

# Nutanix command-line interface (nCLI) introduction

Overview of nCLI and NCC

# Nutanix command-line interface (nCLI)

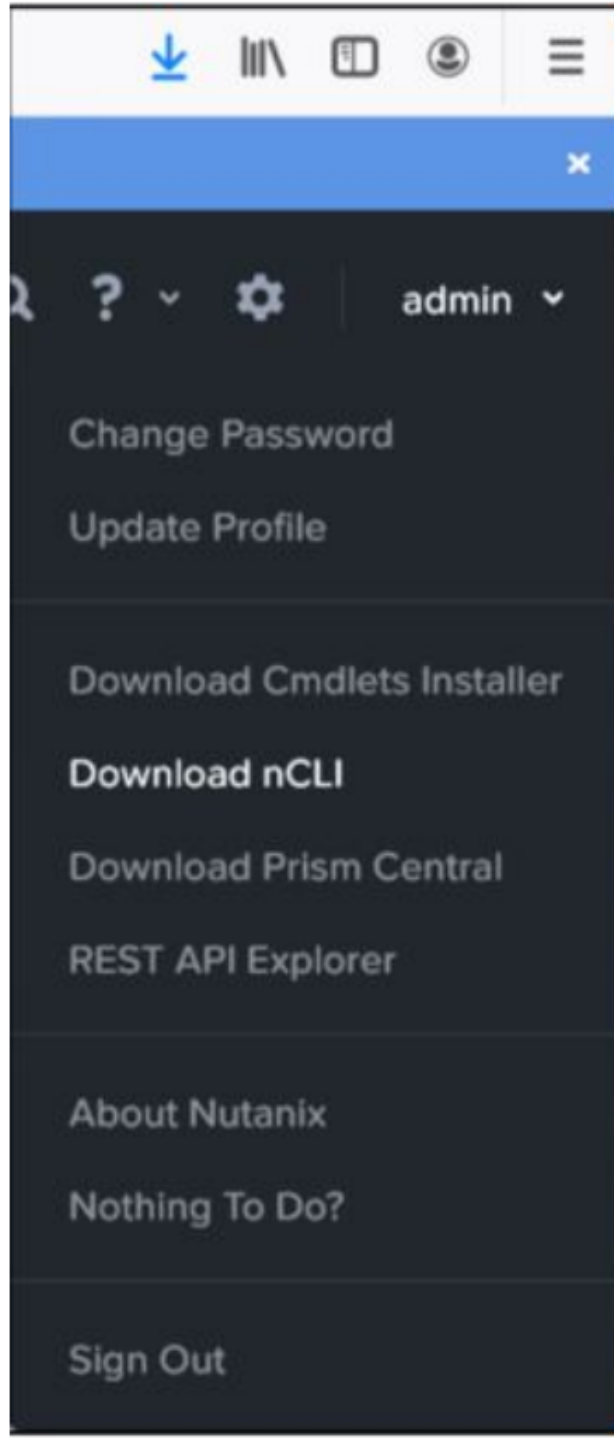
The Nutanix command-line interface (nCLI) allows users to run system administration tasks and get information about the Nutanix cluster from the following machines:

- The user's local machine (by downloading the utility from Prism)
- Any CVM in the cluster

**Note:** For more information about nCLI, refer to the Nutanix Support Portal:  
<https://portal.nutanix.com/#/page/docs/details?targetId=Command-Ref-AOS-v55:man-ncli-c.html>

Users can also log in to the CVM using SSH with any virtual terminal software. The default user name and password is: nutanix / nutanix4u

**Note:** It is suggested that users change their default login password or create another account to use the CVM.



## Basic commands

Command	Action
<code>genesis status</code>	Lists the current statuses of cluster services (and process IDs) on the current CVM – the <code>gs</code> alias can also be used
<code>cluster status</code>	Lists the statuses of cluster services (and process IDs) for all CVMs in the cluster – the <code>cs</code> alias can also be used
<code>ncli</code>	Nutanix command-line interface – <code>ncli</code> commands are used to get status information and configure entities within a cluster
<code>ncli multicluster getcluster-state</code>	This command, when run from the Prism Central virtual machine, will identify whether the Prism Central VM is a single VM, or a scaled out three VM cluster.
<code>ncli cluster info</code>	This command lists the cluster ID, UUID, name, and version. It also displays additional information such as the logging verbosity level, timezone, NCC version, and whether the version is LTS.
<code>ncc --version</code>	Lists the current version of the Nutanix Cluster Checks
<code>ncli cluster version</code>	Lists cluster and <code>ncli</code> version information
<code>free -h</code>	Displays free space in human-readable format
<code>ncc log_collector run_all</code>	Collects logs on all CVMs
<code>sudo reboot</code>	Reboots the PC VM (or CVM) you are currently logged in to
<code>ncc health_checks run_all</code>	Runs all NCC health checks

**Note:** For more information about using commands for problem determination, refer to course [ES42023B - ThinkAgile HX Series: general troubleshooting and PD map](#).

## Nutanix Cluster Check (NCC)

Nutanix Cluster Check (NCC) is a framework of scripts that can help diagnose cluster health. As long as the individual nodes are up, NCC can be run regardless of cluster state.

Depending on the type of information being retrieved, the scripts run standard commands against either the cluster or the nodes.

