vmware*
Knowledge Base

Powering off an unresponsive virtual machine on an ESX host

Symptoms

- You cannot power off an ESX host virtual machine

- A virtual machine is unresponsive and cannot be killed or stopped

- You cannot access or unlock files on a virtual machine. For more information, see Virtual machine does not pow__ on because of missing or locked files (10051).

- After shutting down a virtual machine, VirtualCenters hows thevirtual machine as up and running

- There is no indication a virtual machine is shut down

- You cannot edit properties in the virtual machine

- You see one or more of the following errors:

- •

    o Soap error 999. The operation is not allowed in current state.

    o The attempted operation cannot be performed in the current state
      (Powered Off)

Purpose

This article provides the correct sequence for shutting down or (when necessary) killing an unresponsive virtual machin__

Note: This article pertains to ESX and does not apply to ESXi. For ESXi hosts, see Powering off a virtual machine on a__ ESXi host (1014165).

Resolution

Warning: Follow the sections and steps in this article in order. Do not skip a section or step, as each step may have an__ impact on the virtual machine.

Powering off the virtual machine

To determine if you must use the command line, attempt to power off the virtual machine:

1. Connect VMware Infrastructure (VI) Client to the Virtual Center Server. Right-click on the virtual machine and cli__ **Power off**.

2. Connect VI Client directly to the ESX host. Right-click on the virtual machine and click **Power off**.

    If this does not work, you must use the command line method.

Determining the virtual machine's state

1. Determine the host on which the virtual machine is running. This information is available in the virtual machine's **Summary** tab when viewed in the VI Client page.

2. Log in as root to the ESX host using an SSH client.

3. Run the following command to verify that the virtual machine is running on this host:

   ```
   # vmware-cmd -l
   ```

   The output of this command returns the full path to each virtual machine running on the ESX host. Verify that the virtual machine is listed, and record the full path for use in this process. For example:

   ```
   # /vmfs/volumes/<UUID>/<VMDIR>/<VMNAME>.vmx
   ```

4. Run the following command to determine the state in which the ESX host believes the virtual machine to be operating:

   ```
   # vmware-cmd <path.vmx> getstate
   ```

   If the output from this command is `getstate() = on`, the VirtualCenter Server may not be communicating wit the host properly. This issue must be addressed in order to complete the shutdown process.

   If the output from this command is `getstate() = off`, the ESX host may be unaware it is still running the virtual machine. This article provides additional assistance in addressing this issue.

Powering off the virtual machine while collecting diagnostic information using the vm-support script

Use the following procedure when you want to investigate the cause of the issue. This command attempts to power off the virtual machine while collecting diagnostic information. Perform these steps in order, as they are listed in order of potential impact to the system if performed incorrectly.

Perform these steps first:

1. Determine the WorldID with the command:

   ```
   # vm-support -x
   ```

2. Kill the virtual machine by using the following command in the home directory of the virtual machine:

   ```
   # vm-support -X <world_ID>
   ```

   This can take upwards of 30 minutes to terminate the virtual machine.

   Note: This command uses several different methods to stop the virtual machine. When attempting each method, the command waits for a pre-determined amount of time. The timeout value can be configured to be 0 by adding d0 to switch to the vm-support command.

If the preceding steps fail, perform the following steps for an ESX 3.x host:

1. List all running virtual machines to find the VMID of the affected virtual machine with the command:

   ```
   # cat /proc/vmware/vm/*/names
   ```

2. Determine the master world ID with the command:

   ```
   # less -S /proc/vmware/vm/####/cpu/status
   ```

3. Scroll to the right with the arrow keys until you see the group field. It appears similar to:

    ```
    Group
    vm.####
    ```

4. Run the following command to shut the virtual machine down with the group ID:

    ```
    # /usr/lib/vmware/bin/vmkload_app -k 9 ####
    ```

If the preceding steps fail, perform the following steps for an ESX 4.x host:

1. List all running virtual machines to find the vmxCartelID of the affected virtual machine with the command:

    ```
    # /usr/lib/vmware/bin/vmdumper -l
    ```

2. Scroll through the list until you see your virtual machine's name. The output appears similar to:

    ```
    vmid=5151      pid=-1  cfgFile="/vmfs/volumes/4a16a48a-d807aa7e-e674-
    001e4ffc52e9/mdineeen_test/vm_test.vmx"  uuid="56 4d a6 db 0a e2 e5 3e-a9 2b 31 4b
    69 29 15 19"  displayName="vm_test"  vmxCartelID=####
    ```

3. Run the following command to shut the virtual machine down with the vmxCartelID:

    ```
    # /usr/lib/vmware/bin/vmkload_app -k 9 ####
    ```

Powering off the virtual machine using the vmware-cmd command

This procedure uses the ESX command line tool, and attempts to gracefully power off the virtual machine. It works if the virtual machine's process is running properly and is accessible. If unsuccessful, the virtual machine's process may not be running properly and may require further troubleshooting.

1. From the Service Console of the ESX host, run the following command:

    ```
    vmware-cmd <path.vmx> stop
    ```

    Note: <path.vmx> is the complete path to the configuration file, as determined in the previous section. To verify that it is stopped, run the command:

    ```
    # vmware-cmd <path.vmx> getstate
    ```

2. From the Service Console of the ESX host, run the command:

    ```
    # vmware-cmd <path.vmx> stop hard
    ```

    Note: <path.vmx> is the complete path to the configuration file, as determined in the previous section. To verify that it is stopped, run the command:

    ```
    # vmware-cmd <path.vmx> getstate
    ```

3. If the virtual machine is still inaccessible, proceed to the next section.

Using the ESX command line to kill the virtual machine

If the virtual machine does not power off using the steps in this article, it has likely lost control of its process. You need to manually kill the process at the command line.

Caution: This procedure is potentially hazardous to the ESX host. If you do not identify the appropriate process id (PID) and kill the wrong process, it may have unanticipated results. If you are not comfortable with the following procedure, contact VMware Technical Support and open a <u>Service Request</u>. Please refer to this article when you create the SR.

1. To determine if the virtual machine process is running on the ESX host, run the command:

   ```
   # ps -auxwww |grep -i <VMNAME>.vmx
   ```

   The output of this command appears similar to the following if the `.vmx` process is running:

   ```
   root 3093 0.0 0.3 2016 860 ? S< Jul30
   0:17 /usr/lib/vmware/bin/vmkload_app /usr/lib/vmware/bin/vmware-vmx -
   ssched.group=host/user -# name=VMware ESX Server;version=3.5.0;licensename=VMware
   ESX Server;licenseversion=2.0 build-158874; -@ pipe=/tmp/vmhsdaemon-
   0/vmx569228e44baf49d1; /vmfs/volumes/49392e30-162037d0-17c6-
   001f29e9abec/<VMDIR>/<VMNAME>.vmx
   ```

   The process ID (PID) for this process is in bold. In this example, the PID is `3093`. Take note of this number for us in the following steps.

   Caution: Ensure that you identify the line specific only to the virtual machine you are attempting to repair. If you continue this process for another virtual machine the one in question, you can cause downtime for the other virtu machine.

   If the `.vmx` process is listed, it is possible that the virtual machine has lost control of the process and that it must be stopped manually.

2. To kill the process, run the command:

   ```
   # kill <PID>
   ```

3. Wait 30 seconds and check for the process again.

4. If it is not terminated, run the command:

   ```
   # kill -9 <PID>
   ```

5. Wait 30 seconds and check for the process again.

6. If it is not terminated, the ESX host may need to be rebooted to clear the process. This is a last resort option, and should only be attempted if the preceding steps in this article are unsuccessful.

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