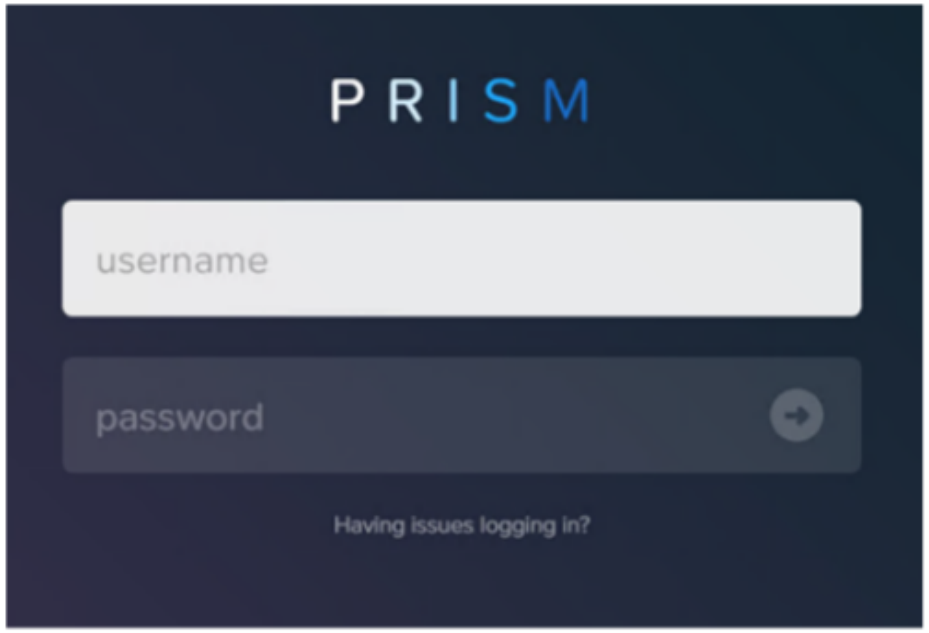
Health check overview

Health checks on the system

Lenovo

Health check overview

System health checks can be performed by using Prism or NCC CLI commands. Users can also manually carry out regular health checks to discover system issues. This section will cover both methods.



Log in to Prism to perform health checks with the console.

