



Installing or upgrading the ONTAP Mediator service

ONTAP MetroCluster

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Installing or upgrading the ONTAP Mediator service

To install the ONTAP Mediator service, you must ensure all prerequisites are met, get the installation package and run the installer on the host.

Before you begin

You must meet the following prerequisites.

Mediator version	Supported Linux versions
1.3	Red Hat Enterprise Linux or CentOS 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3
1.2	Red Hat Enterprise Linux or CentOS 7.6, 7.7, 7.8, 8.0, 8.1



The kernel version must match the operating system version.

- 64-bit physical installation or virtual machine
- 8 GB RAM
- User: Root access

The best practices for installing Red Hat Enterprise Linux or CentOS and the associated repositories on your system are listed below. Systems installed or configured differently might require additional steps.

- You must install Red Hat Enterprise Linux or CentOS according to Red Hat best practices.
- While installing the ONTAP Mediator service on Red Hat Enterprise Linux or CentOS, the system must have access to the appropriate repository so that the installation program can access and install all the required software dependencies.
- For the yum installer to find dependent software in the Red Hat Enterprise Linux repositories, you must have registered the system during the Red Hat Enterprise Linux installation or afterwards by using a valid Red Hat subscription.

See the Red Hat documentation for information about the Red Hat Subscription Manager.

- The following ports must be unused and available for the Mediator:
 - 31784
 - 3260
- If using a third-party firewall: refer to [Firewall requirements for ONTAP Mediator](#)
- If the Linux host is in a location without access to the internet, you can either install the packages manually or you must ensure that the required packages are available in a local repository.

You can use the following link for information about setting up a repository.

If you are using Link Aggregation Control Protocol (LACP) in a Linux environment, you must correctly configure the kernel and make sure the `sysctl net.ipv4.conf.all.arp_ignore` is set to "2".

The following packages are required by the ONTAP Mediator service:

All RHEL/CentOS versions	Additional packages for RHEL/CentOS 7.x	Additional packages for RHEL/CentOS 8.x
<ul style="list-style-type: none"> • openssl • openssl-devel • kernel-devel • gcc • libselinux-utils • make • redhat-lsb-core • patch • bzip2 • python36 • python36-devel • perl-Data-Dumper • perl-ExtUtils-MakeMaker • python3-pip 	<ul style="list-style-type: none"> • policycoreutils-python • python36-pip 	<ul style="list-style-type: none"> • elfutils-libelf-devel • policycoreutils-python-utils

- If signature verification is configured, it must be disabled. This can be done in one of two ways:
 - If the UEFI SecureBoot mechanism is configured, disable it.
 - Disable the signature verification mechanism by updating and regenerating the grub.cfg file:
 - i. Open the /etc/default/grub file.
 - ii. Add the string module.sig_enforce=0 to the end of the GRUB_CMDLINE_LINUX statement.
 - iii. Regenerate the grub.cfg file to implement the change:

```
update-bootloader || update-grub || grub2-mkconfig -o
/boot/grub2/grub.cfg
```

- iv. Reboot the host.

The Mediator installation package is a self-extracting compressed tar file that includes:

- An RPM file containing all dependencies that cannot be obtained from the supported release's repository.
- An install script.

A valid SSL certification is recommended, as documented in this procedure.

This procedure is used for an installation or an upgrade of an existing installation.

[Guidelines for upgrading the ONTAP Mediator in a MetroCluster configuration](#)

Enable access to the repositories

If your operating system is...	You must provide access to these repositories...
RHEL 7.x	rhel-7-server-optional-rpms
CentOS 7.x	C7.6.1810 - Base repository
RHEL 8.x	<ul style="list-style-type: none">• rhel-8-for-x86_64-baseos-rpms• rhel-8-for-x86_64-appstream-rpms
CentOS 8.0	kernel-devel

Enable access to the repositories listed above so Mediator can access the required packages during the installation process. Use the procedure below for your operating system.

- Procedure for [RHEL 7.x](#) operating system.
- Procedure for [RHEL 8.x](#) operating system.
- Procedure for [CentOS 7.x](#) operating system.
- Procedure for [CentOS 8.0.1095 or later](#) operating system.

