8100 Mobile Device Test System

Radio Access: LTE

Product Update

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Page Part Number: 71-006848, Version A0

Table of Contents

1. Introduction

1.1. Overview

This Product Update contains information on the modifications of the Test Packs supported on the 8100 Mobile Device Test System from the version 4.4.0 to version 4.5.0.

The Test Packs supported on the 8100 Mobile Device Test System v4.5.0 are:

- CDMA - LTE Mobility v1.4
- Data Retry - LTE v1.3.1
- Data Throughput - LTE v1.5
- RF Performance - LTE v1.5
- UMTS - LTE Mobility v1.0
- Stress Test - LTE Suite v2.0

NOTE: This release should not be used by AT&T AVLs. AT&T has only validated the RA 4.4.0 (Dec.) release.
For AT&T AVLs, use the new suites (v2.0 or higher) which include Band 2 and 5 tests. These suites should be used in combination with the RA 4.4.0 (Dec) release.
If AT&T LTE Data throughput tests are run with the RA 4.5.0 release, there can be some deviance in performance from the official validated version (RA 4.4.0).

8100 Mobile Device Test System - Radio Access: LTE v4.5.0 consists of the software components listed in the table below.

Software	Version
8100-B Series Platform	1.1.79.0
8100-B 100 Platform	1.5.350
Platform Setup Guides	1.0.2
AirAccess C2K	4.30.009
AirAccess WCDMA HS	4.42.104
AT4 Log Generator COM Interface	1.6.0.12
AT4 Logging Framework Runtime	1.6.1.4
CDMA 8960 Driver	3.3.0.17
CDMA - LTE Mobility	1.4.74
CS8 Development Library	1.1.17
Custom Report Engine	1.1.17
Data Retry - LTE	1.3.157
Data Throughput - LTE	1.5.272

Software	Version
Development Library Services	1.50.143
E2010S Driver	2.9.0603
CS8 Interactive Tester	1.50.022
Intrig Data monitor	1.2.14
RF Performance - LTE	1.5.370
Spirent AT Control (installed on Client Laptop)	1.5.25
Spirent Data Client (installed on the Controller PC, Client Laptop, and Application Server)	1.12.213
Spirent EPC Software	10.0.0.48.paw.19.tsu
Spirent WCE-IAPI	3.51.034
Spreadsheet Report Engine	1.5.67
SR5500 TestKit	3.51.002
TCU2 Driver	1.0.16
Test Manager	2.5.319
UMTS - LTE Mobility	1.0.6.1
Universal DM V2	4.7.1

1.2. New Features

1.2.1. CDMA - LTE Mobility

The following features have been added to the CDMA - LTE Mobility Test Packs:

- Supports verifying UE Capability Information message in the VZW LTE-CDMA InterRAT Operations and VZW LTE-CDMA InterRAT Operations for SVD Test Plans.
- Supports enhancement for MPSR cases.
- Supports password protection for VZW suites.
- Supports locking of VZW suites.
- Supports SR5500 with Static Mode.
- Supports "QrxLevMin" configuration through a test case parameter.
- Supports ping-only in downlink direction.
- Supports calling pre-registration shell command after reset.
- Supports the update for the VZW LTE-CDMA InterRAT Operations Test Plan from v6.0 to v9.0.
- Supports the update for the VZW LTE-CDMA InterRAT Operations for SVD cases.

1.2.2. Data Retry - LTE

There are no new features included in this release of the Data Retry - LTE Test Packs.

1.2.3. Data Throughput - LTE

The following new features are included in this release of the Data Throughput - LTE Test Packs:

- Support for Variable Reference Channel Tests.
- Support for ETU 300 Fading Profile.
- Support for Advanced P/F Criteria based on the UE Category.
- Support for Custom/Adaptive UDP Blaster Rate.
- Support for TM4/TM6 CQI Reporting.
- Support for Suites Password Protection.
- Support for TM1 SIMO.

1.2.4. RF Performance - LTE

The following new features are included in this release of the RF Performance - LTE Test Packs (refer to the user manual for details):

- Optimizations have been implemented to reduce test time execution by 40%. Test Manager includes built-in intelligence to combine and execute similar tests without tearing down the LTE attach between tests.
- Supports the additional E-UTRA operating bands given in the table below.

E-UTRA Operating Band	Uplink (UL) operating band BS receive UE transmit	Downlink (DL) operating band BS transmit UE receive	Duplex Mode
	FUL_low – FUL_high	FDL_low – FDL_high	
24	1626.5 MHz – 1660.5 MHz	1525 MHz – 1559 MHz	FDD
25	1850 MHz – 1915 MHz	1930 MHz – 1995 MHz	FDD
26	814 MHz – 849 MHz	859 MHz – 894MHz	FDD

- Supports the E-UTRA channel bandwidths given in the table below.

E-UTRA Band/Channel Bandwidth						
E-UTRA Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
24	Yes	Yes	Yes	Yes	Yes	Yes
25	Yes	Yes	Yes	Yes	Yes	Yes
26	Yes	Yes	Yes	Yes	Yes	Yes

- SVLTE test cases have been updated to comply with the *Verizon Wireless Compliance Test Plan: Conformance and Performance for Simultaneous Circuit Switched Voice and Packet Data Capable LTE Multi-Mode Devices, version 4.0, issued: June 2011*.
- The following SVLTE test cases as specified in the *Verizon Wireless Compliance Test Plan: Conformance and Performance for Simultaneous Circuit Switched Voice and Packet Data Capable LTE Multi-Mode Devices, version 4.0, issued: June 2011* are now supported.

Test Number	Test Name	Test Pack	Additional Required Instruments
2.1	LTE Performance in the Presence of a 1xRTT Voice Call		
2.1.2	LTE RF Output Power Back-off Conformance Test	TP-RF-SVLTE-TP1	Agilent 8960

- The following test cases as specified in the *Verizon Wireless Compliance Test Plan, LTE 3GPP Band 13 Supplementary RF Conformance, version 10.0, issued: June 2011* are now supported.

Test Number	Test Name	Test Pack	Additional Required Instruments
2	Transmitter Tests		
2.8	Configured Output Power	TP1	

1.2.5. UMTS - LTE Mobility

There are no new features for UMTS - LTE Mobility Test Packs in this release.

1.2.6. Stress Test - LTE Suite

- Base on CS8 Development Library UI.
- Supports VZW Compliance Test Plan LTE Device - Network Interaction Stress test V2.0.

1.3. Maintenance Updates

1.3.1. CDMA - LTE Mobility

There are no maintenance updates for CDMA - LTE Mobility Test Packs in this release.

1.3.2. Data Retry - LTE

The following maintenance updates have been added to the Data Retry - LTE Test Packs:

- Fix AMF value retrieval defect.
- Fix attach messages not shown on chart defect.

1.3.3. Data Throughput - LTE

The following maintenance updates have been added to the Data Throughput - LTE Test Packs:

- *Test Manager Event* window results enhancement.
- Advanced Channel Models enhancement.
- Advanced Channel Models enhancement.
- LTE Data Throughput Recovery enhancement.
- Multiple PDNs Support enhancement.

1.3.4. RF Performance - LTE

The following maintenance updates have been added to the RF Performance - LTE Test Packs:

- Failures seen with "VZW Supplementary RF Conformance 2.4 Spurious Emissions Band UE Coexistence" and "VZW Supplementary RF Conformance 2.9 Spurious Emissions Band UE Coexistence" have been addressed with this release of LTE RF by introducing an external filter between the spectrum analyzer and the SR8068 TCU. These external filters will be automatically shipped to the existing customers.
- The occasional throughput failures seen with Receiver Sensitivity and Receiver Blocking tests due to incorrect calculation of “FER” due to a timing issue have been addressed.

1.3.5. UMTS - LTE Mobility

No maintenance updates have been added to the UMTS - LTE Mobility Test Packs.

1.4. Known Issues

The following issues are applicable to all Test Packs on the 8100 Mobile Device Test System v4.5.0:

- There is an issue with removing the test data cards and test phones from Dell Latitude E6500/E6510/E6520 Client Laptops connected through the PCMCIA slot or USB. If the client laptop model is a Dell Latitude E6500/E6510. Refer to Section 3.1 for details.
- There is a potential conflict that can occur if the device installs a Network Interface driver. Refer to Section 3.2 for details.
- Attempting to abort calibration causes Test Manager to freeze. Refer to Section 3.3 for details.
- The log file format of the OTA messages has changed; therefore OTA messages collected with v4.3.1 cannot be decoded for viewing.
- Installation of Microsoft Security Essentials enables Microsoft Update. Microsoft Update must be disabled. This applies to the Controller PC, Client Laptop, and the Applications Server. Refer to Section 0 for details.
- Errors may be encountered if you do not update every module. If this is occurs, uninstall and then reinstall all of the modules.
- Platform Files created using previous releases are not automatically upgraded correctly in this release. Delete all previously created Platform Files and generate new Platform Files prior to executing any test cases. Refer to Section 0 for details.
- Bandwidths 1.4M, 3M, 15M and 20MHz are enabled, but have not been fully tested due to UE availability.
- Band classes 1, 2, 3, 5, 7, 10, 12, 14, 20, 24, 25, 26, and 27 are enabled, but have not been fully tested due to UE availability.

1.4.1. CDMA - LTE Mobility

The following issues are applicable to the CDMA - LTE Mobility Test Packs:

- In the IOT test cases that test the LTE/eHRPD handover by using FTP to perform transfer verification; if the UE takes more than one minute to finish the handover, the existing FTP transfer is terminated. A new FTP transfer is then used to verify FTP transmission after the handover.
- Sometimes an exception occurs when eAA stops call processing.

1.4.2. Data Retry - LTE

There are no known issues specifically applicable to the Data Retry - LTE Test Packs.

1.4.3. Data Throughput - LTE

The following issues are applicable to version 1.40 the Data Throughput LTE Test Packs:

- For FTP over IPv6 at maximum throughput rates greater than 25Mbps, you must use a client laptop running Windows 7 and an Application Server running Windows Server 2008.
- The Advanced Channel Model test requires the E2010 to be calibrated for 1dB tolerance limits. Call Spirent Customer Service for details.
- If the COM port of the UE is locked, unplug and reconnect the UE.
- When a system is cabled with SR5500M, we recommend that you use a Dedicated Mode platform configuration to achieve maximum RSTP range across all band classes.
- For the MIMO Correlation Matrix Alpha and Beta, only the following combination is fully verified: Alpha = 0, Beta = 0.5 and Alpha = 0.3, Beta = 0.5
- For Verizon Wireless Band 13 Data Throughput Tests 3.1.2.3, Radio link failure is observed with QualComm Chipset.
- For Verizon Wireless Band 13 Data Throughput Tests 3.4.2.6/3.1.2.6/3.9.2.1/3.9.2.2/3.6.2.1, Data Freeze is observed occasionally with the LG Chipset. The test case may not fail because DT recovery algorithm may recover it, depending on when the Data Freeze happened (at the beginning or at the middle of transfer).
- For Verizon Wireless Band 13 Data Throughput Tests 3.8.2.1, Throughput inconsistency is observed between transfers.
- For Verizon Wireless Band 13 Data Throughput Test Cases, 1%-5% UL BLER is occasionally observed.
- For Transmission Mode 3, with the variable reference channel feature, Code Word 2 uses the default Imcs configured in test case parameters. The reported CQI from the UE is not used to decide the Imcs for CW2.

1.4.4. RF Performance - LTE

The following issues are applicable to the RF Performance – LTE Test Packs:

- Microsoft Windows 7 is not supported on the Controller PC.
- LTE RF test cases will not run properly if the UE is permitted to acquire an IP address when it is connected to the Controller PC for UE automation. In this case, the Internet Protocol feature of the UE network interface must be disabled. Refer to Section 3.6 on page 48 for details.

1.4.5. UMTS - LTE Mobility

The following issues are applicable to the UMTS – LTE Mobility Test Packs:

- IOT was performed with the only device available (Sierra Wireless U313 data card). Interoperability with other devices is not known.
- A new component from the Global Installer DVD (UE AT Interface for CS8) must be installed when upgrading the UMTS - LTE Mobility module to this release. You can select this component for installation under the *Instruments* tab, as shown in Figure 1-1.

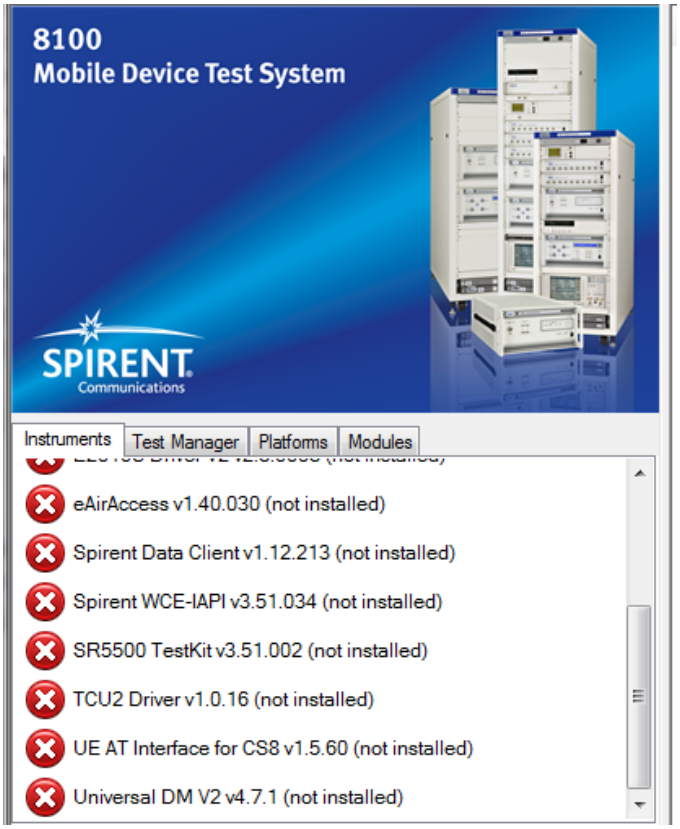

Figure 1-1: Global Installer – Instruments Tab

- Note that the Global Installer software may not correctly detect that the *UE AT Interface for CS8 SW* is installed. This is due to a naming convention mismatch. If you encounter this issue, use the Windows Control Panel to confirm that the correct software applications are installed.

