Deploy OMNIA Core Container

The OMNIA Core Container is deployed as a SystemD service (omnia\_core.service) on the Omnia Infrastructure Manager (OIM). You can use the omnia.sh script to install, uninstall, and view help on the actions that you can perform on the OMNIA Core Container.

# Prerequisites

Before you deploy the container, ensure the following:

* The OIM has internet access to download necessary packages for cluster deployment and configuration.
* The OIM should have two active Network Interface Cards (NICs):  
  - One connected to the public network.  
  - One dedicated to internal cluster communication.
* Install Podman on the OIM.
* If Network File System (NFS) share is used for the OMNIA shared path, ensure the following:  
  - Ensure the NFS share has 755 permissions and no\_root\_squash is enabled for that mounted NFS share.  
  - Ensure the /etc/exports file on the NFS server has the no\_root\_squash option for the exported path:  
   /<your\_exported\_path> \*(rw,sync,no\_root\_squash,no\_subtree\_check)
* Ensure the following Hostname requirements are fulfilled:  
  - Hostname should not contain the following characters: , (comma), . (period), \_ (underscore).
* Hostname cannot start or end with a hyphen (-).
* No upper case characters are allowed in the hostname.
* Hostname cannot start with a number.
* Hostname and domain name (hostname00000x.domain.xxx) cumulatively cannot exceed 64 characters. For example, if the node\_name provided in /opt/omnia/input/project\_default/provision\_config.yml is ‘node’, and the domain\_name provided is ‘omnia.test’, Omnia will set the hostname of a target cluster node to node000001.omnia.test.

# Install OMNIA Core Container

The omnia.sh --install command is used to deploy the OMNIA Core Container on the Omnia Infrastructure Manager (OIM). This container is managed as a SystemD service (omnia\_core.service) and provides the runtime environment for cluster deployment.

To install the OMNIA Core Container, do the following:

1. On the OIM, run the following command.

./omnia.sh –install

1. When promted for the shared the pathe, Enter the path for the OMNIA shared directory. This can be a local file path or an NFS share path. Press Enter.
2. When prompted for the password, enter a secure alphanumeric password for accessing the OMNIA Core Container. The password must not contain special characters such as \ , | , & , ; , ` , < > , \* , ? , ! , $ , ( ) , { } , [ ] . Press **Enter**.

The omnia.sh script performs the following:

* Downloads the omnia\_core container image.
* Deploys the omnia\_core container as a SystemD service
* Starts the omnia\_core container as a SystemD service.
* Configures required mounts <what mounts?a>
* The script generates SSH key pair and stores them in the /root/.ssh folder for both OIM and the containers.
* Note: Do not delete any key pairs generated by Omnia, from the /root/.ssh, as this leads to Omnia execution failure.
* Initializes the Podman container engine.
* Create the following directories within the OMNIA Core Container:

|  |  |
| --- | --- |
| **Path inside container** | **Purpose** |
| /opt/workdir/omnia | Shared directory, mapped to $omnia\_path in OIM |
| /opt/workdir/omnia/input | Playbook input files |
| omnia | OMNIA source code |
| /opt/workdir/omnia/log/core/playbooks | Playbook execution logs |

Note: Do not manually delete any files from the OMNIA shared directory. Use the ./omnia.sh –uninstall playbook to safely remove the entire OMNIA shared directory.

# Accessing the OMNIA Core Container

You can log into the OMNIA Core Container using either of the following methods:

* Podman: To access the OMNIA Core Container using Podman, run the following command:  
  podman exec -it -u root omnia\_core bash
* SSH: To access the OMNIA Core Container using SSH, run the following command:  
  ssh omnia\_core

**Uninstall OMNIA Core Container**

If you no longer require the OMNIA Core Container or need to perform a clean redeployment, you can use the uninstall option. The omnia.sh --uninstall command removes the omnia\_core container and its associated SystemD service (omnia\_core.service). It also cleans up the Omnia shared directory and generated files, while preserving user-generated files such as inventory and mapping files.

1. On the Omnia Infrastructure Manager (OIM), run the uninstall script:
2. ./omnia.sh --uninstall
3. The script performs the following actions:
   * Stops and removes the omnia\_core container and the omnia\_core.service.
   * Deletes the Omnia shared directory and all Omnia-generated files.
   * Preserves user-generated files (for example, inventory files, mapping files).

**Viewing Help for omnia.sh**

The omnia.sh --help command provides usage instructions for managing the OMNIA Core Container. The help menu lists the supported actions you can perform, such as installing, uninstalling, starting, stopping, or restarting the container service.

1. On the Omnia Infrastructure Manager (OIM), run the help command:
2. ./omnia.sh --help
3. The help menu typically includes:
   * -- install: Deploy the OMNIA Core Container and configure it as a SystemD service.
   * --uninstall: Stop and remove the OMNIA Core Container and associated service.
   * --start: Start the OMNIA Core Container if it is stopped.
   * --stop: Stop the running OMNIA Core Container.
   * --restart: Restart the OMNIA Core Container service.
   * --status: Display the current status of the OMNIA Core Container.
   * --help: Display usage information.