



Wireless Products Development Technical Advisory

TA-002

13290 Evening Creek Drive
San Diego, CA 92128

June 20, 2003
Rev 2.4

Virtual Private Network (VPN) client conflict with Intel® PROSet software with Adapter Switching Installed

Product(s) Affected

This issue affects all Intel® Centrino™ mobile technology platforms using the following MiniPCI WLAN adapter.

Product Description	PBA Number	Comments
Intel® PRO/Wireless 2100 LAN MiniPCI Adapter	All	Affects all revisions of this wireless NIC using Intel® PROSet software version 7.0.0.0 or 7.0.1.1 using a Generic release. (This does not affect any OEM customized releases or the Generic "Pkg 1" release.)

Description

Intel is responding to a known issue caused by the co-existence of certain VPN clients not verified by Intel and Intel® PROSet software with *Adapter Switching (AS) installed*. The issue may cause some systems to go to a blue screen with AS installed and unverified VPN clients running on the system.

This issue may occur as follows:

1. PC Systems using all versions of Microsoft* Windows* running with Nortel* Contivity* VPN client V04.15 have a conflict with systems running Intel® PROSet software with the Adapter Switching feature installed, and causes a blue screen to appear on the system when the conflict arises.
2. Other unidentified VPN clients not supporting standard OIDs will exhibit a similar issue when used with Adapter Switching installed.

Verification that a system is running with Adapter Switching installed can be done in the following manner:

- Open Window's* Control Panel, and double click on the Intel® PROSet software application icon from the window.
- Check the Network Components drop down list for "Adapter Switching". If visible, Adapter Switching is installed on the system.

Or

- Double click the Intel® PROSet software icon in the task tray to view the configuration screen as depicted below:

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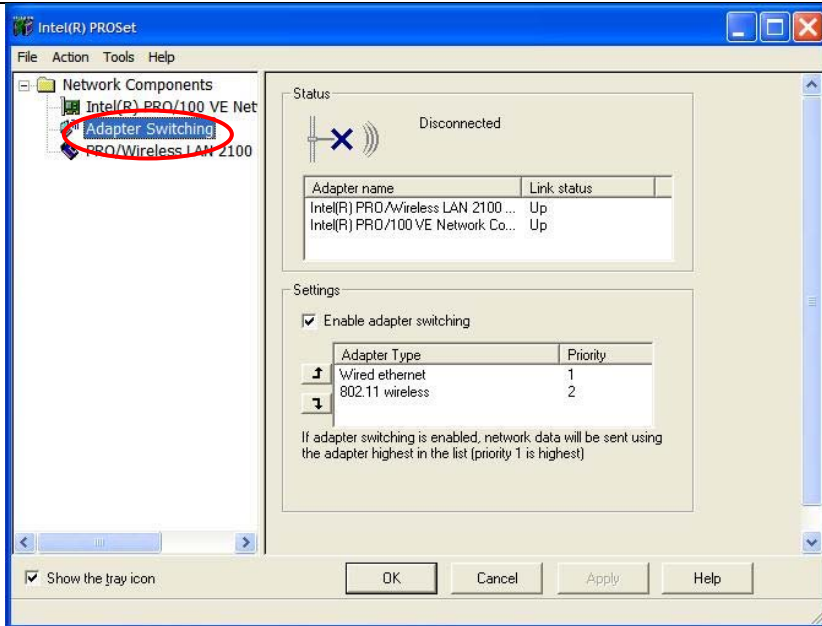
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Root Cause

This symptom is caused by an exception handling error in the Adapter Switching (AS) driver that doesn't correctly allow for a purging of the link list of known adapters maintained by the Intel® AS driver. As a result, when a specific standard OID query is sent to the Nortel VPN client, the client returns an error because it does not support this OID. The AS driver does not handle this response correctly, thus resulting in incorrect purging of known adapters in the link list held by the Adapter Switching driver. Other VPN clients not supporting this OID would cause the same problem.

