

# Troubleshooting VMware ESX Server 3 and VMware VirtualCenter 2

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**VMWORLD 2006**

# Agenda

- Common Issues
- Virtual Machine (VM)
- Virtual Infrastructure Client (VIC)
- ESX3
- VirtualCenter 2 Troubleshooting
- VMotion

## Common Issues

- Virtual machine problems can be caused by
  - Not enough resources
  - Guest OS or application failures
  - Misconfigurations
- Misconfigurations include
  - Undersizing virtual resources
  - Failure to satisfy VMotion requirements
  - Insufficient resources in resource pool
  - Insufficient resources in HA Cluster
  - Not using FQDNs for the ESX Servers

**Use the VI Client to view error messages, resource usage values and configuration information**

# Cannot Power on VM

- Use the VI Client to identify what is failing
  - Error, “Insufficient memory resources”
- What does the failing feature depend on?
  - Permissions
  - Memory resources
    - Of the cluster?
    - Of the ESX Server?
    - Of the resource pool?
    - Of the VM?
  - Memory reservations
    - Set for the VM
    - Set for the resource pool

The screenshot displays the VMware vSphere Client interface. On the left, a tree view shows the hierarchy: Hosts & Clusters > Americas > Los Angeles > Intel > Lab Cluster > kentfield03.priv.vme > Production > FilePrint01. The main pane shows the 'FilePrint01' VM summary, including Guest OS (Microsoft Windows Server 2003, Enterprise Edition), CPU (1 vCPU), Memory (256 MB), and State (Powered Off). An error dialog box is overlaid on the 'Power on' button, displaying a red 'X' icon and the message 'Insufficient memory resources'. Below the main pane, the 'Recent Tasks' table is visible.

Name	Target	Status
Power On Virtual Machine	FilePrint01	Insufficient memory resources
Power On Virtual Machine	Database03	Completed
Power On Virtual Machine	Database02	Completed
Power On Virtual Machine	Database01	Completed

## VI Client Problem: cannot login or add host to inventory

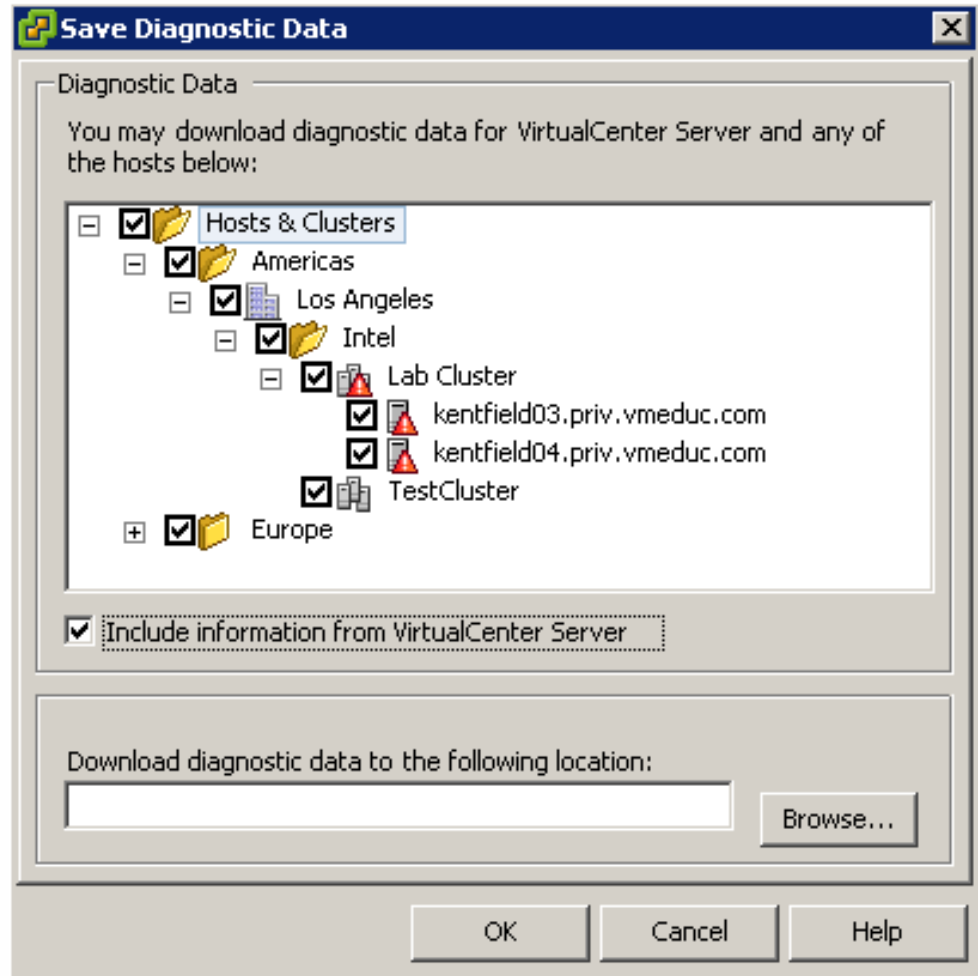
Possible underlying cause	How to test
Incorrect user account and/or password	Try to log directly into the VirtualCenter Server or ESX Server
VirtualCenter Server Service ( <code>vpwd</code> ) is not running	<i>(Only applies if logging into VC Server)</i> Check that the VirtualCenter Server service is running on the VC Server
ESX Server management agent ( <code>hostd</code> ) is not running	<i>(Only applies if logging directly into ESX Server)</i> Check that <code>hostd</code> is running: Run the command, <code>ps -ef   grep hostd</code> , at the service console command line
Local station has no IP connectivity	Depending on what you are logging into, ping the VirtualCenter Server or ESX Server

## What to Do if the ESX Server Crashes

- If the machine had been running in a steady state, with running VMs
  - Check for environmental factors, especially room temperature
  - Check for detached external devices
- If the machine had been recently rebooted
  - Check for hardware configuration changes
- Copy down the screen display, screen-grab it, or take a photo
- Gather information and send to VMware Support
  - Run the vm-support program
  - Use the VI Client to export the diagnostics data

## Collecting Diagnostics Data

- VMware technical support might request several files to help resolve your product issues
- Use the VI Client to collect diagnostics data



## Log into Service Console as Root

- When it is necessary to access the service console command line to troubleshoot problems:

- Access ESX Server physical console
  - Use remote management adapter if one exists
- Use a secure shell (ssh) client, such as puTTY
  - Allow root ssh login on port 22 (off by default)
  - To enable, modify `/etc/ssh/sshd_config`

Change the entry

```
PermitRootLogin no
```

to

```
PermitRootLogin yes
```

- Restart the service:

```
service sshd restart
```

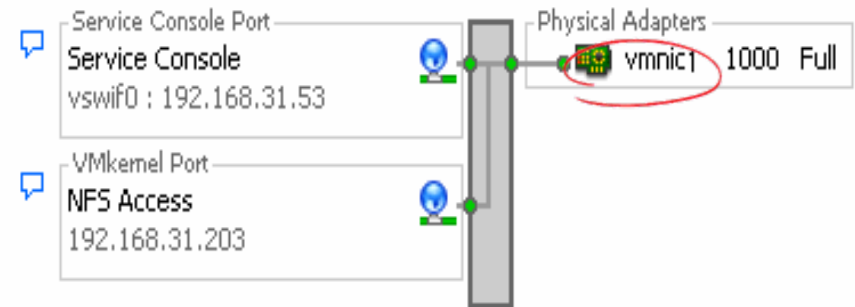
Enabled in an upgrade - Disabled in a fresh install