1.4.6. Stress Test - LTE Suite

The following issues are applicable to the Stress Test - LTE Suite:

- Sometimes an exception occurs when test case configures AA C2K parameters.
- Sometimes an exception occurs when test case configures SR5500 parameters.

2. System Upgrade Instructions

2.1. Overview

The following sections contain the steps necessary to install the LTE Test Packs and the necessary supporting software components on an existing system.

NOTE: LTE Performance – LTE Module users should not install 8100 LTE Radio Access v4.50. Doing so will result in a incompatibility between the existing RF Performance – LTE Module v1.5.370 installation and the newer CS8 Interactive Tester (formerly known as eAirAccess) v1.50.022.
The RF Performance – LTE Module and CS8 Interactive Tester compatibility issue will be resolved in a subsequent v4.51 8100 LTE Radio Access release. This release is scheduled for mid-July.

These steps include:

- Downloading and unzipping the Software Update *Package* from the Customer Support website.
- Using the Global Installer application.
- Updating the Controller PC.
- Updating the Client Laptop.
- Updating the Application Server.
- Updating the EPC Server.
- Updating the E2010S.
- Updating the Cisco 1811/2600 Router Configuration.
- Updating the Dell 6248 Switch Configuration.
- Updating the Agilent ESG.
- Updating the Agilent EXA/MXA Spectrum Analyzer.
- Installing new System Cables.

2.2. Downloading/Unzipping the Software Update

To download/unzip the software update:

1. Log in to the Spirent Customer Service Center website at http://support.spirent.com using the e-mail address and password assigned to you by Spirent.
2. Select **Download Software Updates›Wireless›8100 Radio Access – LTE Testing (Version 4.4.0)›Download** to download the latest release.

3. Locate the downloaded file in Windows Explorer.
4. Right-click the file and select **Extract All** from the menu, as shown in Figure 2-1.

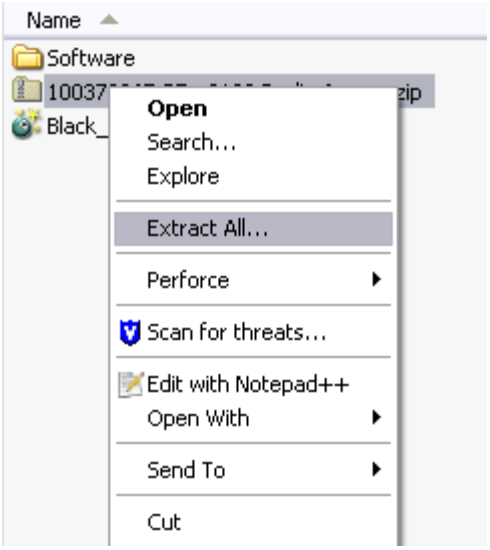

Figure 2-1: Extract All Files

5. Use the *Extraction Wizard* to extract the files to a known location, as shown in Figure 2-2.

NOTE: We recommend that you extract the zipped package files to a portable USB device. These files are needed to update multiple computers on the system.

The location of these files will be referred to as *‹8100 – LTE 4.4.0 Installer Root›* throughout the remainder of this document.

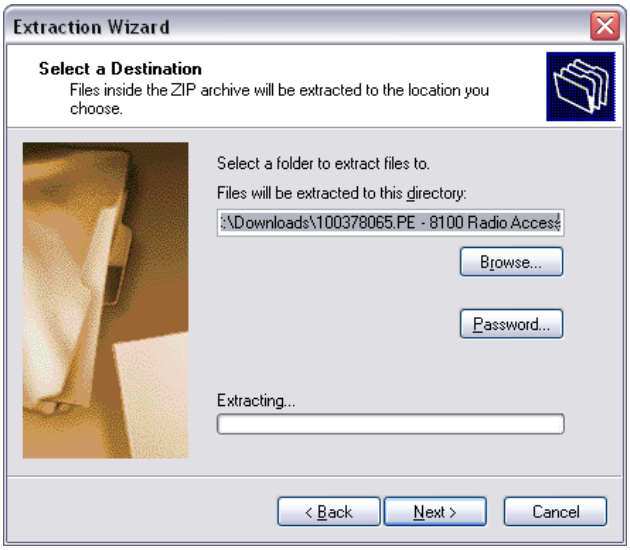

Figure 2-2: Using the Extraction Wizard

2.3. Using the Global Installer Application

This section provides information on how to use the Global Installer. This application allows you to update different computers in the system using a convenient user-interface.

To run the Global Installer application:

1. Navigate to the ‹*8100 – LTE 4.4.0 Installer Root*› folder.
2. Run the **setup.exe** file.
   The *8100 Mobile Device Test System Installer* window displays, as shown in Figure 2-3.

NOTE: The version numbers shown in following Global Installer figures may not reflect the current software version numbers.
For the correct version numbers, refer to the table on page 1.

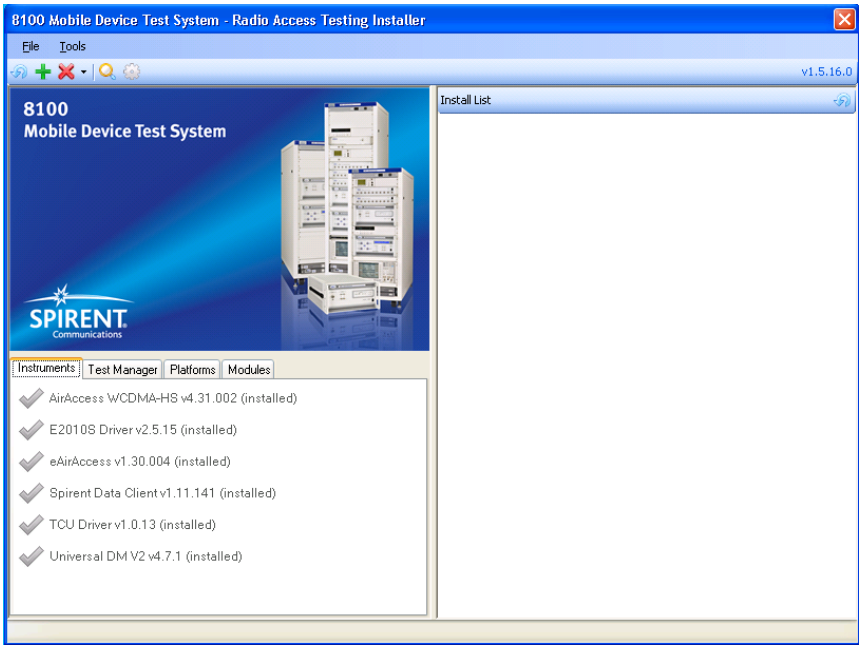

Figure 2-3: 8100 Mobile Device Test System Installer Window

The Global Installer application organizes the software components into separate tabs, shown in Figure 2-3. The icon next to each component indicates which components have been detected as installed on the system.

The following list describes the different icons used in the Global Installer:

 The software is not installed.

 A different version of the software is already installed.

 The software is selected for install (also displays on the Install List).

 The correct version of the software is already installed.

To install software components using the Global Installer application:

1. To mark a software component for installation, select the component.
   The icon changes to a green checkmark and the component is added to the Install List.

2. Add additional components as necessary.
   You can add components from different tabs prior to starting the installation.

NOTE: In some cases, the order of installation is important. Follow the instructions in the sections below regarding installation order.

3. Click the **Installation** toolbar button  to begin the installation. The progress of the install displays on the left pane. When complete, a *Summary* window displays.

2.4. Upgrading the Controller PC

Connect the device containing the unzipped installer to the Controller PC.

2.4.1. Preparing For The Update

1. Ensure that the following applications are not running:
   a. Test Stand Sequence Editor
   b. eAirAccess
   c. AirAccess C2K
   d. AirAccess WCDMA-HS
   e. Intrig IDM
   f. Universal DM V2
   g. Spirent Data Client
2. Save the existing security passwords.
   a. Start Test Manager and select **Help›About›Passwords**.
   b. Click the **Export** button and use the file browser to export the passwords to **passwords.csv**.
   c. Close Test Manager.

2.4.2. Updating Intrig Data Monitor

1. Uninstall any previous versions of IDM by selecting **Start› Add or Remove Programs**.
2. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\Controller PC\IDM* folder.
3. Execute **idm-x.x.x.exe** and accept the defaults.
4. Modify the registry entries after IDM is installed:
   a. Select **Start›Run**. Type **regedit** and press **Enter**.
   Windows 7 Users: Type **regedit** in the Search field and press **Enter**.
   b. If the *User Account Control* window displays, click **Yes** to proceed.
   c. Expand **HKEY_LOCAL_MACHINE\SOFTWARE\Intrig**. Right-click the *IDM* folder and select **Permissions**.
   d. Select the **Users** account and under *Permissions*, select **Allow** for the Full Control option, as shown in Figure 2-4.
   Click **Apply** and then **OK**.

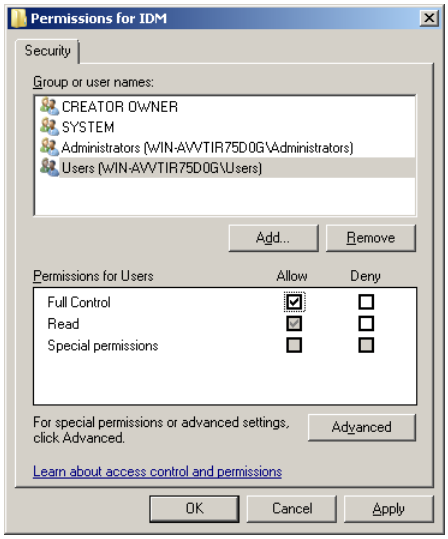

Figure 2-4: IDM Permissions Window

2.4.3. Updating Components - Global Installer

For details on how to use the Global Installer application, refer to Section 2.3.

To update components in the Global Installer:

1. If the correct version of Test Manager is not installed, select the Test Manager component.
2. Click the **Installation** toolbar button to begin the installation.
3. Navigate through all the tabs from left to right and select any components that are indicated to be out of date or missing.

NOTE: There are now two versions of the E2010S Driver. Select both for installation.

4. Click the **Installation** toolbar button to begin all installations.
5. Restart the Controller PC.

2.4.4. Installing Logging Framework

1. Uninstall any previous versions of Logging Framework components.
   a. Stop the Logging Framework by selecting **Start›All Programs›AT4 Wireless›Logging Framework Runtime›Stop Logging Framework**.
   b. An *Information* window displays verifying that Logging Framework has been stopped, as shown in Figure 2-5.

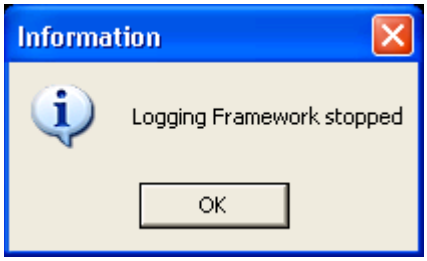

Figure 2-5: Logging Framework Information Window

c. From the Control Panel, select **Add or Remove Programs** and remove the following components:

   i. AT4 Wireless Logging Generator COM Interface

   ii. AT4 Wireless Dissectors

d. Uninstall LogAgent by selecting **Start›All Programs›AT4 Wireless›Logging Agent›Uninstall**.

2. Install the Logging Framework:

   a. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\Controller PC\Logging Framework* folder.

   b. Execute **Logging Framework Runtime Setup.exe** and accept the defaults.

   c. Execute **AT4 Wireless Dissectors Setup.exe** file and accept the defaults.

2.4.5. Completing Test Manager Configuration

2.4.5.1 Updating Test Manager Passwords and User Files

1. Start Test Manager and select **Help›About›Passwords**.
2. Select and open the **passwords.csv** file exported in Section 2.4.1 on page 13.

NOTE: Contact your local Spirent Sales Manager if new or additional passwords are required for the updated features.

3. Delete all older platform files.
   In Test Manager, select **File›Open›Platform File**.
4. Create a new platform file.
   In Test Manager, select **File›New›Platform File**. Refer to Section 0 for details on creating Platform Files.
5. Update all UE Files from previous versions.
   In Test Manager, select **File›Open›UE File** and save the old UE Files again.
6. Update all Session Files from previous versions.
   In Test Manager, select **File›Open›Session File** and save the old Session Files again.
7. Run a System Calibration for the B-Series platform and/or the B-100 platform.
8. Close Test Manager.

2.4.6. Completing CS8 Interactive Tester Configuration

1. Launch *CS8 Interactive Tester* by double-clicking the desktop icon.
2. Select **Help›Enter Password**.
   The *Password* window displays, as shown in Figure 2-6.
3. Enter the appropriate password and click **OK**.

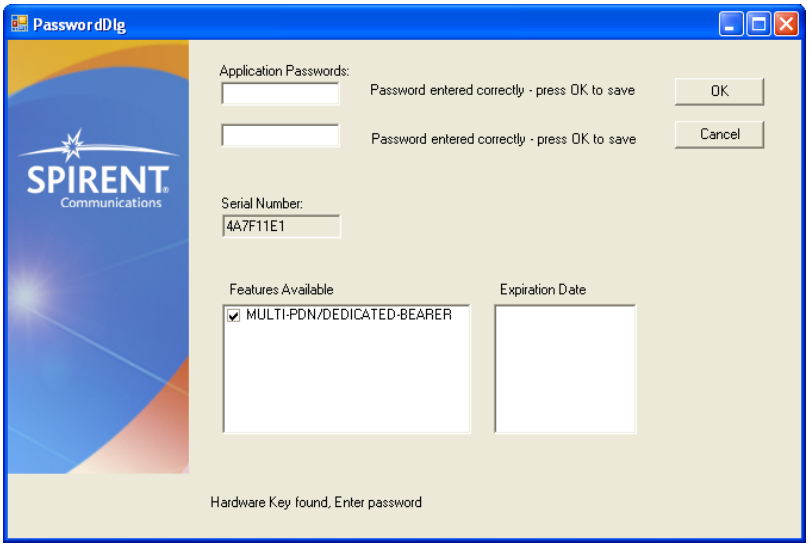

Figure 2-6: Entering the CS8 Interactive Tester Password

4. Close the CS8 Interactive Tester.

2.4.7. Completing AirAccess C2K Installation

NOTE: Follow these instructions only if C2K instruments are included in your system.

