Dell™ ControlPoint
Connection Manager

DELL™

Notes

✍ **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

Contents

The Dell™ ControlPoint (DCP) Connection Manager application enables you to easily set-up and automate your network connections and network-related settings (such as firewall, VPN, and printers) from a single application on your Dell laptop. DCP Connection Manager replaces multiple utilities that were required in the past to configure all of your network connections and settings, greatly simplifying the configuration process as well as network connectivity usage.

When DCP Connection Manager starts the first time, many of the connections and settings listed below are configured automatically using the default settings on your Dell laptop as a guide. From DCP Connection Manager, these connections and settings can be easily added, removed, edited, and imported/exported.

Connection Manager helps you manage the following network connection types and network-related settings:

- Wi-Fi
- Mobile Broadband
- Dial-up
- Ethernet or Wired (Cable Broadband, DSL)
- Bluetooth™ and UWB
- GPS
- Printer
- Internet Browser & Security
- VPN
- Share Folders
- Map Network Drives

Starting DCP Connection Manager

There are three access methods for starting the DCP Connection Manager application:

- Directly through the Dell ControlPoint™ application
- In the system tray icons
- By starting the DCP Connection Manager from the Microsoft® Windows® Start Menu

To start DCP Connection Manager from Dell Control Point system tray icon:

1 Double-click or right-click the DCP icon in the system tray.

2 Click **Open Dell ControlPoint**.

3 Click **Connection Manager**. The **Connection Manager Overview** window appears (see Figure 1-1).

To start DCP Connection Manager from Dell ControlPoint application:

• From Windows, click **Start→All Programs→Dell Control Point→Connection Manager**. The **Connection Manager Overview** window appears.

To start DCP Connection Manager directly from the Windows Start Menu:

• From Microsoft Windows, click **Start→All Programs→Connection Manager**. The **DCP Connection Manager Device Status** screen appears.

To start DCP Connection Manager from any of the three system tray icons:

• Double-click or right-click the DCP Connection Manager icon in the system tray, and then click **Open Utility**. The Device Status screen appears.

The **Connection Manager Overview** screen shows a Location Profile name (if configured), the currently active network connection and a list of installed network devices currently being managed by DCP Connection Manager. From this screen, you can click the **Connections** button to view, create, delete, and edit Network Connections and Location Profiles.

The **Connection Manager Overview** screen shows a Location Profile name (if configured), the currently active network connection, and a list of installed network devices currently being managed by DCP Connection Manager. From this screen you can click the **Connections** button to view, create, delete, and edit Network Connections and Location Profiles.

Figure 1-1.   Connection Manager Overview Window

Table 1-1.   Icon Legend

Icon	Description
	Main DCP Connection Manager icon with no active network connections
	Ethernet or wired network connection is active
	Wireless network connection is active

Device Status Screen

The **Device Status** screen is the default home page that displays when you first start the DCP Connection Manager application. It provides information regarding the Network Devices (Network Types) configured on your Dell laptop and managed by DCP Connection Manager.

To access the Device Status screen, open DCP Connection Manager. The **Device Status** screen appears (see Figure 1-2).

Network Devices

The **Network Devices** section displays installed Network Types and their status. Grayed-out icons indicate that the device does not have an active connection. Click or double-click a **Network Type** icon to go to the **Connection Status** screen for this network connection.

If an icon is not shown, then the Network Type is either not currently managed by the DCP Connection Manager or is not installed.

Radio Controls

In the **Radio Controls** section at the bottom of the screen, only installed technology radio types on your laptop that are managed by the DCP Connection Manager will have a check box.

- Click the **Airplane Mode** check box to disable radios of all Network Types.
- Click individual check boxes to disable or enable radios individually.

Other Links

In the navigation frame on the left are four links to other functions of the DCP Connection Manager application:

- Click **Device Status** to return to the **Device Status** page.
- Click **Connection Status** to see a more detailed view of your currently configured network connections, as well a start/stop/activate your network connections.
- Click **Profiles** to view configured Location Profiles and Network Connections, make a manual network connection, add or remove a network connection or Location Profile, edit settings, import, and export profiles.
- Click **Troubleshooting** to find resources for diagnosing network connectivity problems.

Figure 1-2.   Device Status Screen
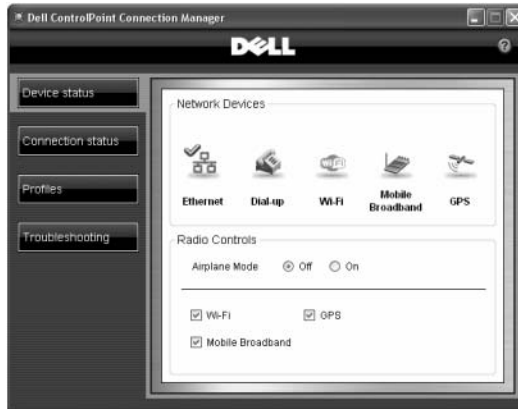
Connection Status Screen

The Connection Status screen illustrates the connectivity details of your network connections. To access the Connection Status Screen from the DCP Connection Manager, click **Connection Status**.

- The **Connection** drop-down menu lists installed and available network connections.

- The **Profile** drop-down menu lists the network connections defined for the Connection selected. The word `Active` appears next to the active Connection (Network Type).

Below the **Profile** drop-down menu is the network map associated with the selected connection (network type) and profile (network connection). From this screen you can do the following:

- Click a drop-down menu to find and select a network connection.

- Click **Connect/Disconnect** button to either disconnect from the active network or connect to an alternative network connection.

At the bottom of the screen are three links:

- Click **View Available Wi-Fi Networks** to locate and connect to Wi-Fi networks in your area. This link is active only when the Wi-Fi connection technology is enabled on your laptop and managed by the DCP Connection Manager.

- Click **View Network Status Details** to see a lower level of detail for the network you selected.

- Click **SMS Text messaging**. This link is active only when the Mobile Broadband connection technology is activated on your laptop by a mobile operator and managed by the DCP Connection Manager.

To interpret the network maps specific to each network connection type, click these links:

- Wi-Fi Status Screen

- Mobile Broadband Status Screen

- Dial-up Status Screen

- Ethernet Status Screen

- GPS Status Screen

Wi-Fi Connection Status

Figure 1-3. Wi-Fi Connection Status Screen
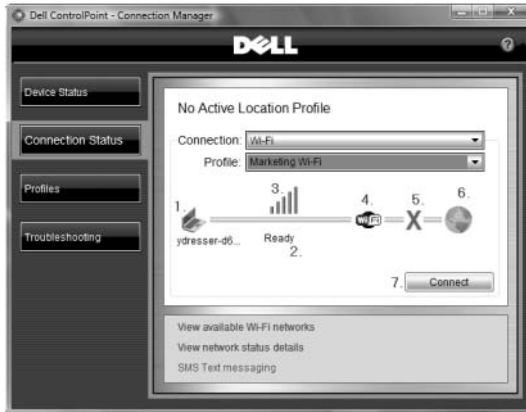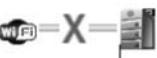
Table 1-2. Wi-Fi Connection Status Screen Legend

Indicator	Description
1	Network connection source and laptop name
1, 2, and 4	Wi-Fi network adapter detected
2	Status Message field; other status messages include: • Authenticating... • Connecting... • Connected • Disconnecting...
3	Strong Wi-Fi signal
4	Wi-Fi network symbol
4, 5, and 6	Wi-Fi network not connected to Internet
6	Internet symbol
7	Connect/Disconnect button

Indicator	Description
	Wi-Fi radio off
	Good Wi-Fi signal
	Weak Wi-Fi signal
	Wi-Fi connected to Internet
	Wi-Fi connected to domain
	Wi-Fi not connected to domain
	VPN tunnel established

Mobile Broadband Connection Status

Double-click on the **mobile operator branded** icon or **generic mobile broadband** icon to be redirected to the mobile operator or Dell website for more information about mobile broadband service.