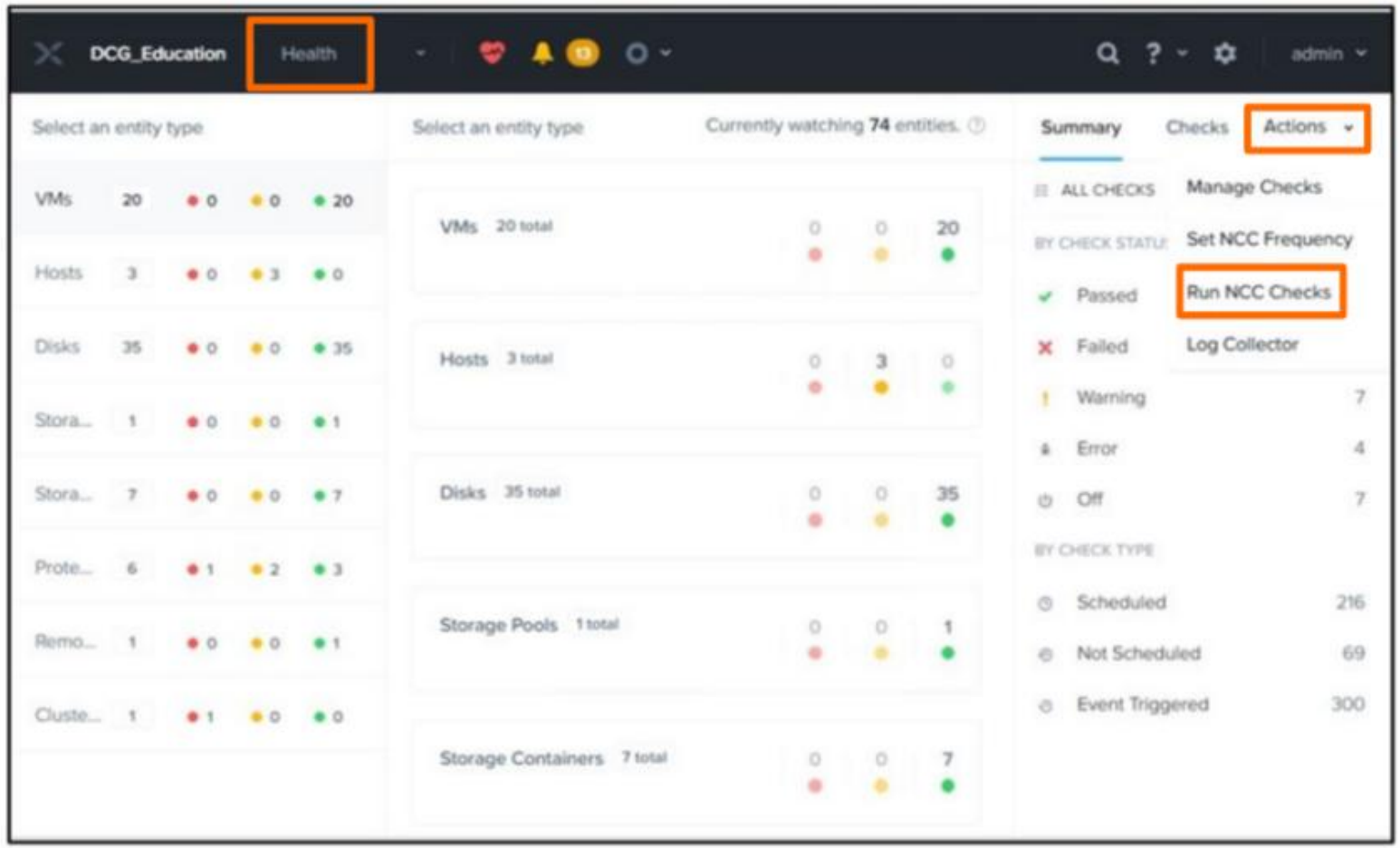
Click each step in turn to see the procedure.

Step 1 2 3 4

Lenovo

Health check overview

On the **Health** dashboard, select **Run NCC Checks** from the **Actions** drop-down menu.