1. Launch AirAccess C2K by double-clicking the desktop icon.
2. Select **Help›Enter Application Password**. The *Application Password* window displays, as shown in Figure 2-7.
3. Enter the appropriate password and click **OK**.

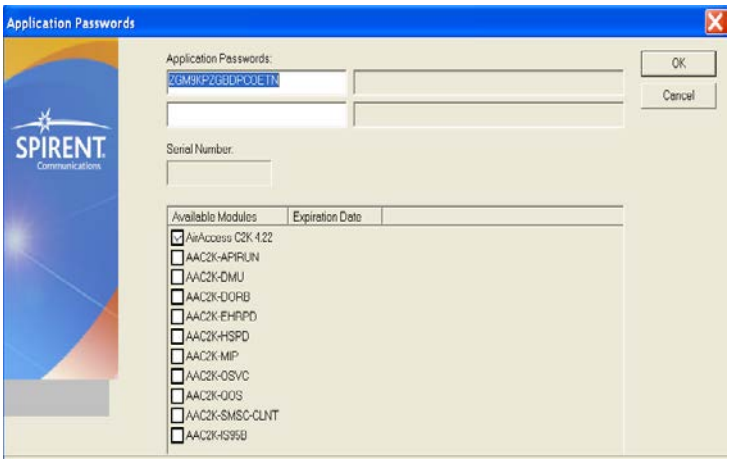

Figure 2-7: Entering the AirAccess C2K Password

4. Select **File›Install Instrument Firmware**.

5. The *SR3452, SR3462, and SR3600 Instrument* windows display, as shown in the following figures.

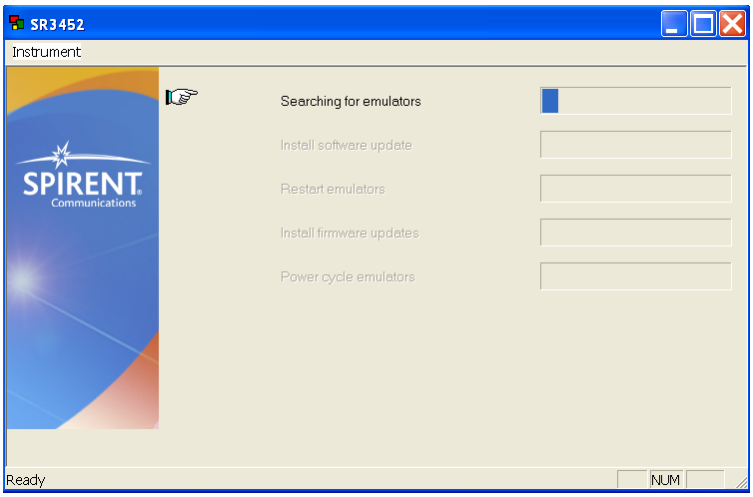

Figure 2-8: SR3452 Instrument Window

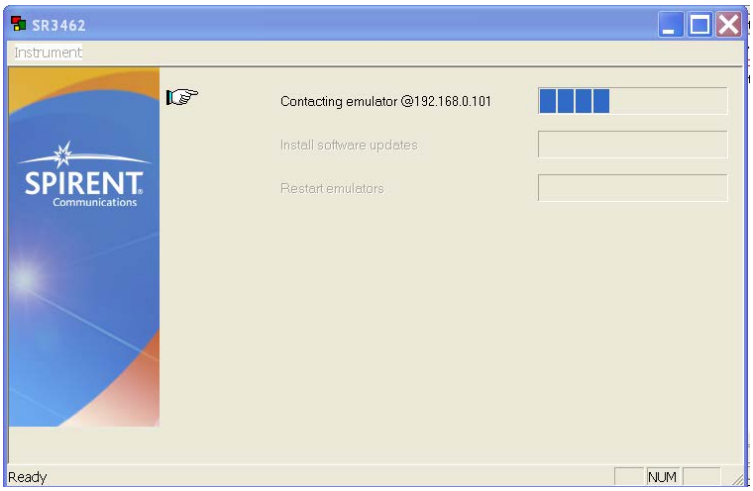

Figure 2-9: SR3462 Instrument Window

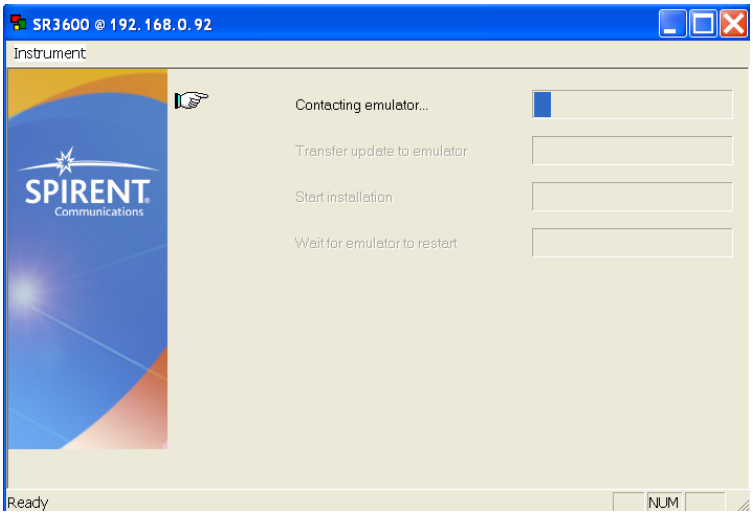

Figure 2-10: SR3600 Instrument Window

6. Wait for the installation to complete.
   A window may display prompting you to turn the instrument off and power it on again. Follow the instructions to restart the instrument and close the window.
7. Close AirAccess C2K.

2.4.8. Installing Microsoft VC++ 2010 Runtime Libraries

1. Insert the 8100 Utilities DVD in the DVD-ROM drive.
2. On the desktop, select **My Computer** and double-click the DVD-ROM icon.
3. Navigate to the *Microsoft Visual C++ 2010 Redistributable Package* folder. Run the **vcredist_x86.exe** file to initiate the install.
4. In the *License Term Agreement* window, select **I have read and accept the license** and click **Install**.
5. In the *Installation is Complete* window, click **Finish**.

2.4.9. Installing .NET Framework 3.5 SP1 and .NET Framework 4.0

1. If .NET 3.5 SP1 Framework is already installed, you can omit steps 2-5and go directly to step 6.
2. Insert the *8100 Utilities* DVD in the DVD-ROM drive.
3. On the desktop, select **My Computer** and double-click on the DVD-ROM icon.
4. Navigate to the *Microsoft .NET Framework\3.5* folder. Run the **dotnetfx35.exe** file to initiate the install.
5. In the *Installation is Complete* window, click **Finish**.
6. If .NET 4.0 Framework is already installed, you can omit steps 7-10.
7. Insert the *8100 Utilities* DVD in the DVD-ROM drive.
8. On the desktop, select **My Computer** and double-click on the DVD-ROM icon.
9. Navigate to the *Microsoft .NET Framework\4.0* folder. Run the **dotNetFx40_Full_x86_x64.exe** file to initiate the install.
10. In the *Installation is Complete* window, click **Finish**.

2.5. Upgrading the Client Laptop

Connect the device containing the unzipped installer to the Client Laptop.

2.5.1. Updating Spirent AT Control

To update Spirent AT Control:

1. Select **Start›Control Panel›Add/Remove Programs**.
2. Uninstall the Spirent AT Control application.
3. Navigate to the *‹8100 – LTE 4.4.0 Installer Root›\eAirAccess\Controller PC\Spirent AT Control* folder.
4. Execute **setup.exe** and accept the defaults.

2.5.2. Updating Spirent Data Client

For details on how to use the Global Installer application, refer to Section 2.3 on page 11.

To update Spirent Data Client:

1. Start the Global Installer application.
2. If the correct version of Spirent Data Client is not installed, select the **Spirent Data Client** component.
3. Click the **Installation** toolbar button to begin the installation.
4. Restart the Client Laptop.

2.6. Upgrading the Application Server

To update the Application Server:

1. Connect the device containing the unzipped installer to the Application Server.
2. From the Controller PC, use *Remote Desktop* to login to the Application Server at **192.168.0.70**.

2.6.1. Updating Spirent Data Client

For details on how to use the Global Installer application, refer to Section 2.3 on page 11.

1. Start the Global Installer application.
2. If the correct version of Spirent Data Client is not installed, select the **Spirent Data Client** component.
3. Click the **Installation** toolbar button to begin the installation.

4. Exit the Global Installer application.

2.6.2. Updating Xlight IPv6 FTP Server Configuration

1. Double click the **Xlight FTP Server** icon from the desktop as shown in Figure 2-11.

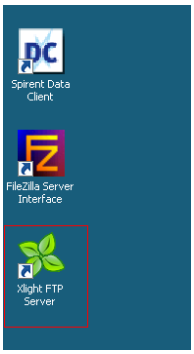

Figure 2-11: Xlight IPv6 FTP Icon

2. The *Duplicated Process* window shown in Figure 2-12 displays. Click **Yes** to proceed.

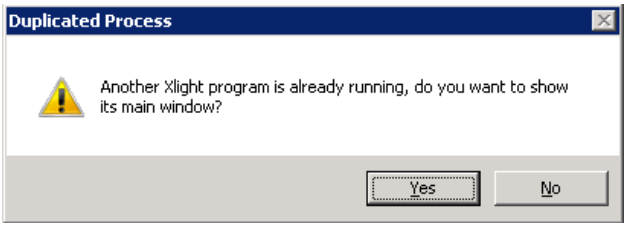

Figure 2-12: Duplicated Process Warning Window

3. Select the **fd00:0:20:1::4** IPv6 server and click the **Modify Virtual Server Configuration** button, as shown in Figure 2-13.

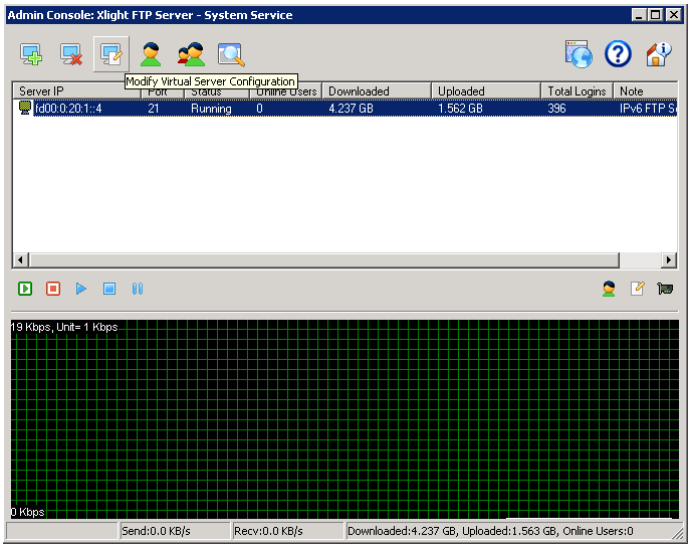

Figure 2-13: Modify Virtual Server Configuration Button

4. Under the *General* tab, change the "Maximum idle time" parameter to **120** and select the **Enable the anti-idle scheme** option, as shown in Figure 2-14.

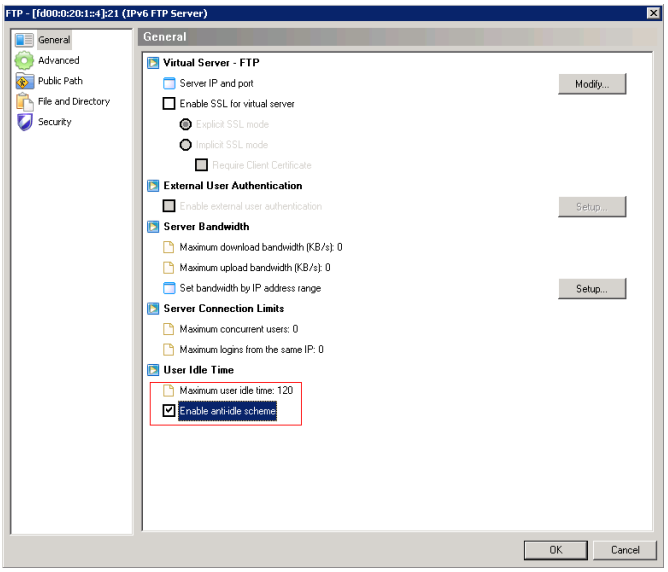

Figure 2-14: Enable Anti-idle Scheme Option

5. Click **OK** to close all Xlight windows.

2.7. Updating the EPC Server

NOTE: If the steps in Section 2.4.7 have been completed, you can skip this section.

1. From the Controller PC, navigate to **C:\Program Files\Spirent Communications\SR3600\x.x.x**, as shown in Figure 2-15.
   If there is more than one folder, open the most recent.

