



# Wireless Products Development

## Technical Advisory

TA-002

13290 Evening Creek Drive  
San Diego, CA 92128

June 4, 2003  
Rev 1.0

### Virtual Private Network (VPN) client conflict with Intel® PROSet Adapter with Intel® 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 PROSet version 7.0.0.0 or 7.0.1.1 using a Generic release. (This does not affect any OEM customized releases)

#### Description

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

This issue is characterized by the following:

1. PC Systems running with Nortel's Contivity VPN client V04.15 to present have a conflict with systems running Intel PROSet software with Intel® Adapter Switching 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 Intel® Adapter Switching installed.

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

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

Or

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

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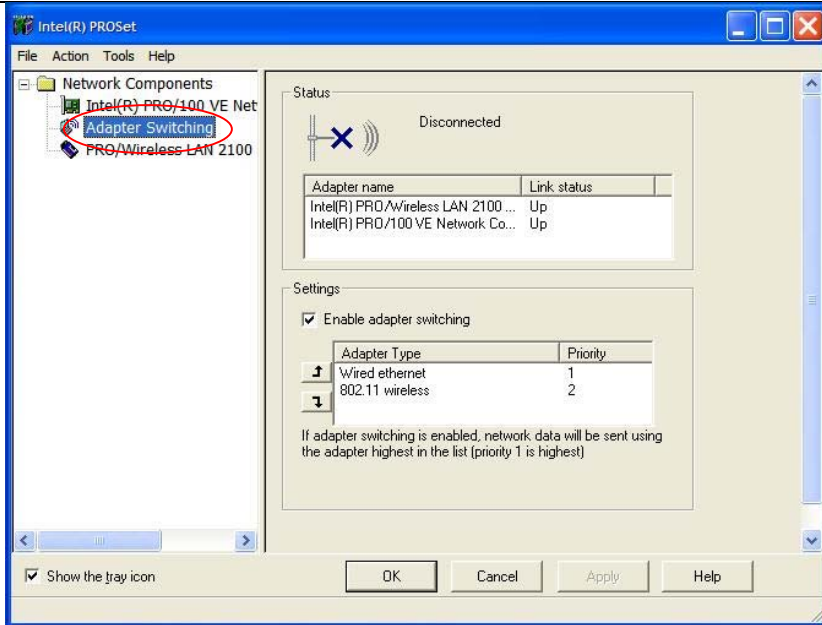
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### Root Cause

This symptom is caused by an exception handling error in the Intel® 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 Intel® AS driver. Other VPN clients not supporting this OID would cause the same problem.

Any change to a VNIC status (re-enumeration) or insertion or removal of a network adapter will cause Intel® AS 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 Intel® Adapter Switching that doesn't support standard OIDs, and a secure session is initiated.

### Corrective Action / Resolution

Options:

**#1) Upgrade to a newer release of Intel's PROSet Wireless software with Intel® Adapter Switching 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:

⇒ PROSet Version 7.1 or later

Version 7.1 is expected to be available to OEMs in mid-June 2003.

**#2) Download Intel® Adapter Switch feature removal script to automatically remove the feature from the system.**

Intel recommends end users or IT departments to contact their respective OEM technical support site for the most

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up-to-date solution for this issue. In addition, Intel has a version of the script available at our support web site. This can be found at the following URL <http://support.intel.com/support/network/wireless/pro2100/index.htm>.

The basic routine of this script is as follows:

- o Check to see if the user has admin rights. If no admin rights, inform the user that admin rights are needed and exit.
- o Check to see if AS is installed. If it is not, inform the user that AS is not installed and exit.
- o Stop and uninstall AS service.
- o Remove all AS binding.
- o Modify the cached MSI in the system, so the user can't reinstall AS for the Add/Remove program in the Control Panel.
- o Modify the Intel® PROSet registry to hide VPN, TCP/IP, and Instant Adhoc selection features within the PROSet application.
- o Prompt the user for a reboot.

Intel's Adapter Switching technology has the following functionality:

- o Prioritization of media type (wired or wireless) based on user defined profiles on systems using both an Intel PRO/Wired LAN adapter and Intel PRO/Wireless adapter that are DHCP enabled.
- o Auto-launching of a VPN client designed to be used with PROSet when the connection status changes.

By uninstalling Intel's adapter switching service, the end user system will lose the functionality above.

Users with Windows XP by default get the following network adapter switching functionality once Intel® AS is removed:

- o Network connection switching occurs by theoretical connection speed between wired and wireless adapters, irrespective of vendor. Furthermore, users will have to manually initiate the VPN client to re-establish a secure tunnel once the connection has been lost (due to lack of Auto-launching feature).

Users running Windows 2000:

- o No adapter switching will be present on these systems. Windows 2000 will switch to a live connection if more than one is present and a connection is lost.

Note: by removing adapter switching, 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 2100 adapters) (Note: Ad-hoc mode still supported)	is used to setup quick sessions between 2100 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.

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**Action Requested:**

None.

WPD Applications Engineering  
Wireless Products Development  
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