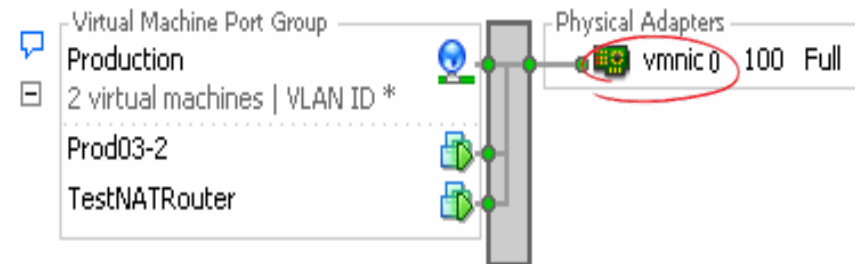
# Misconfigured ESX Service Console Networking

- If unable to connect to the ESX host with the VI Client
  - Use `esxcfg-vswitch` to verify current configuration of a virtual switch and to make changes
- Example:
  - `esxcfg-vswitch -l` to view virtual switch configuration
  - `esxcfg-nics -l` or `cat /proc/vmware/pci | grep vmnic` to view virtual nics
  - `esxcfg-vswitch -U vmnic0 vSwitch0`
    - Unlinks `vmnic0` from `vSwitch0`
  - `esxcfg-vswitch -L vmnic1 vSwitch0`
    - Links `vmnic1` to `vSwitch0`
  - `service mgmt-vmware restart` to restart hostd

Virtual Switch: vSwitch0



Virtual Switch: vSwitch1



## Troubleshooting: hostd

- hostd is the replacement for serverd and ccagent
- New `/usr/bin/vmware-watchdog` process watches over hostd and restarts it if it crashed
- If watchdog and hostd crash, then you must restart hostd manually
- `service mgmt-vmware restart` will restart hostd if crashed

# Time Synchronization

- Hardware clock or Network Time Protocol (NTP)
  - Sync to an Active Directory server or alternate time source
    - Example:  
`esxcfg-firewall -o 123,udp,out,ntp`  
`ntpdate <IP address of NTP master>`  
Then  
`service mgmt-vmware restart`
  - Set UTC time in the ESX host BIOS and use an offset
- Areas impacted
  - Performance charts
  - SSH keys could expire prematurely
  - NFS
  - Backups
  - Any operation that depends on time

## Domain Name Service

- ESX needs to be configured with a FQDN
  - VMware HA expects DNS to be set up correctly
  - Putty connections
  - Commands like scp use host names
  - NFS mounts - server or client
  - Syslog
  - Anything that needs to resolve host names
- Specify the correct IP addresses for the DNS servers on each host
  - Both primary and secondary
  - Try to NOT rely on /etc/hosts – error prone!
- During the install, take the time to read the installation summary!

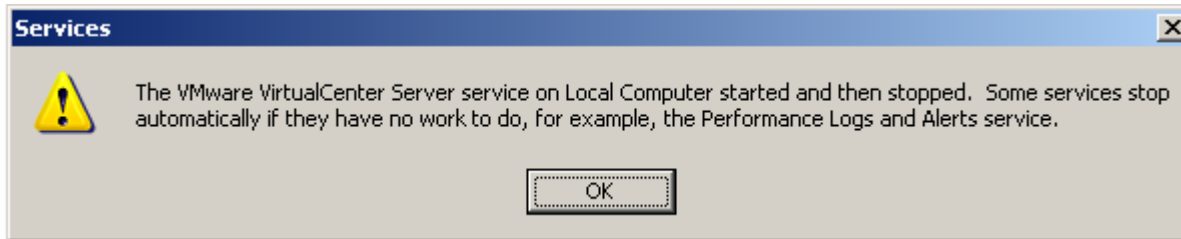
# VirtualCenter 2



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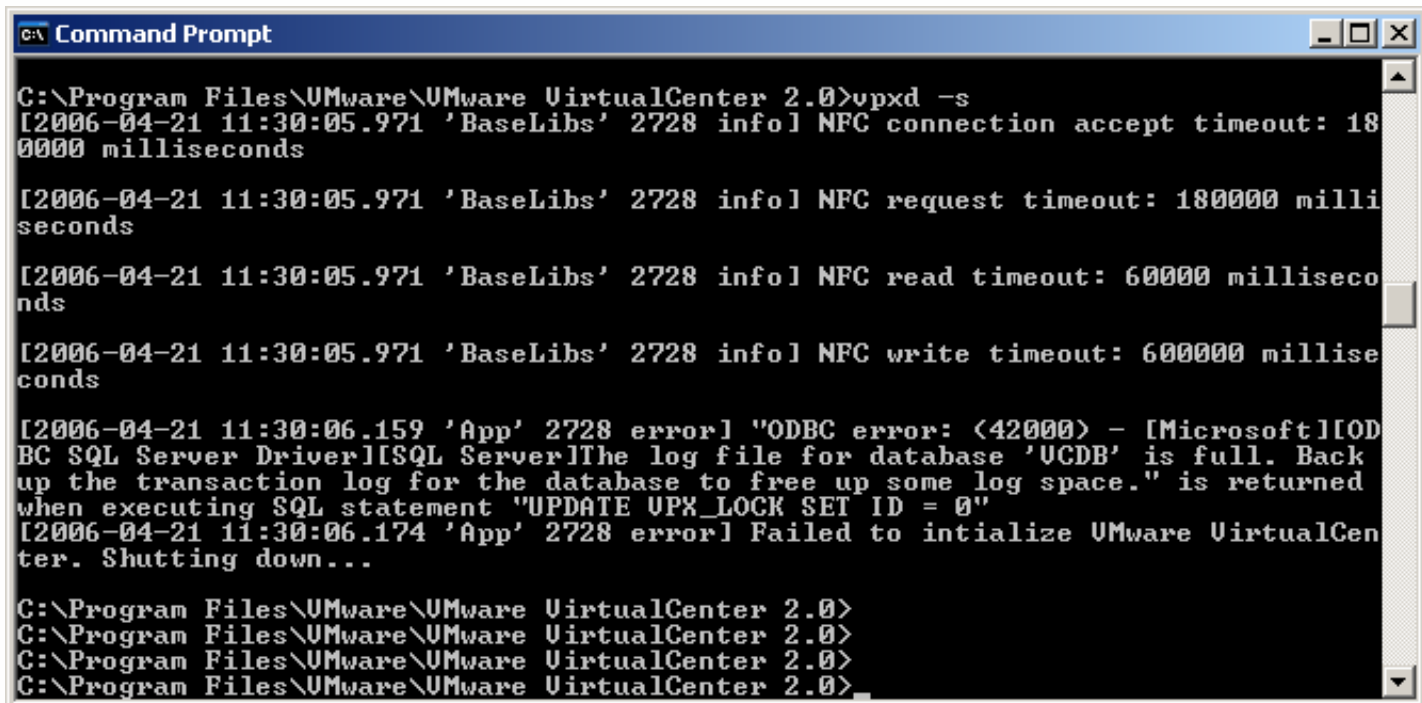
## Windows Operating System Errors

- If the VC service starts but stops immediately, a Windows error will be presented



