

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.
- Download and extract the **ScaleIO Complete Windows Software Download** for this version.

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>).

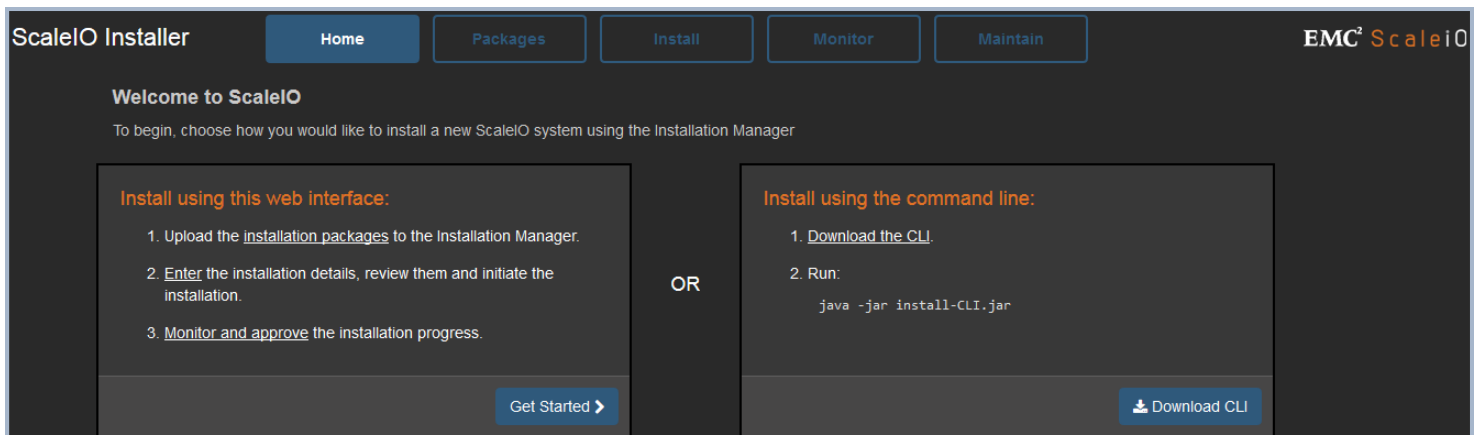
- Ensure that your system meets the following requirements:
 - 3 physical servers, each with:
 - 2 CPUs
 - 1.5 GB available DRAM
 - 100 GB available storage capacity
 - 1 GB network, with connectivity to all nodes that will be used by the system.
- To install SDC on 2008 R2, ensure that Microsoft Security Update KB3033929 is installed.
- Select two servers to host the Primary and Secondary MDMs, and install the following package on both: **PythonModulesInstall.exe**

ScaleIO Deployment Wizard Steps

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

① Prepare the Environment

1. Prepare a Windows server to act as the Installation Manager (IM)/Gateway server:
 - a. Determine whether the Java version installed on this server is 32-bit or 64-bit.
 - b. From the extracted package, install the ScaleIO Gateway that matches your installed Java version. The Gateway includes the Installation Manager.
 - For 64-bit Java, install this file:
EMC-ScaleIO-gateway-1.32-xxx.x-x64.msi
 - For 32-bit Java, install this file:
EMC-ScaleIO-gateway-1.32-xxx.x-x86.msi
 - a. Enter a new **Gateway admin** password, and record the password.
 2. Prepare disks for storage:
 - a. Ensure that devices to be used are on-line, and initialized as MBR or GPT.
 - b. On each disk, use the **Windows Disk Management** to create a new, simple volume. Assign it a drive letter, and select **Do not format this volume**.
 3. 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.



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.

Installation Configuration
Review the configuration, enter passwords and other options, then start the installation.

Credentials Configuration

MDM Password: [password] [confirm password] [?]
LIA Password: [password] [confirm password] [?]
EULA: ☒ I accept the terms of the EULA (mandatory)

Topology
Click on a table cell to edit (except for the role which is fixed). Press <ENTER> to apply changes.

Nodes			
Role	IP	OS	Password
MDM Primary / SDS / SDC	10.0.0.1	Linux	
MDM Secondary / SDS / SDC	10.0.0.2	Linux	
Tie Breaker / SDS / SDC	10.0.0.3	Linux	

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+ Clone host ✕ Delete host ☐ Show passwords while editing

Start Installation > - OR - ✕ Cancel

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- 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:

Operation Progress
Server: install - query phase

Start upload phase Abort Retry failed

Progress of this phase: completed: 0, pending: 5, aborted: 0, failed: 0 (5:56:08 PM)

Phase	IP	Command	Status	Start time	Details
1: Query	Installation Manager	validate and orchestrate new comm	II pending	not started	Details
1: Query	10.76.61.35	validate node	II pending	not started	Details
1: Query	10.76.61.34	validate node	II pending	not started	Details
1: Query	10.76.61.33	validate node	II pending	not started	Details
1: Query	10.76.61.32	validate node	II pending	not started	Details

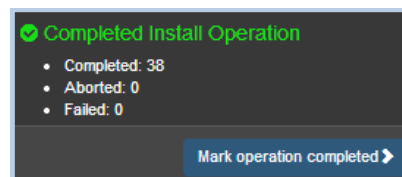
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☒ Auto Refresh ☒ Hide Completed Successfully ☒ Show All Phases

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**.
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 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:

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

- b. Add devices, by typing the following command:

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

Example: cli --add_sds_device --sds_ip 192.168.212.10 --protection_domain_name default
--storage_pool_name default --device_path d

For other options regarding adding Windows devices, see *Adding devices to SDS nodes on Windows servers* in the *ScaleIO Installation Guide*.

2. **Add and map a volume:**

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

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

Example: cli --add_volume --protection_domain_name default --storage_pool_name default
--size_gb 16 --volume_name volo1

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

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

Example: cli --map_volume_to_sdc --volume_name volo1 --sdc_ip 192.168.212.19

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 IM, or another server with Java 1.7 or higher, 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)
3. Click **Connect**.

