

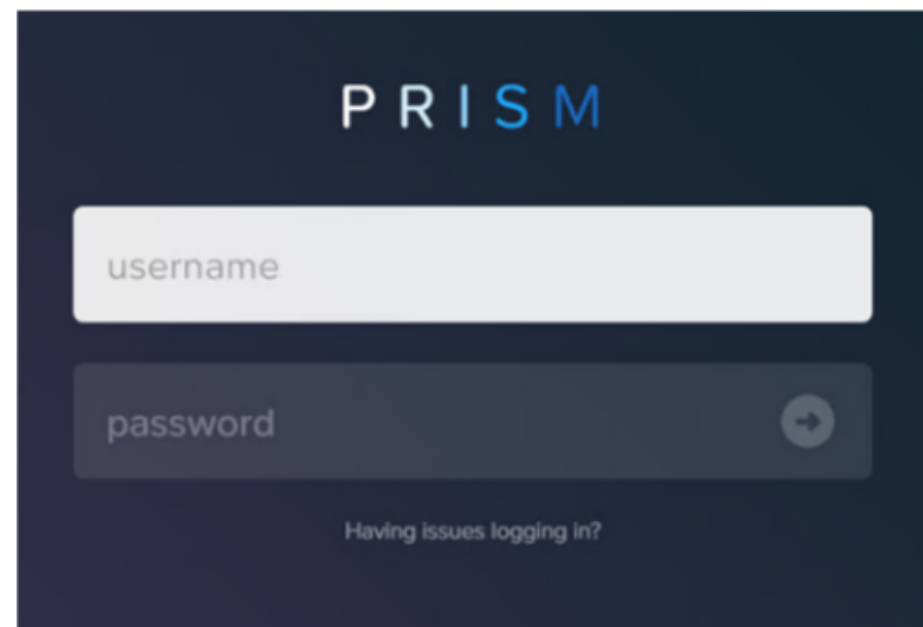
Health check overview

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



Health check overview

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

The screenshot shows the 'Health' dashboard for 'DCG_Education'. The 'Health' tab is selected in the top navigation bar. The dashboard displays a summary of monitored entities and a list of actions.

Entity Summary:

Entity Type	Total	Red	Yellow	Green
VMs	20	0	0	20
Hosts	3	0	3	0
Disks	35	0	0	35
Storage Pools	1	0	0	1
Storage Containers	7	0	0	7
Prote...	6	1	2	3
Remo...	1	0	0	1
Cluste...	1	1	0	0

Entity Details:

- VMs: 20 total (0 Red, 0 Yellow, 20 Green)
- Hosts: 3 total (0 Red, 3 Yellow, 0 Green)
- Disks: 35 total (0 Red, 0 Yellow, 35 Green)
- Storage Pools: 1 total (0 Red, 0 Yellow, 1 Green)
- Storage Containers: 7 total (0 Red, 0 Yellow, 7 Green)

Actions Menu:

- Summary
- Checks
- Actions (selected)
- Manage Checks
- Set NCC Frequency
- Run NCC Checks (highlighted)
- Log Collector

Check Status:

- ALL CHECKS
- BY CHECK STATUS: Passed, Failed, Warning, Error, Off
- BY CHECK TYPE: Scheduled, Not Scheduled, Event Triggered

Step



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.

Run Checks

Select checks you want to run:

☐ All Checks (282)

☐ Only Failed And Warning Checks (3)

☒ Specific Checks

disk

Data Disk Usage
CVM | Disk

Disk Configuration
CVM | Disk

Host Disk Usage
Host | Disk

vDisk Count Check
Cluster | Services

Duplicate disk id check

☐ Send the cluster check report in the email ?
Recipients: nos-alerts@nutanix.com