## VC Service will Not Start

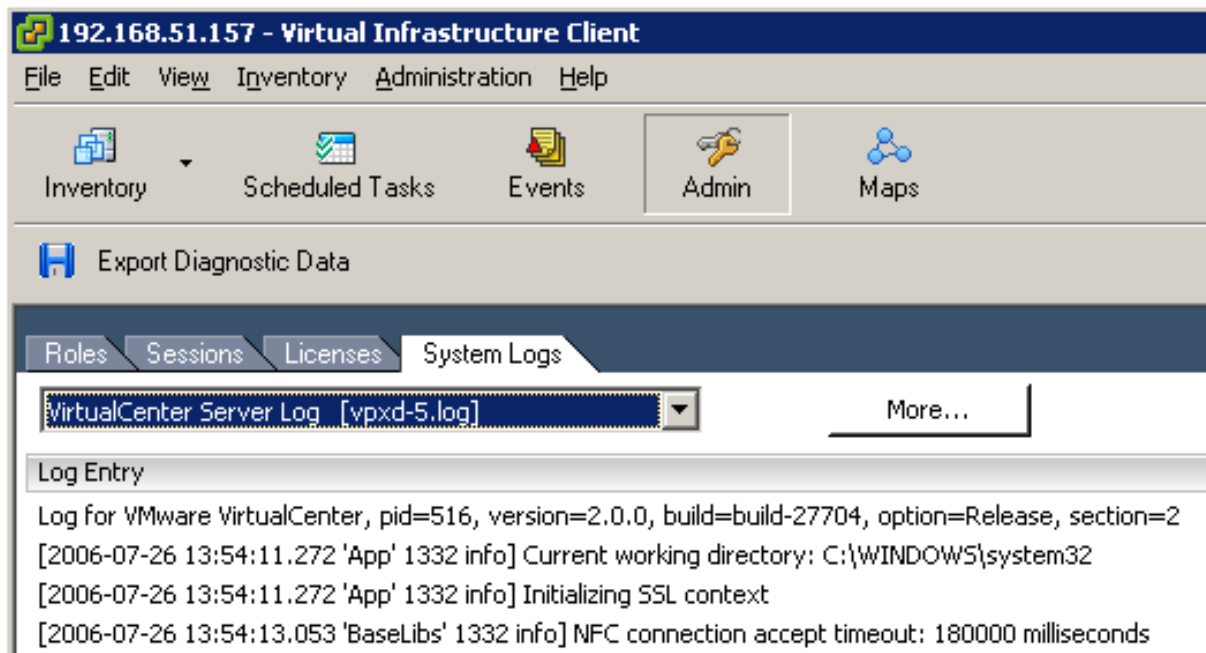
- Check `vpxd` logs and Windows event logs for clues
- Sometimes, VC terminates before adequate info is written to logs
- Invoke `vpxd` in `stand-alone` mode: `vpxd -s`



```
C:\Program Files\VMware\VMware VirtualCenter 2.0>vpxd -s
[2006-04-21 11:30:05.971 'BaseLibs' 2728 info] NFC connection accept timeout: 180000 milliseconds
[2006-04-21 11:30:05.971 'BaseLibs' 2728 info] NFC request timeout: 180000 milliseconds
[2006-04-21 11:30:05.971 'BaseLibs' 2728 info] NFC read timeout: 60000 milliseconds
[2006-04-21 11:30:05.971 'BaseLibs' 2728 info] NFC write timeout: 600000 milliseconds
[2006-04-21 11:30:06.159 'App' 2728 error] "ODBC error: <42000> - [Microsoft][ODBC SQL Server Driver][SQL Server]The log file for database 'UCDB' is full. Back up the transaction log for the database to free up some log space." is returned when executing SQL statement "UPDATE VPX_LOCK SET ID = 0"
[2006-04-21 11:30:06.174 'App' 2728 error] Failed to initialize VMware VirtualCenter. Shutting down...
C:\Program Files\VMware\VMware VirtualCenter 2.0>
C:\Program Files\VMware\VMware VirtualCenter 2.0>
C:\Program Files\VMware\VMware VirtualCenter 2.0>
C:\Program Files\VMware\VMware VirtualCenter 2.0>
```

## What happens if the VirtualCenter server service fails to start?

- Use the VI Client to check VirtualCenter Server service (vpxd) logs for clues
- Use the Windows Event Viewer to check event logs for clues

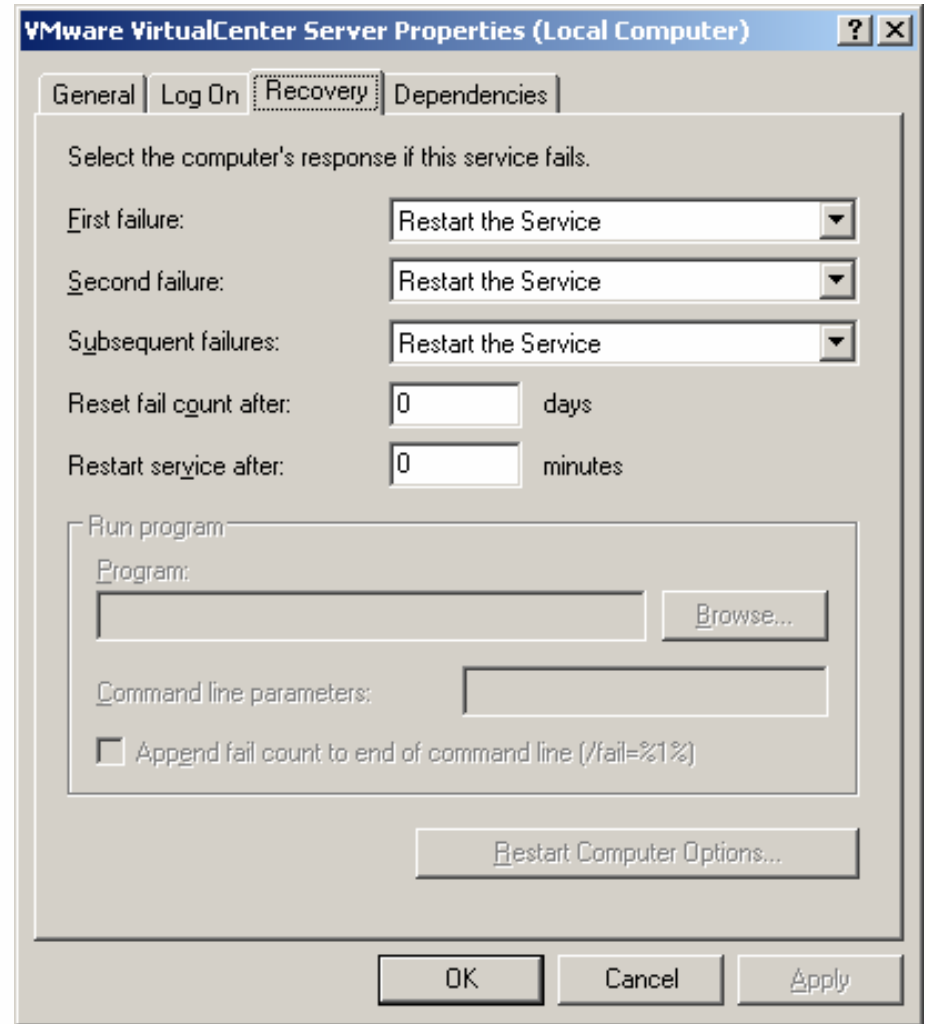


- Service failure could also be caused by database problems



## Windows Service Recovery

- If the VC service occasionally stops because of DB issues you may want to change the recovery options
- The root-cause should still be investigated

