Problem determination and troubleshooting

How to perform problem determination actions on the SR675 V3

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Problem determination and troubleshooting overview

Perform the following actions to determine the cause of problems on the SR675 V3
- Check the system health status on the XCC2 dashboard
- Check the system event log in XCC2
- Check the event log in UEFI
- Check the LEDs on the system
- If applicable, check the external LCD diagnostics handset

For more information about how to use XCC2, UEFI, or OneCLI to monitor system status and collect logs, refer to the following courses:
- ES51757B – Introducing ThinkSystem tools

- ES52374 – ThinkSystem tools for the ThinkSystem V3 platform

- ES41759C – ThinkSystem problem determination

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LED descriptions

Use the LEDs on the front operator panel, the rear side of the server, or the internal LED light path for hardware status monitoring and problem determination. The internal LED light path will only be provided when the system AC power cable is connected.
The LEDs indicate the following:
- DIMM errors
- CPU errors
- PCIe cable errors
- PSU integrated faults
- HDD activity and errors
- Fan errors

For more information about the SR675 V3 LEDs, refer to the Server components section of the ThinkSystem SR675 V3 User Guide on Lenovo Docs.

Front diagnostic LED panel on a SR675 V3 4-DW GPU model

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LCD diagnostic panel

The SR675 V3 (except 8-DW GPU models) supports the external LCD diagnostic handset. The panel can be used to quickly access system information, such as active errors, system health status, firmware version, network connection status, and health information. A demo video is available on the course landing page.

External Diagnostics Handset

External Diagnostics Port
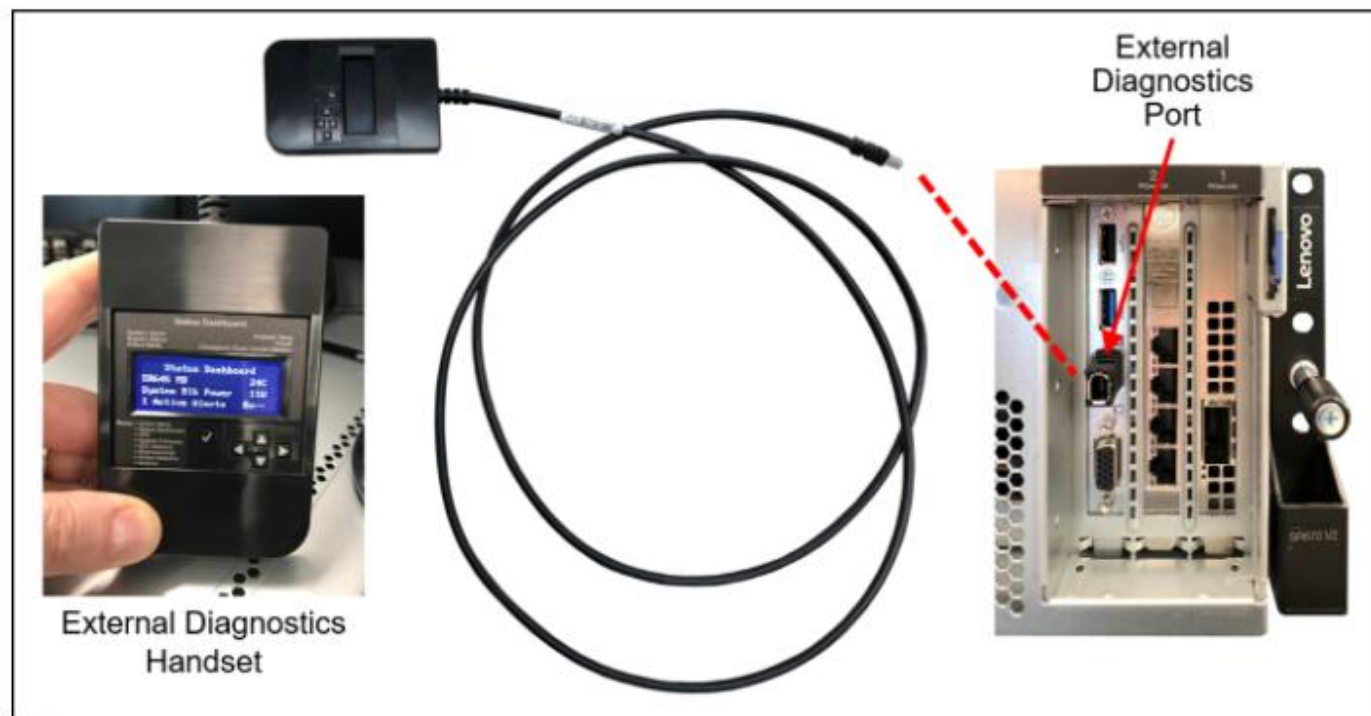
NVIDIA GPU problem determination

The problem determination steps for NVIDIA SXM5 GPUs and PCIe GPUs are the same as those used with the previous generation of GPUs. Use XCC2 to monitor GPU status, or use IPMI commands to check GPU or SMX GPU board health status.

If necessary, collect XCC service data, or use the `nvidia-bug-report.sh` command to collect a GPU bug report for problem escalation.

Refer to the following article for complete instructions on how to monitor NVIDIA GPU status and collect NVIDIA GPU logs: https://support.lenovo.com/tw/en/solutions/ht512069

Health check for GPUs and GPU boards

1. To get the GPU health status, use the following IPMI command:

```
ipmitool -I lanplus -H XCCIPAddress -U USERID -P PASSWORD sdr elist
```
The XCC IP address and the login credentials will vary based on your environment.

If a Linux-based OS is installed on the host system, add the grep command to search for GPU information only:
```
ipmitool -I lanplus -H XCCIPAddress -U USERID -P PASSWORD sdr elist | grep GPU
```

Sample output

```
[root@kchen33-f1zn8cz ~]# ipmitool sdr elist| grep GPU
GPU Board Power  | 8Ch | ok | 21.4 | 240 Watts
GPU Board        | E9h | ok | 11.8 | Transition to OK
GPU CPUs         | EAh | ok | 11.9 | Transition to OK
```

From the output above, `Transition to OK` means the GPU board and the GPU processors are good. If the output sho system has failed to detect the GPU board or GPU processors.

2. Run the nvidia-smi utility to monitor and manage online GPUs. A summary table will be displayed with information abou