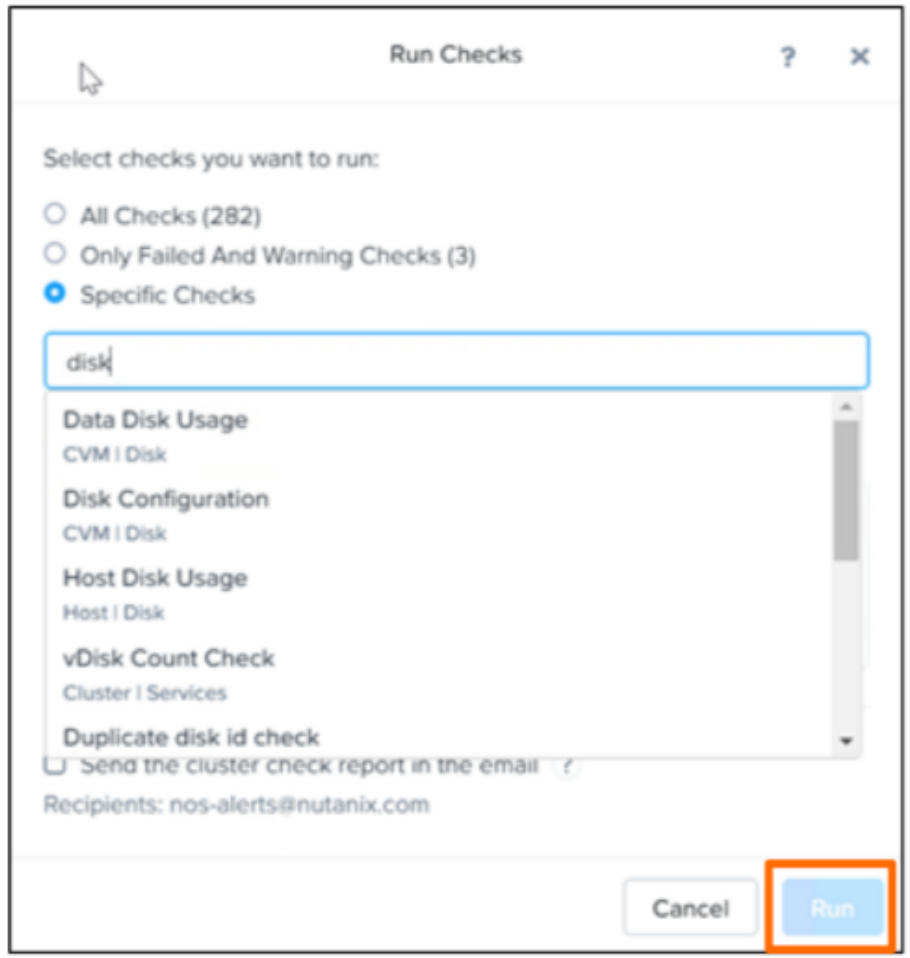
Step 1 2 3 4

Health check overview

Users can select three options:

- **All checks**
- **Only Failed And Warning Checks**
- **Specific Checks** (Users can input any component in this field)

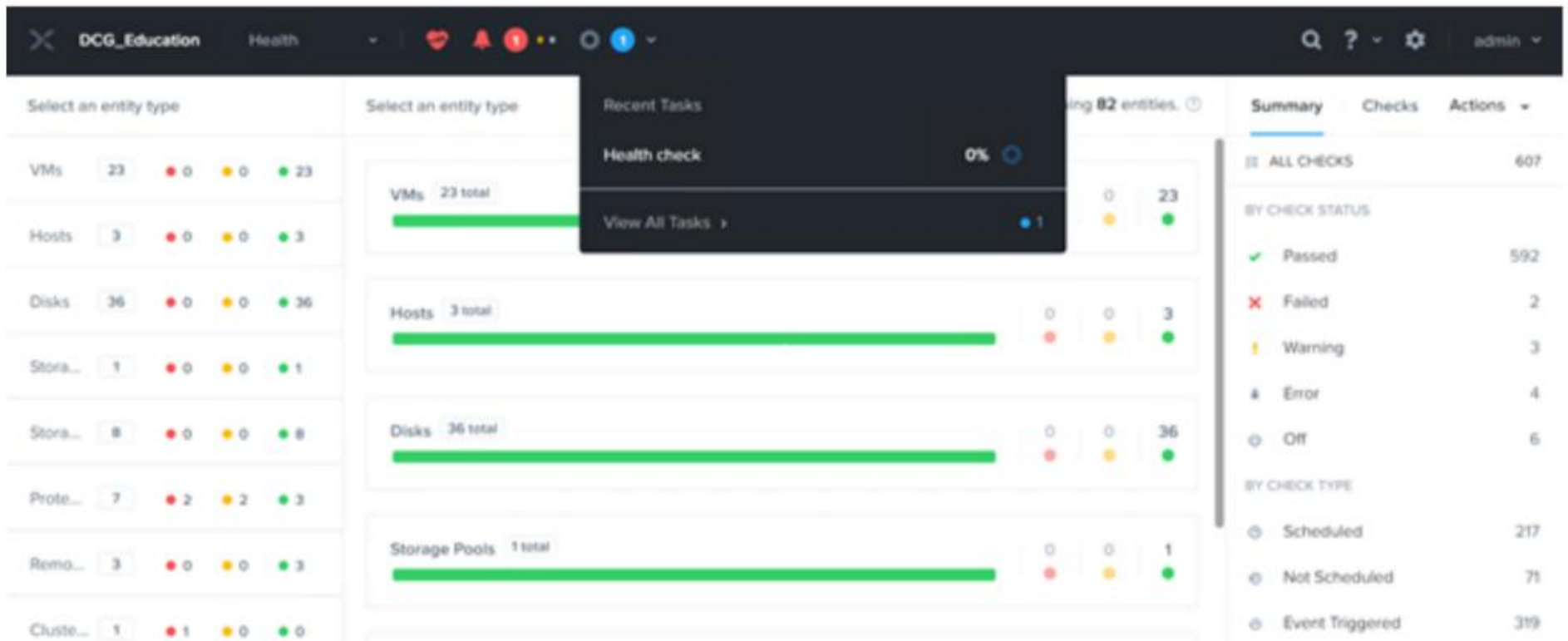
Click **Run** to perform the checks.



