

BEFORE YOU BEGIN

This document describes how to deploy ScaleIO in the following scenario: all management and data communication are on the same network; one Protection Domain; on a fully-converged system. For all other cases and customization options, use the full installation, as described in the *EMC ScaleIO Installation Guide*.

ScaleIO installation enables unlimited use of the product, in **non-production environments**. To obtain a license for production use, and to receive technical support, open a service ticket with EMC Online Support at <https://support.emc.com>.

Before Deploying ScaleIO:

- Read this document in its entirety.
- Install the following packages on all servers that will be in the system: **numactl**, **libaio**
- Select two servers to host the Primary and Secondary MDMs, and install the following packages on both:
 - **mutt** (for Call-Home)
 - **bash-completion** (for CLI completion)
 - Latest version of **Python 2.X**

- Download and extract the following files for this version:

- **ScaleIO Gateway for Linux Download**
- **ScaleIO GUI for Linux Download**
- **ScaleIO <Operating System> Download** (for example **ScaleIO 1.32 RHEL6 Download**)
You can download from the EMC Online Support site (<https://support.emc.com>) or the EMC ScaleIO site (<http://www.emc.com/storage/scaleio/index.htm>).

- Ensure that your system meets the following requirements:

- 3 physical servers, each with:
 - 2 CPUs
 - 1.5 GB available DRAM
 - 100 GB available storage capacity 1 GB network, with connectivity to all nodes that will be used by the system.

ScaleIO Deployment Wizard Steps

- Step 1**—Prepare the Environment
- Step 2**—Start the Deployment
- Step 3**—Monitor the Deployment
- Step 4**—Enable Storage

1 Prepare the Environment

1. On a Linux server, create the Gateway server (includes the Installation Manager) by running the following command (all on one line):

```
GATEWAY_ADMIN_PASSWORD=  
  <new_GW_admin_password> rpm -U  
  /tmp/EMC-ScaleIO-gateway-1.32-  
  XXX.X.noarch.rpm
```

where <new_GW_admin_password> is a password that you define to access the IM

If your Linux IM server has JRE 1.7 or higher, add the **--nodesps** flag.

2. Log in to the Installation Manager/Gateway server:
https://<IM_Server_IP_Address>
(default username: *admin*, and the password created in the previous step).

The Installation Manager **Welcome to ScaleIO** window appears.

ScaleIO Installer

Home Packages Install Monitor Maintain

EMC² ScaleIO

Welcome to ScaleIO

To begin, choose how you would like to install a new ScaleIO system using the Installation Manager

Install using this web interface:

1. Upload the [installation packages](#) to the Installation Manager.
2. Enter the installation details, review them and initiate the installation.
3. [Monitor and approve](#) the installation progress.

OR

Install using the command line:

1. [Download the CLI](#).
2. Run:

```
java -jar install-CLI.jar
```

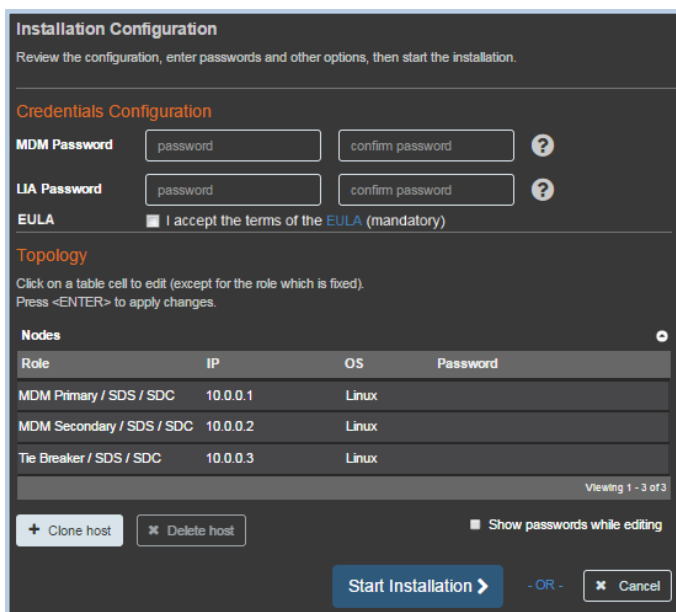
Get Started >

Download CLI

If the **Welcome** window does not appear, see *Troubleshooting* in the *ScaleIO Installation Guide*.

② Start the Deployment

1. Select the **Packages** tab.
 - a. From the **Manage Installation Packages** window, browse to, and select all the extracted ScaleIO component installation packages, then click **Open**.
 - b. Click **Upload**.
The uploaded installation packages appear in the file table.
 - a. Click **Proceed to Install**.
2. In the **Provide Installation Topology** screen, click **Installation wizard**.
The Installation Configuration window appears:
3. In the **Installation Configuration** window, perform the following:
 - a. Enter MDM and LIA passwords. Passwords must meet the following criteria:
 - Length is between 6 and 31 (ASCII-printable) characters
 - No white spaces
 - Must include at least 3 of the following groups: [a-z], [A-Z], [0-9], or special chars (!@#\$...).
 - b. Review, and accept, the end user license agreement.

