Global VPN Client

SonicWALL Global VPN Client 4.6.4

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Pre-Installation Recommendations

SonicWALL strongly recommends you follow these steps before installing the Global VPN Client (GVC) 4.6.4 client:

- For Vista systems, it is required that you update device drivers for each Network Adapter card to the latest available versions. You can check the NIC vendor Web site for these updates.
- SonicWALL GVC encounters run time conflicts when it co-exists with any 3rd party IPsec VPN clients.
 Uninstall all IPsec VPN clients prior to installing SonicWALL GVC.

Platform Compatibility

SonicWALL GVC 4.6.4 supports both 32-bit and 64-bit client machines.

Windows Clients:

The following versions of Microsoft Windows are supported by SonicWALL GVC 4.6.4:

- Windows 7
- Vista
- Windows XP

NOTE: Windows 2000, Windows NT 4.0, Windows ME, Windows 98, and Windows 95 are not supported.

SonicWALL Firmware:

The SonicWALL GVC 4.6.4 release is compatible with the following firmware releases:

- SonicOS Enhanced 2.0.0.2 and above
- SonicOS Standard 2.0.0.2 and above



SonicWALL Appliances:

The SonicWALL GVC 4.6.4 release supports the following SonicWALL appliance platforms:

- NSA E-Class series
- NSA series
- TZ series
- PRO series
- TELE series
- SOHO series
- GX series

New Features

SonicWALL GVC 4.6.4 includes enhanced and updated Deterministic Networks (DNE) drivers.

This release also fixes a number of issues relating to Windows 7, certain tablet PCs, and DHCP behavior.

Known Issues

There is one known issue in the SonicWALL GVC 4.6.4 release:

Installation

Symptom	Condition / Workaround	Issue
SonicWALL GVC 4.6.4 is always installed in the default directory, causing the "Start this program when I log in" option to fail after the upgrade.	Occurs when upgrading SonicWALL GVC and there is a previous installation in a non-default folder. The GVC start option fails because the GVC folder has changed.	97689



Resolved Issues

This section describes the resolved issues in the SonicWALL GVC 4.6.4 release:

Connectivity

Symptom	Condition / Workaround	Issue
On several laptop models, enabling SonicWALL GVC causes the laptop to become unresponsive, requiring a restart.	Occurs when running Windows 7 on a 32-bit or 64-bit laptop, including Dell and HP models, and using SonicWALL GVC to establish a VPN tunnel. Can occur for both wired and wireless connections.	92212
The DNS servers configured in the SonicWALL GVC DHCP lease are not reachable, and the routes generated for them are incorrect.	Occurs on Windows 7 computers when DNS server IP addresses are included in the SonicWALL GVC DHCP lease configuration.	90612
SonicWALL GVC cannot connect, but stays in the "Acquiring IP" state, or keeps asking for a phone book entry.	Occurs when a Windows 7 client using a 3G card launches SonicWALL GVC, and GVC is configured to provide DHCP leases to clients.	87872
Launching a SonicWALL GVC connection to a remote firewall causes the client machine to become unresponsive and display a bluescreen.	Occurs on Windows 7 and Windows XP clients when a VPN policy is created in SonicWALL GVC, and then the policy is enabled to connect to a remote firewall.	96426

Networking

Symptom	Condition / Workaround	Issue
The correct VPN Access network route is not added to the route table on the host computer, preventing access to certain servers on the network.	Occurs when the DHCP scope is a subnet of the VPN Access network. The DHCP scope subnet mask (for example, 255.255.255.0) is used for the VPN Access network route (even though it is configured to be 255.0.0.0).	95203

Users

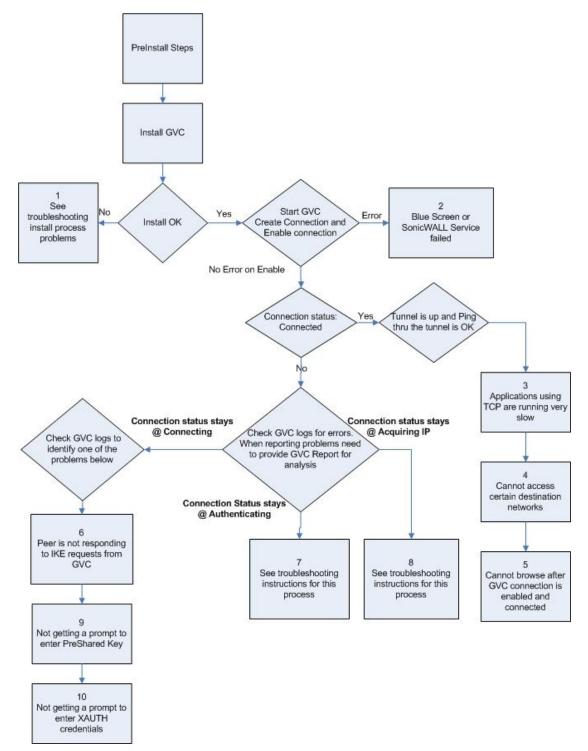
Symptom	Condition / Workaround	Issue
SonicWALL GVC displays the error "Your password will expire in -1 days".	Occurs when a domain user connects to a network with SonicWALL GVC, and the user's password has already expired.	91672



