

Network Interface Cards (NICs) tested with Cisco Agent Desktop (CAD) and CTI Toolkit Desktop Silent Monitor - Reference Information



Disclaimer: Cisco Agent Desktop (CAD) and CTI Toolkit Desktop Silent Monitoring puts special requirements on the Network Interface Card (NIC) on the agent desktop PC. The NIC is required to provide network connectivity on the default data VLAN, while being able to capture voice packets on a different VLAN (voice VLAN) simultaneously. Some NICs are able to accomplish this task while others MAY not. In order to help with deployments, Cisco has tested the most common NICs with driver versions as listed in the table below. Be advised that there is a possibility for a specific NIC card to behave differently with different driver versions or operating systems. If a combination of NIC / operating system / driver version is not specifically listed below, it is recommended to test them using instructions in the CTI OS System Manager's Guide (see Appendix A, "Testing an Ethernet Card for Silent Monitor") for NIC testing information before deploying them with Silent Monitor. Although Cisco tested these NIC cards only with CTI Toolkit Desktops, the same results should be valid for Cisco Agent Desktops as well, as the CAD desktop silent monitoring features uses the same NIC card capabilities.

Tested releases and versions

CTI OS release: 7.1(3)

Operating System: Windows XP Pro SP2

NIC Card		NIC Driver Data					Supported
Card/Desktop system Brand and name	Manufacturer NIC Name	Provider	Date	Version	Signature		
Aironet AEG100 10/100/1000Mbps PCI Gigabit 32-bit Adapter.	Realtek RTL8169/8110 Family Gigabit Ethernet NIC	Realtek Semiconductor Corp.	8/11/2003	5.606.811.2003	No digitally signed	Yes	
		Realtek Semiconductor Corp.	7/16/2004	5.615.716.2004	Microsoft Windows Hardware compatibility Publisher	Yes	
3com 3C905CX-TXM 10/100Mbps PCI 2.1/2.2 Managed Network Interface Adapter - OEM	3Com EtherLink XL 10/100 PCI for Complete PC Management NIC (3C905C-TX)	Microsoft	7/01/2001	4.5.0.0	Microsoft Windows Publisher	Yes	
Dynex Desktop 10/100 PCI Network Card	Dynex DX-E101 PCI Fast Ethernet Adapter (rev. F1)	BestBuy	11/02/2005	3.49.0.434	Microsoft Windows Hardware compatibility Publisher	Yes	
Linksys Ethernet Desktop Adapter 'LNE100TX'	Linksys LNE100TX(v5) Fast Ethernet Adapter	Linksys Group Inc.	10/25/2001	2.17.1025.2001	Microsoft Windows Hardware compatibility Publisher	Yes	
Belkin Desktop Gigabit 10/100/1000 Network PCI Card	Belkin F5D5005 v2000 Gigabit Desktop PCI Card	Belkin Corporation	01/18/2006	5.639.118.2006	Microsoft Windows Hardware compatibility Publisher	Yes	
CompUSA Gigabit 10/100/1000 Network PCI card	Realtek RTL8169/8110 Family Gigabit Ethernet NIC	Realtek Semiconductor Corp.	12/31/2003	5.611.1231.2003	Microsoft Windows Hardware compatibility Publisher	Yes	
Netgear Gigabit PCI Adapter "GA311NA"	Netgear GA311 Gigabit Adapter	NetGear	10/09/2003	5.608.1009.2003	Not digitally signed	Yes	
D-Link 10/100TX PCI Adapter	D-Link DFE-550TX FAST Ethernet 10/100 Adapter	D-Link	10/20/2002	2.5.13.0	Microsoft Windows Hardware compatibility Publisher	Yes	
StarTech.com 10/100Mbps PCI Fast Ethernet Network Card Adapter Full Duplex 200 Mbps w/ACPI Wake Port Plug & Play, RJ-45	Realtek RTL8139/810x Family Gigabit Ethernet NIC	Realtek Semiconductor Corp.	12/31/2003	5.611.1231.2003	Microsoft Windows Hardware compatibility Publisher	Yes	
TRENDnet TEG-PCITXR 10/100/1000/2000Mbps PCI Copper Gigabit Network Adapter	TEG-PCITXR 32-bit 10/100/1000Mbps PCI Adapter	TRENDware	07/30/2004	5.6204.201.2005	Microsoft Windows Hardware compatibility Publisher	Yes	
Intel PWLA8391GT 10/100/1000Mbps PCI Network Adapter - OEM	Intel® PRO/1000 GT Desktop Adapter	Intel	06/22/2004	8.0.57.0	Microsoft Windows Hardware compatibility Publisher	Yes with workaround #1	
3Com 10/100 Secure NIC, low profile	3Com 10/100 Secure NIC {3CR9908-97"}	3Com	08/30/2003	3.0.0.5	Microsoft Windows Hardware compatibility Publisher	No (Failed to receive VLAN packets but was able to do silent monitor)	
System name: Acer AcerPower S285 - Celeron D 352 3.2 GHz.	NIC: Realtek RTL8169/8110 Family Gigabit Ethernet NIC (Integrated)	Realtek Semiconductor Corp.	04/19/2006	5.641.209.2006	Microsoft Windows Hardware compatibility Publisher	Yes	
System name: Pavilion a1620e CTO Desktop (HP)	NIC: NVIDIA nForce Networking Controller (Integrated)	NVIDIA	03/03/2006	50.2.4.0	Microsoft Windows Hardware compatibility Publisher	Yes	
System name: OptiPlex 320 Desktop Celeron (Dell)	NIC: Broadcom 440x 10/100 Integrated Controller (Integrated)	Broadcom	05/17/2006	4.47.0.0	Microsoft Windows Hardware compatibility Publisher	Yes with workaround #2	
System name: ThinkCentre A55 Tower (Lenovo)	NIC: Broadcom NetLink (TM) Gigabit Ethernet (Integrated)	Broadcom	08/28/2006	9.81.0.0	Microsoft Windows Hardware compatibility Publisher	Yes with workaround #3	
System name: DX420B (Gateway)	NIC: Intel 82562V 10/100 Network Connection (Integrated)	Intel	07/19/2006	9.4.21.0	Microsoft Windows Hardware compatibility Publisher	No	

