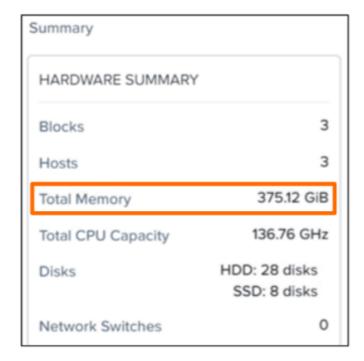# Memory troubleshooting

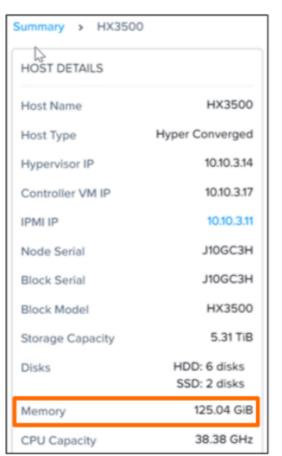Memory issues and identification

Lenovo

Memory troubleshooting overview

Memory issues can cause the customer's system to operate less efficiently or to crash. When diagnostic memory issues occur, the following tools can be used to collect logs for analysis:

- Prism: check for alerts and total installed memory capacity
- IMM or XCC: collect service data
- OneCLI: collect FFDC logs

The following section covers general memory issues and how to identify memory in the hypervisor.

In Prism, go to **Hardware → Diagram** to check the total memory of the system and each node.

Summary	
HARDWARE SUMMARY	
Blocks	3
Hosts	3
Total Memory	375.12 GiB
Total CPU Capacity	136.76 GHz
Disks	HDD: 28 disks SSD: 8 disks
Network Switches	0

Summary > HX3500	
HOST DETAILS	
Host Name	HX3500
Host Type	Hyper Converged
Hypervisor IP	10.10.3.14
Controller VM IP	10.10.3.17
IPMI IP	10.10.3.11
Node Serial	J10GC3H
Block Serial	J10GC3H
Block Model	HX3500
Storage Capacity	5.31 TiB
Disks	HDD: 6 disks SSD: 2 disks
Memory	125.04 GiB
CPU Capacity	38.38 GHz

Lenovo

Memory issues

Faulty or missing memory: It is possible for a DIMM to fail entirely, resulting in the system seeing it as missing – for example, a node with 512 GB (16*32 GB) of installed memory only showing 448 GB present. In this case, the BIOS has detected that one DIMM has failed and is masking out the channel where it is located, allowing the host to start and operate using the working memory channels.

This scenario commonly presents after a system restart or power cycle, and when it occurs, customers might see an alert in Prism stating that the amount of memory in the node is incorrect. This issue usually comes with an error code – for example, **A1052**, which signifies that the available memory for the node is inconsistent with the other nodes in the block/cluster.

Note: For error code information, users can refer to the Nutanix support portal:
https://portal.nutanix.com/#/page/docs/details?targetId=Web-Console-Guide-Prism-v59:ale-alert-health-Hardware-CVM-auto-r.html

Lenovo

Memory identification

Users can also identify system memory information from the hypervisor. (Click the tabs to see details.)

AHV

ESXi

Hyper-V

Lenovo

Memory identification

Users can also identify system memory information from the hypervisor. (Click the tabs to see details.)

AHV

ESXi

Hyper-V

```
#dmidecode | sed -n '/^Memory Device$/,/^$/p' | egrep 'Manufacturer|Part
Number|Size|Speed' | sort | uniq
        Configured Clock Speed: 1333 MHz
        Manufacturer: Samsung
        Part Number: M393B2G70BH0-CH9
        Size: 16384 MB
        Speed: 1333 MHz
```

Lenovo

Memory identification

Users can also identify system memory information from the hypervisor. (Click the tabs to see details.)

AHV

ESXi

Hyper-V

```
#smbiosDump | sed -n '/^ Memory Device:/,/^ [A-Z][0-9]/p' | egrep
'Manufacturer|Part Number|Size|Speed' | sort |
uniq
        FIPS mode initialized
        Manufacturer: "Samsung"
        Max. Size: 128 GB
        Part Number: "M393B2G70QH0-YK0"
        Size: 16 GB
        Speed: 1600 MHz
```

Memory identification

Users can also identify system memory information from the hypervisor. (Click the tabs to see details.)

| AHV |
| ESXi |
| Hyper-V |

Using command

```
#get-wmiobject -class "Win32_PhysicalMemory" | foreach-object {write-output $_.Manufacturer $_.PartNumber } |
sort-object | get-unique
```

Lenovo