

## Stopping a VM and Releasing Files

### Stopping a VM

VMware has added a new command in VI3 to help when a user has a VM that has become unresponsive. Below are the progressive steps to go through to get the VM cleanly powered off. Whatever you do, **DO NOT kill the pid for the VM from the Service Console**, unless you have tried absolutely everything. Killing the pid from the Service Console may prevent the VM from restarting.

The following steps assume that the usual graceful shutdowns do not work from within the VM operating system or the Virtual Infrastructure Client. Commands are bold underscore type, with descriptions of path names and some example output is included.

1. Logon to the ESX host where the VM is running and become root.
2. **vmware-cmd -l** to list all the registered VMs.
3. **vmware-cmd /path/copied/from/vmware-cmd getstate** to get state of vm
  - a. If the state requires an answer:
    - i. **vmware-cmd /path/copied/from/vmware-cmd answer**
  - b. If no answer is needed:
    - i. **vmware-cmd /path/copied/from/vmware-cmd stop trysoft**
      1. if “trysoft” does not work:
        - a. **vmware-cmd /path/copied/from/vmware-cmd stop hard**
4. **If the vmware-cmd does not help** next up is to kill the master user world id
5. **cat /proc/vmware/vm/\*/names |grep vmname** where vmname is the vm that is hung
  - a. find the value for vmid
6. **less /proc/vmware/vm/vmid value/cpu/status** where vmid value is the number from above
7. scroll over to the right until you find the group field that shows vm.#### where the #### numbers after vm. will be the master user world id
8. **/usr/lib/vmware/bin/vmkload\_app -k 9 ####** where #### is the master user world id
  - a. If successful you will get a WARNING message that a signal 9 is being sent
9. **If vmkload\_app does not help** next up is to crash the vm with the vm-support -X command
10. **vm-support -x** to get the vmid
11. From a directory that has ample space **vm-support -X ####** where #### is the vmid
12. Answer all the questions with the default answers. The entire process takes about 10 minutes and creates an archive log that can be submitted to support. It will also crash the vm.

### Releasing Files

Sometimes a file or set of files in a VMFS become locked and any attempts to edit them or delete will give a device or resource busy error, even though the vm associated with the files is not running. If the vm is running then you would need to stop the vm to manipulate the files. If you know that the vm is stopped then you need to find the ESX server that has the files locked and then stop the process that is locking the file(s).

1. Logon to the ESX host where the VM was last known to be running.
2. **vmkfstools -D /vmfs/volumes/path/to/file** to dump information on the file into /var/log/vmkernel
3. **less /var/log/vmkernel** and scroll to the bottom, you will see output like below:

- a. Nov 29 15:49:17 vm22 vmkernel: 2:00:15:18.435 cpu6:1038)FS3: 130: <START vmware-16.log>
  - b. Nov 29 15:49:17 vm22 vmkernel: 2:00:15:18.435 cpu6:1038)Lock [type 10c00001 offset 30439424 v 21, hb offset 4154368
  - c. Nov 29 15:49:17 vm22 vmkernel: gen 66493, mode 1, owner 46c60a7c-94813bcf-4273-**0017a44c7727** mtime 8781867] ← Bold type added to number for emphasis.
  - d. Nov 29 15:49:17 vm22 vmkernel: 2:00:15:18.435 cpu6:1038)Addr <4, 588, 7>, gen 20, links 1, type reg, flags 0x0, uid 0, gid 0, mode 644
  - e. Nov 29 15:49:17 vm22 vmkernel: 2:00:15:18.435 cpu6:1038)len 23973, nb 1 tbz 0, zla 2, bs 65536
  - f. Nov 29 15:49:17 vm22 vmkernel: 2:00:15:18.435 cpu6:1038)FS3: 132: <END vmware-16.log>
4. The owner of the lock is on line 3c, the last part is all you need, in this case **0017a44c7727**
  5. esxcfg-info | grep -i 'system uuid' | awk -F '-' '{print \$NF}' will display the system uuid of the esx server. You need to run the esxcfg-info command on each esx server in the cluster to discover the owner.
  6. When you find the ESX server that matches the uuid owner, logon to that ESX server and run the command: ps -elfgrep vmname where vmname is the problem vm. Example output below:
    - a. 4 S root 7570 1 0 65 -10 - 435 schedu Nov27 ? 00:00:02  
/usr/lib/vmware/bin/vmkload\_app /usr/lib/vmware/bin/vmware-vmx -  
ssched.group=host/user/pool2 -@ pipe=/tmp/vmhsdaemon-  
0/vmxf7fb85ef5d8b3522;vm=f7fb85ef5d8b3522 /vmfs/volumes/470e25b6-37016b37-  
a2b3-001b78bedd4c/iu-lsps-vstest/iu-lsps-vstest.vmx0
  7. Since there is a process running, pid 7570 in the example, you need to kill it by following steps 5-12 on stopping a VM above
  8. Once the kill is complete the files should be released.