Step 1 2 3 4

Health check overview

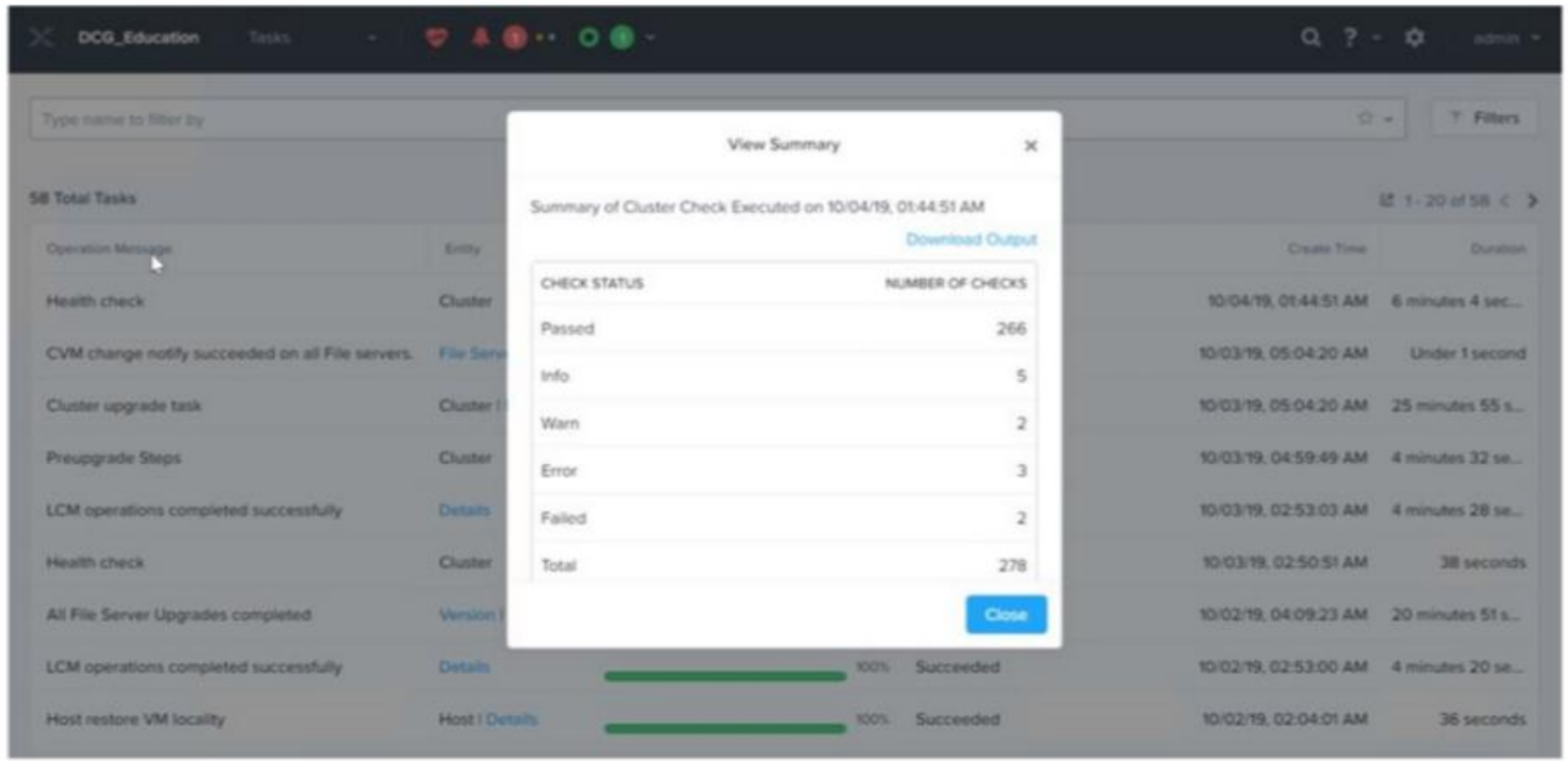
Users can see the progress from the tasks progress drop-down menu.