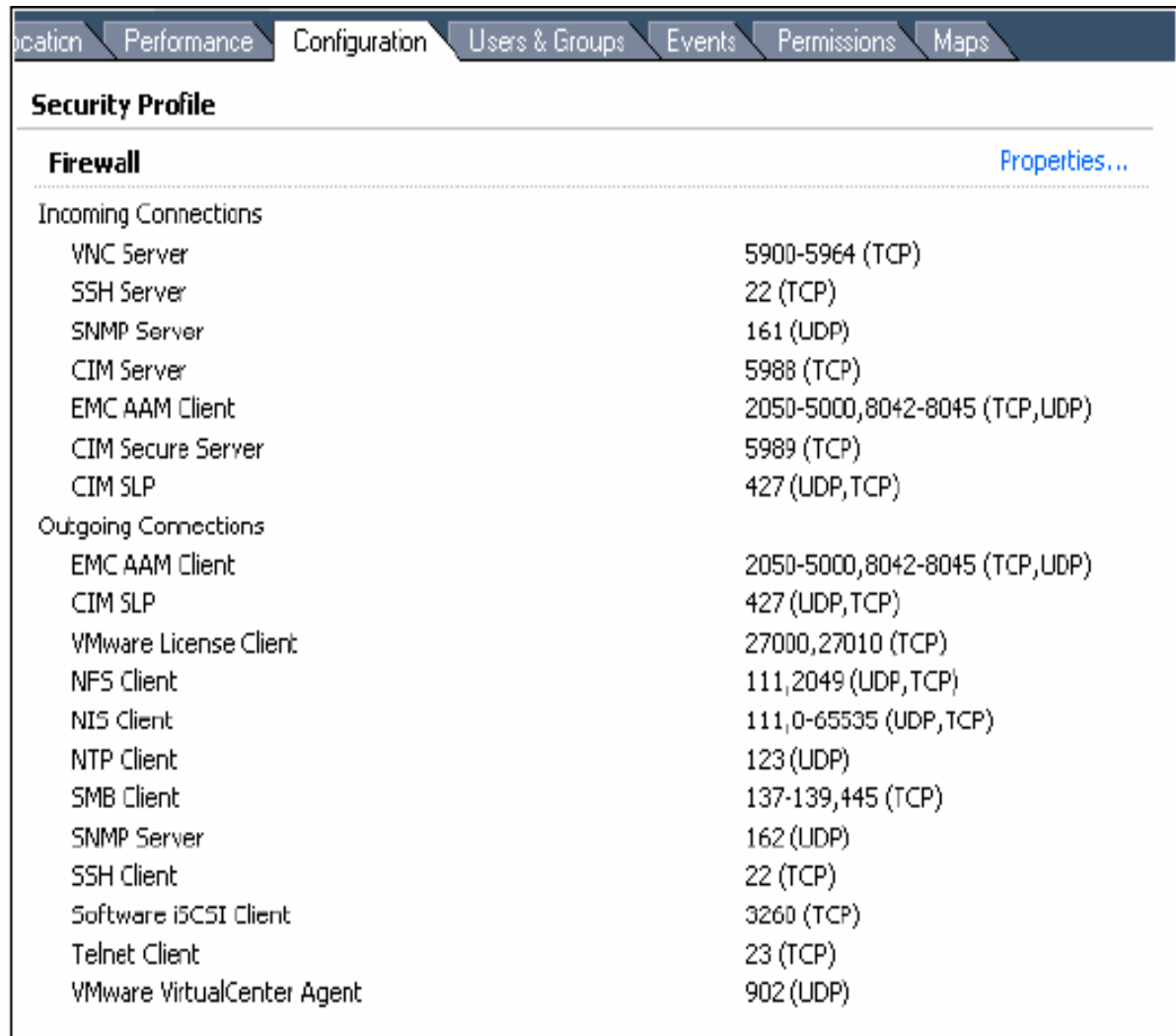


# Communication between VC2 and ESX3

## ■ Server Configuration Guide

➤ Page 180 shows complete list of ports, the ports use, and whether traffic is incoming or outgoing

■ Ports are defined as being used by the VMkernel or the SC

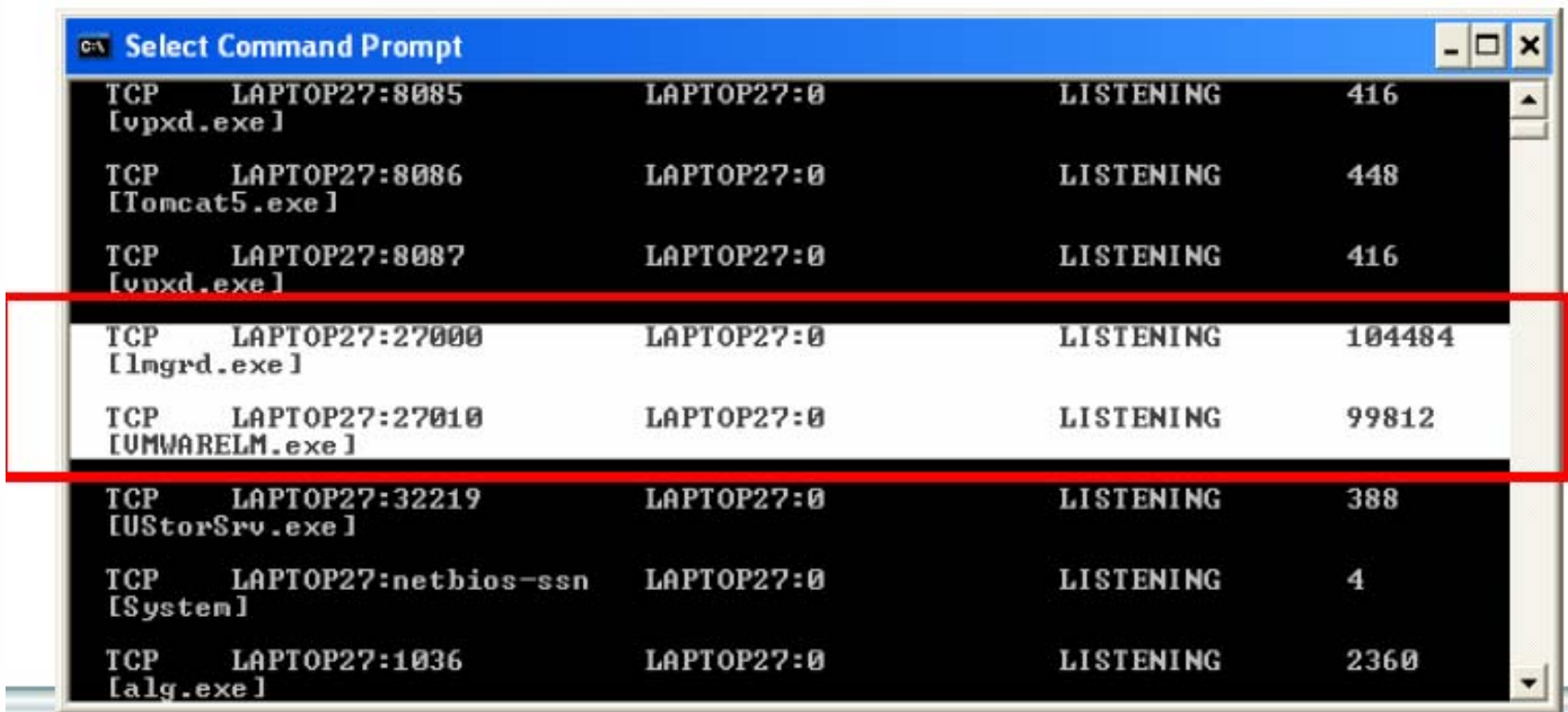


The screenshot shows the vSphere Configuration console with the 'Configuration' tab selected. The 'Security Profile' section is expanded to show the 'Firewall' settings. A 'Properties...' link is visible in the top right corner of the Firewall section. The Firewall settings are divided into 'Incoming Connections' and 'Outgoing Connections', each listing various services and their corresponding port ranges and protocols.