Figure 1-4.   Mobile Broadband Connection Status Screen
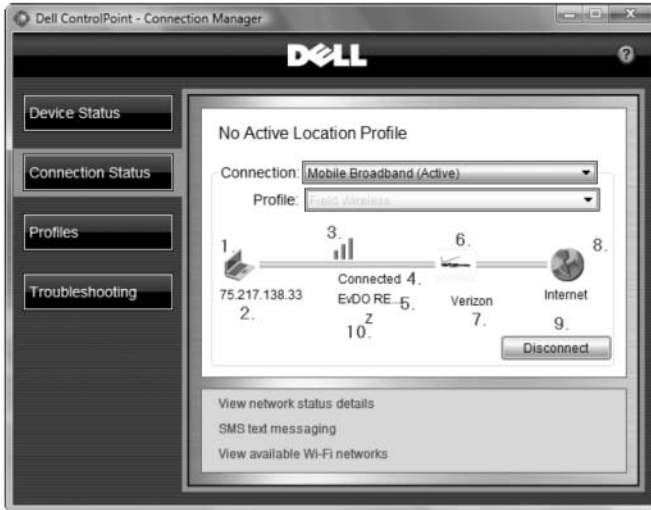
Table 1-3.   Mobile Broadband Connection Status Screen Legend

Indicator	Description
1	Network connection source
1, 4, and 6	Mobile Broadband adapter connected
2	Local network IP Address
3	Signal strength
4	Connection status field; other status messages include: • Ready • Connecting... • Disconnecting... • SIM Locked

Indicator	Description
5	Mobile Broadband air interface type. Other air interface types:
	• HSxPA
	• EVDO Rev A
	• UMTS
	• EVDO
	• GPRS
6	Mobile Operator branded symbol; may also be generic mobile operator symbol:
7	Mobile Operator name
9	Button indicating Connect/Disconnect, Unlock, or Activate
10	Mobile Broadband network adapter is in a dormant mode or idle.
	Strong signal
	Weak signal
	Radio is turned off
	Mobile Broadband device connected to Internet
	Mobile Broadband device not connected to Internet
	Mobile Broadband connected to domain
	New text messages

Indicator	Description
	Mobile broadband service is roaming on another network
	VPN tunnel established

Dial-Up Connection Status

Figure 1-5. **Dial-Up Connection Status Screen**
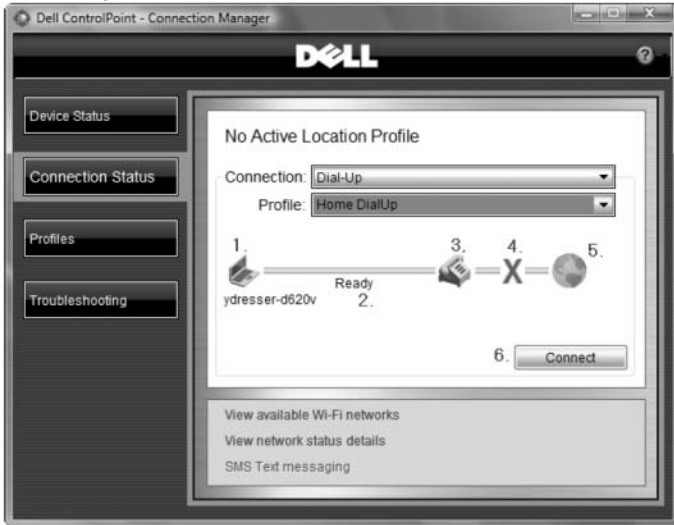
Table 1-4. **Dial-Up Connection Status Screen Legend**

Indicator	Description
1	Network connection source and laptop name
2	Status message field; other status messages include:
	• Ready
	• Dialing
	• Connecting...
	• Connected
	• Disconnecting...
3	Dial-up network symbol
3, 4, and 5	Dial-up network not connected to Internet
5	Internet symbol
6	Connect/Disconnect button

Indicator	Description
	Dial-up network adapter not detected
	Dial-up network connected to Internet
VPN	Dial-up network connected to a domain
	Dial-up network not connected to a domain
VPN	VPN tunnel established

Ethernet Connection Status

Figure 1-6. Ethernet Connection Status Screen
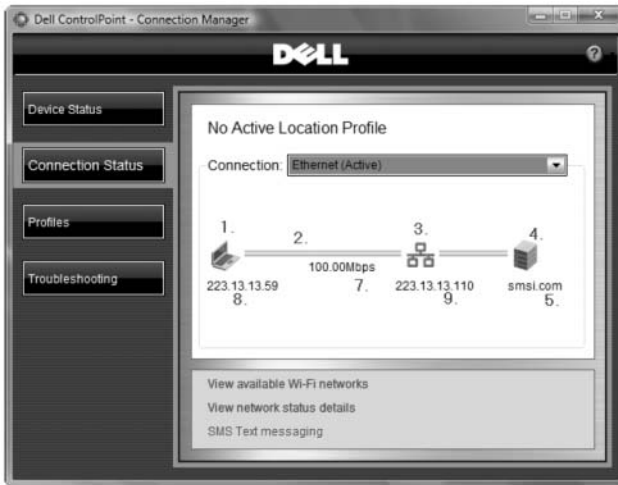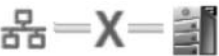
Table 1-5. Ethernet Connection Status Screen Legend

Indicator	Description
1	Network connection source
1, 2, and 3	Ethernet network adapter detected
3	Ethernet network
4	Domain symbol
5	Domain name
7	Ethernet network throughput
8	Local IP Address
9	Domain Controller IP Address
	Ethernet connected to a domain
	Ethernet not connected to a domain

Indicator	Description
	Ethernet cable unplugged
	Limited Ethernet signal

GPS Connection Status

Figure 1-7.   GPS Connection Status Screen
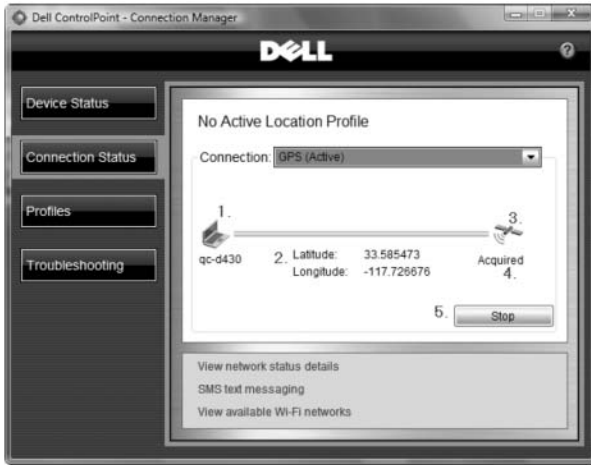
Table 1-6.   Ethernet Connection Status Screen Legend

Indicator	Description
1	Network connection source and laptop name
2	Dell laptop geographic location measured from satellite
3	GPS symbol
4	Status message field; other status messages include: • Acquiring... • Acquired • Disconnected
5	Start/Stop button
	GPS Disconnected

Tray Icon

The **Tray** icon provides a menu of shortcuts to often used DCP Connection Manager tasks and information.

1   Right-click any of the DCP Connection Manager tray icons (see Table 1-1) to open the **Tray Icon** window.

Figure 1-8.   Tray Icon Window
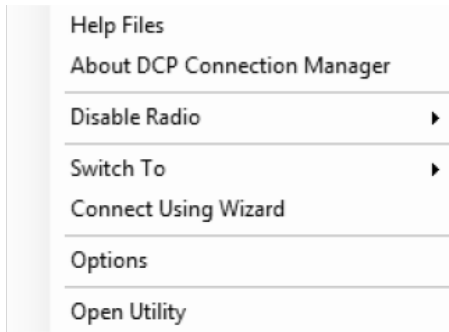
2   The following Tray Icon tasks and information are available:

- •   Help Files

- •   About DCP Connection Manager

- •   Disable Radios

- •   **Switch To** opens a menu of all available Location Profiles and Network Connections.

