



# **Backup and restore using a MySQL database dump**

**Active IQ Unified Manager 9.9**

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# Backup and restore using a MySQL database dump

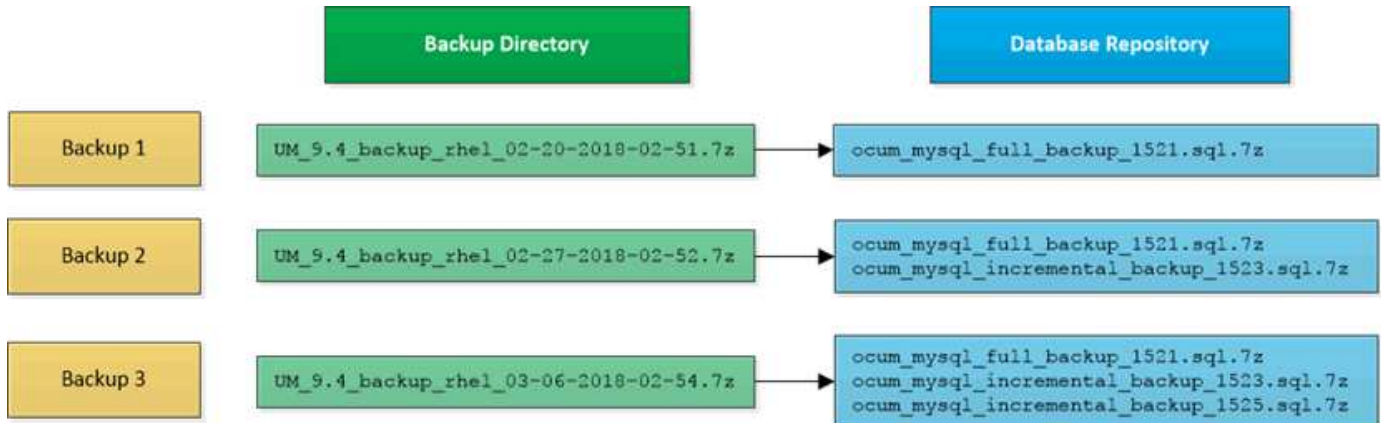
A MySQL database dump backup is a copy of the Active IQ Unified Manager database and configuration files that you can use in case of a system failure or data loss. You can schedule a backup to be written to a local destination or to a remote destination. It is highly recommended that you define a remote 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. For Red Hat Enterprise Linux, CentOS Linux systems or Windows, you can use the NetApp Snapshot backup method if Active IQ Unified Manager is managing a large number of cluster and nodes, or if your MySQL backups are taking many hours to complete.

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.

## Before you begin

- 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.

## About this task

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 that the number of incremental backup files is getting too large for the space you have allocated for backups, you can create a new full backup periodically to replace the old full backup and all of its' child incremental files. As another option, you may want to start using the NetApp Snapshot backup method if Unified Manager is installed on a Linux system.
- 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**.

## Results

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.



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.

## 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.

### Before you begin

- 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.

## About this task

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 finish

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.

## Before you begin

- 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.

## About this task

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 finish

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.



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