

Troubleshooting

- Verifying the Hardware and VM Requirements, on page 1

Verifying the Hardware and VM Requirements

To help troubleshoot issues with the controller, make sure that the device is installed on the supported hardware and the following VM requirements are being met:

- Verify that the server hardware is supported by the hypervisor vendor. If you are using VMware, verify that the server is listed in the VMware Hardware Compatibility List. For more information, see the VMware documentation set.
- Verify that the I/O devices, for example, Fibre Channel (FC), Internet Small Computer System Interface (iSCSI), and SAS that are being used are supported by the VM vendor.
- Verify that sufficient RAM is allocated on the server for the VMs and the hypervisor host.
- If you are using VMware, make sure the server has enough RAM to support both VMs and VMware ESXi.
- Verify if the hypervisor version is supported by the controller or not.
- Verify that the correct VM settings are configured based on the amount of memory, number of CPUs, and disk size.
- Verify that the vNICs are configured using a supported network driver.

Network Connectivity Issues

To troubleshoot network connectivity issues for the controller, ensure that the following requirements are met:

- Promiscuous mode should be set to accept to see the traffic sent and received through the vSwitch. Tagged traffic will not flow properly without this mode.
- Verify that there is an active and unexpired license installed on the VM. Enter the **show license** command. The **License State** should be shown as **Active**, **In Use**.
- Verify that the vNIC for the VMs are connected to the correct physical NIC or to the proper vSwitch.
- Ensure that the vSwitch is configured with the correct VLAN, if you are using virtual LANs (VLANs).

- Ensure that there are no duplicate MAC addresses, if you are using static MAC addresses or VMs that are cloned.

Caution Duplicate MAC addresses might cause the controller feature license to become invalidated, which will disable the device interfaces.

VM Performance Issues

The controller operates within a set of supported VM parameters and settings to provide certain levels of performance that have been tested by Cisco.

Use vSphere Client to view data and troubleshoot VM performance. If you are using vCenter, you can view historical data. If you are not using vCenter, you can view live data from the host.

Ensure that the following requirements are met to troubleshoot performance issues:

- Verify that the device is configured for the correct MTU setting.
- By default, the maximum MTU setting on the device is set to 1500. To support jumbo frames, you need to edit the default VMware vSwitch settings. For more information, see the VMware vSwitch documentation.
- The controller does not support memory sharing between VMs. On the ESXi host, check the memory counters to determine the used and shared memory on the VM. Verify that the counters used by the balloon and swap are zero.
- If a given VM does not have enough memory to support the controller, increase the size of the VM's memory. Insufficient memory on the VM or the host might cause the controller console to hang and be nonresponsive.

Caution When troubleshooting performance issues, note that other VMs on the same host as the controller can impact the performance of the controller VM. Verify that the other VMs on a host are not causing memory issues that impact the controller VM.

- Verify that no network packets are being dropped. On the ESXi host, check the network performance and view the counters to measure the number of receive and transmit packets dropped.