- •   **Connect Using Wizard** opens the **Profile Wizard Options** screen

- •   **Options** opens the **Program Settings** screen

- •   **Open Utility** reopens **DCP Connection Manager**

Location Profiles, Network Connections, and Network-Related Settings

Location Profiles

Location Profiles is a useful feature for automating your network connections and network-related settings when roaming between physical locations where your Dell laptop is frequently used. Common Location Profiles might include Work, Home, and Travel. For example, you may use your Dell notebook in multiple locations at work and use your laptop at home. Each location utilizes different networks and network types, printers, shared folders, etc. DCP Connection Manager allows you to define a Location Profile for each of these locations that combines applicable network connections and network-related settings, and applies them automatically when you either manually select the Location Profile or when Location Profiles automatically activate.

Below is the sequence of how the DCP Connection Manager works with Location Profiles and Network Connections.

1   When you power on your Dell laptop, DCP Connection Manager searches for available networks to connect to according to the order of Network Types and Network Connections defined from the **Profiles** screen.

2   When the first Network Type is located (Wi-Fi, Ethernet, Dial-up, etc.), DCP Connection Manager determines if the Network Type and its Network Connections are associated with any Location Profiles.

   • If DCP Connection Manager determines that a network connection is associated with one Location Profile, a connection is made automatically and the Location Profile's Network-related settings are applied.

   • If the Location Profile has several associated Network Types, DCP Connection Manager identifies the highest-ranking, available network connection to start. If during a networking session a connection link fails, the Connection Manager can re-establish a link with the next highest available network connection.

   • If DCP Connection Manager determines that a network connection is associated with more than one Location Profile, a pop-up box appears informing the user to manually decide which Location Profile to apply.

- Ordering of Network Types and Network Connections associated with Location Profiles is set from the Network Associations screen of the Profile Wizard.

- Ordering of Network Types and Network Connections not associated with Location Profiles is set from **Profiles** screen. Use the green up and down arrows to re-sequence Network Types and associated Network Connections.

- Advanced network connectivity rules associated with Location Profiles can be configured from the Location Settings screen.

- If DCP Connection Manager determines that a defined network connection is not associated with any Location Profile, you have the option to define a Location Profile or to start the network connection without a Location Profile.

Network Connections and Network Types

Network connections are uniquely configured network profiles associated with a network type supported on your Dell laptop. The following network types may be available on your Dell laptop:

- Wi-Fi
- Mobile Broadband
- Ethernet or Wired (includes DSL and Broadband Cable)
- Dial-up
- GPS
- Bluetooth
- UWB

Network-Related Settings

Any or all of these settings may be included with a Location Profile. The Profile Wizard scans your Dell laptop and automatically configures many of the settings listed below, which you can then edit and apply to an active Location Profile.

- Printer
- Internet Browser
- VPN

- Folder Sharing

- Map Network Drive

- Launch Applications

- Security

- GPS Settings

- WPAN Settings

Using Location Profiles and Network Connections

1   Open **DCP Connection Manager**→**Profiles**. The **Profiles** screen appears.

Figure 1-9.   Profiles Screen
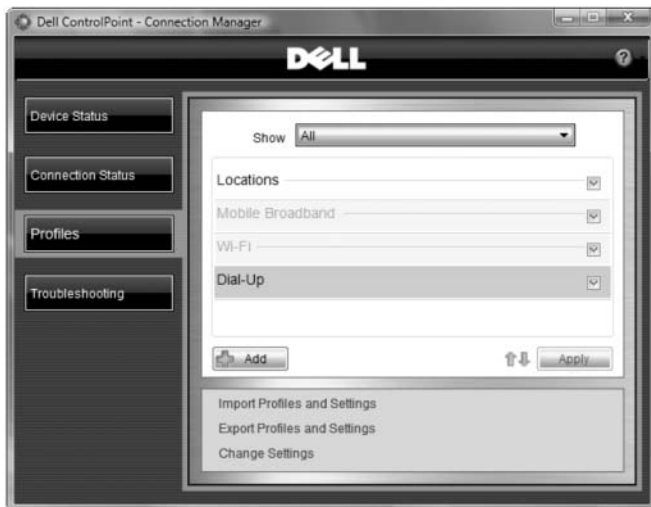
From this screen, you can:

- Filter your profiles with the **Show** drop-down list

- Connect or disconnect an existing network or hot spot

- Add a Network Connection or Location Profile

- Remove a Network Connection or Location Profile

- Lock a Network Connection or Location Profile

- Use the **Up** and **Down** arrows to re-sequence Network Connections and Location Profiles

- Right-click on a Location Profile or Network Connection to edit settings

- Import profiles and settings

- Export profiles and settings

- Change Settings (edit Global Program and Network Settings)

Connecting to Location Profiles and Network Connections

DCP Connection Manager will automatically connect to an available network connection according to the sequence of Network Connections and Location Profiles defined from the **Profiles** screen and **Location Settings** screen. You may also manually connect to a Network Connection or Location Profile.

To connect manually:

1 Open **DCP Connection Manager**→**Profiles**. The **Profiles** screen appears.

2 Highlight a **Network Connection** or **Location Profile** and right-click to open a drop-down list and select **Connect** (for Network Connections) or **Activate** (for Location Profiles) as appropriate.

Figure 1-10. Connect to a Network from Profiles Screen
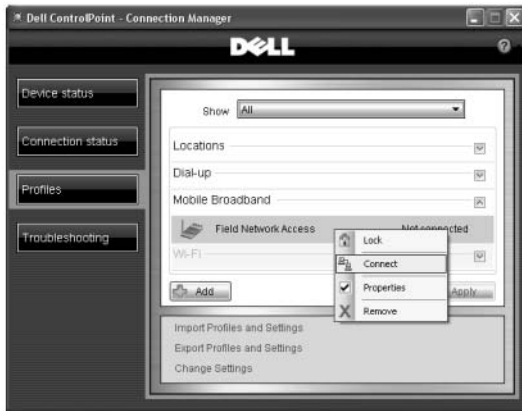
Setting the Order of Preferred Network Types and Network Connections

Set the order of preferred network types and associated network connections through the drop-down list to the right of each network type on the **Profiles** screen. Use the green up and down arrows to re-sequence Location Profiles, Network Types, and Network Connections.

You can also control Location Profile priority rules from the **Location Settings** screen:

1 Click **DCP Connection Manager→Connections→Profiles**.

2 Select a **Network Connection Type,** and then use the green up and down arrows to re-sequence that network type and associated network connections amongst all network types or select a network connection and re-sequence it amongst other network connections within a network type.

3 Click **Apply** to confirm the sequence changes.

Using the Profile Wizard to Add a Location Profile or Network Connection

A Location Profile is made up of one or more network types, network connections, and other network-related settings. The Profile Wizard will guide you through the process of creating a basic network connection or a Location Profile with any of the following settings:

- Wi-Fi

- Mobile Broadband

- Ethernet

- Dial Up

- General - Location Profile icon change

- Internet Browser

- Launch Applications

- Map Network Drive

- Folder Sharing

- Printers

- Security

- VPN

- WPAN

- GPS

- Network Connections - Associate existing network connections with Location Profiles

Adding a Location Profile

1 Click **DCP Connection Manager→Profiles→Add**. The **Profile Wizard Options** screen appears when using the Profile Wizard to create a Location Profile or configure a Network Connection (see Figure 1-11).

2 Check the **Location Based Profile** check box and enter a name that best describes the Location Profile you want to create—for example, Work, Home, or Travel.

3 Select one or more **Network Types** if you would like to create and associate one or more Network Connections with this Location Profile now. Or, click **Next** to create and associate Network Connections with this Location Profile later.

Figure 1-11. Profile Wizard Options Screen

Add a Network Connection using the Profile Wizard

1   Click **DCP Connection Manager**→**Profiles**→**Add**. The **Profile Wizard Options** screen opens (see Figure 1-11).