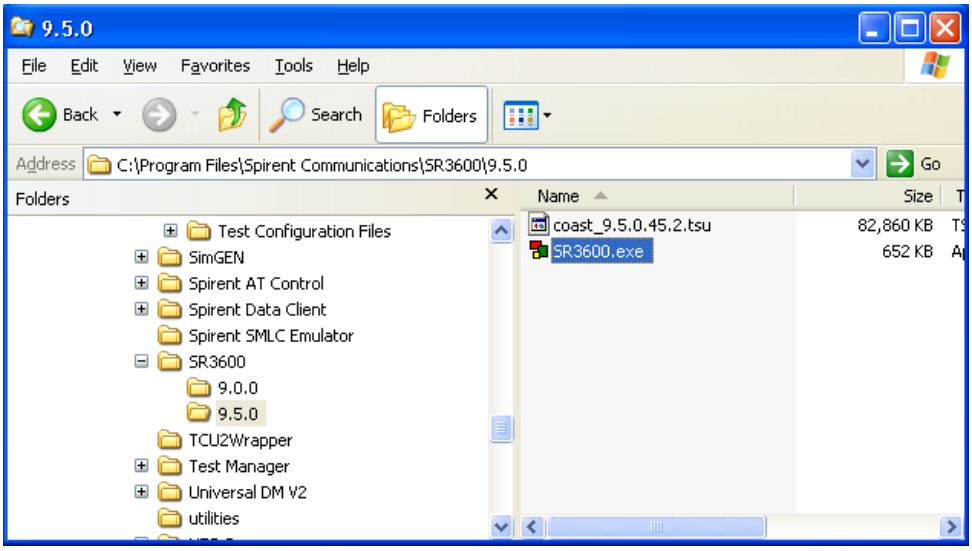

Figure 2-15: SR3600 Folder

2. Execute the **SR3600.exe** file.

3. In the *Upgrade* window, select **Instrument>Install Firmware Update** as shown in Figure 2-16.

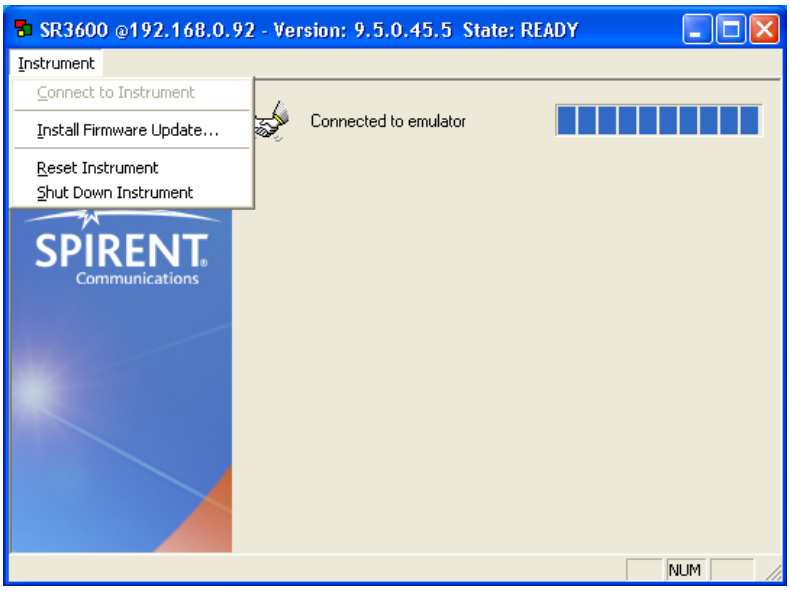

Figure 2-16: Opening the Firmware Update

4. In the *Open* window, navigate to **C:\Program Files\Spirent Communications\eAirAccess**.

5. Select the **.tsu** file and click the **Open** button, as shown in Figure 2-17.

NOTE: The version number reflected in the filename shown in Figure 2-17 may not reflect the current software version number.
For the correct version number, refer to the table on page 1.

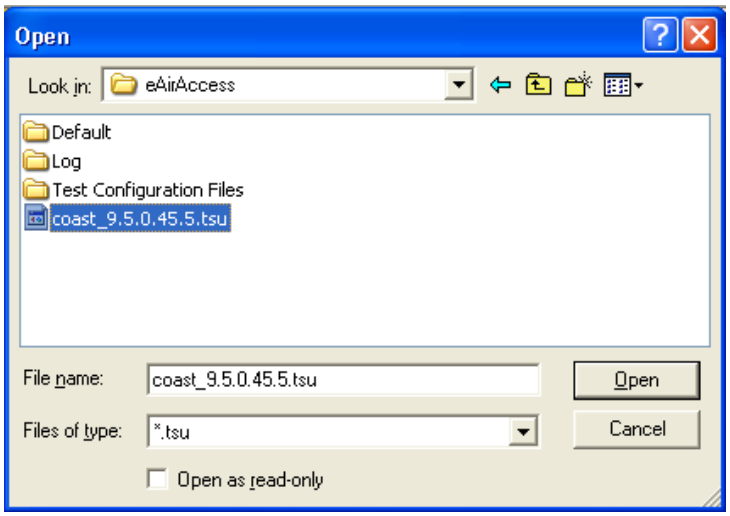

Figure 2-17: Opening the .tsu File

6. Wait for the update to complete (this will take several minutes), as shown in Figure 2-18.

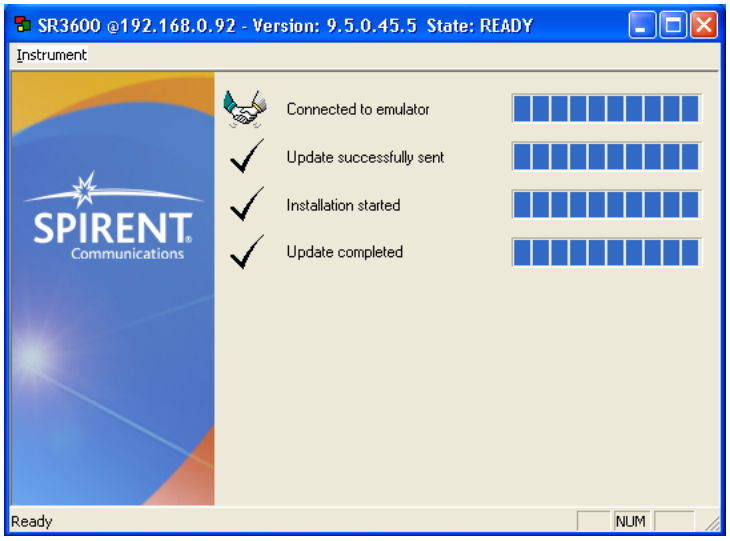

Figure 2-18: Update Status

7. Close the SR3600 tool.

2.8. Updating the E2010S

NOTE: This procedure needs to be performed if you are upgrading from the 8100 v4.4 release.

2.8.1. Uninstalling Previous E2010S Software

1. Uninstalling the Spirent E2010 Manager:
   a. Open *Windows Task Manager* by right-clicking the clock in the lower right corner of the Windows System Tray and selecting **Task Manager** from the menu.
   b. Under the *Process* tab run the **E2010Manager.exe** file and click the **End Process** button.
   c. Close *Windows Task Manager*.
   d. Open the *Windows Control Panel*. Uninstall *E2010 Manager*.
   e. Close the *Windows Control Panel*.
2. Uninstalling the Logging Framework:
   a. Select **Start›Programs›AT4 Wireless›Logging Framework Runtime›Stop Logging Framework**.
   b. Select **Start›Programs›AT4 Wireless›Logging Framework Runtime›Uninstall**.
   c. Wait for the software to be uninstalled. This should also uninstall the Logging Framework COM Driver.
3. Uninstalling the Layer 3 Components:
   a. Open *Windows Control Panel*. Uninstall *L3 Components Installer*.
   b. Close the *Windows Task Manager*.

2.8.2. Updating the MCH Firmware

1. Insert the USB device where the unzipped install package is stored on the E2010S. Navigate to the *‹8100 – LTE 4.5.0 Installer Root›* folder and copy the *CS8 Interactive Tester* folder to the E2010S Desktop. Remove the USB device from the E2010S.
2. Navigate to the *CS8 Interactive Tester* folder. In the *CS8 Interactive Tester\E2010 Embedded PC\MCH\bin* folder, select all four files and copy them to the *C:\TFTPExchange* folder on the E2010.
3. In the *‹CS8 Interactive Tester›\E2010 Embedded PC\MCH* folder, copy the Updater folder to the E2010 Desktop.
4. Run the SolarWinds TFTP Server by selecting **Start›All Programs›SolarWinds TFTP Server›TFTP Server**.

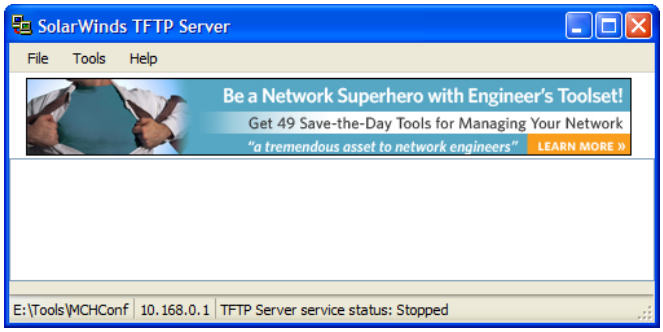

Figure 2-19: SolarWinds TFTP Server Window

5. From the TFTP Server menu, select **File›Configure**.

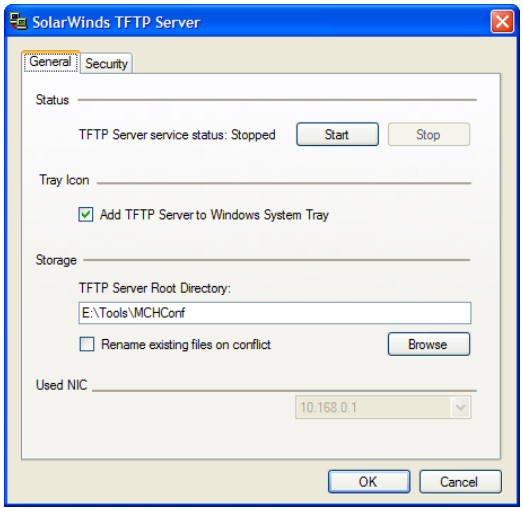

Figure 2-20: Configuration Window

6. Under the *General* tab, click the **Browse** button.
   The *Browse for Folder* window displays, as shown in Figure 2-21.

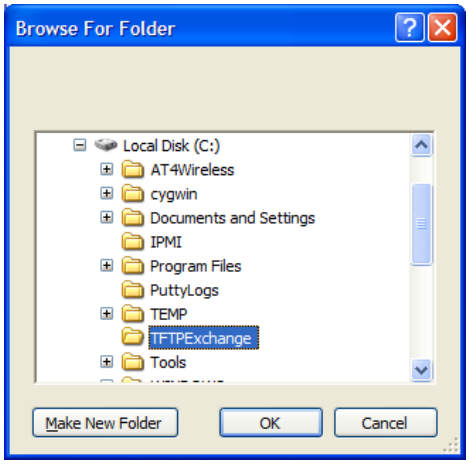

Figure 2-21: General Tab — Browse for Folder

7. Select the *TFTPExchange* folder and click the **OK** button.

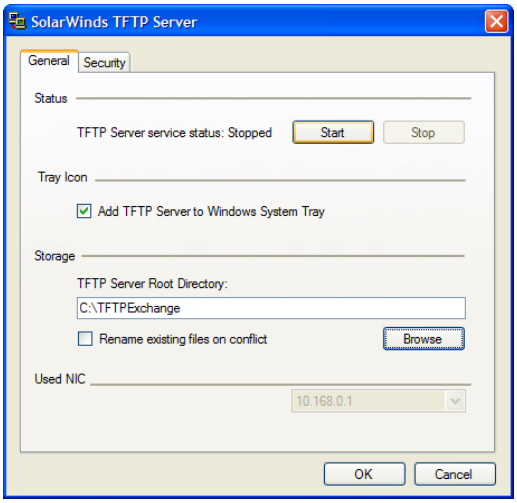

Figure 2-22: TFTPExchange Folder

8. Verify that the TFTP Server Root Directory is now set to **C:\TFTPExchanges**, as shown in Figure 2-22.

9. Under the *Status* section, click the **Start** button.

10. Verify that the TFTP Server starts successfully, as shown in Figure 2-23.

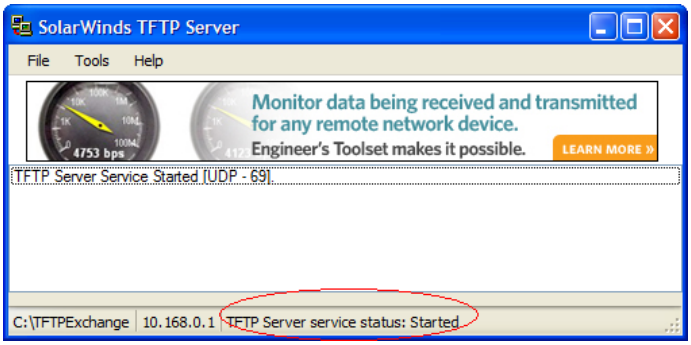

Figure 2-23: TFTP Server Status

11. Open the Command Prompt by selecting **Start›Run**, and typing **cmd**.

12. At the Command Prompt, type **cd "C:\Documents and Settings\superuser\Desktop\Updater"** and press **Enter**.
    Be sure to type the quotations.

13. Now type **updateMchFw -f mch_fw211.bin** and press **Enter**.
    Wait a few minutes for the script to run and return to the prompt.
    The *Command Prompt* window and SolarWinds Server Output window should display as shown in Figure 2-24 and Figure 2-25.

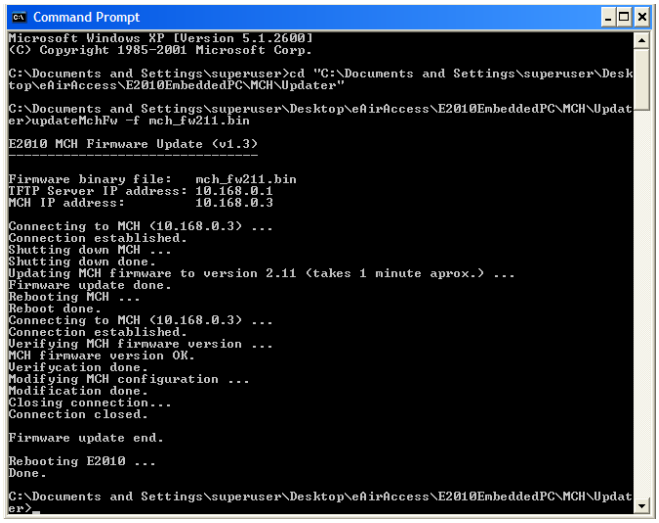

Figure 2-24: Command Prompt Window

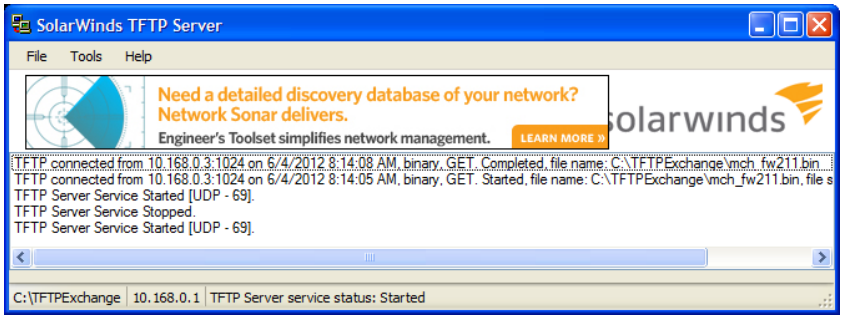

Figure 2-25: SolarWinds TFTP Server Window

14. Telnet to the MCH by double-clicking the **Putty** icon on the desktop. The *PuTTY Configuration* window displays, as shown in Figure 2-26.