Connection Type	Service	Port Range and Protocol
Incoming Connections	VNC Server	5900-5964 (TCP)
	SSH Server	22 (TCP)
	SNMP Server	161 (UDP)
	CIM Server	5988 (TCP)
	EMC AAM Client	2050-5000,8042-8045 (TCP,UDP)
	CIM Secure Server	5989 (TCP)
	CIM SLP	427 (UDP,TCP)
Outgoing Connections	EMC AAM Client	2050-5000,8042-8045 (TCP,UDP)
	CIM SLP	427 (UDP,TCP)
	VMware License Client	27000,27010 (TCP)
	NFS Client	111,2049 (UDP,TCP)
	NIS Client	111,0-65535 (UDP,TCP)
	NTP Client	123 (UDP)
	SMB Client	137-139,445 (TCP)
	SNMP Server	162 (UDP)
	SSH Client	22 (TCP)
	Software iSCSI Client	3260 (TCP)
	Telnet Client	23 (TCP)
	VMware VirtualCenter Agent	902 (UDP)

## Find a Process Using the Port Number

- Get process information with `netstat -a -b`
- Remove service or change ports if possible

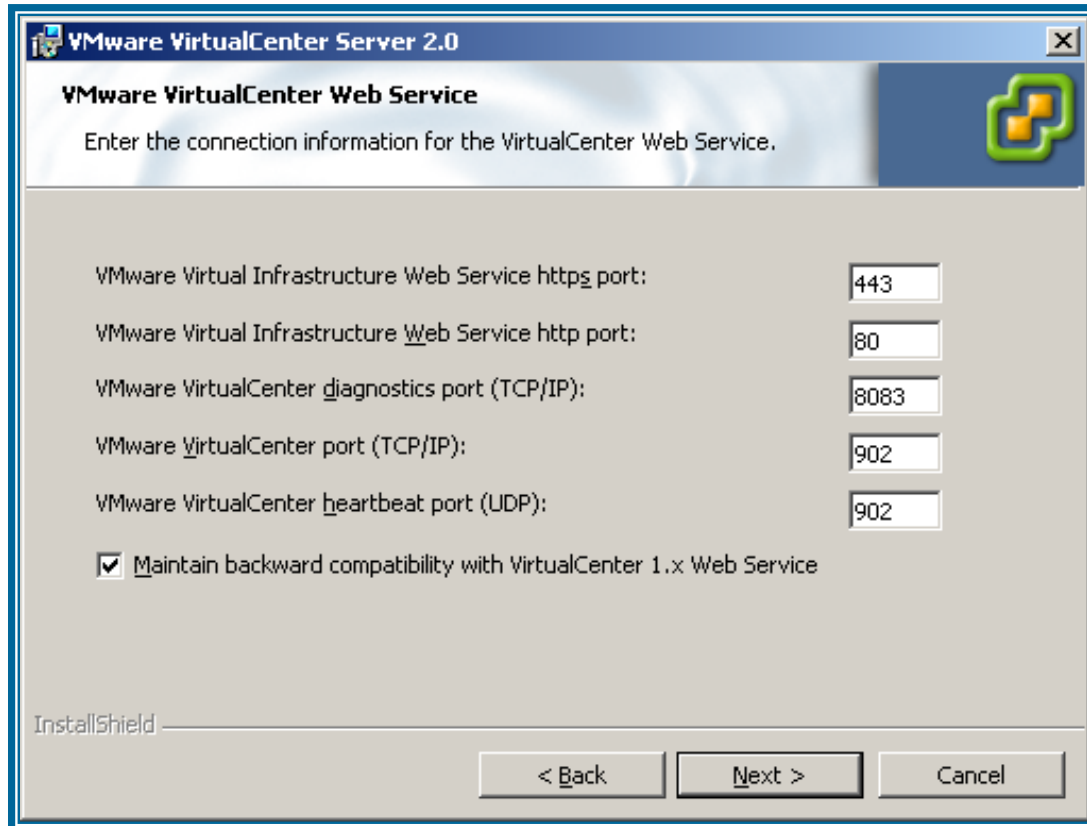


```
C:\> netstat -a -b
```

Protocol	Local Address	Foreign Address	State	Process
TCP	LAPTOP27:8085	LAPTOP27:*	LISTENING	[vpxd.exe]
TCP	LAPTOP27:8086	LAPTOP27:*	LISTENING	[Tomcat5.exe]
TCP	LAPTOP27:8087	LAPTOP27:*	LISTENING	[vpxd.exe]
TCP	LAPTOP27:27000	LAPTOP27:*	LISTENING	[lmgrd.exe]
TCP	LAPTOP27:27010	LAPTOP27:*	LISTENING	[UMWARELM.exe]
TCP	LAPTOP27:32219	LAPTOP27:*	LISTENING	[UStorSrv.exe]
TCP	LAPTOP27:nethios-ssn	LAPTOP27:*	LISTENING	[System]
TCP	LAPTOP27:1036	LAPTOP27:*	LISTENING	[alg.exe]

## Modify VC Ports

- Change VC from default ports if needed, but be aware of additional complexity this introduces



The screenshot shows a Windows-style dialog box titled "VMware VirtualCenter Server 2.0". The main heading is "VMware VirtualCenter Web Service" with a sub-instruction: "Enter the connection information for the VirtualCenter Web Service." The dialog contains five input fields for port numbers and a checked checkbox. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

VMware Virtual Infrastructure Web Service https port:	443
VMware Virtual Infrastructure <u>W</u> eb Service http port:	80
VMware VirtualCenter <u>d</u> iagnostics port (TCP/IP):	8083
VMware <u>V</u> irtualCenter port (TCP/IP):	902
VMware VirtualCenter <u>h</u> eartbeat port (UDP):	902

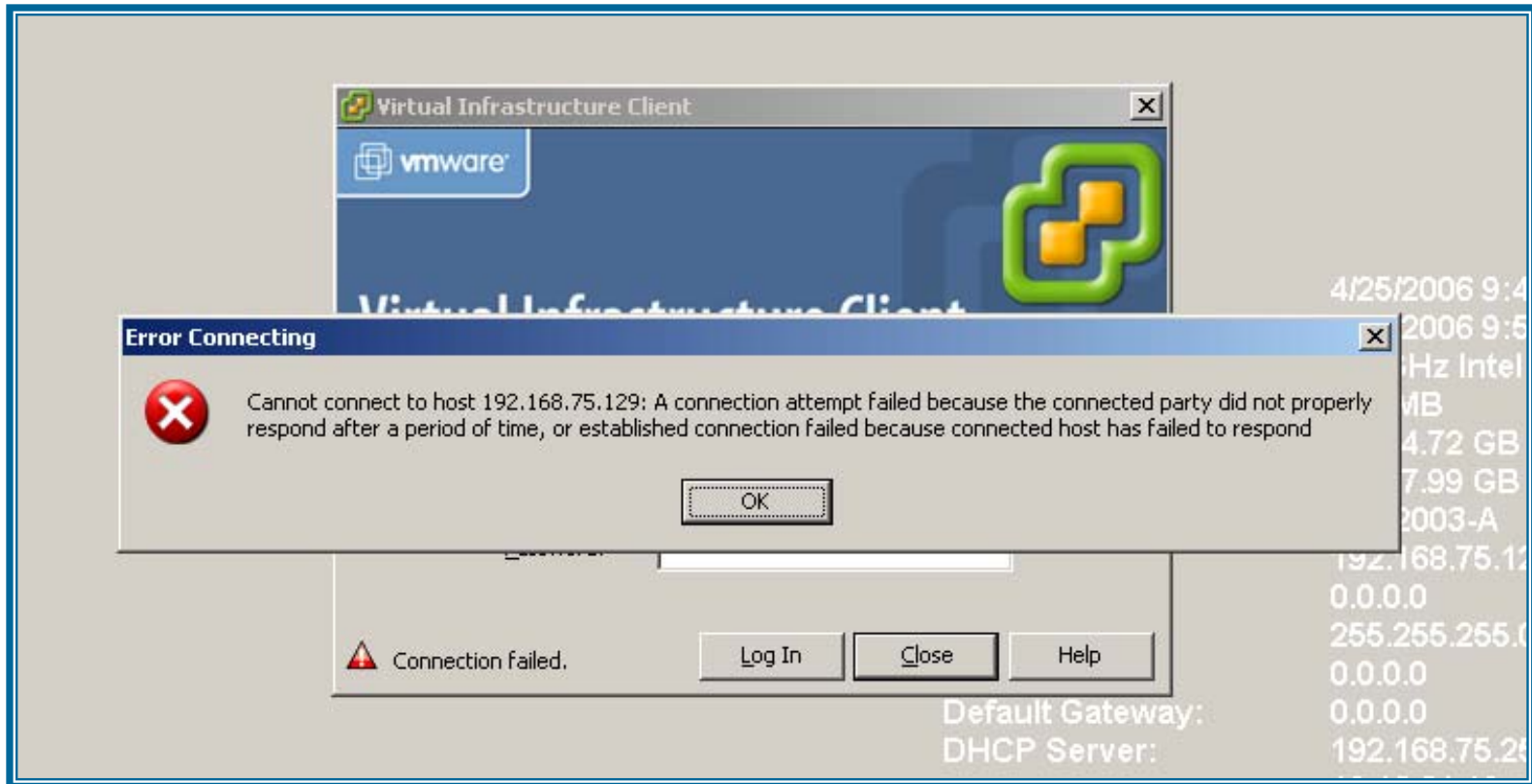
Maintain backward compatibility with VirtualCenter 1.x Web Service