2   Check the **Choose the type of network connections you want to configure** check box.

3   Check the network connections you want to configure from the list of **Network Types** available on the screen.

4   Click the **Next** button to continue to the **Profile Wizard Settings** screen (see Figure 1-12). The network connection type(s) you have chosen from the **Profile Wizard Options** screen appear at the top of the list on the left.

5   As you make selections on the left, the fields on the right change according to the types of network connections you selected from the previous **Profile Wizard Options** screen. Populate as many fields on the right as necessary to configure your network connection.

6   Click **Advanced** to configure advanced network connection settings and/or to modify default IP and DNS settings.

7   Click **Next** to continue the Profile Wizard process, or click **Finish** to review configured network settings from the Profile Wizard Summary Page if the wizard process is completed.

Figure 1-12.   Profile Wizard Settings Screen
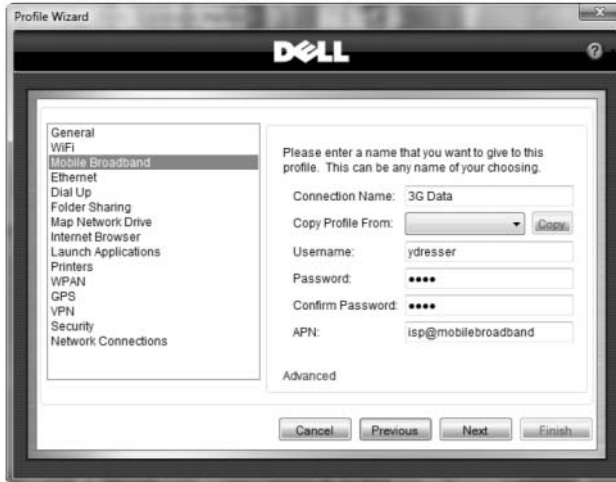
Profile Wizard Summary Screen

The **Profile Wizard Summary** screen is reached by clicking the **Finish** button during a Profile Wizard routine, and summarizes the parameters you have set for the Location Profile, including network connection and network and user-related Location Profile Settings. You can also review, edit, print or save the settings to a .txt file.

From this page you can do the following:

- Click **Previous** to return to the Profile Wizard and adjust your settings.
- Print configuration settings.
- Save configuration settings to file.
- Hide Network Keys.
- Click **Done** to save the configuration settings you have made. The Profiles screen appears.

Figure 1-13.   Profile Wizard Summary Screen

Remove or Edit a Location Profile or Network Connection

You can remove or edit a Location Profile or Network Connection you have defined.

NOTE: When removing a Location Profile, any associated network connections are not removed.

1 Open **DCP Connection Manager**→**Profiles**. The **Profiles** screen appears.

2 To remove a Location Profile or Network Connection, right-click the **Location Profile** or **Network Connection** name and select **Remove** from the drop-down list box that opens.

3 To edit a Location Profile or Network Connection, right-click on the **Location Profile** or **Network Connection** name and select **Properties** from the drop-down box to open the associated **Profile Wizard Settings** screen.

NOTE: A Windows Local Administrator or better privilege is required to edit or remove Location Profiles and Network Connections if they have been locked by an administrator.

Lock a Location Profile or Network Connection

You may need to lock a Location Profile or Network Connection to prevent setting changes.

> **NOTE:** The Lock function is available to users with Windows Local Administrator user privileges or better and prevents local users from removing or editing Location Profiles and Network Connections.

1   Open **DCP Connection Manager**→**Profiles**. The **Profiles** screen appears (see Figure 1-14).

2   Right-click a **Location Profile** or **Network Connection** name and select **Lock** from the drop-down list box.

Figure 1-14.   Lock a Location Profile or Network Connection
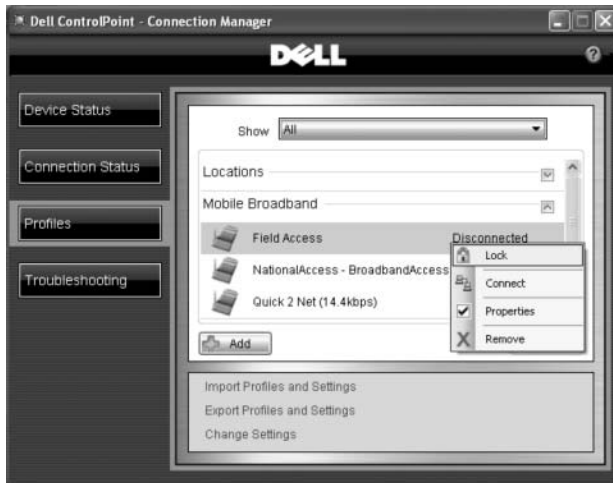
Export Location Profiles, Network Connections, and Global Settings

There are five profile options available for selecting Location Profiles, Network Connections, and Network-Related Settings to export using the DCP Connection Manager Export feature:

•   **Location Profiles**—Includes all Location Profiles (and Network-Related Settings) only

•   **All Networks**—Includes all network connections only

•   **Mobile**—Includes mobile broadband network connections

•   **Wi-Fi**—Includes Wi-Fi network connections

•   **Dial-Up**—Includes dial-up network connections

To access the profile options:

1 Open **DCP Connection Manager**→**Profiles**→**Export Profiles and Settings**. The **Export Profiles** screen displays (see Figure 1-15).

2 Choose the **Profile Type** to export from the drop-down list box.

3 Select and move **Location Profiles** or **Network Connections** for export from the list box on the left and move to the right list box.

4 Select import/export settings:

   • The **Include adapter settings** check box supports only Wi-Fi adapter settings today.

   • The **Include program settings** check box exports all Global Program and Network Settings.

   • Check the **Include Credentials** check box to include all credential and security information such as user names, passwords, and network security keys in the encrypted export .xml file.

5 Click **OK** to open the **Save As** screen.

6 Save the file as an .xml file.

7 Click the **Save** button to save the exported .xml file and return to the **Export** screen.

Figure 1-15.   Export Profiles Screen
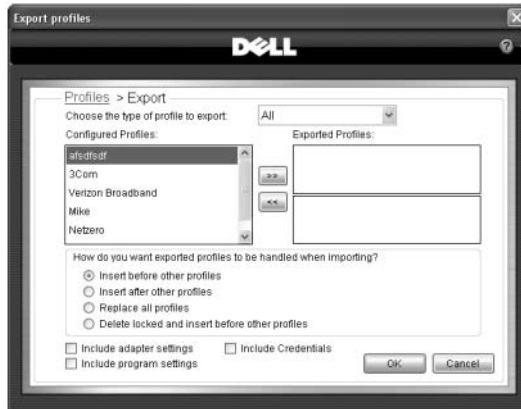
Import Location Profiles, Network Connections, and Global Settings

There are two methods for importing Location Profiles, Network Connections and Global Settings: the DCP Connection Manager Import utility or manual/automated distribution of the profile file to System32 folder in Windows.

DCP Connection Manager Import Utility

1   Open **DCP Connection Manager**→**Profiles**→**Import Profiles and Settings**. The **Import Profiles** screen opens.

2   Select the appropriate .xml profiles file.

3   Click **Open** to finish the import routine of the selected profile file. The **Import Profiles** screen closes and the imported profile file is deleted.

Manual/Automated Distribution of Profile File to System32 Folder in Windows

1   Locate the exported profile file and rename it **networkUCM.xml**.

2   Manually place the file in **C:\\Windows\Systems32\networkUCM.xml**. Alternatively, you can distribute the file using a third-party system management tool.

Figure 1-16.   Rename the Exported Profile File
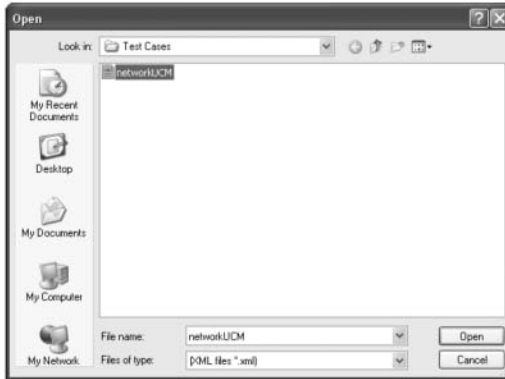
Add a Location Profile Icon

From the **General** screen, you can add a distinctive icon that represents the Location Profile being created and edit a Location Profile name.