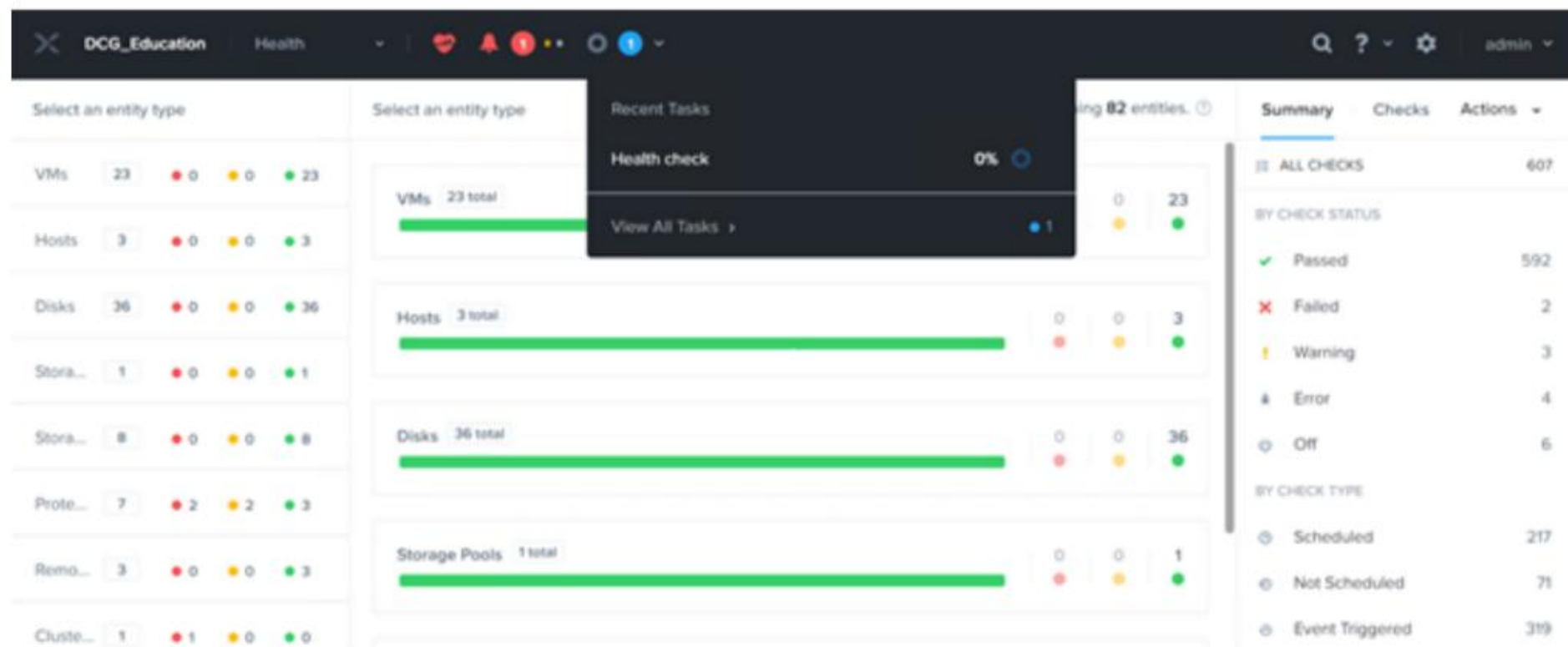
Cancel Run

Step



Health check overview

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



Step



Health check overview

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

The screenshot shows the 'Tasks' dashboard in the DCG_Education application. A modal titled 'View Summary' is open, displaying the results of a cluster check executed on 10/04/19 at 01:44:51 AM. The modal includes a 'Download Output' link and a table summarizing the check status.

CHECK STATUS	NUMBER OF CHECKS
Passed	266
Info	5
Warn	2
Error	3
Failed	2
Total	278

The background dashboard shows a list of tasks with columns for 'Operation Message', 'Entry', 'Create Time', and 'Duration'. The first task listed is 'Health check' for a 'Cluster' entry, with a 'Create Time' of '10/04/19, 01:44:51 AM' and a 'Duration' of '6 minutes 4 sec...'. Other tasks include 'CVM change notify succeeded on all File servers', 'Cluster upgrade task', 'Preupgrade Steps', 'LCM operations completed successfully', 'All File Server Upgrades completed', and 'Host restore VM locality'.

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 ]
```

Health check passed

Detailed information about the health check

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

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

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

```
+-----+  
| State | Count |  
+-----+  
| Pass  | 16    |  
| Info  | 1     |  
| Total | 17    |  
+-----+
```

Plugin output written to /home/nutanix/data/logs/ncc-output-latest.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-
```

```
ba30025052fcb8f2a170f64625045c50c00024a5
```

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.

```
bed0925953IabcI2a170I64625845a58ee9034c5
  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.

-----+

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`