InstallShield

< Back    Next >    Cancel

## Client Connections Blocked

- If VI Client on another machine can't connect to VC Server, it could be firewall-related



# Troubleshooting Windows Firewall

- Turn on firewall logging if necessary to determine whether or not ports are blocked
- Control Panel > Windows Firewall > Advanced Tab
  - Click on “Settings”... (under Security Logging)
- Look at `C:\WINDOWS\pfirewall.log`

```
2006-04-26 14:15:21 DROP TCP 192.168.75.128 192.168.75.129  
1550 80 48 S 24007413
```

```
43 0 64240 - - - RECEIVE
```

```
2006-04-26 14:15:34 DROP TCP 192.168.75.128 192.168.75.129  
1551 902 48 S 2554083
```

```
295 0 64240 - - - RECEIVE
```

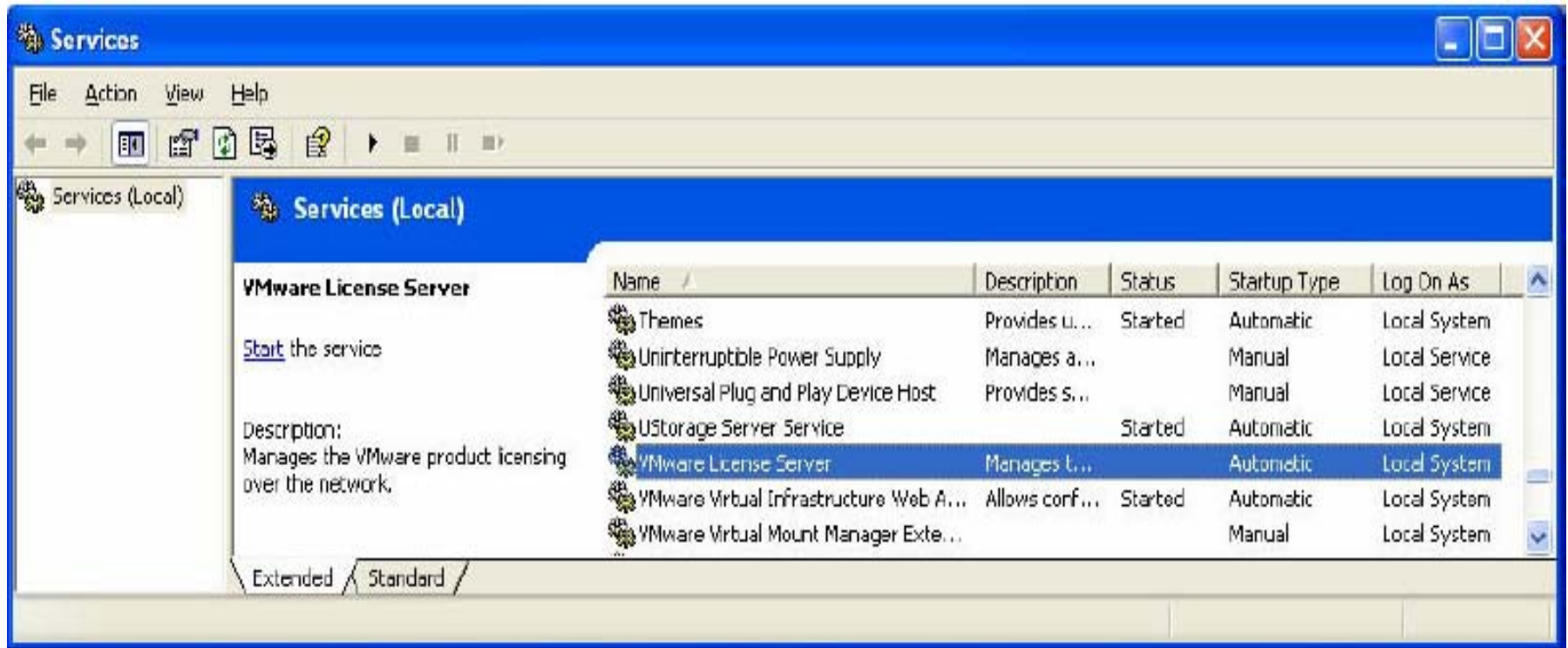
# License Server



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# License Server Service

- Check whether the VMware License Server is running via Start->Control Panel -> Administrative Tools -> Services





## License Server will Not Start

- Most likely cause is an incorrect or corrupted license file
  - KB1013698 provides syntax information about host/server based license files
- Use the **LMTTOOLS (license server tools)** utility
  - Click the Server Status tab to check the status of the license server, and verify the path to the license file being used
    - Click "**Perform Status Enquiry**" and look at messages
    - Use **Edit > Clear** window between runs
  - 1. If the wrong file is being used, change it in the "**Configure Services**" tab; hit "**Save Service**" after making the change
  - 2. Attempt to start the service again

## License Server Starts But Doesn't Behave Properly

- Check the log file in:  
%ALLUSERSPROFILE%\Application Data\VMware\VMware License Server\lmgrd.log
- Log viewer is also available in **LMTOOLS** under the “Config Services” tab
- Check the log under:  
%ALLUSERSPROFILE%\Application Data\Macrovision\FLEXIm
- Check the “Server Diags” tab in **LMTOOLS**. Click on "Perform Diagnostics" to see all licensed features and details
- Use the Generate VirtualCenter Server log bundle program
  - The result vcsupport-date-time.zip file is placed on the VC Server desktop

# Are licenses available?

- Error: *“There are not enough licenses installed to perform the operation”*
- Check to see that the ESX Server License Type has been changed from the default of "Unlicensed"

The screenshot shows the vSphere Configuration page for an ESX server. The 'Configuration' tab is selected. On the left, there are two expandable sections: 'Hardware' and 'Software'. The 'Software' section is expanded, showing 'Licensed Features' as a sub-section. On the right, the 'Licensed Features' section is detailed, showing 'License Sources' and 'ESX Server License Type'.

License Sources	
License Server:	egwin2003
Host License File:	None

ESX Server License Type	
ESX Server 3.0 Enterprise	Licensed for 2 CPUs
iSCSI Usage	
SAN Usage	
NAS Usage	

Add-Ons	
VMotion	Not Used
VMware DRS	Not Used
VMware HA	Not Used
Up to 4-way virtual SMP	Not Used
VMware Consolidated Backup	Not Used
VirtualCenter Management Server...	Licensed for 2 CPUs

## Unable to Change License State

- If the License Server cannot be set or changed, the ESX host may not be able to resolve the name of the License Server machine
  1. Log into the console (ssh)
  2. Verify that the name resolves to the correct IP
  3. If not, use the IP address instead of name
- If hosts are not automatically updated with the correct License Server when adding to VC
  1. Modify the License Server address under **Server Settings**
  2. Select “**Use the following license server**”
  3. Enter the alias or IP of the server
    - ❖ **If this step is not possible, restart the License Server right before clicking the OK button**

# VC2 Database



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## Checking for Database Failure

- VC log may contain a line such as:

**"An unrecoverable problem has occurred  
stopping the VMware VirtualCenter service  
Check database connectivity before  
restarting"**

