



# **Verify cluster upgrade limits**

ONTAP 9

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If you don't use [Active IQ Upgrade Advisor](#), you need to verify that your cluster does not exceed the platform system limits. SAN also has limits that you should verify in addition to the platform system limits.

1. Verify that the cluster does not exceed the system limits for your platform.

[NetApp Hardware Universe](#)

2. If your cluster is configured for SAN, verify that it does not exceed the configuration limits for FC, FCoE, and iSCSI.

[NetApp Hardware Universe](#)

3. Determine the CPU and disk utilization: `node run -node node_name -command sysstat -c 10 -x 3`

You should monitor CPU and disk utilization for 30 seconds. The values in the **CPU** and **Disk Util** columns should not exceed 50% for all 10 measurements reported. No additional load should be added to the cluster until the upgrade is complete. NOTE: CPU and disk utilization can vary at different times in your environment. Therefore, it is best to check your CPU and disk utilization during the timeframe of your anticipated upgrade window.

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