Troubleshooting

The following is the troubleshooting procedure for the SonicWALL GVC 4.6.4 release:

Trouble Shooting Process for GVC:





Note: If you need to debug run time problems after a successful SonicWALL GVC install, refer to the SonicWALL GVC logs to detect the error condition(s). Some problems may also require information from the firewall logs. Reporting SonicWALL GVC run time problems to technical support requires that you submit SonicWALL GVC and/or Firewall logs for analysis.

Detailed troubleshooting processes are explained for the following issues:

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Process 1: Debug Install Issue

Note: If SonicWALL GVC was an upgrade install, then first uninstall SonicWALL GVC, reboot your computer and then run setup again. If you encounter an error, follow the troubleshooting instructions.

A) Blue Screen during Install Process:

If you get a blue screen after the upgrade to SonicWALL GVC 4.6.4.x, provide the following file **%SystemRoot%\Minidump.dmp** (%SystemRoot% is usually C:\Windows) to Tech support in order to troubleshoot further.

For someone who can reproduce the BSOD, choosing 'Kernel memory dump' could be of even more help as it should have more information. To get detailed memory dump need to set the following;

Start->Computer, right-click on 'Computer' and select 'Properties'. Choose 'Advanced system settings' and then choose 'Settings' under 'Startup and Recovery'. The settings are under the 'System failure' section. The dump file will by default be written to the "SystemRoot" MEMORY. DMP file.

B) SonicWALL GVC install fails due to the following error:





This error could happen in the following cases:

- a) Installing SonicWALL GVC without a reboot after GVC uninstall.
- b) Hard reset during the install operation.
- c) SonicWALL GVC install is an upgrade from an earlier GVC Beta version.

Reboot your computer and then run setup again. If it still results in the same error, then do the following.

- Right-click on the Command Prompt icon and select Run as administrator.
- 2. Change directory to **%SystemRoot%\system32\drivers** (%SystemRoot% is C:\Windows).
- 3. Type **net stop SWIPsec.sys**. You may see either success or failure returned.
- 4. Rename SWIPsec.sys to SWIPsec.sys.bak (if SWIPsec.sys exists in this directory).

Now run setup again and install SonicWALL GVC.

C) SonicWALL GVC Install is stuck while installing the SonicWALL Virtual Adapter:

You may have to do a hard reset if the installation is stuck during the install of the Virtual Adapter. After power up, uninstall SonicWALL GVC and reboot your computer. Now verify that SonicWALL Virtual Adapter does not exist. Go to Start->Control Panel->Network and Internet->Network and Sharing Center->Manage Network Connections page. If it still exists after the SonicWALL GVC uninstall, it is most likely due to registry corruption during the hard reset.

Manually uninstall SonicWALL Virtual Adapter as follows:

- 1. Go to Start->Computer, right-click on 'Computer' and select 'Properties'.
- 2. Choose 'Device Manager' and then choose 'Network adapters'
- 3. Right-clik 'SonicWALL VPN Adapter' and uninstall this adapter.
- 4. Select the 'Delete the driver software for this device' checkbox.
- 5. Change to the %SYSTEMROOT%\System32\Drivers directory and delete SWVNIC.SYS.
- 6. Reboot your machine.
- 7. After power up, install SonicWALL GVC again.

D) SonicWALL GVC Install fails due to following error:

"SWGVCSVC Module has Stopped Working"

This error indicates that the installer failed to install SonicWALL services. Run SonicWALL GVC installer for the second time.

Process 2: Post-Install Errors

These problems are seen after the successful install.

- 1) Blue Screen
- 2) Failed to run SonicWALL service.

Blue Screen:

Network Adapter Card drivers: Check if you are using the latest driver for each Network Adapter card installed on your computer. If it is not, then you have to first upgrade to this latest version of the driver and then run SonicWALL GVC again.