Step 1 2 3 4

Health check overview

When the checks are complete, users can find the result, see a summary, and download the output from the **Tasks** dashboard.



Step 1 2 3 4

Health check with NCC CLI commands overview

Users can also use NCC CLI commands to collect individual logs and perform health checks on specific components.

Health checks with NCC CLI commands

1. Use PuTTY to ssh into the Nutanix controller VM IP address.
2. Run `#ncc hardware_info update_hardware_info` to update cluster hardware information.
3. To check all or individual components, run one of the following commands:
   - Show all hardware information - `#ncc hardware_info show_hardware_info`
   - Hardware related checks - `#ncc health_checks hardware_checks run_all`
   - Various hypervisor checks - `#ncc health_checks hypervisor_checks run_all`
   - Network related checks - `#ncc health_checks network_checks run_all`
   - Disk related checks `#ncc health_checks hardware_checks disk_checks run_all`
4. Users can use SCP or WINSCP software to download the logs from CVM. The output progress will be shown on your terminal, and also saved to an output file under `/home/nutanix/data/log_collector/CVM_IP_address-logs/CVM_IP_address_output`

Note: Users can enter `--help` after the command to get more details.

Finding results in health check command

The output of every health check will include **PASS**, **INFO**, or **FAIL**.
Example:

```
/health_checks/network_checks/mellanox_nic_mixed_family_check
[ PASS ]
/health_checks/network_checks/10gbe_check
[ INFO ]

Detailed information for 10gbe_check:
Node 172.20.63.25:
INFO: CVM is not uplinked to active 10Gbps nics, but has a standby 10Gbps link.
Node 172.20.63.27:
INFO: CVM is not uplinked to active 10Gbps nics, but has a standby 10Gbps link.
Refer to KB 1584 (http://portal.nutanix.com/kb/1584) for details on 10gbe_check or Recheck with:
ncc health_checks network_checks 10gbe_check --cvm_list=172.20.63.25,172.20.63.27
+---------------+
| State | Count |
+---------------+
| Pass  | 16    |
| Info  | 1     |
| Total | 17    |
+---------------+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
```

Health check passed

Detailed information about the health check

Recommended solutions – users can also refer to the Nutanix knowledge base for details

Log file path – use ftp or sftp to download the log

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.
Example:

Scroll down for more information.

```
#ncc hardware_info show_hardware_info

Running /hardware_info/show_hardware_info
[ INFO ]
--------------------------------------------------------------------------------
-----------------------------------+

Detailed information for show_hardware_info:
Node 172.20.63.25:
INFO:

   ------------------------------------------------------------------------------
   Updated: Tue, 17 Sep 2019 06:20:27 UT
   1a26c1a4-d7f4-46e8-9ea6-3f71fee5e42f"
   CVM IP: 172.20.63.25
   Hypervisor Version:6.0.0-10474991
   NOS Version:el7.3-release-euphrates-5.5.4-stable-
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.

Example:

Scroll down for more information.

