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## Troubleshooting connectivity issues to an NFS data store

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## Symptoms

- The NFS share cannot be mounted by the ESX/ESXi host.
- The NFS share is mounted, but nothing can be written to it.

## Purpose

This document guides you through the most common steps to identify a connectivity problem from an ESX/ESXi host to an NFS shared storage device.

## Resolution

To troubleshoot the inability to mount the volume:

1. Refresh the storage to see if visibility to the NFS shares is restored.
2. Verify that the ESX host VMkernel IP has been granted permissions to use the NFS server, and double-check the mount point name exported by the NFS server.
3. Verify that any firewalls between the ESX host and NFS device have ports UDP/TCP 111 and 2049 opened.
4. Verify that NFS traffic has been enabled on the ESX firewall, as explained in the ESX [Configuration Guide](#). Select the host and click **Configuration > Security Profile > Properties**, select **NFS Client** and click **OK**.
5. Verify that the ESX host can vmkping the NFS server. For more information, see [Testing VMkernel connectivity with the vmkping command \(1003728\)](#).
6. Verify that the NFS host can ping the VMkernel IP of the ESX Host.
7. Verify that the virtual switch being used for storage has been configured correctly. See [Networking Attached Storage in the ESX Configuration Guide](#).
8. Verify that the storage array is listed on the Storage/SAN Compatibility Guide for your version of ESX. For more information, see [Verifying that ESX host hardware \(System, Storage, and I/O\) devices are supported \(1003916\)](#).

**Note:** Some array vendors have a minimum microcode/firmware version that is required to work with ESX.

9. Verify that the following physical hardware functions correctly:
  - The Ethernet switch
  - The Ethernet cables between the switch and the ESX/ESXi host
  - The network adapter to which the VMkernel virtual switch is connected
11. Verify that the Server (if it is Windows) is correctly configured for NFS. For more information, see [Troubleshooting adding a data store from a Windows Services NFS device \(1004490\)](#).

To troubleshoot a mount being read-only:

1. Verify that the permissions of the NFS server have not been set to read-only for this ESX host.
2. Verify that the NFS share was not mounted with the read-only box selected.

## Update History

05/11/2010 - Additional troubleshooting steps.

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