- Check the state of the database before restarting the VC service

## Checking for Failure to Connect to Database

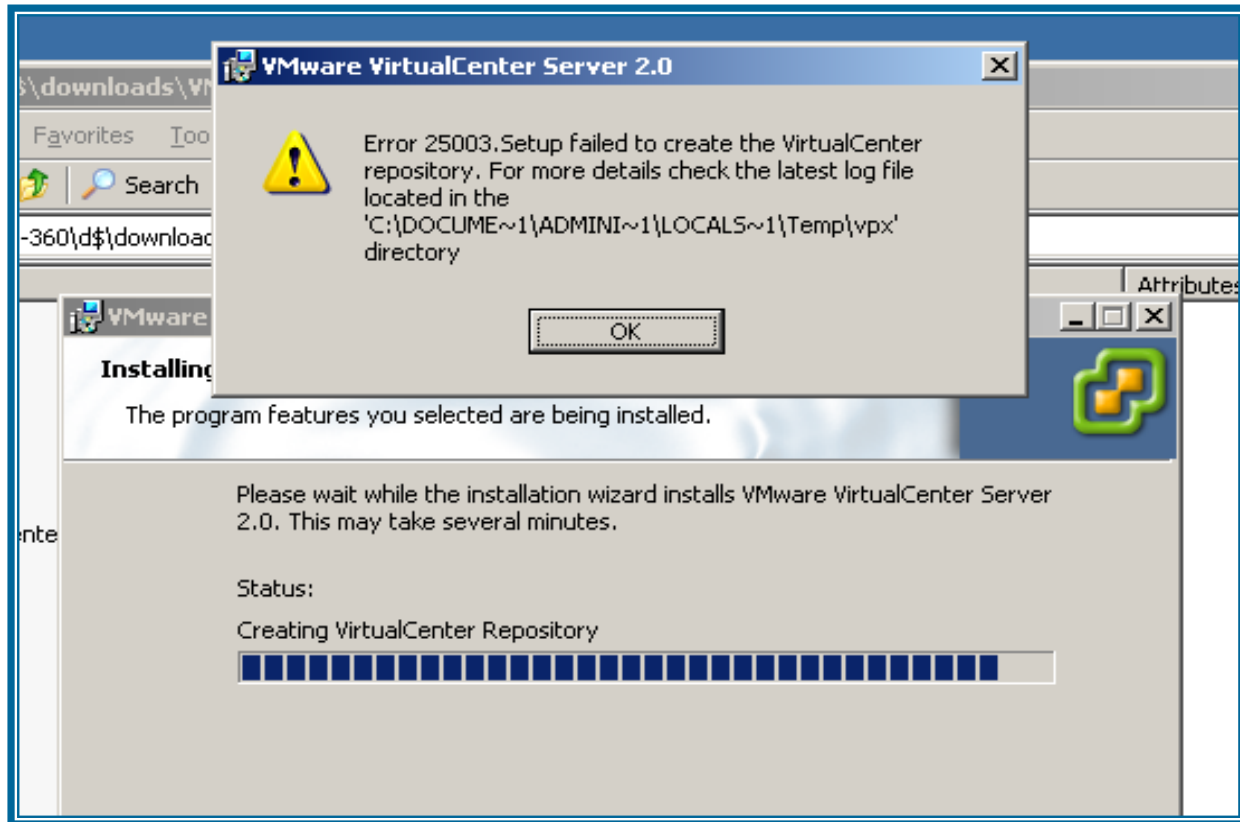
- VC log may contain a line such as:

**“SQL Server does not exist or access denied.”**

- Check to make sure the DSN is set up properly and access is granted to the connecting account

## Case-sensitive SQL Server

- VC is a case-insensitive DB application
  - Installation will fail with a case-sensitive collation





# Checking SQL Server Collation

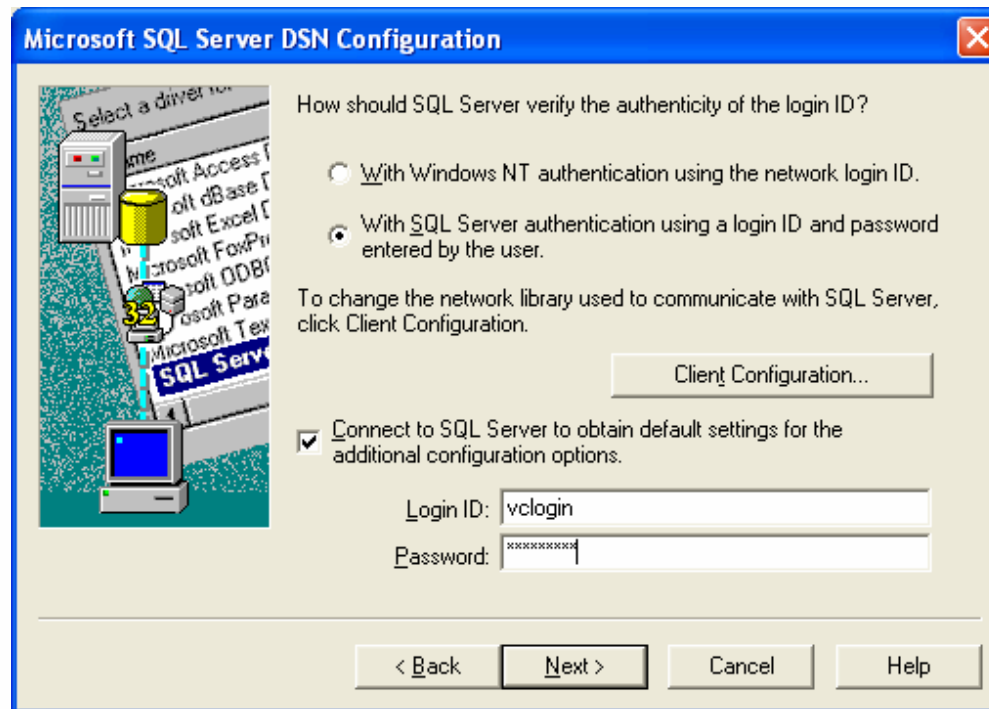
- Check the DB Properties

The screenshot shows the SQL Server Enterprise Manager interface on the left, with the 'Databases' folder expanded to show the 'VCDBX' database. The 'VCDBX Properties' dialog box is open, displaying the 'General' tab. The 'Collation name' field is circled, showing the value 'SQL\_Latin1\_General\_CP1\_CS\_AS'.

Property	Value
Name	VCDBX
Status	Normal
Owner	WIN2003-A\Administrator
Date created	4/26/2006 4:02:49 PM
Size	2.00 MB
Space available	0.58 MB
Number of users	2
Last database backup	None
Last transaction log backup	None
Maintenance plan	None
Collation name	SQL_Latin1_General_CP1_CS_AS

## ODBC Authentication Issues

- SQL Server authentication will work predictably on local and remote database servers
- NT authentication requires VC to run with a service account that has access to the DB; “**Local System**” account does not have access to remote servers



## Transaction Logs Filling Up

To prevent this:

1. Set to simple recovery mode if possible
2. Take regular backups of database if not in simple recovery mode
3. Ensure adequate disk space and configure transaction logs to grow automatically (logs will eventually fill entire disk unless regular backups are performed)
4. If customers are using SQL 2000 they may see an issue with transaction logs filling up, the vpxd log may contain:

**"The log file for database 'VCDB' is full. Back up the transaction log for the database to free up some log space"**

## Reinitializing the VC DB

- Wipes out and resets all data stored in the VC DB
- Use only as a last resort
- If vpxd is running under a user account, log in as that user
- From a command prompt:
  - `C:\>"\Program Files\VMware\VMware VirtualCenter 2.0\vpxd.exe -b"`

# VMotion



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## Virtual Machine Requirements for VMotion

