

Setting up Initiators

This section explains how to set up application initiators for a KumoScale deployment.

The requirements for **application initiators**, also known as **compute hosts**, depends on whether you are using KumoScale for Application Mode or Managed Mode and the orchestration environment you are using. This section includes the steps common to most orchestration environments:

- [Install the KumoScale Agent on Application Initiators](#)
- [Install the NVMe Patch on Application Initiators](#)

You will need to use the KumoScale REST API, Cluster Manager CLI, Ansible, OpenStack, or CSI interfaces to complete any remaining steps that may be required to successfully implement your design. For complete details on how to use these interfaces see the [KumoScale documentation page](#).

Install the KumoScale Agent on Application Initiators

For both Appliance and Managed mode, you will need to install the KumoScale agent, **ks-agent**, on your application initiators. For instructions on installing the KumoScale agent for

- Ansible: See the [Ansible User Guide](#).
- All other orchestration environments, follow the instructions below:

For all orchestration environments other than Ansible:

- Confirm your servers run either RHEL/CentOS™ 7.x or Ubuntu™ 18.x.
- Copy ssdtoolbox.pem from the KumoScale Provisioner to **/etc/ssl/certs/ssdtoolbox.pem**.
- Confirm the following packages are installed on the initiator:

- mdadm**
- dmidecode**
- nvme-cli**
- util-linux**

- Install the agent according to your operating system:

RHEL/CentOS

```
yum install ks-agent-<major>.<minor>.<release>.x86_64.rpm -y
```

Ubuntu

```
dpkg -i ks-agent_<major>.<minor>.<release>_amd64.deb
```

The **ks-agent** service will start automatically after the installation. To verify status, enter:

```
systemctl status ks-agent.service
```

- Configure the KumoScale agent by updating the value of the parameters in the agent configuration file **/usr/lib/systemd/system/ks-agent.conf**. You will need to provide values for the application's external parameters shown in the table below:

Parameter	Description
PROV_URL	Provisioner full URL
NODE_NAME	Node name - should be unique (within provisioner), start with a letter, no more than 32 chars, and only small letters, numbers and '-'.
PROV_TOKEN	A provisioner token (set if using 'LOCAL' authentication mode)
PROV_CLIENT_ID	The client ID of a client which has ADMIN role in provisioner resource server (set if using 'OPEN_IDC' authentication mode)
PROV_CLIENT_SECRET	The client secret of a client which has ADMIN role in provisioner resource server. (set if using 'OPEN_IDC' authentication mode)
PROV_CLIENT_SCOPE	The client scope (set if using 'OPEN_IDC' authentication mode with ADFS.
AUTH_SERVER_TOKEN_URL	The URL to generate the token on the configured authorization server. (set if using 'OPEN_IDC' authentication mode)

- Restart the agent with

```
systemctl start ks-agent.service
```

Stopping and Starting the KumoScale Agent

To stop the ks-agent service, enter:

```
systemctl stop ks-agent.service
```

To start the ks-agent service, enter:

```
systemctl start ks-agent.service
```

Upgrading the KumoScale Agent

To upgrade the agent using:

RHEL/CentOS

```
rpm -Uvh ks-agent-<major>.<minor>.<release>.x86_64.rpm
```

Ubuntu

```
dpkg -i ks-agent_<major>.<minor>.<release>_amd64.deb
```

Uninstalling the KumoScale Agent

To uninstall the agent using:

RHEL/CentOS, enter

```
rpm -ev ks-agent-<major>.<minor>.<release>.x86_64
```

Ubuntu, enter:

```
dpkg --purge ks-agent
```

NVMe Patch on Application Initiators

The NVMe patch addresses an issue where commands get stuck while Host NVMe-oF controller is in a reconnect state. To verify the patch is installed, run the following on the initiator (compute node).

```
# modinfo nvme-core|grep description
```

If the result is **nvme host KIOXIA patch (compiled 2020-12-01_12-13-59)**, then the patch is installed, otherwise the initiator runs with original kernel module.

If you do not have this patch installed, go to [Install the NVMe Patch on Application Initiators](#).

Next: [Tenant Management](#)