1 Open **DCP Connection Manager**→**Profiles**→**Add**→**Next**→**General**.

2 Edit a **Location Profile Name**.

3 Click **Change Icon** to optionally select another icon for this profile.

4 Click **Next** to continue the Profile Wizard settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-17.   Profile Wizard General Screen
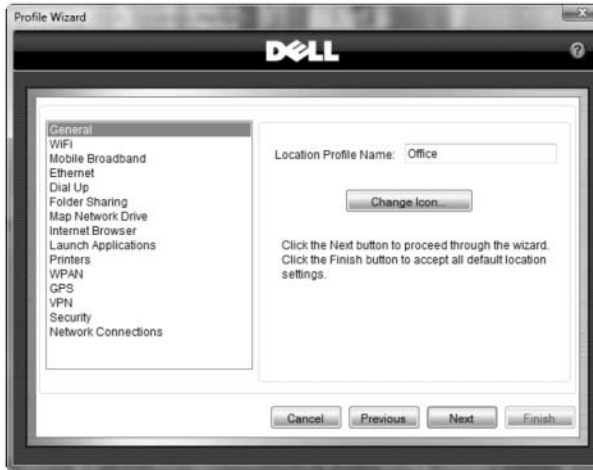
Wi-Fi Connections

Wi-Fi or WLAN (wireless local area network) is a commonly used wireless network in laptop systems that enables a connection to the Internet or other portable systems that have Wi-Fi functionality. Wi-Fi networks broadcast radio waves that can be picked up by Wi-Fi receivers that are attached to different portable systems. Wi-Fi is also the brand name for WLAN technologies and devices. The following Wi-Fi network bands are supported: A, B, G, N.

By default, DCP Connection Manager configures your Wi-Fi settings with the default settings on your Dell laptop. From DCP Connection Manager, Wi-Fi network connections can be added, removed or edited.

Create a Basic Wi-Fi Network Connection

1   Open **DCP Connection Manager**→**Profiles**→**Add**.

2   Select the **Wi-Fi** check box and click **Next**. The **Wi-Fi** screen displays (see Figure 1-18).

3   Under **Connection Name,** enter a name to associate with this network connection.

4   To select a Network Name:

a   Click the **View** button to scan from a list of broadcasting networks for a Wi-Fi network to add.

b   Click on a **Wi-Fi network**, and then click **OK** to return to the previous screen. DCP Connection Manager will automatically populate the required fields, except the **Key** field which requires manual entry.

If the scan result does not show the Wi-Fi network for which you are searching, then manually enter the following required information:

- **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

- **Security Type:** Press the drop-down arrow to select one of the following basic Security Types from the list: Open, WEP, WEP-PSK, WPA-Personal, WPA2-Personal, or CKIP.

- **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: WEP, TKIP, AES, or CKIP.

- **Key:** Enter the assigned security key for this Wi-Fi network (sometimes referred to as an encryption key or pass phrase).

NOTE: Provide 5 or 13 characters if entering the key in ASCII, and 10 or 26 characters if entering the key as a hexidecimal value.

The **Display Characters** check box pertains to showing or hiding the Key.

5   Click **Next** to continue the Profile Wizard settings process, or click **Finish** to reach the Profile Wizard Summary page.

NOTE: Click Advanced to set additional Wi-Fi options. See "Creating an Advanced Wi-Fi Connection" for more information.

Figure 1-18.   Profile Wizard Wi-Fi Screen

Creating an Advanced Wi-Fi Connection

Advanced Wi-Fi connectivity is designed for enterprise organizations seeking the highest levels of wireless network security. Additional network infrastructure such as AAA or RADIUS servers are required.

> **NOTE:** Contact your organization's system administrator for details on configuring an advanced Wi-Fi connection. Consult the "Wi-Fi Security Overview" section for more information on advanced Wi-Fi connectivity.

DCP Connection Manager supports the following Wi-Fi security type combinations:

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with TLS EAP and no Inner Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with LEAP EAP and no Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with PEAP EAP and MS-CHAPv2 or GTC Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with PEAP EAP and TLS Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with EAP-FAST EAP and GTC or MS-CHAPv2 Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with EAP-FAST EAP and no Inner EAP Authentication (CCX v3 mode)

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with TTLS EAP and PAP, CHAP, MS-CHAP, or MS-CHAPv2 Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with TTLS EAP and TLS Inner EAP Authentication

- 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with EAP-FAST EAP and TLS Inner EAP Authentication

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with TLS EAP and No Inner Authentication

1. Open **DCP Connection Manager**→**Profiles**→**Add**. Check the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2. In the **Connection Name** field, type a name to associate with this network connection.

3. Click the **View** button to scan from a list of broadcasting networks for a Wi-Fi network to add. Click on a **Wi-Fi network**, and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

    If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

    – **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

    – **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

    – **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4. If the Advanced Wi-Fi screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

    – Enable the **Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

NOTE: The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista® operating system, this setting will be disabled (grayed-out).

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

– Select **Use VPN Connection** to automatically start the VPN configured for this network connection.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5   Select **EAP-TLS** from the **Authentication** drop-down list.

6   Click **Settings** to continue to the next screen (see Figure 1-21).

7   From the **Connection** tab do the following:

   a   Check the **Validate server certificate** box.

   b   Select the certificate authority associated with the security certificate installed on the Dell laptop or the SmartCard you will be using.

8   Click the **User Credentials** tab to continue (see Figure 1-22).

9   If using a Certificate, click the **Use the following Certificate** radio button and select a certificate from the list.

10   Click **OK** to return to the **Advanced Wi-Fi** screen.

11   Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard settings** screen.

12   Click **Next** to continue the **Profile Wizard**, or click **Finish** to reach the **Profile Wizard Summary** screen.

Figure 1-19. Profile Wizard Settings for Wi-Fi Screen
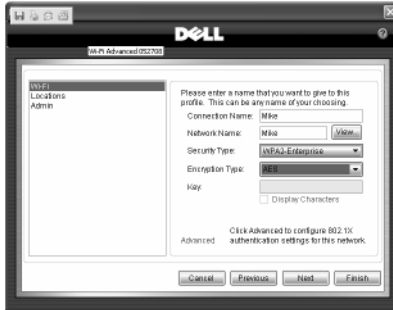
Figure 1-20. Advanced Wi-Fi Window

Figure 1-21.   Advanced Connection Window
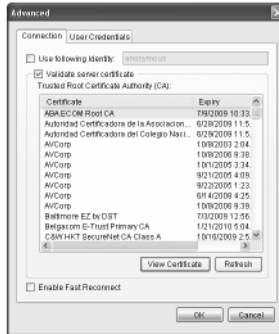
Figure 1-22.   Advanced User Credentials Window

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with TTLS EAP and TLS Inner EAP Authentication

1   Click **DCP Connection Manager**→**Connections**→**Profiles**→**Add**→**Wi-Fi**. The Profile Wizard Settings screen for Wi-Fi appears (see Figure 1-19).

2   In the **Connection Name** field, type a name to associate with this network connection.

3 Click the **View** button to scan from a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

– **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the **Advanced Wi-Fi** screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

– Enable the **Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

📝 **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured for this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5 Select **EAP-TTLS-TLS** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-21).

7 From the **Connection** tab, check the **Use anonymous outer identity** box to prevent clear text username and password transmission.

8   Check the **Validate server certificate** box. Select the certificate authority associated with the security certificate installed on the Dell laptop or the SmartCard you will be using.

9   Click the **User Credentials** tab to continue (see Figure 1-22).

10 If using a certificate, click the **Use the following Certificate** radio button and select the certificate installed on your laptop from this list.