- Migrating a VM with the following conditions produces an **error**:
  - VM has an active connection to an internal virtual switch
  - VM has an active connection to a CD-ROM or floppy device with a local image mounted
  - VM has its CPU affinity set to run on one or more specific, physical CPUs
  - VM is in a cluster relationship (e.g. using MSCS) with another VM
- Migrating a VM with the following conditions produces a **warning**:
  - VM is configured with an internal virtual switch but is not connected to it
  - VM is configured to access a local CD-ROM or floppy image but is not connected to it

## Host Requirements for VMotion

- Source and destination ESX servers must have
  - Visibility to all SAN LUNs (either FC or iSCSI) and NAS devices used by VM
  - A Gigabit Ethernet backplane
  - Access to the same physical networks
  - Consistently labeled virtual switch port groups
  - Compatible CPUs
    - New CPU features exposed, which introduce new VMotion compatibility constraints and trade-offs

## Identifying CPU characteristics

- In most cases, use server & CPU family/model specifications
- Use VMware's CPU bootable utility

```
TEST: 56983: CUID CHANGE: 312580
Reporting CUID for 1 logical CPU...

    Family: 06 Model: 0d Stepping: 6

    ID1ECX      ID1EDX      ID81ECX      ID81EDX
    0x00000180  0xafe9f9bf  0000000000  0000000000

Vendor        : Intel
Processor Cores : 1
SSE Support   : SSE2
Supports NX / ED : No
Hyperthreading : No
Supports 64-bit Longmode : No
Supports 64-bit VMware : No

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```

[http://www.vmware.com/download/vi/drivers\\_tools.html](http://www.vmware.com/download/vi/drivers_tools.html) or Get it from the ESX3 CD



## Links

- HCL for supported server hardware and operating systems
  - [http://www.vmware.com/pdf/vi3\\_systems\\_guide.pdf](http://www.vmware.com/pdf/vi3_systems_guide.pdf)
- HCL for support I/O adapters
  - [http://www.vmware.com/pdf/vi3\\_io\\_guide.pdf](http://www.vmware.com/pdf/vi3_io_guide.pdf)
- HCL for support SAN storage
  - [http://www.vmware.com/pdf/vi3\\_san\\_guide.pdf](http://www.vmware.com/pdf/vi3_san_guide.pdf)
- Installation and upgrade guide
  - [http://www.vmware.com/pdf/vi3\\_installation\\_guide.pdf](http://www.vmware.com/pdf/vi3_installation_guide.pdf)
- Command line reference in Appendix A of Server Configuration Guide
  - [http://www.vmware.com/pdf/vi3\\_server\\_config.pdf](http://www.vmware.com/pdf/vi3_server_config.pdf)
    - esxcfg-nics, esxcfg-vswif, esxcfg-vswitch, esxcfg-firewall, etc.
- License server configuration
  - [http://www.vmware.com/pdf/vi3\\_license\\_redemption.pdf](http://www.vmware.com/pdf/vi3_license_redemption.pdf)

The End

Questions?

## Presentation Download

Please remember to complete your  
**session evaluation form**  
and return it to the room monitors  
as you exit the session

The presentation for this session can be downloaded at  
**<http://www.vmware.com/vmtn/vmworld/sessions/>**

Enter the following to download (case-sensitive):

**Username: cbv\_rep**  
**Password: cbvfor9v9r**

Some or all of the features in this document may be representative of feature areas under development. Feature commitments must not be included in contracts, purchase orders, or sales agreements of any kind. Technical feasibility and market demand will affect final delivery.

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# Appendix



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## Service Console NIC

- vswif
  - > `eth0` is gone. Have to specify interface name while using standard Linux networking commands e.g. `/sbin/arping -I vswif0`
  - > MAC address is retained across reboots (`ifcfg-vswif0`)
  - > MAC address could be changed using `ifconfig`
  - > Multiple vswif's could be easily added – possible multi-homed configuration issues (routing table entries)
  - > `vswif0` settings are replicated to `eth0` when booting into Troubleshooting mode
    - `esxcfg-linuxnet -setup`: creates `ifcfg-eth0`
    - `esxcfg-linuxnet -remove`: removes `ifcfg-eth0`
  - > Resetting SC NIC settings
    - Use `esxnet-support` script – included with `VMware-esx-supptools.rpm`

## Virtual Center Installation Logs

- Install logs are located in the `%TEMP%` directory of the user that installed software

<b>vmlic.log</b>	test results for served license file during install
<b>redist.log</b>	MDAC/MCAD QFE rollup install results
<b>vmmsde.log</b>	MSDE installation log
<b>vmls.log</b>	License server installation log
<b>vmosql.log</b>	Creation of database/trans logs for VCDB
<b>vminst.log</b>	Log of VC server installation and subtasks
<b>VCDatabaseUpgrade.log</b>	Details of upgrading from VC 1.x DB
<b>vmmsi.log</b>	VI client installation log
<b>vpx\vpxd-0.log</b>	small stub from first time starting service

## VC Log File Locations - VPXD logs

- Location: %TEMP%\vpx (relative to the user account running vpxd)
- Naming: vpxd-#.log (# is one digit, 0-9)
- vpxd-index contains the # of the currently active log file
- Logs rotate each time vpxd is started, and also when it reaches 5 MB in size



## VC Log File Locations - VPXA logs

- VC agent on ESX host
- Location: `/var/log/vmware/vpx` on the ESX host
- Naming: `vpxa-#.log` (# is one digit, 0-9)
- `vpxa.cfg` can be used to modify logging behavior like `vpxd.cfg`

## VIC Log File Locations - VI client logs

- Intended for client-specific diagnostics
- Location: %TEMP%\vpx (relative to the user running the client)
- Naming: viclient-#.log (# is one digit, 0-9)
- No index file
- Logs rotate each time VI Client is started

## VC Log File Locations - Miscellaneous logs

- Core dump location
  - %USERPROFILE%\Application Data\VMware
- License Server debug log
  - %ALLUSERSPROFILE%\Application Data\VMware\VMware License Server\lmgrd.log (reset each time the service starts; no rotation)
  - %ALLUSERSPROFILE%\Application Data\Macrovision\FLEXIm\
- Web Access (Tomcat) Logs
  - C:\Program Files\VMware\VMware VirtualCenter 2.0\tomcat\logs

# Enable or disable Nx/xD

192.168.51.138 - VMware VirtualCenter

File Edit View Inventory Administration Help

Inventory Scheduled Tasks Events Admin Maps Feedback

Virtual Machine Properties

Hardware Options Resources

Settings Summary

General Server-R1

Power

Power Management

Advanced

Settings

- Run with debugging information
- Disable acceleration
- Enable Logging

CPU Identification Mask

Hiding the Nx flag will increase VMotion compatibility between hosts, at the cost of disabling certain CPU performance features for some guest operating systems and applications.

- Hide the Nx flag from guest.
- Expose the Nx flag to guest.
- Keep current Advanced setting values for the Nx flag.

Advanced...

Configuration Parameters...

OK Cancel

Tasks Alarms

Choose between Nx/xD security features or broadest VMotion compatibility

For future CPU features, edit mask at the bit level

# VMware HA



**VMWORLD 2006**

## Troubleshooting VMware HA

- Ensure IP connectivity
- DNS resolution (<29 char DNS name). May want to add nodes to /etc/hosts on ESX Server AND hosts file on VC Server
  - A better plan would be to use primary and secondary DNS servers
- Service Console has default gateway defined.
- Insure that storage and networks are visible throughout the cluster
- Ensure that no one has managed hosts directly, bypassing VC
- Check logs:
  - `/opt/LGTOaam512/logs/*`
  - `/opt/LGTOaam512/vmsupport/*`

## Configuration error

- After enabling HA, you may see a generic error like this:

 Configuring HA  10.16.8.84  An error occurred during configuration of the HA Agent on the host

- Double check the failover capacity to make sure it is greater than zero

VMware HA	
Admission Control:	<b>Allow constraint violations</b>
Current Failover Capacity:	<b>0 hosts</b>
Configured Failover Capacity:	<b>1 host</b>