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Workaround #1 for Intel® PRO/1000 GT Desktop Adapter

By default, Intel adapters strip the VLAN tag before passing it up the stack. If you are using a Microsoft Windows OS and you need to see tagged frames using your packet capturing software you will need to use the latest Intel driver and you will be required to make a registry change. To allow tagged frames to be passed to your packet capture software you must go into the registry and either add a registry dword and value or change the value of the registry key.

The registry dword is MonitorModeEnabled. It should be placed at:

HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\00xx

where xx is the instance of the network adapter that you need to see tags on. (Check by opening and viewing the name of the adapter).

It should be set to read:

MonitorModeEnabled= 1

Note: ControlSet001 may need to be CurrentControlSet or another 00x number.

For more information, refer to <http://support.intel.com/support/network/sb/CS-005897.htm>

Workaround #2 for Broadcom 440x 10/100 Integrated Controller

There is a registry key under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001 that can be set to cause the driver and chip not to strip the 802.1Q headers. In order to set that key, you need to find the right instance of the driver in Registry Editor and set that key for it. You can do this by doing following:

1. Run the Registry Editor (regedt32)
2. Look for the registry key mentioned above. If it is found then go to step 4, if it is not found then go to step 3
3. Search for the instance number that contains information about "Broadcom 440x 10/100 Integrated Controller"
4. Right-click on the instance number (eg. 0001) and add a new string value.
5. Enter "PreserveVlanInfoInRxPacket" and give it the value "1".
6. Reboot your system.

This should set you up to be able to capture the VLAN tag information

Workaround #3 for Broadcom NetLink (TM) Gigabit Ethernet

There is a registry key under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet that can be set to cause the driver and chip not to strip the 802.1Q headers. In order to set that key, you need to find the right instance of the driver in Registry Editor and set that key for it. You can do this by doing following:

1. Run the Registry Editor (regedt32).
2. Search for "TxCoalescingTicks" and ensure this is the only instance that you have.
3. Right-click on the instance number (eg. 0008) and add a new string value.
4. Enter "PreserveVlanInfoInRxPacket" and give it the value "1".
5. Reboot your system.

This should set you up to be able to capture the VLAN tag information.

For more information, refer to <http://www.networkinstruments.com/support/osup1056.html>