When run from nCLI, NCC generates a log file with the output of the diagnostic commands selected by the user.

New nodes that are added to expand a Nutanix cluster might not be installed with the latest version of NCC. After adding nodes, users should re-install NCC throughout the cluster.

**Note:** Each node in the cluster must run the same NCC version.

## NCC output

Each NCC plugin is a test that works independently of other plugins. Each test completes with one of the following status types.

- PASS: The tested aspect of the cluster is healthy and no further action is required.
- FAIL: The tested aspect of the cluster is not healthy and must be addressed.
- WARN: The plugin returned an unexpected value and must be investigated.
- INFO: The plugin returned an expected value that cannot be evaluated as either PASS or FAIL.



## Installing NCC from an installer file

Users can download the NCC installation file from the Nutanix support portal under **Downloads > Tools & Firmware**. The file type users should download depends on their NCC version:

- Some NCC versions include a single installer file (ncc\_installer\_filename.sh) that you can download and run from any CVM.
- Some NCC versions include an installer file inside a compressed TAR file (ncc\_installer\_filename.tar.gz) that you must first extract, then run from any CVM.
- The directory to which you copy the installation package should exist on all nodes in the cluster (/home/nutanix is suggested). Additionally, the folder should be owned by any accounts that use NCC.


Click each number in turn to see the installation procedure.

Step



# Installing NCC from an installer file

Step1: Download the installation file to any CVM in the cluster and then copy it to the `/home/nutanix` directory.

Step 

## Installing NCC from an installer file

Step 2: Check the file's MD5 value. It must match the MD5 value published on the support portal. If the values do not match, delete the file and download it again from the support portal.

```
nutanix@cvm$ md5sum ./ncc_installer_filename.sh
```

Step





## Installing NCC from an installer file

Step 3: Work through the following procedure for NCC versions that include a single installer file (`ncc_installer_filename.sh`)

- **Make the installation file executable:** `nutanix@cvm$ chmod u+x ./ncc_installer_filename.sh`
- **Install NCC:** `nutanix@cvm$ ./ncc_installer_filename.sh` The installation script installs NCC on each node in the cluster.

NCC installation file logic tests the NCC TAR file checksum and prevents installation if it detects file corruption.

- If the file is verified, the installation script installs NCC on each node in the cluster.
- If file corruption is detected, the script prevents installation and deletes any extracted files. If this happens, download the file again from the Nutanix support portal.

Step



## Installing NCC from an installer file

Step 4: Work through the following procedure for NCC versions that include an installer file inside a compressed TAR file (`ncc_installer_filename.tar.gz`)

a) Extract the installation package.

```
nutanix@cvm$ tar xvmf ncc_installer_filename.tar.gz --recursive-unlink
```

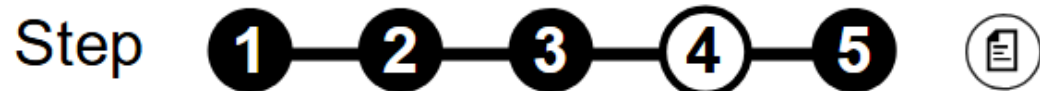
Replace `ncc_installer_filename.tar.gz` with the name of the compressed installation TAR file.

The `--recursive-unlink` option is needed to ensure old installations are completely removed.

b) Run the installation script. Provide the installation TAR file name if it has been moved or renamed.

```
nutanix@cvm$ ./ncc/bin/install.sh [-f install_file.tar]
```

The installation script copies the `install_file.tar` TAR file to each node and installs NCC on each node in the cluster.




# Installing NCC from an installer file

Step 5: Check the output of the installation command for any error messages.

If installation is successful, a **Finished Installation** message will be displayed. You can check any NCC-related messages in `/home/nutanix/data/logs/ncc-output-latest.log`.

In some cases, output similar to that shown below will be displayed. Depending on the NCC version installed, the installation file might log the output to `/home/nutanix/data/logs/` or `/home/nutanix/data/serviceability/ncc`.

```
Copying file to all nodes [ DONE ]
-----+
+-----+
| State | Count |
+-----+
| Total | 1     |
+-----+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
[ info ] Installing ncc globally.
[ info ] Installing ncc on 10.130.45.72, 10.130.45.73
[ info ] Installation of ncc succeeded on nodes 10.130.45.72, 10.130.45.73.
```

Step **1**—**2**—**3**—**4**—**5** 

## Upgrading NCC software

Step 1: Run Nutanix Cluster Checks (NCC).

- From the Prism Web console Health page, select **Actions > Run Checks**. Select **All checks** and click **Run**.
- Log in to a CVM and use nCLI to run `nutanix@cvm$ ncc health_checks run_all`  
If the check reports a status other than PASS, resolve the reported issues before proceeding.

Step 2: Click **Upgrade Software**, and then click **NCC** in the dialog box.

Step 3: If an update is available, click **Upgrade Available** and then **Download**.

Step 4: When the download process is complete, click **Upgrade** and then **Yes** to confirm.

The **Upgrade Software** dialog box shows the progress of your selection.

As part of the installation or upgrade, NCC automatically restarts the cluster health service on each node in the cluster. As a result, users might see notifications or observe other slight anomalies as the service is being restarted.