11 Click **OK** to return to the **Advanced Wi-Fi** screen.

12 Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

13 Click **Next** to continue the Profile Wizard, or click **Finish** to reach the **Profile Wizard Summary** screen.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client With TTLS EAP and PAP, CHAP, MSCHAP, or MSCHAPv2 Inner EAP Authentication

1   Open **DCP Connection Manager→Profiles→Add**. Check the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2   In the **Connection Name** field, type a name to associate with this network connection.

3   Click the **View** button to scan from a list of broadcasting networks for a Wi-Fi network to add. Click on a **Wi-Fi network** and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

–   **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

–   **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

–   **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the **Advanced Wi-Fi** screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

   – Enable the **Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

   📝 **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

   – **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

   – Select **Use VPN Connection** to automatically start the VPN configured for this network connection.

   – Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the Mandatory AP expires.

5 Select **EAP-TTLS-TLS** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-21).

7 From the **Connection** tab, check the **Use anonymous outer identity** box to prevent clear text username and password transmission.

8 Check the **Validate server certificate** box. Select the certificate authority associated with the security certificate installed on the Dell laptop or the SmartCard you will be using.

9 Click the **User Credentials** tab to continue (see Figure 1-22).

10 If using a certificate, click the **Use the following Certificate** radio button and select the certificate installed on your laptop from this list.

11 Click **OK** to return to the **Advanced Wi-Fi** screen.

12 Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

13 Click **Next** to continue the Profile Wizard, or click **Finish** to reach the **Profile Wizard Summary** page.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with PEAP EAP and TLS EAP Inner Authentication

1 Open **DCP Connection Manager**→**Profiles**→**Add**. Select the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2 In the **Connection Name** field, type a name to associate with this network connection.

3 Click the **View** button to scan a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

– **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the **Advanced Wi-Fi** screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network nonnection and set additional Wi-Fi options.

– Select the **Enable Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

✎ **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

–   Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5   Select **PEAP-TLS** from the **Authentication** drop-down list.

6   Click **Settings** to continue to the next screen (see Figure 1-21).

7   From the **Connection** tab, do the following:

   a   Check the **Validate server certificate** box.

   b   Select the certificate authority associated with the security certificate installed on the Dell laptop or the SmartCard you will be using.

8   Click the **User Credentials** tab to continue (see Figure 1-22).

9   If using a certificate, click the **Use the following Certificate** radio button and select a certificate from the list.

10   Click **OK** to return to the **Advanced Wi-Fi** screen.

11   Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard settings** screen.

12   Click **Next** to continue the Profile Wizard, or click **Finish** to reach the **Profile Wizard Summary** page.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with PEAP EAP and MS-CHAPv2 or GTC Inner EAP Authentication

1   Open **DCP Connection Manager**→**Profiles**→**Add**. Check the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2   In the **Connection Name** field, type a name to associate with this network connection.

3   Click the **View** button to scan from a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

–   **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP. 4.

4 If the Advanced Wi-Fi screen does not open automatically, click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options (see Figure 1-20).

– Select the **Enable Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

✐ **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5 Select **PEAP-MSCHAPv2** or **PEAP-GTC** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-21).

7 From the **Connection** tab, check the **Use anonymous identity** box to prevent clear text transmission of username and password information.

8 Check the **Validate server certificate** box. Then, select the certificate authority associated with the security certificate installed on the Dell laptop or the SmartCard you will be using.

9 Click on the **User Credentials** tab to continue (see Figure 1-23).

10 Select one of the available **User Credential** options.

11 Click **OK** to return to the **Advanced Wi-Fi** screen.

12 Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard settings** screen.

13 Click **Next** to continue the Profile Wizard, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-23.   Advanced User Credentials Window

Figure 1-24.   Advanced Connection Window

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with EAP-FAST EAP and GTC or MS-CHAPv2 Inner EAP Authentication

1 Open **DCP Connection Manager→Profiles→Add**. Check the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2 In the **Connection Name** field, type a name to associate with this network connection.

3 Click the **View** button to scan a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

– **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the Advanced Wi-Fi screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

– Enable **Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

✎ **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5 Select **EAP-FAST MSCHAPv2** or **EAP-FAST GTC** from the Authentication drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-24).

7   From the **Connection** tab, check the **Use anonymous outer identity** box to prevent clear text transmission of username and password information.

8   If using Automatic PAC Provisioning, check the **Validate server certificate** box. Then, select the certificate authority associated with the security certificate installed on your laptop.

Alternatively, you can check the **Available Manual PAC** radio button and click the **Add** button to manually install a PAC file.

9   Click **Enable Fast Reconnect** to allow limited re-authentication when roaming between Wi-Fi access points.

    📝 **NOTE:** This setting is available only with Cisco Wi-Fi access points configured with Cisco's Wireless Domain Services (WDS).

10   Click the **User Credentials** tab to continue (see Figure 1-22).

11   Select one of the available **User Credential** options.

12   Click **OK** to return to the **Advanced Wi-Fi** screen.

13   Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

14   Click **Next** to continue the **Profile Wizard**, or click **Finish** to reach the **Profile Wizard Summary** page.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client with EAP-FAST EAP and No Inner EAP Authentication

1   Open **DCP Connection Manager**→**Profiles**→**Add**. Check the **Wi-Fi** check box, and then click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2   In the **Connection Name** field, type a name to associate with this network connection.

3   Click the **View** button to scan a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

–   **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.
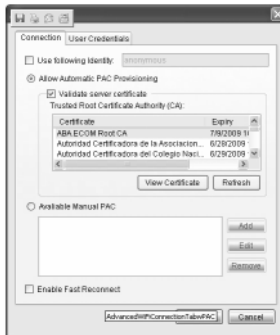
– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the **Advanced Wi-Fi screen** does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

– Select the **Enable Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

NOTE: The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the Program Settings screen.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5 Select **EAP-FAST** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-24).

7 From the **Connection** tab, do the following:

– If using Automatic PAC Provisioning, check the **Validate server certificate box**. Then, select the certificate authority associated with the security certificate your laptop will access.

– If not using Automatic PAC Provisioning, check the **Available Manual PAC** radio button and click the **Add** button to manually install a PAC file.

– Check **Enable Fast Reconnect** box to allow limited re-authentication when roaming between Wi-Fi access points.

NOTE: This setting is available only with Cisco Wi-Fi access points configured with Cisco Wireless Domain Services (WDS).

8 Click the **User Credentials** tab to continue (see Figure 1-23).

9 Select one of the available **User Credential** options.

10 Click **OK** to return to the advanced Wi-Fi screen.

11 Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

12 Click **Next** to continue the **Profile Wizard**, or click **Finish** to reach the **Profile Wizard Summary** page.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client With EAP-FAST EAP and TLS Inner EAP Authentication

1 Open **DCP Connection Manager**→**Connections**→**Profiles**→**Add**→**Wi-Fi**. The **Profile Wizard Settings** screen for Wi-Fi appears.

2 In the **Connection Name** field, type a name to associate with this network connection.

3 Click the **View** button to scan a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

– **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4 If the **Advanced Wi-Fi screen** does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

– Select the **Enable Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

> ![NOTE icon] **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

– Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP.

5 Select **EAP-FAST-TLS** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the next screen (see Figure 1-24).

7 From the **Connection** tab, check the **Use anonymous outer identity** box to prevent clear text username and password transmission.

8 If using Automatic PAC Provisioning, check the **Validate server certificate** box. Select the certificate authority associated with the security certificate your PC will access.

If you are *not* using Automatic PAC Provisioning, check the **Available Manual PAC** radio button and click the **Add** button to manually install a PAC file.

9 Check the **Enable Fast Reconnect** box to allow limited re-authentication when roaming between Wi-Fi access points.

> ![NOTE icon] **NOTE:** This setting is available only with Cisco Wi-Fi access points configured with Cisco Wireless Domain Services (WDS).

10 Click the **User Credentials** tab to continue (see Figure 1-22).

11 If using a certificate, click the **Use the following Certificate** radio button and select the certificate installed on your laptop from this list.

