is locked only for few seconds.

ⓘ Backup taken during initial 15 days of a new cluster addition might not be accurate enough to get the historical performance data.

Steps

1. In the left navigation pane, click **General** > **Database Backup**.
2. In the **Database Backup** page, click **Backup Settings**.
3. Enter the maximum number of Snapshot copies that you want to retain in the **Retention Count** field.

   The default value for retention count is 10. The maximum number of Snapshot copies is determined by the version of ONTAP software on the cluster. You can leave this field blank to implement the maximum value regardless of ONTAP version.

4. Select the **Scheduled Daily** or **Scheduled Weekly** button, and then specify the schedule details.
5. Click **Apply**.

Snapshot copies are created based on the schedule. You can see the available backup files in the Database Backup page.

Because of the importance of this volume and the snapshots, you may want to create one or two alerts for this volume so you are notified when either:

- The volume space is 90% full. Use the event **Volume Space Full** to set up the alert.

You can add capacity to the volume using ONTAP System Manager or the ONTAP CLI so that the Unified Manager database does not run out of space.

- The number of snapshots is close to reaching the maximum number. Use the event **Too Many Snapshot Copies** to set up the alert.

  You can delete older snapshots using ONTAP System Manager or the ONTAP CLI so that there is always room for new Snapshot copies.

You configure alerts in the Alert Setup page.

Restoring Unified Manager by using Snapshot copies for Linux and Windows

If data loss or data corruption occurs, you can restore Unified Manager to the previous stable state with minimum loss of data. You can restore the Unified Manager Snapshot database to a local or remote operating system by using the Unified Manager maintenance console.

What you'll need

- You must have the root user credentials for the Linux host and administrative privileges for Windows host machine on which Unified Manager is installed.
- You must have a user ID and password authorized to log in to the maintenance console of the Unified Manager server.

The restore feature is platform-specific and version-specific. You can restore a Unified Manager backup only on the same version of Unified Manager.

Steps
1. Connect to the IP address or fully qualified domain name of the Unified Manager system.

    - Linux: Secure Shell
    - Windows: Power Shell

2. Log in to the system with the root user credentials.
3. Enter the command `maintenance_console` and press Enter.
4. In the maintenance console **Main Menu**, enter 4 for the **Backup Restore** option.
5. Enter 2 for selecting **Backup and Restore using NetApp Snapshot**.

    If you are performing a restore onto a new server, after installing Unified Manager do not launch the UI or configure any clusters, users, or authentication settings when the installation is complete. Enter 1 for selecting **Configure NetApp Snapshot Backup** and configure the settings for Snapshot copies as they are on the original system.

6. Enter 3 for selecting **Restore using NetApp Snapshot**.
7. Select the Snapshot copy from which you want to restore Unified Manager. Press **Enter**.
8. After the restore process is complete, log in to the Unified Manager user interface.

After you restore the backup, if the Workflow Automation server does not work, perform the following steps:

1. On the Workflow Automation server, change the IP address of the Unified Manager server to point to the

latest machine.

2. On the Unified Manager server, reset the database password if the acquisition fails in step 1.

Modifying the backup type

If you want to change the type of backup for your Active IQ Unified Manager system, then you can use the maintenance console options. The **Unconfigure NetApp Snapshot Backup** option enables you to fall back to the MySQL based backup.

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.

Steps

1. Access the maintenance console.

2. Select 4 from the **Main Menu** for backup and restore.

3. Select 2 from the **Backup and Restore Menu**.

4. Select 4 for **Unconfigure NetApp Snapshot Backup**.

   The actions that are performed are displayed which are, stop the services, break the symlink, move the data from storage to directory, and then start the services again.

   After the backup method is modified, the backup mechanism is changed from Snapshot copy to default MySQL backup. This change appears in the Database Backup section of the General settings.

On-demand backup for Unified Manager

You can use the Active IQ Unified Manager user interface to generate on demand backup whenever required. The on-demand backup enables you to instantaneously create a backup using the existing backup method. The on-demand backup does not differentiate between MySQL or NetApp Snapshot based backup.

You can perform on-demand backup using the **Backup Now** button on the Database Backup page. The on-demand backup does not depend on the schedules that you have configured for Active IQ Unified Manager.

Migrating a Unified Manager virtual appliance to a Linux system

You can restore a Unified Manager MySQL database dump backup from a virtual appliance to a Red Hat Enterprise Linux or CentOS Linux system if you want to change the host operating system on which Unified Manager is running.

What you'll need

- On the virtual appliance:
  - You must have the Operator, Application Administrator, or Storage Administrator role.

- ◦ You must know the name of the Unified Manager maintenance user for the restore operation.
- • On the Linux system:
  - ◦ You must have installed Unified Manager on a Linux server following the instructions in Installing Unified Manager on Linux systems.
  - ◦ The version of Unified Manager on this server must be the same as the version on the virtual appliance from which you are using the backup file.
  - ◦ Do not launch the UI or configure any clusters, users, or authentication settings on the Linux system after installation. The backup file populates this information during the restore process.
  - ◦ You must have the root user credentials for the Linux host.

These steps describe how to create a backup file on the virtual appliance, copy the backup files to the Red Hat Enterprise Linux or CentOS system, and then restore the database backup to the new system.

Steps

1. On the virtual appliance, click **Management** > **Database Backup**.

2. In the **Database Backup** page, click **Backup Settings**.

3. Change the backup path to /jail/support.

4. In the Schedule section, select **Scheduled Daily**, and enter a time a few minutes past the current time so that the backup is created shortly.

5. Click **Apply**.

6. Wait a few hours for the backup to be generated.

   A full backup can be over 1 GB and can take three to four hours to complete.

7. Log in as the root user to the Linux host on which Unified Manager is installed and copy the backup files from /support on the virtual appliance using SCP.`root@<rhel_server>:/# scp -r admin@<vapp_server_ip_address>:/support/* .`

   `root@ocum_rhel-21:/# scp -r admin@10.10.10.10:/support/* .`

   Make sure you have copied the .7z backup file and all the .7z repository files in the /database-dumps-repo subdirectory.

8. At the command prompt, restore the backup: `um backup restore -f /<backup_file_path>/<backup_file_name>`

   `um backup restore -f /UM_9.7.N151113.1348_backup_unix_02-12-2019-04-16.7z`

9. After the restore operation completes, log in to the Unified Manager web UI.

You should perform the following tasks:

- • Generate a new HTTPS security certificate and restart the Unified Manager server.
- • Change the backup path to the default setting for your Linux system (/data/ocum-backup), or to a new path of your choice, because there is no /jail/support path on the Linux system.
- • Reconfigure both sides of your Workflow Automation connection, if WFA is being used.
- • Reconfigure SAML authentication settings, if you are using SAML.

After you have verified that everything is running as expected on your Linux system, you can shut down and remove the Unified Manager virtual appliance.