Any change to the Virtual Network Interface Card (VNIC) status (re-enumeration) or insertion or removal of a network adapter will cause Adapter Switching to reference a pointer to de-allocated memory, thus causing the blue screen event.

Typically, a system will not exhibit this behavior until a VPN client has been installed on a system with Adapter Switching that doesn't support standard OIDs, and a secure session is initiated.

Corrective Action / Resolution

Due to the nature of this anomaly it may be necessary to use the operating system's "Safe Mode" to boot up and uninstall the VPN client software before proceeding with any of the following options.

Options:

- #1) Remove Intel® PROSet v7.0.1.1 (installed from Intel's Generic SW build) and replace with Intel® PROSet v7.0.1.1 from Generic "Pkg 1": Intel SW version 4.0.1.1 (Generic Package 1) already has the adapter switching component removed from the Intel® PROSet utility. It is available today as a fully validated SW build via ARMs.



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#2) Upgrade to a newer release of Intel® PROSet software with Adapter Switching feature removed: Users should contact their OEM's technical support center for the proper software release that has been validated to work on their specific system. Newer versions of this software with Adapter Switching removed are identified as:

⇒ Intel® PROSet software Version 7.1 or later

#3) Run Intel® Adapter Switching Removal Utility. Intel recommends end users or IT departments to contact their respective OEM technical support site for the most up-to-date solution for this issue. iASClean.exe has been made available to OEM customers for use to rectify this issue if migrating to a newer release of Intel® PROSet is not an option.

The basic routine of this script is as follows:

- Check to see if the user has admin rights. If no admin rights, inform the user that admin rights are needed and exit.
- Check to see if Adapter Switching is installed. If it is not, inform the user that AS is not installed and exit.
- Stop and uninstall Adapter Switching feature.
- Remove all Adapter Switching binding.
- Modify the cached MSI in the system, so the user can't reinstall Adapter Switching for the Add/Remove program in the Control Panel. Intel® PROSet software application.
- Prompt the user for a reboot.

By following this routing, automatic switching of wired and wireless connectivity remains supported. Removing Intel's® Adapter Switching Feature changes user options regarding the Priority Settings of Wired/Wireless Connectivity. These changes are summarized below by OS type:

Intel® PROSet software with Windows* XP or Windows* 2K

- Automatic switching of wired and wireless connectivity is prioritized based upon the media type priority selected by the end user (wired or wireless) when using the notebook with Intel® PRO/Wireless LAN Mini-PCI Network Connection and Intel® PRO 10/100 and 10/100/1000 connections (Intel wired LAN end-user notebook solutions).

Intel® PROSet software with Windows* XP without Intel's Adapter Switching Technology

- Automatic switching of wired and wireless connectivity is prioritized based upon the theoretical connection speed of the wired or wireless connections.

Intel® PROSet software with Windows* 2K without Intel's Adapter Switching Technology

- Automatic switching from wired and wireless connectivity is based on loss of connection. If a user disconnects from the wired LAN they will be transitioned to the wireless LAN but upon re-connection to the wired LAN the user will not transition back to the wired LAN unless the wireless connection is lost.



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Note: by removing the Intel® Adapter Switching feature, several other features contained within this version of Intel® PROSet software will be disabled. These changes are listed below:

Feature Removed	User Implication
Automatic launch of VPN Clients	You will need to manually launch your VPN client
Ability to set a static IP address per profile (TCP/IP)	You will not be able to use static IP addresses for different profiles. You will need to use the OS's IP management and configuration
Instant Ad-hoc Wizard (only works with Intel® PRO/Wireless 2100 LAN Mini-PCI Network Connection adapters) (Note: Ad-hoc mode still supported)	Is used to setup quick sessions between with Intel® PRO/Wireless 2100 LAN Mini-PCI Network Connection adapters using similar configurations where users can exchange files like using "IR". User just needs to enter a personal 'password' to create or join the adhoc network, all the configuration/TCP/IP and security settings will be set automatically.

Action Requested:

Please forward this Technical Advisory to your call support centers to be used for resolving this recognized issue.

WPD Applications Engineering
Wireless Products Development
Intel Corporation

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