Trend Micro firewall: If you have installed this client based firewall, then check to make sure it is the latest version from the Vendor Website. If it is and you are still getting Blue screen, then disable the Trend Micro Common firewall driver binding from the properties of the Virtual adapter. On Vista, go to Start->Control Panel->Network and Internet->View network status and tasks->Manage network connections. Select SonicWALL Virtual adapter and right-click to select properties and then disable Trend Micro Common firewall driver binding.



If the blue screen still persists, then you need to provide the following to tech support for further investigation.

After the upgrade to SonicWALL GVC 4.2.x.x, if you get a blue screen, provide the following file **%SystemRoot%\Minidump** (%SystemRoot% is usually C:\Windows) to Tech support in order to troubleshoot further.

For someone who can reproduce the BSOD, choosing 'Kernel memory dump' could be of even more help as it should have more information. To get detailed memory dump need to set the following;

Start->Computer, right-click on 'Computer' and select 'Properties'. Choose 'Advanced system settings' and then choose 'Settings' under 'Startup and Recovery'. The settings are under the 'System failure' section. The dump file will by default be written to the %SystemRoot%\MEMORY.DMP file.

Failed to run SonicWALL Service:

Open a DOS command prompt window by right-clicking on the icon and select 'Run as administrator'. Change directory to SonicWALL GVC install directory, (Usually \Program Files\SonicWALL\SonicWALL Global VPN Client) and type the following commands.

Net stop SWGVCSVC Net start SWGVCSVC

Process 3: TCP Applications on Vista are Slow

The issue is caused by Windows Scaling being handled incorrectly by the firewall device. To manually disable windows scaling, run the following command from the command prompt:

"netsh interface tcp set global autotuning=disabled"

Refer to the following URL for more information on this problem: http://support.microsoft.com/kb/934430

Process 4: Cannot Access Certain Destination Networks

- A) From SonicWALL GVC menu select, File->Properties->Status tab. In the connection section, select Details button. Verify the destination network you are trying to reach, exists in the Destination Proxy IDs list. The information is user specific and can be controlled in the Group VPN Policy on the firewall. This verification can also be done from a SonicWALL GVC report and can be found under the following heading;
 - i. Destination Networks
 - ii. ------
 - iii. 192.168.0.0/255.255.255.0/BOOTPS: Phase 2 Complete
 - iv. 192.168.0.0/255.255.255.0/Any: Idle

This destination proxy ID list is generated on a per user basis so it is possible the user access list is missing the required destination networks.

B) If Step 1 is verified and it still fails, then verify the route to and from the destination network is correct on the firewall side. This may require a packet capture either on the SonicWALL appliance or an external packet capture on the host you are trying to reach.



Process 5: Cannot Browse the Internet after SonicWALL GVC Connection is Enabled and Connected

Generate SonicWALL GVC report (Help->Generate Report menu) and verify if the policy is a tunnel all policy. Check that the default route points to the correct interface. If the policy is tunnel all, then a packet capture on the SonicWALL appliance should provide information if the packet is dropped at the firewall due to an incorrectly configured or unavailable rule to route the Internet packets. In order to help trace this, start a continuous ping from SonicWALL GVC client to 4.2.2.2 and use the packet capture utility on the firewall to trace the packet destination.

Process 6: Peer is not Responding to ISAKMP Requests from SonicWALL GVC; Check SonicWALL GVC Logs to Verify

- A) Verify host running SonicWALL GVC application has Internet connectivity and can browse the Internet. If not, then fix this problem and then go to Step B.
- B) Verify the Peer gateway is running and the <zone> Group VPN policy is enabled. If you have other SonicWALL GVC clients connecting to the same firewall on the same interface of the firewall, then this is not a problem. Go to Step C.
- C) SonicWALL GVC works from certain locations and this error message only shows up when you are behind certain NAT device. There are two possible scenarios.

 NAT device is blocking IKE traffic from SonicWALL GVC (Vista OS) since it is not using defined UDP source port (500) for IKE. This is currently only a problem with SonicWALL GVC running on Vista. In order for SonicWALL GVC to use the defined IKE source port, start SonicWALL GVC by right-clicking on the icon and then select 'Run as administrator'. If SonicWALL GVC still cannot connect, then go to Step D
- D) It is possible that this NAT device is blocking IKE traffic and so requires a rule (policy) to allow IKE packets from SonicWALL GVC.
 To verify if the IKE traffic from SonicWALL GVC is reaching the Peer gateway, use the event logs (Network Debug Category enabled) or packet capture on the SonicWALL appliance. If the Peer gateway does not get the IKE packets, then it is the NAT device in the middle or ISP that is dropping the IKE packets. Consult the NAT device manual or ISP to troubleshoot this problem.