Procedure for RHEL 7.x operating system

If your operating system is **RHEL 7.x**:

Steps

1. Subscribe to the required repository:

```
subscription-manager repos --enable rhel-7-server-optional-rpms
```

The following example shows the execution of this command:

```
[root@localhost ~]# subscription-manager repos --enable rhel-7-server-optional-rpms
Repository 'rhel-7-server-optional-rpms' is enabled for this system.
```

2. Run the `yum repolist` command.

The following example shows the execution of this command. The "rhel-7-server-optional-rpms" repository should appear in the list.

```
[root@localhost ~]# yum repolist
Loaded plugins: product-id, search-disabled-repos, subscription-manager
rhel-7-server-optional-rpms | 3.2 kB  00:00:00
rhel-7-server-rpms | 3.5 kB  00:00:00
(1/3): rhel-7-server-optional-rpms/7Server/x86_64/group
| 26 kB  00:00:00
(2/3): rhel-7-server-optional-rpms/7Server/x86_64/updateinfo
| 2.5 MB  00:00:00
(3/3): rhel-7-server-optional-rpms/7Server/x86_64/primary_db
| 8.3 MB  00:00:01
repo id                                repo name
status
rhel-7-server-optional-rpms/7Server/x86_64  Red Hat Enterprise Linux 7
Server - Optional (RPMs) 19,447
rhel-7-server-rpms/7Server/x86_64          Red Hat Enterprise Linux 7
Server (RPMs) 26,758
repolist: 46,205
[root@localhost ~]#
```

Procedure for RHEL 8.x operating system

If your operating system is **RHEL 8.x**:

Steps

1. Subscribe to the required repository:

```
subscription-manager repos --enable rhel-8-for-x86_64-baseos-rpms
```

```
subscription-manager repos --enable rhel-8-for-x86_64-appstream-rpms
```

The following example shows the execution of this command:

```
[root@localhost ~]# subscription-manager repos --enable rhel-8-for-
x86_64-baseos-rpms
[root@localhost ~]# subscription-manager repos --enable rhel-8-for-
x86_64-appstream-rpms
Repository 'rhel-8-for-x86_64-baseos-rpms' is enabled for this system.
Repository 'rhel-8-for-x86_64-appstream-rpms' is enabled for this
system.
```

2. Run the `yum repolist` command.

The newly subscribed repositories should appear in the list.

Procedure for CentOS 7.x operating system

If your operating system is **CentOS 7.x**:

Steps

1. Add the C7.6.1810 - Base repository. The C7.6.1810 - Base vault repository contains the kernel-devel package needed for ONTAP Mediator.
2. Add the following lines to /etc/yum.repos.d/CentOS-Vault.repo.

```
[C7.6.1810-base]
name=CentOS-7.6.1810 - Base
baseurl=http://vault.centos.org/7.6.1810/os/$
basearch/gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
enabled=1
```

3. Run the `yum repolist` command.

The following example shows the execution of this command. The CentOS-7.6.1810 - Base repository should appear in the list.

```
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
* base: distro.ibiblio.org
* extras: distro.ibiblio.org
* updates: ewr.edge.kernel.org
C7.6.1810-base | 3.6
kB 00:00:00
(1/2): C7.6.1810-base/x86_64/group_gz | 166
kB 00:00:00
(2/2): C7.6.1810-base/x86_64/primary_db | 6.0
MB 00:00:04
repo id repo name
status
C7.6.1810-base/x86_64 CentOS-7.6.1810 - Base
10,019
base/7/x86_64 CentOS-7 - Base
10,097
extras/7/x86_64 CentOS-7 - Extras
307
updates/7/x86_64 CentOS-7 - Updates
1,010
repolist: 21,433
[root@localhost ~]#
```

Procedure for CentOS 8.0.1905 or later operating system

If your operating system is **CentOS 8.0.1905 or later builds**:

Before you begin

In the [CentOS Vault](#), locate the kernel-devel package that matches your operating system. Because the latest versions of the 8.0 (CentOS 8.0.1905 and later) core reside in the [CentOS Vault](#), you must provide access to the matching kernel-devel package to compile the needed kernel module.

Steps

1. Issue the following command to directly install the kernel-devel package:

```
rpm -i http://vault.centos.org/8.0.1905/BaseOS/x86_64/os/Packages/kernel-devel-$(uname -r).rpm
```



The above command is an example that is specific to CentOS 8.0.1905. Change the path where appropriate for other CentOS 8.x builds.