12 Click **OK** to return to the **Advanced Wi-Fi** screen.

13 Click **OK** to finish configuring advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

14 Click **Next** to continue the **Profile Wizard**, or click **Finish** to reach the **Profile Wizard Summary** page.

Configure 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM Client With EAP LEAP and No Inner Authentication

1   Open **DCP Connection Manager**→ **Connections**→**Profiles**→**Add**→**Wi-Fi**. The **Profile Wizard Settings** screen for Wi-Fi appears (see Figure 1-19).

2   In the **Connection Name** field, type a name to associate with this network connection.

3   Click the **View** button to scan a list of broadcasting networks for a Wi-Fi network to add. Click on a Wi-Fi network and then click **OK** to return to the previous screen. DCP Connection Manager automatically populates the required fields.

If the scan result does not show the Wi-Fi network you are searching for, then manually enter the following required information:

– **Network Name:** Type the name of the Access Point (AP), often called an SSID, to which you will be connecting.

– **Security Type:** Press the drop-down arrow to select one of the following Security Types from the list: 802.1x, WPA-Enterprise, WPA2-Enterprise, or CCKM.

– **Encryption Type:** Press the drop-down arrow to select one of the following Encryption Types from the list: TKIP, AES, or CKIP.

4   If the **Advanced Wi-Fi** screen does not open automatically (see Figure 1-20), click **Advanced** to continue configuring an advanced Wi-Fi network connection and set additional Wi-Fi options.

– Select the **Enable Connect Prior to Logon** option if you choose to establish a wireless network connection prior to user logon to Windows.

✎ **NOTE:** The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on the Windows Vista operating system, this setting will be disabled (grayed-out).

– Select **Use VPN Connection** to automatically start the VPN configured with this network connection.

– **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

     –   Select **Specify Mandatory AP** to enforce Wi-Fi network access to a specific AP. Enter a date after which the mandatory AP expires.

5 Select **EAP-LEAP** from the **Authentication** drop-down list.

6 Click **Settings** to continue to the **User Credentials** tab (see Figure 1-23).

7 Select one of the available **User Credential** options.

8 Click **OK** to return to the **Advanced Wi-Fi** screen

9 Click **OK** to finish configuring Advanced Wi-Fi settings and return to the **Profile Wizard Settings** screen.

10 Click **Next** to continue the **Profile Wizard**, or click **Finish** to reach the **Profile Wizard Summary** page.

View Available Wireless Networks

1 Open **DCP Connection Manager**→**View available Wi-Fi networks**. The **Available Wireless Networks** screen appears (see Figure 1-25).

2 The following functions are available:

    –   Select a network name from the list, and click **Connect** to create a Wi-Fi network connection through the Profile Wizard.

    –   Click **Connection Status** or **OK** to return to the previous screen.

    –   Click **View Site Survey** to view lower-level details of the available Wi-Fi network connections.

Figure 1-25.   Available Wireless Networks Screen
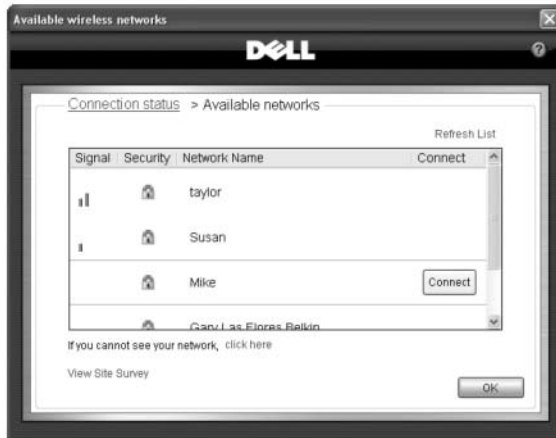
Wi-Fi Security Overview

The following security types—including authentication methods and encryption methods—are available:

Basic

- **Open**—No security
- **WEP (Open System Authentication)**—WEP Open System Authentication does not have an authentication function. It only identifies a wireless node using its wireless adapter hardware address.
- **WEP (Shared)**—WEP Shared Key Authentication verifies that the wireless client joining the wireless network has been configured with a secret key. With an infrastructure network, all of the wireless clients and the wireless AP (access points) use the same shared key. With an ad hoc network, all of the wireless clients of the ad hoc wireless network use the same shared key.
- **WPA-Personal/WPA2-Personal**—For infrastructure environments without the RADIUS infrastructure. WPA-Personal (PSK) supports the use of a pre-shared key. WPA-Personal (PSK) is the next generation of wireless network security for home and small office environments. The WPA-Personal (PSK) protocol uses either WPA-PSK or WPA2-PSK protocols based on the WPA-PSK/WPA2-PSK security protocols available on the AP.

- **CKIP**—Cisco CKIP Open System Authentication does not have an authentication function. It only identifies a wireless node using its wireless adapter hardware address.

Advanced

- **802.1X**—802.1X security enforces authentication of a network node before it can begin to exchange data with the network. This mode is for environments with a Remote Access Dial-In User Service (RADIUS) infrastructure. This environment requires advanced technical support to set up and maintain, and is intended for use by larger organizations.

- **WPA-Enterprise/WPA2-Enterprise**—The network is operating in 802.1X authentication mode. This mode is for environments with a Remote Access Dial-In User Service (RADIUS) infrastructure. This environment requires advanced technical support to set up and maintain and is intended for use by larger organizations. The WPA-Enterprise protocol uses either WPA or WPA2 protocols based on the WPA/WPA2 security protocols available on the AP.

- **CCKM**—An authentication method in which a Cisco-branded access point is configured to provide Cisco Wireless Domain Services (WDS) to take the place of the RADIUS server and to authenticate the client very quickly so that there is no perceptible delay in voice or other time-sensitive applications.

WEP - Open System Authentication

WEP - Open System Authentication does not have an authentication function. It only identifies a wireless node using its wireless adapter hardware address.

- The Data Encryption Method is *Wired Equivalent Privacy* or *WEP*.

- The Authentication Method is *Open*.

- Open System Authentication may use a network key for authentication.

WEP (Shared key) Authentication

WEP Shared Key authentication verifies that the wireless client joining the wireless network has been configured with a secret key. With an infrastructure network, all the wireless clients and the wireless APs use the same shared key. With an ad hoc network, all the wireless clients of the ad hoc wireless network use the same shared key.

- The Data Encryption Method is *Wired Equivalent Privacy* or *WEP*.

- The Authentication Method is *WEP*.
- WEP Shared Key Authentication requires a network key for authentication.

CKIP

CKIP - Open System Authentication does not have an authentication function. It only identifies a wireless node using its wireless adapter hardware address.

- The Data Encryption Method is *CKIP*.
- The Authentication Method is *CKIP*.
- A network key for authentication is required.

WPA/WPA2 - Personal Authentication

For infrastructure environments without the RADIUS infrastructure, WPA-Personal (PSK) supports the use of a pre-shared key. WPA-Personal (PSK) is the next generation of wireless network security for home and small office environments. WPA-Personal (PSK) authentication uses either WPA-PSK or WPA2-PSK security protocols based on the WPA-PSK/WPA2-PSK security protocols available on the AP.

- The Data Encryption Method is *Auto (TKIP or AES)*.
- The Authentication Method is *WPA-Personal (PSK)*.
- WPA-Personal Authentication requires a network key for authentication.

802.1X Authentication

802.1X security enforces authentication of a network node before it can begin to exchange data with the network. This mode is for environments with a Remote Access Dial-In User Service (RADIUS) infrastructure.

This environment requires advanced technical support to set up and maintain and is intended for use by larger enterprises.

- The Data Encryption Method is WEP or CKIP.
- The Authentication Method may be one of the following Extensible Authentication Protocol (EAP)* methods:
    - **TLS**—TLS EAP authentication with no inner authentication. Requires a client certificate.

– **TTLS/PAP**—TTLS EAP authentication with PAP inner authentication. Requires a username and password.