Process 7: Stuck on Authenticating when SonicWALL GVC Connection is Enabled

Important: Check SonicWALL GVC logs to get the state of the connection progress. Most likely causes:

- A) Group VPN Configuration error on the Firewall. Check if the user has VPN access list assigned. (With or Without XAUTH this is required)
- B) SonicWALL GVC logs show Phase 2 error. This should never happen with SonicWALL GVC. Delete the connection and create a new one and then try to connect again. The user has to enter the preshared key if the firewall GroupVPN setting "Use Default Key for Simple Client Provisioning" is not enabled. They will also enter their XAUTH credentials as they normally do on new connections, if the firewall XAUTH checkbox is on for GroupVPN
- C) SonicWALL GVC logs shows Phase 2 error. This should never happen with SonicWALL GVC. Delete the connection and create a new one and then try to connect again. The user has to enter their XAUTH credentials and the preshared key if default provisioning key is not enabled.
- D) Check if the firewall has license for SonicWALL GVC connection. If it has, then check if the number of concurrent SonicWALL GVC connections does not exceed the licensed number.



Process 8: Failed to Obtain DHCP Lease for the Virtual Adapter

Note: Try a reboot first. If that does not help follow these steps:

- A) Verify that no 3rd party IPsec VPN clients are installed on your computer. Uninstall any existing IPsec VPN clients (including SonicWALL GVC), reboot, and then install SonicWALL GVC again.
- B) Dell Wireless WLAN 4.10+ wireless network driver includes VLAN Priority Support which conflicts with getting a DHCP lease for the SonicWALL Virtual Adapter. Check if VLAN Priority Support is enabled. If it is, disable it by performing the following steps:
 - Right-click My Computer on the desktop and click Properties.
 NOTE: If there is no My Computer icon on the desktop, click Start and right-click My Computer on the right column of the Start menu.
 - 2. When the **System Properties** window appears, click the **Hardware** tab and click **Device Manager**.
 - 3. When the **Device Manager** window appears, click the <+> next to **Network Adapters** and double-click **Dell Wireless WLAN Adapter**.
 - 4. When the **Dell Wireless WLAN Adapter Properties** window appears, click the **Advanced** tab.
 - 5. Scroll down to VLAN Priority Support and click to highlight.
 - 6. Select **Disable** from the drop-down menu under the **Value:** field.
 - 7. Click **OK** to close the **Dell Wireless WLAN Adapter Properties** window.
 - 8. Click the X button in the upper right-hand corner of the Device Manager window to close it.
- C) Verify DNE binding is enabled for the SonicWALL Virtual Adapter. Go to Start->Control Panel->Network and Internet->Network and Sharing Center->Mange network connections page. Select SonicWALL Virtual Adapter and right-click on properties. On the properties page verify Deterministic Network Enhancer binding is enabled.
- D) If this is a new setup, verify configuration on the firewall. Enable Network Debug category logs to show the DHCP transaction messages. Based on the logs you can determine if the DHCP request is received from the client and if the DHCP server responded to this request. If it is an already working setup, and only SonicWALL GVC on Vista is having this problem, then go to step B.
- E) If you are running a client-based software firewall on the Vista machine, check if the version is Vista compatible. If it is not, then upgrade to the latest version. If it does not work after the upgrade, then add a rule to allow TCP/UDP port 67/68. If this does not fix the problem, then go to step C. (Note: There were numerous problems reported with Norton Internet Security Suite. If you have this software installed, then the final try is to uninstall Norton and reboot your computer and then try again)
- F) Disable the software firewall completely and then try again. If this does not work, then go to Step E.
- G) Change the default setting for this connection for NAT Traversal from Automatic to Disabled. To select the connection, go to File->properties->Peer->Edit tab to change this setting.



Process 9: Not Getting a Prompt to Enter a PreShared Key (PSK)

This could happen due to process 6 error condition above. If that is not the case, then PSK prompt is only available if the Simple provisioning key is not enabled on the <zone> Group VPN Policy. After the PSK is entered for the first time, it is saved in the encrypted configuration file. Unless the PSK in Group VPN policy is changed the PSK is never prompted again.

Process 10: Not Getting a Prompt to Enter XAUTH Credentials

This could happen due to process 6 error condition above. If that is not the case, then XAUTH prompt is only available if it is enabled on the <zone> GroupVPN Policy. XAUTH credentials are allowed to be cached in the encrypted configuration file only it is allowed on the <zone> Group VPN policy.

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