```
bed0925953fabcf2a17df6462584a58ee9034c5
   NCC Version:3.5.3.1-7663af3f

   ------------------------------------------------------------------------

   Nutanix Product Info

   +-------------------------------------------------------------------------
---------------+
   | Manufacturer                    |   Lenovo
|
   | Product name                    |   ThinkAgile HX3321 Node -[7Y89CTO3WW]-
|
   | Product part number             |   7Y89CTO3WW
|
   | Configured Serial Number        |   J10088D7
|
   +-------------------------------------------------------------------------
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.

Example:

Scroll down for more information.

```
   Chassis

   +-------------------------------------------------------------------------------
---------------+
   | Bootup state                    |   0x02 (Unknown)
|
   | Manufacturer                    |   Lenovo
|
   | Serial number                   |   J10088D7
|
   | Temperature                     |   0.0 degree C
|
   | Thermal state                   |   0x02 (Unknown)
|
   | Version                         |   none
|
   +-------------------------------------------------------------------------------
---------------+
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.
Example:

Scroll down for more information.

```
---------------+

   System Power Supply

   +-----------------------------------------------------------------------------
---------------+
   | Location                        |   PS
|
   | Manufacturer                    |   ARTE
|
   | Max power capacity              |   0.0 W
|
   | Product part number             |   SP57A03100
|
   | Serial number                   |   P4LD83Y019F
|
   | Status                          |   Present, OK
|
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.
Example:

Scroll down for more information.

```
---------------+

   SSD

   +-----------------------------------------------------------------------------
---------------+
   | Location                        |   1(LX model position 0)
|
   | Capacity                        |   960 GB
|
   | Firmware version                |   SCV1LU45
|
   | Hypervisor disk                 |   False
|
   | Manufacturer                    |   SSDSC2KG960G7L
|
   | Power on hours                  |   5826
|
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.

Example:

Scroll down for more information.

```
   +-------------------------------------------------------------------------------
---------------+
   | Location                          |   Fan 1b tach
|
   | Rpm                               |   10057
|
   | Status                            |   OK
|
   +-------------------------------------------------------------------------------
---------------+
   | Location                          |   Fan 2a tach
|
   | Rpm                               |   8988
|
   | Status                            |   OK
|
   +-------------------------------------------------------------------------------
---------------+
   | Location                          |   Fan 2b tach
```

show_hardware_info output information

The output of this command will include the status of and detailed information about all the hardware.
Example:

Scroll down for more information.

```
----------------+

INFO: Hardware Info log file can be found at : /home/nutanix/data/hardware_logs

INFO: Hardware Collector output written to:
/home/nutanix/data/hardware_logs/172.20.63.25_output
INFO: The command to verify the output is: cd /home/nutanix/data/hardware_logs &&
sha224sum -c output.checksum

Recheck with: ncc hardware_info show_hardware_info
+----------------+
| State | Count |
+----------------+
| Info  | 1     |
| Total | 1     |
+----------------+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
```

hardware_checks output information

Users can perform further system checks by adding different parameters to this command.

```
+-----------------------------------------------------------------------------+
| Type | Name         | Impact        | Description                           |
+-----------------------------------------------------------------------------+
| M    | disk_checks  | N/A           | Checks relating to disk health        |
| P    | help_opts    | Non-Intrusive | Show various options for this module. |
| M    | ipmi_checks  | N/A           | Checks run on IPMI or on the host using ipmitool |
| P    | run_all      | Non-Intrusive | Run all non-intrusive plugins in this module     |
+-----------------------------------------------------------------------------+
```

hypervisor_checks output information

The output of this command includes detailed error information about hypervisors.
Example:

Scroll down for more information.