15. Select **MCH Telnet** and click the **Load** button.
    Click the **Open** button to open the *MCH Telnet* prompt.

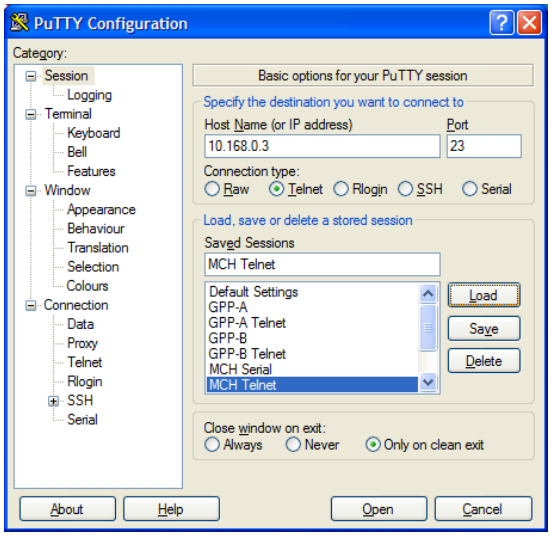

Figure 2-26: PuTTY Configuration Window

16. You should see the nat› prompt in the *MCH Telnet* window, as shown in Figure 2-27. Type **diag** under the nat› prompt. Under the DIAG (RET=0/0x0): prompt, type **7** and press **Enter**.

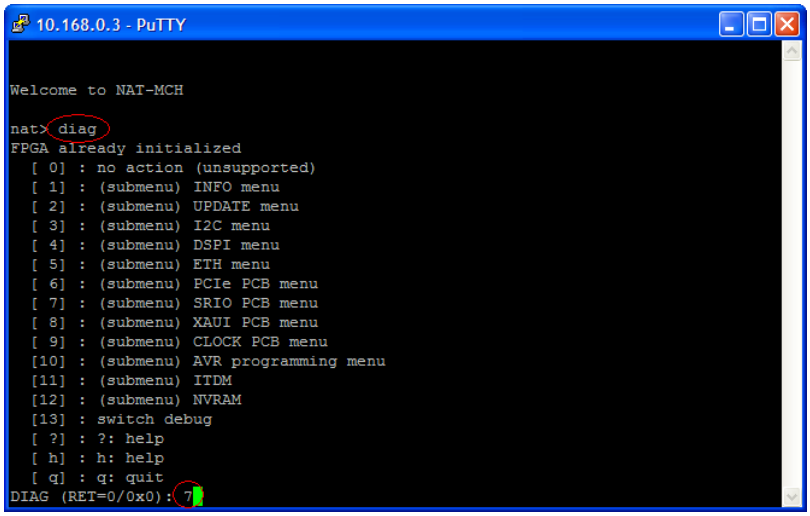

Figure 2-27: MCH Telnet Window – nat› Prompt

17. At the SRIO (RET=0/0x0): prompt, type **12** then press **Enter**.
At the Enter Switch Number (RET=0/0x0): prompt, type **0** then press **Enter**.
At the [IP:FILENAME]: prompt, type **10.168.0.1:srio0_v10_pe.bin**, then press **Enter**.
You should see "srio_write_prom: programming 112 bytes ..... - done", as shown in Figure 2-28.

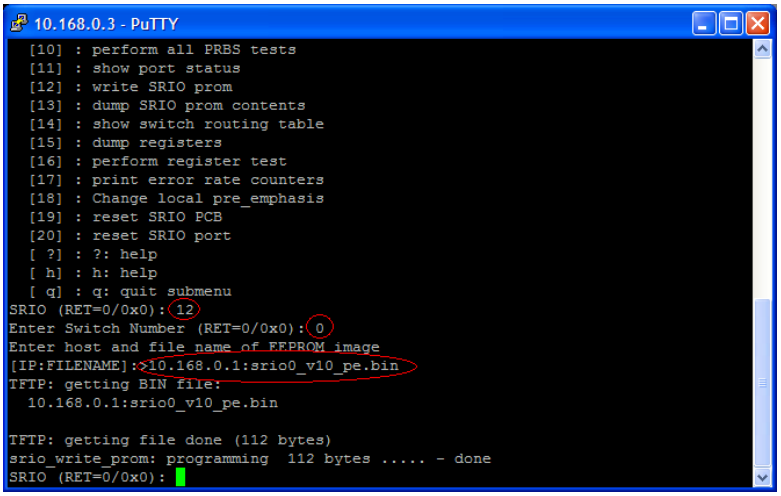

Figure 2-28: MCH Telnet Window - [IP:FILENAME] Prompt

18. Under the SRIO (RET=0/0x0): prompt, type **12** then press **Enter**. At the Enter Switch Number (RET=0/0x0): prompt, type **1** then press **Enter**. At the [IP:FILENAME]: prompt, type **10.168.0.1:srio1_v10_pe.bin**, then press **Enter**. You should see "srio_write_prom: programming 208 bytes ... - done", as shown in Figure 2-29.

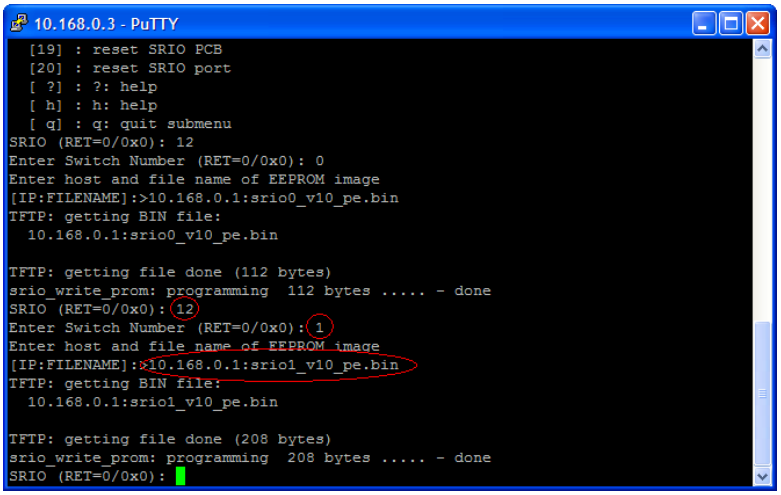

Figure 2-29: MCH Telnet Window

19. At the SRIO (RET=0/0x0): prompt, type **q**. At the DIAG (RET=0/0x0): prompt, type **q**, as shown in Figure 2-30.

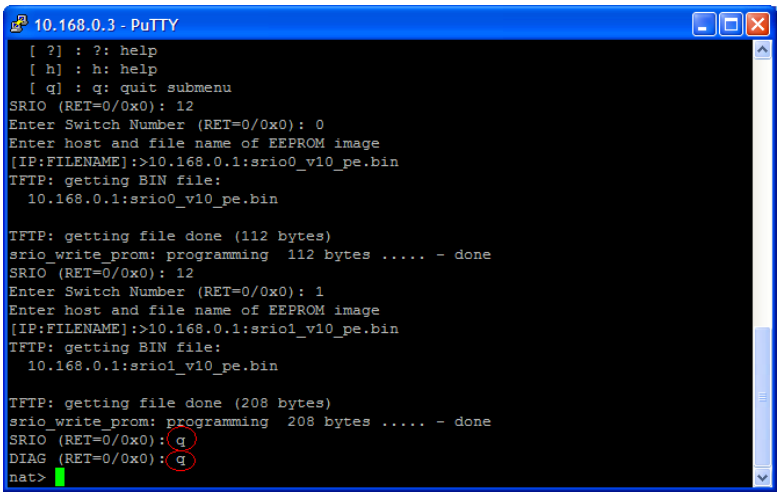

Figure 2-30: MCH Telnet Window - DIAG (RET=0/0x0): Prompt

20. The *TFTP Server* window should display all of the transfers, as in the window below.

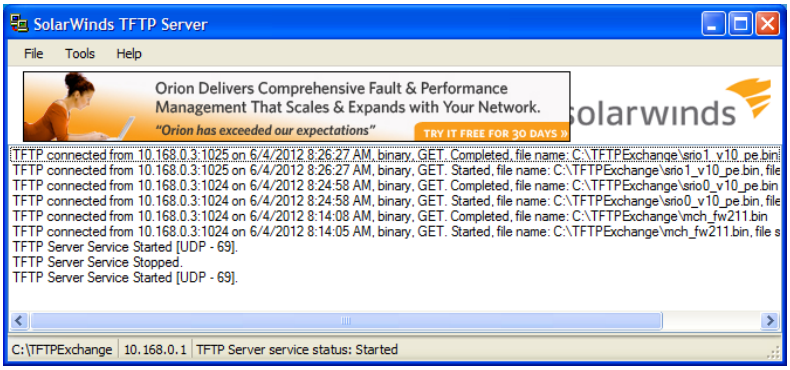

Figure 2-31: TFTP Server Window - Transfers

21. Select **File>Configure** from the *TFTP Server* menu. Click the **Stop** button.

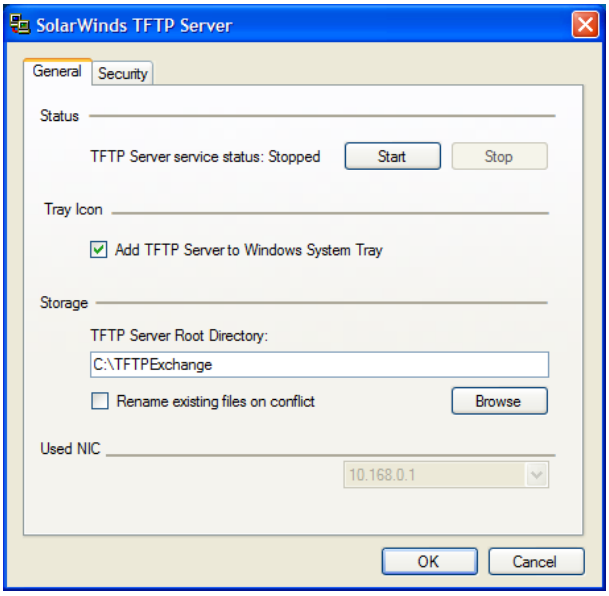

Figure 2-32: SolarWinds TFTP Server Window

22. Verify that the server has been stopped, as shown in Figure 2-33.

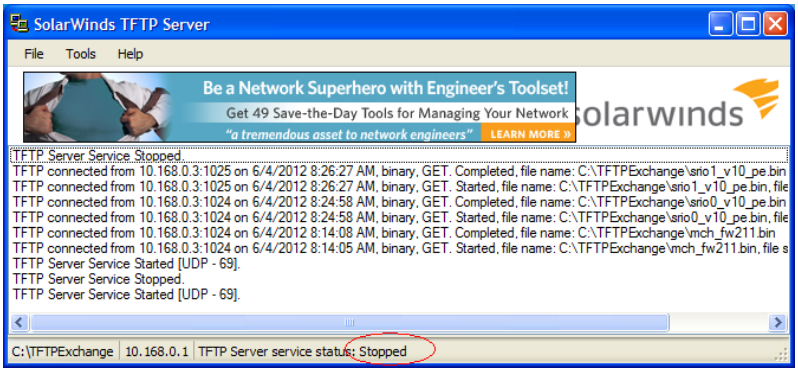

Figure 2-33: Verifying the Server is Stopped

23. Delete the *Update* folder from the Desktop.

2.8.3. RACK.ini File Copy

In the *‹CS8 Interactive Tester›\E2010 Embedded PC\RACK* folder, copy the **RACK.ini** file to the *C:\AT4Wireless\E2010\HWSet* folder on the E2010.
If the unit is single cell, copy the **RACK.ini** file from the *SingleCell* subfolder. If the unit is dual cell, copy the **RACK.ini** file from the *DualCell* subfolder.

2.8.4. Installing AT4 E2010 Manager Software

1. In the *‹CS8 Interactive Tester›\ E2010 Embedded PC\AT4 E2010 Manager* folder, run the **E2010 Manager Setup.exe** file to install the software.

2. For each installer window, select the default values and click **Next** until the installation is complete.

3. On the *Completing the E2010 Manager Setup Wizard* window, select the **Start E2010 Manager Service & E2010 Control Panel** option, and click **Finish**, as shown in Figure 2-34.

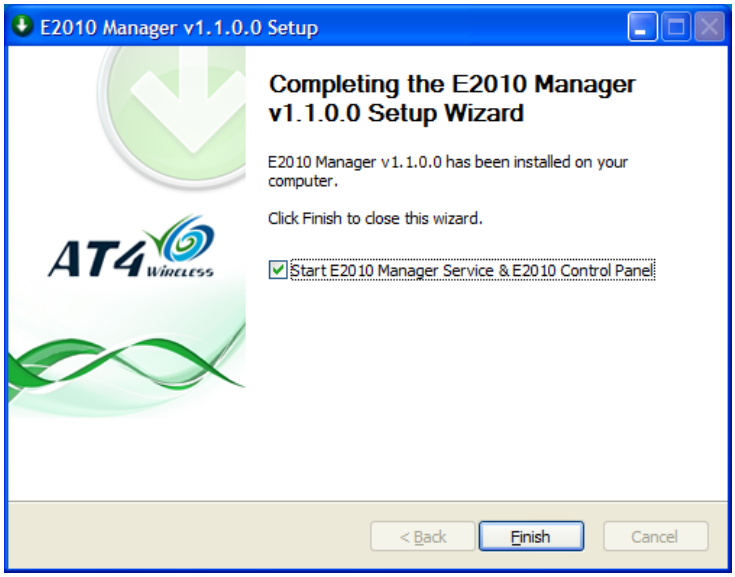

Figure 2-34: E2010 Manager Setup Wizard Window

4. When complete, the *E2010 Control Panel* displays, as shown in Figure 2-35.

Figure 2-35: E2010 Control Panel Window

2.8.5. Installing E2010 Software

1. From the *E2010 Control Panel*, click the **Versions** button.
   The *Installed Versions* window displays, as shown in Figure 2-36.

