



Adding disk space to the Unified Manager database directory

Active IQ Unified Manager 9.8

NetApp
February 20, 2023

Table of Contents

- Adding disk space to the Unified Manager database directory 1
 - Adding space to the data disk of the VMware virtual machine..... 1
 - Adding space to the data directory of the Linux host..... 2
 - Adding space to the logical drive of the Microsoft Windows server..... 3

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 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.

Before you begin

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

About this task

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.

Before you begin

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

About this task

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 750 GB through LVM commands or by adding extra disks.



Mounting the `/opt/netapp/data` directory on an NFS or CIFS share is not supported.

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.

Before you begin

You must have Windows administrator privileges.

About this task

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 |

Copyright information

Copyright © 2023 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.