```
#ncc health_checks hypervisor_checks run_all

Running : health_checks hypervisor_checks run_all
[==================================================] 100%
/health_checks/hypervisor_checks/esxi_ivybridge_perf_degradation_check
[ PASS ]
--------------------------------------------------------------------------------
----------------------------------------+
/health_checks/hypervisor_checks/nfs_file_count_check
[ PASS ]
--------------------------------------------------------------------------------
----------------------------------------+
/health_checks/hypervisor_checks/esx_check_services
[ PASS ]
--------------------------------------------------------------------------------
----------------------------------------+
/health_checks/hypervisor_checks/esxi_uvm_ivy_haswell_perf_check
[ PASS ]
```

hypervisor_checks output information

The output of this command includes detailed error information about hypervisors.
Example:

Scroll down for more information.

```
Detailed information for vm_checks:
Node 172.20.63.25:
FAIL: VM 'Windows7' has memory usage (94 %) above threshold (80 %)

Node 172.20.63.28:
FAIL: VM 'CentOS7-58' has cpu utilization (95 %) above threshold (90 %)

Refer to KB 2733 (http://portal.nutanix.com/kb/2733) for details on vm_checks or
Recheck with: ncc health_checks hypervisor_checks vm_checks --
cvm_list=172.20.63.25,172.20.63.28
+---------------+
| State | Count |
+---------------+
| Pass  | 35    |
| Fail  | 1     |
| Total | 36    |
+---------------+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
```

disk_checks output example

Scroll down for more information.

```
#ncc health_checks hardware_checks disk_checks run_all

Running : health_checks hardware_checks disk_checks run_all
[==================================================] 100%
/health_checks/hardware_checks/disk_checks/boot_raid_check                [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/disk_online_check              [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/lsi_firmware_rev_check         [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/toshiba_pm4_status_check       [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/sas_connectivity_status_check
                                                                          [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/vg_space_usage_check           [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/metadata_mounted_check         [ PASS ]
----------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/disk_id_duplicate_check        [ PASS ]
----------------------------------------------------------------------------+
/health checks/hardware checks/disk checks/sata controller check          [ PASS ]
```

disk_checks output example

Scroll down for more information.

```
/health_checks/hardware_checks/disk_checks/sm883_status_check                [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/disk_storage_pool_check            [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/raid_health_check                  [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/inode_usage_check                  [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/disk_smartctl_check                [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/ssd_configuration_check            [ PASS ]
----------------------------------------------------------------------------------+
/health_checks/hardware_checks/disk_checks/sm883_status_check                 [ PASS ]
----------------------------------------------------------------------------------+
+-----------------------+
| State          | Count |
+-----------------------+
| Pass           | 27    |
| Total Plugins  | 27    |
+-----------------------+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
```

network_checks output information

The output of this command includes detailed error information about networks.
Example:

Scroll down for more information.

```
#ncc health_checks network_checks run_all

Running : health_checks network_checks run_all
[============================================] 100%
/health_checks/network_checks/nic_link_down_check
[ PASS ]
--------------------------------------------------------------------------------
--------------------------------------+
/health_checks/network_checks/host_pingable_check
[ PASS ]
--------------------------------------------------------------------------------
--------------------------------------+
/health_checks/network_checks/zeus_config_ip_address_check
[ PASS ]
--------------------------------------------------------------------------------
--------------------------------------+
/health_checks/network_checks/check_ntp
[ PASS ]
```

network_checks output information

The output of this command includes detailed error information about networks.
Example:

Scroll down for more information.

```
Detailed information for 10gbe_check:
Node 172.20.63.25:
INFO: CVM is not uplinked to active 10Gbps nics, but has a standby 10Gbps link.
Node 172.20.63.27:
INFO: CVM is not uplinked to active 10Gbps nics, but has a standby 10Gbps link.
Refer to KB 1584 (http://portal.nutanix.com/kb/1584) for details on 10gbe_check or
Recheck with: ncc health_checks network_checks 10gbe_check --
cvm_list=172.20.63.25,172.20.63.27
+---------------+
| State | Count |
+---------------+
| Pass  | 16    |
| Info  | 1     |
| Total | 17    |
+---------------+
Plugin output written to /home/nutanix/data/logs/ncc-output-latest.log
```