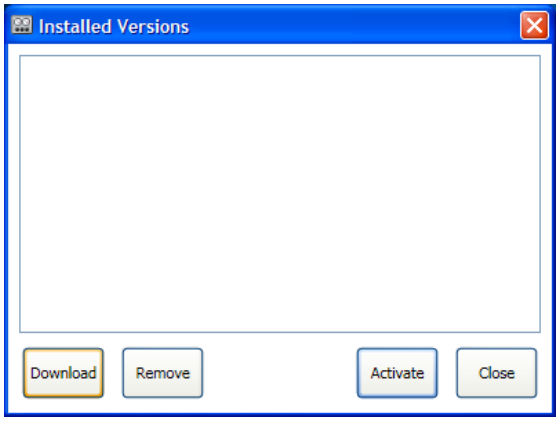

Figure 2-36: Installed Versions Window

2. Click the **Download** button. Navigate to the *‹CS8 Interactive Tester›\E2010 Embedded PC\LTE E2010 Core* folder. Select the **LTE E2010 Software Package v3.0.5.2.exe** file and click **Open**, as shown in Figure 2-37.

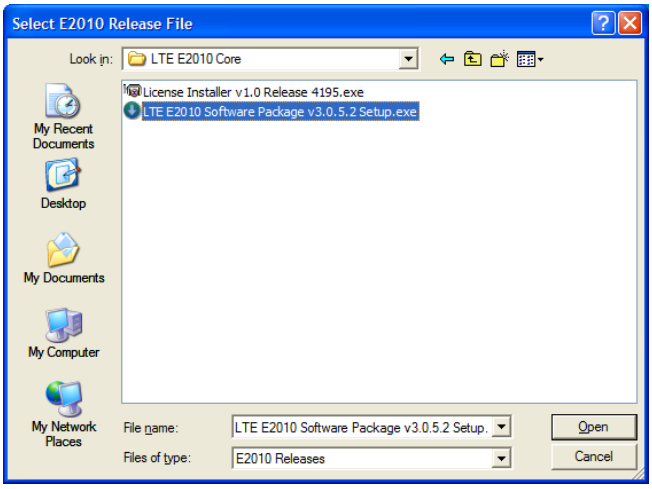

Figure 2-37: E2010 Software File

3. In the *Installed Versions* window, select **3.0.5.2** and click the **Activate** button, as shown in Figure 2-38.

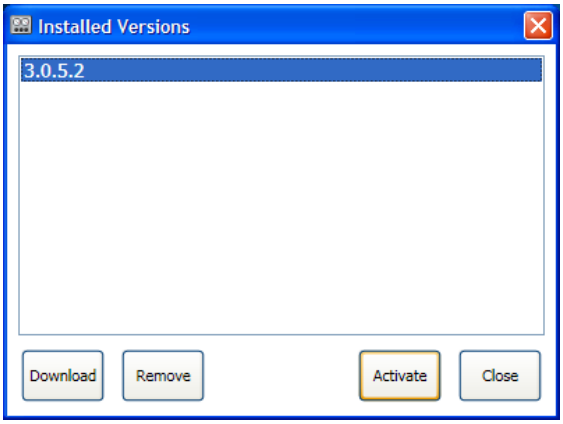

Figure 2-38: Installed Versions Window - 3.0.5.2

4. The E2010 Control Panel window displays.
   The status of the activation displays at the bottom of the window, as shown in Figure 2-39. This process will take between 10 and 15 minutes.

Figure 2-39: E2010 Control Panel Window

5. When the process is complete, the following windows may display. Click **OK** to continue.

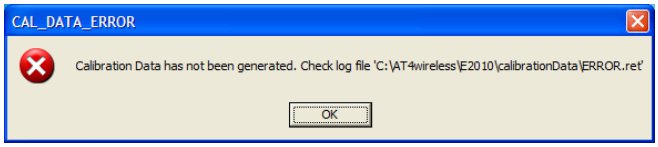

Figure 2-40: Error Window - Calibration Data

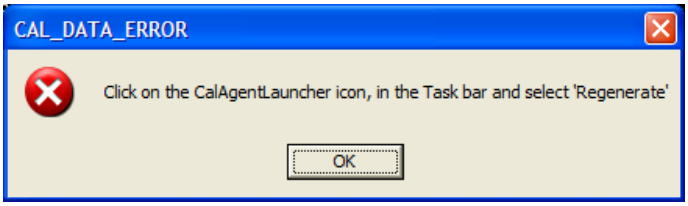

Figure 2-41: Error Window - CalAgentLauncher Icon

6. In the *Command* window, verify that it matches with the highlighted areas in Figure 2-42. Note that for a single cell unit, you will not see the FPGA message for Cell B.

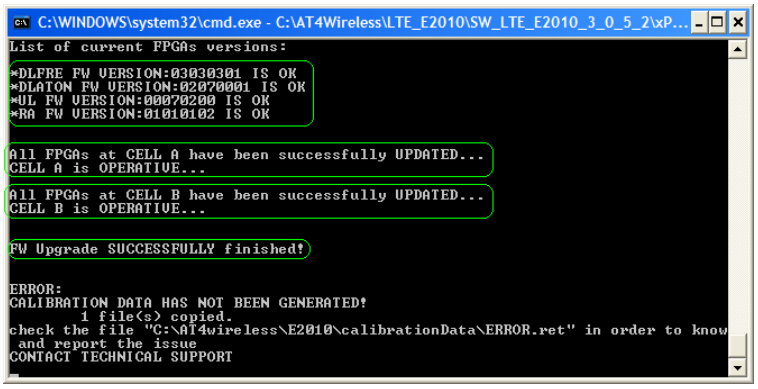

Figure 2-42: Command Prompt Window

7. If the calibration update failed, the window in Figure 2-43 may display. If the message from Figure 2-42 matched, disregard this error. Otherwise, repeat the activation process.

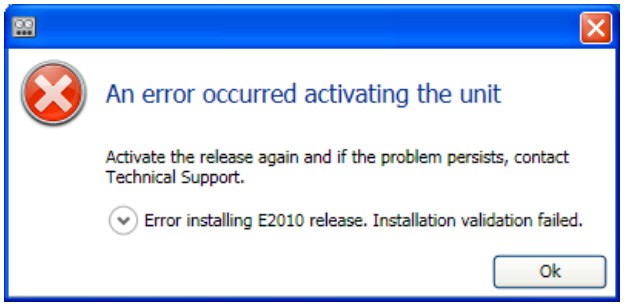

Figure 2-43: Failed Calibration Update

8. If there was an error generating the calibration data, regenerate the data by right-clicking the Ladybug icon in the System Tray and select **Generate** from the menu. This may take a few minutes. When the generation process is complete, the Ladybug looking icon should be green. If it is blue, wait a bit longer, as the process is still running. If it is orange or red, generate the data again. You may need to do this a few times before you get a green result.

Figure 2-44: Regenerating Calibration Data

9. Power-down the E2010 and power it up again. When the E2010 boots, the *E2010 Control Panel* should automatically display. Verify that it matches the highlighted items in Figure 2-45. Allow a few minutes for all the components to boot up. Note that Single Cell units have only one HWSetA.

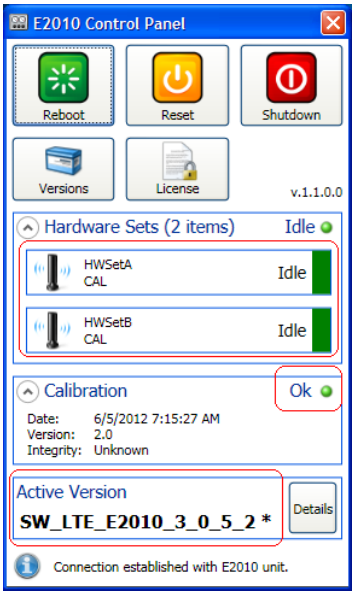

Figure 2-45: E2010 Control Panel - Hardware Sets

2.8.6. Installing the Logging Framework

1. In the *‹CS8 Interactive Tester›\E2010 Embedded PC\Logging Framework* folder, run the **Logging Framework Runtime Setup EmbeddedPC1.exe** file to install the Logging Framework Runtime. **Note**: If this is the second E2010 in a two E2010 unit setup, run the **Logging Framework Runtime Setup EmbeddedPC2.exe** file instead.
2. In the *Welcome to the Logging Framework Runtime Setup Wizard* window, click **Next**.
3. In the *License Agreement* window, select the **I accept the terms** option and click **Next**.
4. In the *Choose Components* window, make sure all components are selected and click **Install**.
5. In *Completing the Logging Runtime Setup Wizard* window, click **Finish**.
6. If this is a single E2010 system, or the first E2010 in a multi-E2010 system, run the **NetCfg_Master.reg** file located in the *C:\AT4Wireless\LoggingFramework\E2010_LOG_FMW_RTE\Misc\scripts* folder. If this is the second E2010 in a multi-E2010 system, run the *NetCfg_Slave.reg* file located in the same folder.

2.8.7. Installing the Dissectors

1. In the *‹CS8 Interactive Tester›\E2010 Embedded PC\Logging Framework* folder, run the **AT4 wireless Dissectors Setup.exe** file to install the AT4 dissectors.
2. In the *Welcome to the AT4 Wireless Dissectors Setup Wizard* window, click **Next**.

3. In the *License Agreement* window, select the **I accept the terms** option and click **Next**.
4. In the *Choose Components* window, make sure all components are selected and click **Install**.
5. In the *Completing the AT4 Wireless Dissectors* window, click **Finish**.

2.8.8. Installing Layer 3 Software

In the *‹CS8 Interactive Tester›\E2010 Embedded PC\Layer 3 Components* folder, run the *setup.exe* installation file. The installation starts automatically. Accept all default options.

2.8.9. Installing E2010Manager Software

1. In the *‹CS8 Interactive Tester›\E2010 Embedded PC\E2010Manager* folder, run the **Setup.exe** installation file. The installation starts automatically. When you are prompted to select a install destination folder, make sure to use the default path: *C:\Program Files\Spirent Communications\E2010Manager*.
2. After installing the E2010Manager, press the power button on the front of E2010S to perform a hard reboot.
3. When the box reboots, E2010Manager should run automatically. Verify that it is running using Task Manager. If the software is not running, start E2010Manager manually by selecting **C:\Program Files\Spirent Communications\E2010 Manager\E2010Manager.exe**.

2.8.10. Configuring the E2010 IP Address

1. Select **Control Panel›Network Connections**. Right-click *Local Area Connection 2* and select **Properties** from the menu.
2. Under the *General* tab, select **Internet Protocol (TCP/IP)** and click the **Properties** button, as shown in Figure 2-46.

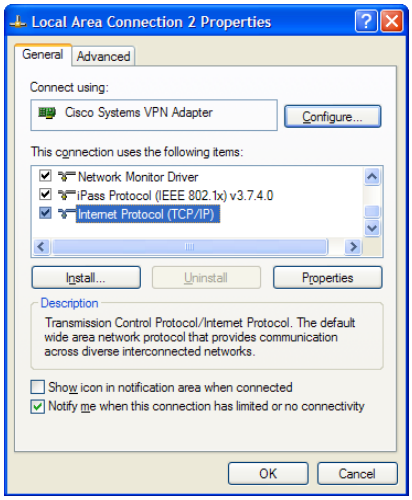

Figure 2-46: Local Area Connection 2 Properties Window

3. Configure the IP Address settings as shown in Figure 2-47. Note that if this is the second E2010 unit in a two E2010 configuration, you must set the IP address to **192.168.0.190** instead.

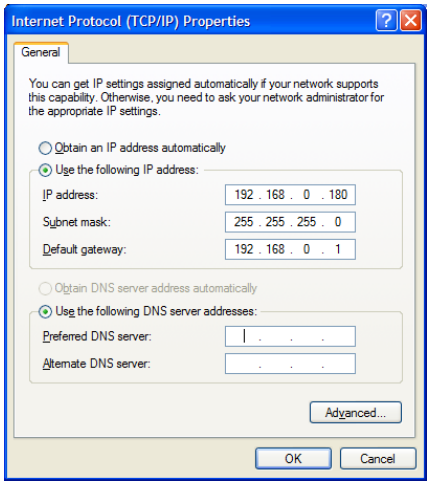

Figure 2-47: IP Address Settings

4. Click the **Advanced** button. In the *Advanced TCP/IP Settings* window, click the **Add** button, as shown in Figure 2-48.

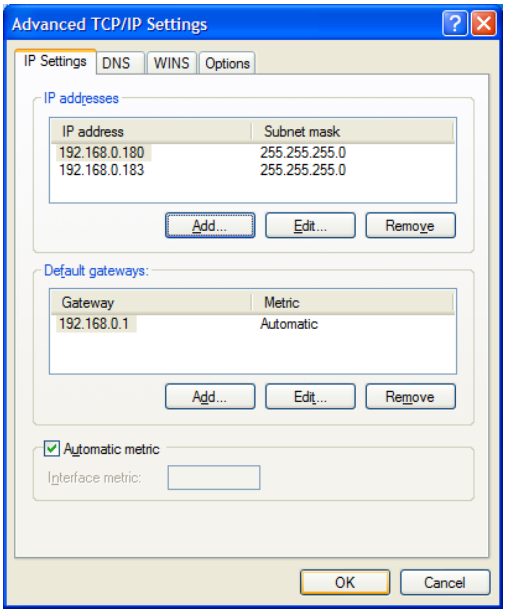

Figure 2-48: Advanced TCP/IP Settings Window

5. In the *TCP/IP Address* window, enter **192.168.0.183** for the IP address and **255.255.255.0** for the Subnet mask as shown in Figure 2-49. Note that if this is the second E2010 unit in a two E2010 configuration, you must set the IP address to **192.168.0.193** instead.

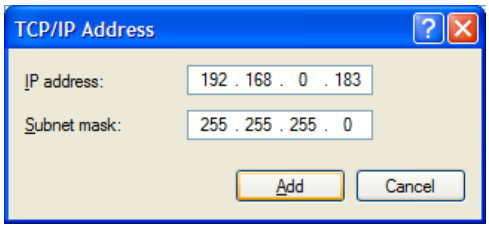

Figure 2-49: TCP/IP Address Window

6. Click **OK** to close the *Advanced TCP/IP Settings* window.
7. Click **OK** to save the *Internet Protocol Properties* settings.
8. Click **OK** to save the *Local Area Connection 2 Properties* settings.