2. If the system displays an error indicating that the package is already installed, remove the package and try again:
 - a. Remove the kernel-devel package:

```
yum remove kernel-devel
```
 - b. Repeat the `rpm` command shown in [Step 1](#).

Download the Mediator installation package

Steps

1. Download the Mediator installation package from the ONTAP Mediator page.

[ONTAP Mediator download page](#)

2. Confirm that the Mediator installation package is in the target directory:

```
ls
```

```
[root@mediator-host ~]#ls
./ontap-mediator_1.3
```

If you are at a location without access to the internet, you must ensure that the installer has access to the required packages.

3. If necessary, move the Mediator installation package from the download directory to the installation directory on the Linux Mediator host.

Install the ONTAP Mediator installation package

Step

1. Install the Mediator installation package and respond to the prompts as required:

```
./ontap-mediator_1.3
```

The installation process proceeds to create the required accounts and install required packages. If you have a previous version of Mediator installed on the host, you will be prompted to confirm that you want to upgrade.

[Example of ONTAP Mediator installation \(console output\)](#)

Verify the installation

Steps

1. Run the following command to view the status of the ONTAP Mediator services:

```
systemctl
```

```
[root@scspr1915530002 ~]# systemctl status ontap_mediator mediator-scst

• ontap_mediator.service - ONTAP Mediator
   Loaded: loaded
   (/opt/netapp/lib/ontap_mediator/systemd/ontap_mediator.service; enabled;
   vendor preset: disabled)

   Active: active (running) since Thu 2020-06-18 09:55:02 EDT;
   3 days ago

   Main PID: 3559 (uwsgi)

   Status: "uWSGI is ready"

   CGroup: /system.slice/ontap_mediator.service

           \u251c\u25003559
   /opt/netapp/lib/ontap_mediator/pyenv/bin/uwsgi --ini
   /opt/netapp/lib/ontap_mediator/uwsgi/ontap_mediator.ini

           \u251c\u25004510
   /opt/netapp/lib/ontap_mediator/pyenv/bin/uwsgi --ini
   /opt/netapp/lib/ontap_mediator/uwsgi/ontap_mediator.ini

           \u2514\u25004512
   /opt/netapp/lib/ontap_mediator/pyenv/bin/uwsgi --ini
   /opt/netapp/lib/ontap_mediator/uwsgi/ontap_mediator.ini
```

```

Jun 18 09:54:43 scspr1915530002 systemd[1]: Starting ONTAP
Mediator...

Jun 18 09:54:45 scspr1915530002 ontap_mediator[3559]: [uWSGI]
getting INI configuration from
/opt/netapp/lib/ontap_mediator/uwsgi/ontap_mediator.ini

Jun 18 09:55:02 scspr1915530002 systemd[1]: Started ONTAP
Mediator.

    • mediator-scst.service
      Loaded: loaded
            (/opt/netapp/lib/ontap_mediator/systemd/mediator-scst.service; enabled;
            vendor preset: disabled)

      Active: active (running) since Thu 2020-06-18 09:54:51 EDT;
              3 days ago

      Process: 3564 ExecStart=/etc/init.d/scst start (code=exited,
              status=0/SUCCESS)

      Main PID: 4202 (iscsi-scstd)

      CGroup: /system.slice/mediator-scst.service
              \u2514\u25004202 /usr/local/sbin/iscsi-scstd

Jun 18 09:54:43 scspr1915530002 systemd[1]: Starting mediator-
scst.service...

Jun 18 09:54:48 scspr1915530002 iscsi-scstd[4200]:
max_data_seg_len 1048576, max_queued_cmds 2048

Jun 18 09:54:51 scspr1915530002 scst[3564]: Loading and
configuring SCST[ OK ]

Jun 18 09:54:51 scspr1915530002 systemd[1]: Started mediator-
scst.service.

[root@scspr1915530002 ~]#

```

2. Confirm the ports the ONTAP Mediator service is using: netstat

```

[root@scspr1905507001 ~]# netstat -anlt | grep -E '3260|31784'

LISTEN      tcp        0          0 0.0.0.0:31784        0.0.0.0:*
LISTEN      tcp        0          0 0.0.0.0:3260        0.0.0.0:*
LISTEN      tcp6       0          0 :::3260              :::*

```

Result

The ONTAP Mediator service is now installed and running. Further configuration must be performed in the ONTAP storage system to use the Mediator features.

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