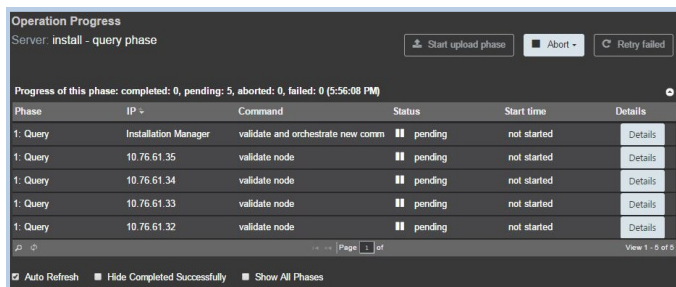


ScaleIO installation enables unlimited use of the product, in **non-production environments**. To obtain a license for production use, and to receive technical support, open a service ticket with EMC Support at <https://support.emc.com>. For complete information on licensing, see the *ScaleIO User Guide*.

- c. In the **Topology** section, enter server information:
 - For each node, change the IP address, select the host operating system, and enter the host password (the password of the *administrator* user).
 - To add more hosts, click **Clone host**. The assigned IP is derived from the IP of the previous host. Each cloned host is enabled to act as an SDS and an SDC.
4. Click **Start Installation**.
A post-installation notice appears. Its content is described in this document.

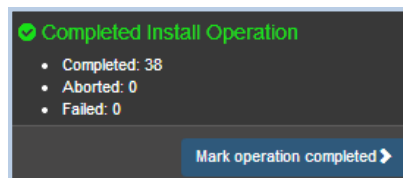
③ Monitor the Deployment

1. Click the **Monitor** tab. The **Install-query** screen appears:
2. When the *Query* phase is complete, click **Start Upload phase**.
3. When the *Upload* phase is complete, click **Start Install phase**.
4. When the *Install* phase is complete, click **Start Configure phase**.
5. When the *Completed Install Operation* message is displayed, click **Mark operation completed**.



The installation performs the following phases: query, upload, install, and configure. After each phase completes, you must approve moving to the next phase.

2. When the *Query* phase is complete, click **Start Upload phase**.



The wizard installation creates one Protection Domain and one Storage Pool, both named *default*. These names are used in the following section.

④ Enable the Storage

After the ScaleIO system is installed, follow these steps to enable using the storage. You must issue these commands from the Primary MDM node, either directly, or via SSH/RDP.

1. Add SDS devices (you can also add devices with the ScaleIO GUI):

- You must add at least one device to at least 3 SDSs, with a minimum of 100 GB free storage capacity per device.
- Balance the total device capacity over all SDSs.

a. Log in, by typing the following command:

```
scli --login --username <MDM_USERNAME> --password <MDM_PASSWORD>
```

b. Add devices, by typing the following command:

```
scli --add_sds_device --sds_ip <IP> --protection_domain_name <NAME>  
--storage_pool_name <NAME> --device_path <DEVICE_PATH>
```

Example: `scli --add_sds_device --sds_ip 192.168.212.10 --protection_domain_name default --storage_pool_name default --device_path /dev/sdX`

Tip: If bash completion isn't enabled, run:
`./etc/bash_completion/scli`

2. Add and map a volume:

a. Add a volume, by typing the following command:

```
scli --add_volume --protection_domain_name <NAME> --storage_pool_name <NAME>  
--size_gb <SIZE> --volume_name <NAME>
```

Example: `scli --add_volume --protection_domain_name default --storage_pool_name default --size_gb 16 --volume_name vol01`

b. Map a volume to an SDC, by typing the following command:

```
scli --map_volume_to_sdc --volume_name <NAME> --sdc_ip <IP>
```

Example: `scli --map_volume_to_sdc --volume_name vol01 --sdc_ip 192.168.212.19`

Tip: Mapped volumes appear to the SDC as `/dev/sciniX` where X is a letter, starting from "a". For more information, see *Mounting ScaleIO* in the ScaleIO documentation.

Now you can start using your storage. For best results, it is recommended to review the *EMC ScaleIO User Guide*. You can use the GUI or the ScaleIO CLI `--query_all` command to see the installed nodes and storage.

Run the GUI Management Software

1. Install the ScaleIO GUI management software, either on the Installation Manager, or another suitable server: 3. Click **Connect**.

- **Linux** (Java 1.6 or higher required, and minimum screen resolution of 1366 x 768)

a. Run the following file:

```
rpm -U EMC-ScaleIO-gui-1.32-XXX.X.noarch.rpm
```

b. Start the GUI (run `/opt/emc/scaleio/gui/run.sh`)

- **Windows** (Java 1.7 or higher required, and minimum screen resolution of 1366 x 768)

a. Run the following file:

```
EMC-ScaleIO-gui-1.32-xxx.x.msi
```

b. Start the GUI (**Start > Programs > EMC ScaleIO GUI**)

2. Log in, by entering the following:

- MDM management IP address
- User name (default: *admin*)
- Password (as defined during installation)