2.8.11. Editing UdpServerLoggingConfig.xml

1. Under *My Computer*, navigate to: **C:\AT4Wireless\LTE_E2010\SW_LTE_E2010_3_0_5_2\xWinArea\Tools\UdpServer**, as shown in Figure 2-50.

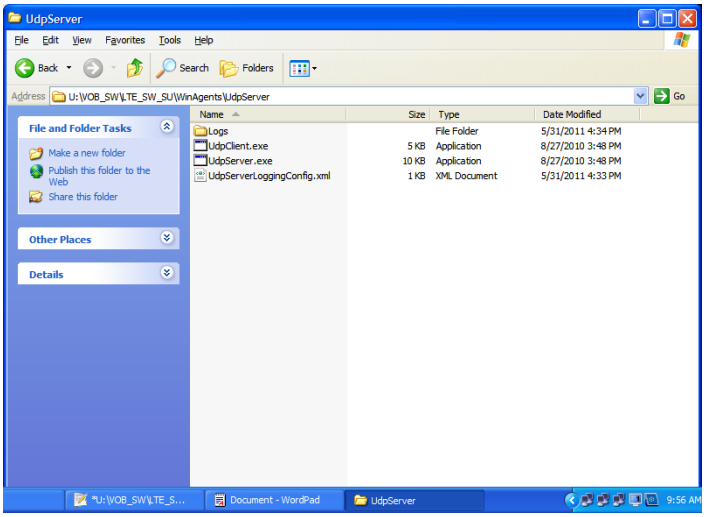

Figure 2-50: UdpServer Folder

2. Right-click the **UdpServerLoggingConfig.xml** file and select **Edit with Notepad ++** from the menu.

3. In the *Notepad* window, under the line marked *‹pcIpAddress›*, enter **192.168.0.35** for the IP address, as shown in Figure 2-51.

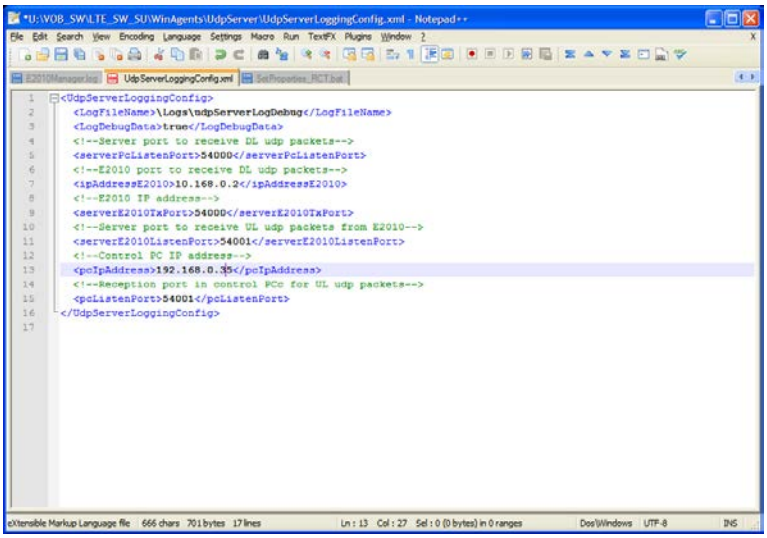

Figure 2-51: Notepad – Editing the IP Address

4. Save the document by selecting **File›Save**.

5. Close Notepad and Windows Explorer.

2.8.12. Ethernet Cable for Dual Cell E2010S

A new Ethernet cable is required to support L1 logging for the second cell of the E2010S.

Connect the supplied Ethernet cable from the AUX 2 port of the E2010S to port 35x of the Dell 6248 switch. Refer to the *B200 Setup Guide* for connection guidelines.

2.8.13. Trigger Cable for Dual Cell E2010S

A new trigger cable is required on systems containing the dual cell E2010S.

Connect the supplied BNC trigger cable from the E2010S Cell A TRIG 2 port to Cell B TRIG 2 port. Refer to the *B200 Setup Guide* for connection guidelines.

3. Known Issues - Details

3.1. Dell Latitude E6500/E6510/E6520 Client Laptop Issue

NOTE: If you have any other Client Laptop model, you can skip this chapter.

There is an issue with removing the test data cards and test phones from Dell Latitude E6500/E6510/E6520 Client Laptops connected via the PCMCIA slot or USB. The issue prevents the device from being used (after removed) until the client laptop is rebooted.

To avoid having to reboot the Client Laptop after removing a test device:

1. Before removing a device plugged into the PCMCIA slot or connected via the USB port, stop the device properly by selecting the **Safely Remove Hardware** icon from the System Tray, as shown in Figure 3-1.

Figure 3-1: Safely Remove Hardware Icon

2. Select the desired test device to safely remove it from the Client Laptop.

3.2. UE Drivers that Install a Network Interface

There is a potential conflict during data call setup, when both the Network Interface and Dial-Up Modem are enabled on the client laptop.

To avoid this conflict, we recommend that you disable the Network Interface if the TestDrive Data Connection (Dial-Up Modem) is the targeted interface for the session, as shown in the Figures below. If the Network Interface is not disabled, data call setups could fail with a RasDial exception.

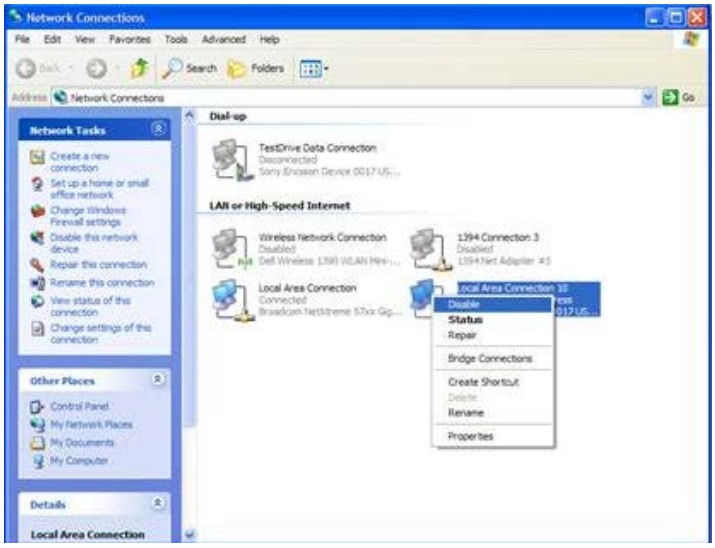

Figure 3-2: Network Connections Window – Disabling the Network Interface

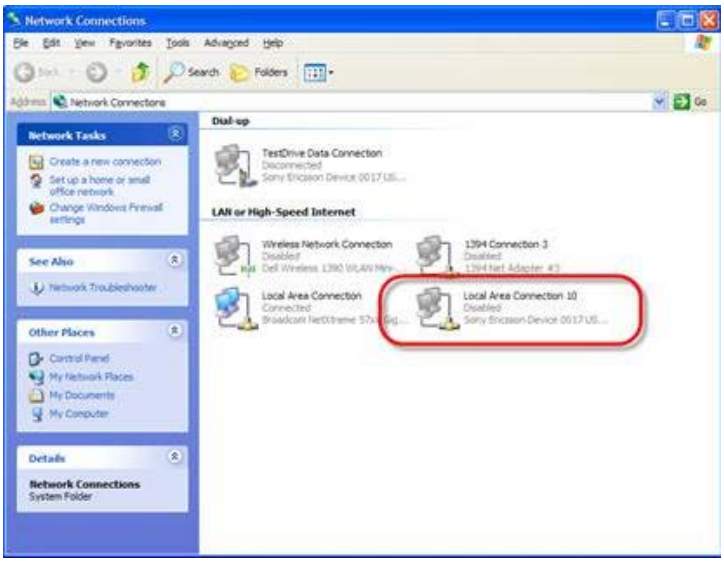

Figure 3-3: Network Connections Window – Successfully Disabled Network Interface

3.3. Unable to Abort Calibration

In the *Calibration Wizard*, clicking the **Abort** button freezes TestManager in a non-working state. You must re-launch TestManager to continue.

3.4. Disabling Microsoft Update

After installing Microsoft Security Essentials, Microsoft Update is enabled by default. Microsoft Update must be disabled on 8100 systems.

3.4.1. Windows XP and Windows Server 2003

Perform the following steps on each of the following PCs included in your system:

- Windows XP Controller PC
- Windows XP Client Laptop
- Windows Server 2003 Applications Server

To disable Microsoft Update:

1. Select **Start›Control Panel›Performance and Maintenance›System**.
   The *System Properties* window displays.
2. Under the *Automatic Updates* tab, select the **Turn off Automatic Updates** option, as shown in Figure 3-4.

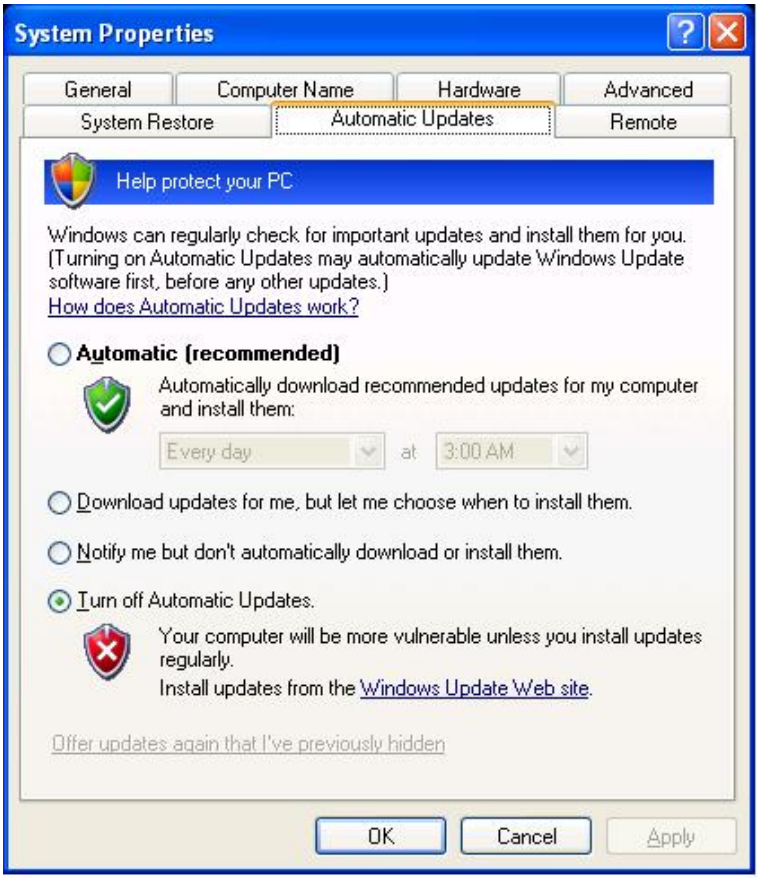

Figure 3-4: System Properties Window – Automatic Updates Tab

3. Click **OK** to save the changes and exit the window.

3.4.2. Windows 7

Perform the following steps on each of the following PCs included in your system:

- Windows 7 Controller PC
- Windows 7 Client Laptop

1. Select **Start›Control Panel›System and Security›Windows Update›Change Settings**. The *Windows Update – Change Settings* window displays.
2. Under the *Important Updates* section, select **Never check for updates**, as shown in Figure 3-5.

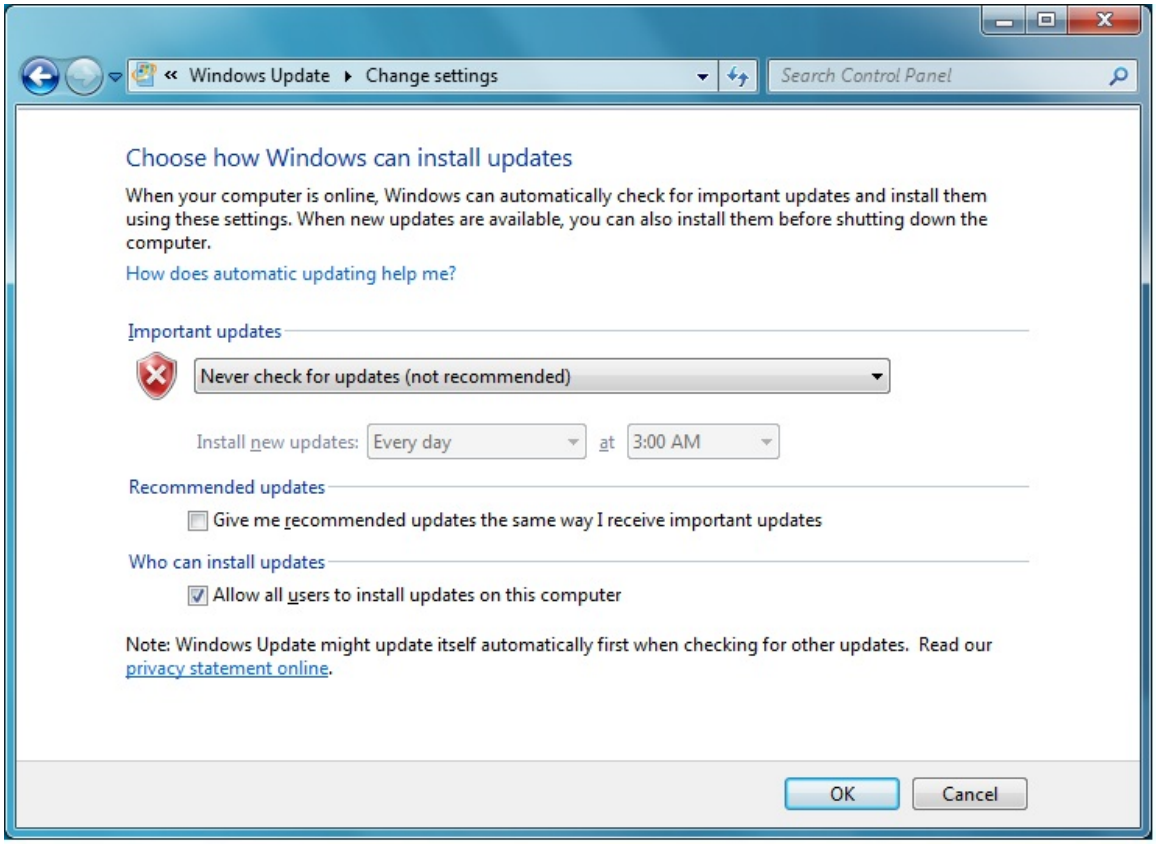

Figure 3-5: Windows Update – Change Settings

3. Click **OK** to save the changes and exit the window.
4. If a "Windows update is turned off. Click to turn on." message displays on the desktop, ignore it.

3.4.3. Windows Server 2008

If you are running Windows Server 2008 on the Applications Server, perform the following steps.

1. Select **Start›Control Panel›System and Maintenance›Windows Update›Change Settings**.
   The *Change Settings* window displays.

2. Under the *Important Updates* section, select **Never check for updates**, as shown in Figure 3-6.

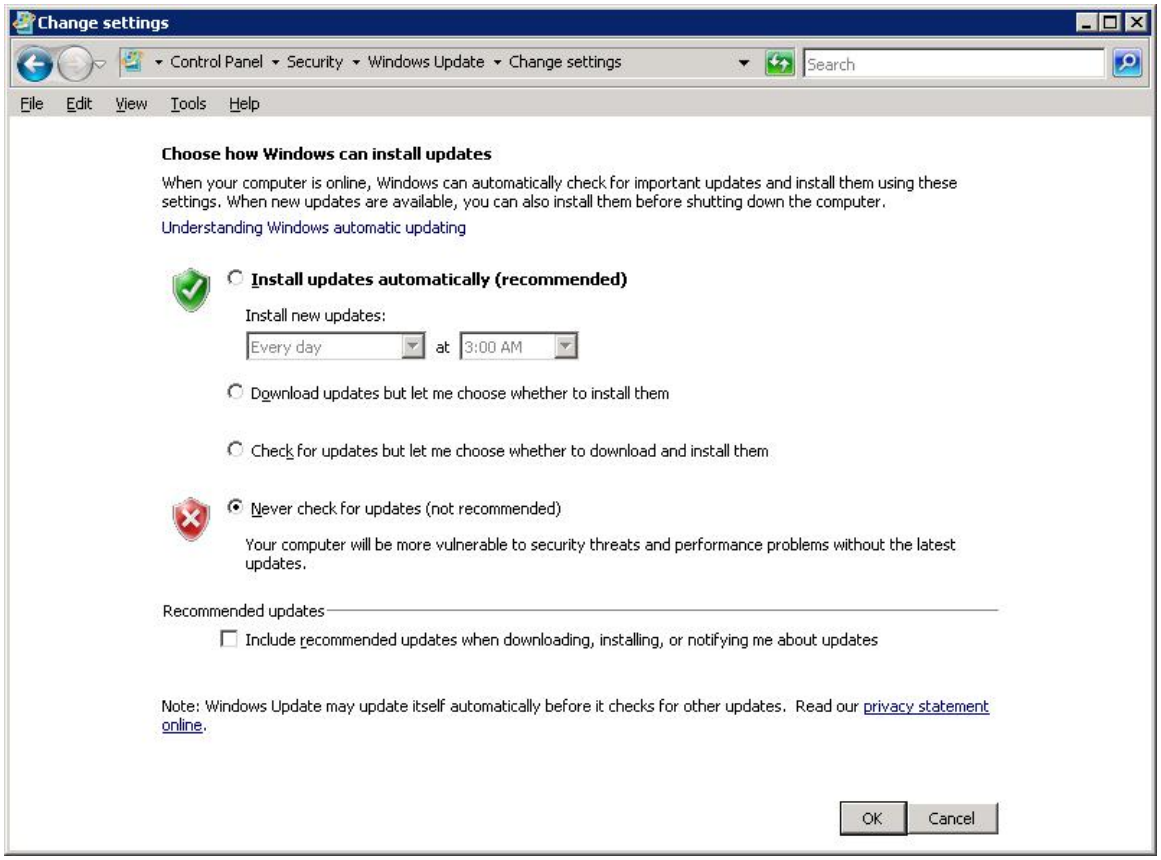

Figure 3-6: Windows Update – Change Settings

3. Click **OK** to save the changes and exit the window.

4. If a "Windows update is turned off. Click to turn on." message displays on the desktop, ignore it.

3.5. Creating a New Platform File

Platform Files created using previous releases do not automatically upgrade correctly with this release. Follow the instructions below to create a new Platform File for your test system.

1. In Test Manager, select **File›New›Platform File** as shown in Figure 3-7. The B-Series Platform file opens.

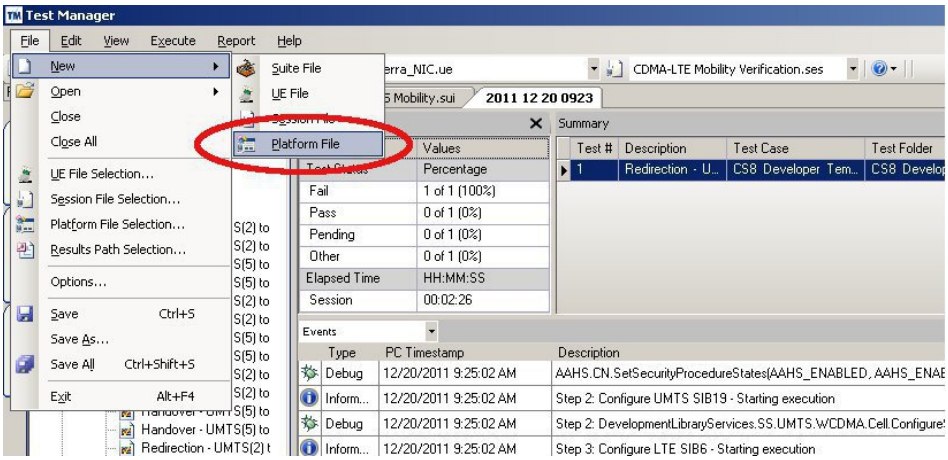

Figure 3-7: Platform File Menu Item

2. Under *Available Instruments*, enable all configured instruments.

3. Under *Network Configuration*, configure the available network options for the specific module to be tested.

4. Under *PDN Gateway*, enter **FD00:0:20:1:0:0:1:3** for the IPv6 address, as shown in Figure 3-8.

5. Under **SR8078 Test Configuration Unit**, select the LTE Mode Configuration file applicable to the test theme.

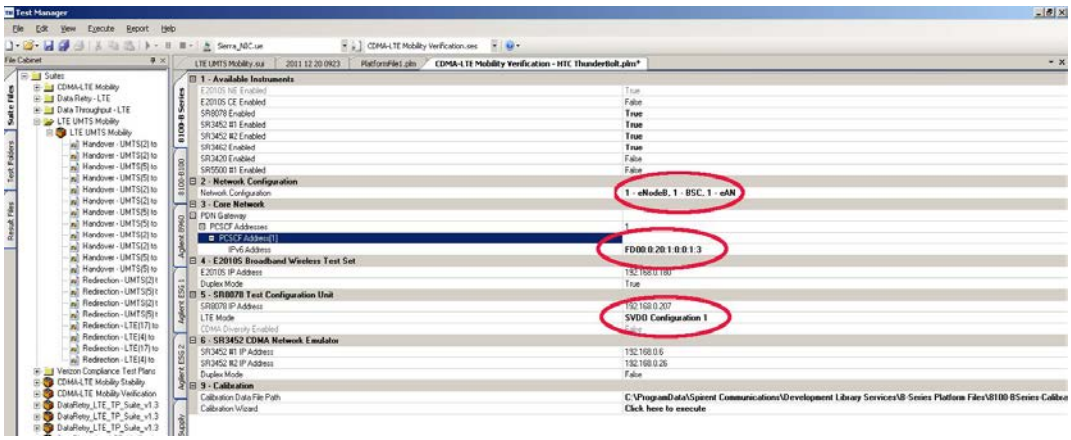

Figure 3-8: Setting Platform File Parameters

6. If you are running the LTE RF Performance Module, select the **B100** tab in the new Platform File.

7. Configure the SR8048 Test Configuration options for the system, as shown in Figure 3-9.

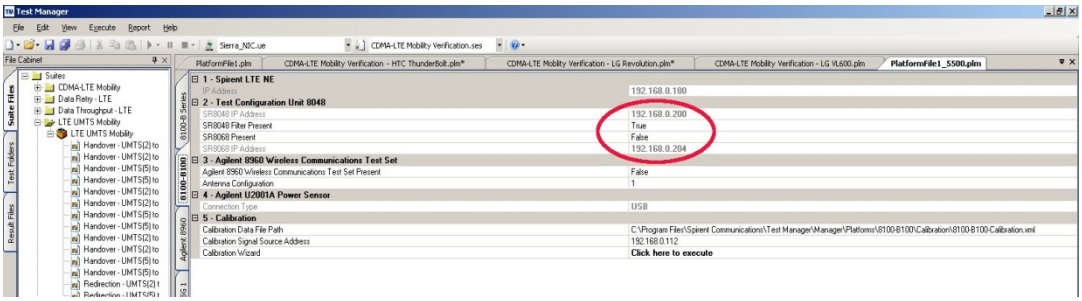

Figure 3-9: SR8048 Test Configuration Options

8. If you are running C2K SVLTE, configure the Agilent 8960 options in the Platform File.

9. When all options have been configured, save the Platform File by selecting **File>Save** in Test Manager.

10. When executing the tests, ensure that all test cases reference the Platform File you have just created.

3.6. Disabling Internet Protocol on the UE Network Connection

When running the LTE RF test cases, the UE is connected to the Controller PC for automation control. LTE UEs often establish an IP address automatically when connected to the USB port on the PC.

This can cause stability issues while running LTE RF test cases. To prevent this from occurring, perform the following steps to disable internet protocol on the UE network connection.

1. From the Control Panel, select **Network Connections** and locate the UE Local Area Connection, as shown in Figure 3-10.

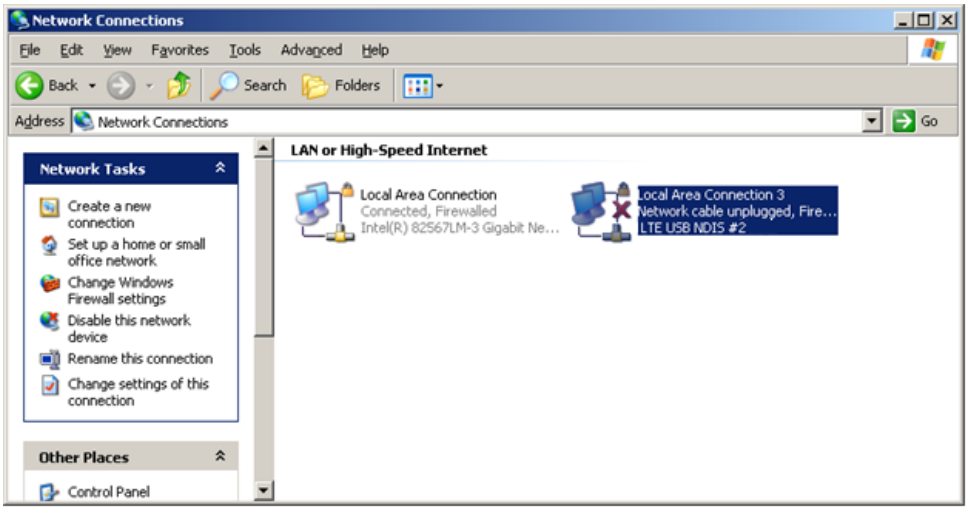

Figure 3-10: Network Connections Window

2. Right-click **Local Area Connection** and select **Properties** from the menu.
   The *Local Area Connection Properties* window displays, as shown in Figure 3-11.

3. Deselect the **Internet Protocol (TCP/IP)** option, as shown in Figure 3-11.

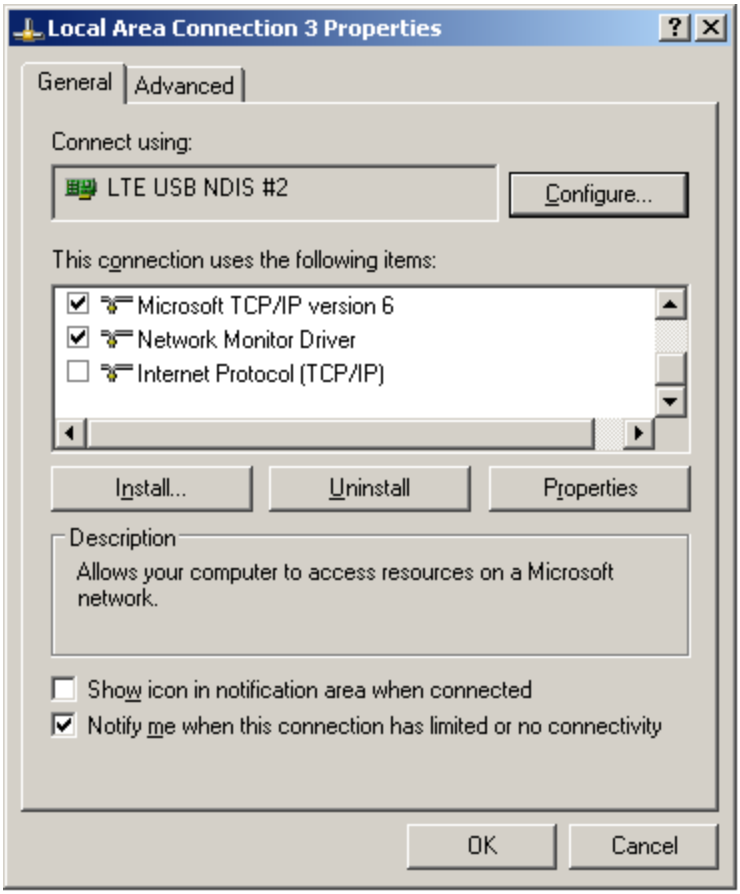

Figure 3-11: Local Area Connection Properties Window

NOTE: The Spirent Controller PC is shipped with two IP addresses: 192.168.0.35 and 192.168.0.5. We strongly recommend that you do not add any other IP addresses, especially on a different subnet.