– **TTLS/CHAP**—TTLS EAP authentication with CHAP inner authentication. Requires a username and password.

– **TTLS/MSCHAP**—TTLS EAP authentication with MS-CHAP inner authentication. Requires a username and password.

– **TTLS/MSCHAPv2**—TTLS EAP authentication with MS-CHAPv2 inner authentication. Requires a username and password.

– **LEAP EAP**—LEAP EAP authentication with no inner authentication; requires a username and password.

– **PEAP/MSCHAPv2**—PEAP EAP authentication with MS-CHAPv2 inner authentication. Requires a username and password.

– **PEAP/TLS**—PEAP EAP authentication with TLS inner authentication. Requires a client certificate.

– **PEAP/GTC**—PEAP EAP authentication with GTC inner authentication. Requires a username and password or token.

– **EAP-FAST/NONE**—EAP-FAST EAP authentication with no inner authentication. Requires a username and password.

NOTE: Use to connect to a Cisco Compatible Extensions v3 network. If you are connecting to a Cisco Compatible Extensions v4 network, you must use one of the EAP-FAST inner EAP methods, such as MSCHAPv2, TLS, or GTC.

– **EAP-FAST/MSCHAPv2**—EAP-FAST EAP authentication with MS-CHAPv2 inner authentication; requires a user name and password. This method has an option for using Cisco Compatible Extensions v4 authenticated provisioning called PAC (Protected Access Credential). If the option for using authenticated provisioning is selected, a client certificate must also be supplied when provisioning a PAC.

NOTE: Use to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

– **EAP-FAST/TLS**—EAP-FAST EAP authentication with TLS inner authentication; requires a client certificate. This method has an option for using Cisco Compatible Extensions v4 authenticated provisioning.

– **EAP-FAST/GTC**—EAP-FAST EAP authentication with GTC inner authentication; requires a user name and password or token. Cisco Compatible Extensions v4 authenticated provisioning is used.

NOTE: Use EAP-FAST/GTC to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method. EAP is a universal authentication framework frequently used in wireless networks.

WPA/WPA2 - Enterprise Authentication

The network is operating in 802.1X authentication mode. This mode is for environments with a Remote Access Dial-In User Service (RADIUS) infrastructure. This environment requires advanced technical support to set up and maintain and is intended for use by large organizations.

WPA-Enterprise security uses either WPA or WPA2 security protocols based on the WPA/WPA2 security protocols available on the AP.

• The encryption method may be *TKIP (WPA)* or *AES (WPA2)*.

• The authentication method may be one of the following EAP (Extensible Authentication Protocol) methods:

– **TLS**—TLS EAP authentication with no inner authentication. Requires a client certificate.

– **TTLS/PAP**—TTLS EAP authentication with PAP inner authentication. Requires username and password.

– **TTLS/CHAP**—TTLS EAP authentication with CHAP inner authentication. Requires username and password.

– **TTLS/MSCHAP**—TTLS EAP authentication with MS-CHAP inner authentication. Requires username and password.

– **TTLS/MSCHAPv2**—TTLS EAP authentication with MS-CHAPv2 inner authentication. Requires username and password.

– **LEAP**—LEAP EAP authentication with no inner authentication. Requires username and password.

– **PEAP/MSCHAPv2**—PEAP authentication with MS-CHAPv2 inner authentication. Requires username and password.

– **PEAP/TLS**—PEAP EAP authentication with TLS inner authentication. Requires a client certificate.

– **PEAP/GTC**—PEAP EAP authentication with GTC inner authentication. Requires username and password or token to log on.

– **EAP-FAST/NONE**—EAP-FAST EAP authentication with no inner authentication. Requires a username and password to log on.

> **NOTE:** Use this method to connect to a Cisco Compatible Extensions v3 network. If you are connecting to a Cisco Compatible Extensions v4 network, you must use one of the EAP-FAST inner EAP methods, such as MS-CHAPv2, TLS, or GTC.

– **EAP-FAST/MSCHAPv2**—EAP-FAST EAP authentication with MS-CHAPv2 inner authentication; requires a user name and password. This method has an option for using Cisco Compatible Extensions v4 authenticated provisioning called PAC (Protected Access Credential). If the option for using authenticated provisioning is selected, a client certificate must also be supplied when provisioning a PAC.

> **NOTE:** Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

– **EAP-FAST/TLS**—EAP-FAST EAP authentication with TLS inner authentication. Requires a client certificate. This method has an option for using Cisco Compatible Extensions v4 authenticated provisioning.

> **NOTE:** Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

– **EAP-FAST/GTC**—EAP-FAST EAP authentication with GTC inner authentication. Requires a username and password or token. Cisco Compatible Extensions v4 authenticated provisioning is used.

> **NOTE:** Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

CCKM Authentication

An authentication method in which a Cisco-branded access point is configured to provide Wireless Domain Services (WDS) to take the place of the RADIUS server and to authenticate the client very quickly so that there is no perceptible delay in voice or other time-sensitive applications.

- The encryption method may be *WEP*, *CKIP*, *TKIP* or *AES*.

- The authentication method may be one of the following:

  - **TLS**—TLS EAP authentication with no inner authentication.

  - **LEAP**—LEAP EAP authentication with no inner authentication. Requires username and password.

  - **EAP-FAST/NONE**—EAP-FAST EAP authentication with no inner authentication. Requires a username and password to log on.

  NOTE: Use this method to connect to a Cisco Compatible Extensions v3 network. If you are connecting to a Cisco Compatible Extensions v4 network, you must use one of the EAP-FAST inner EAP methods, such as MS-CHAPv2, TLS, or GTC.

  - **EAP-FAST/MSCHAPv2**—EAP-FAST EAP authentication with MS-CHAPv2 inner authentication. Requires username and password. Has option for using Cisco Compatible Extensions v4 authenticated provisioning. If the option for using authenticated provisioning is selected, a client certificate must also be supplied when provisioning a PAC.

  NOTE: Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

  - **EAP-FAST/TLS**—EAP-FAST EAP authentication with TLS inner authentication. Requires a client certificate. Has option for using Cisco Compatible Extensions v4 authenticated provisioning.

  NOTE: Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

  - **EAP-FAST/GTC**—EAP-FAST EAP authentication with GTC inner authentication. Requires a client certificate. Cisco Compatible Extensions v4 authenticated provisioning is used. Requires a username and password or token to log on.

> **NOTE:** Use this method to connect to a Cisco Compatible Extensions v4 network. If you are connecting to a Cisco Compatible Extensions v3 network, you must use the EAP-FAST/NONE method.

– **PEAP/MSCHAPv2**—PEAP EAP authentication with MS-CHAPv2 inner authentication. Requires username and password.

– **PEAP/GTC**—PEAP EAP authentication with GTC inner authentication. Requires username and password or token to log on.

Wi-Fi Encryption Methods

The following Wi-Fi encryption methods are supported:

– **WEP**—*Wired Equivalent Privacy* encryption prevents unauthorized reception of wireless data. WEP provides two levels of security, using a 64-bit or a 128-bit key. For stronger security, use a 128-bit key. If you use encryption, all wireless devices on your wireless network must use the same encryption keys. WEP uses an encryption key to encrypt data before transmitting it. Only portable systems using the same encryption key can access the network or decrypt the encrypted data transmitted by other portables. Authentication provides an additional validation process from the wireless network adapter to the wireless access point.

– **TKIP**—*Temporal Key Integrity* protocol is an enhancement to the WEP security. TKIP provides per-packet key mixing, a message integrity check, and a re-keying mechanism, which fixes the flaws of WEP.

– **AES**—*Advanced Encryption Standard* protocol provides a stronger encryption method than TKIP. Choose AES as the data encryption method whenever strong data protection is important.

– **CKIP**—*Cisco Key Integrity Protocol* is a Cisco proprietary security protocol for encrypting 802.11 wireless and wired networks. CKIP improves security in wireless infrastructure mode using key permutation, message integrity check, an message sequence number. Cisco networking infrastructure is required.

Mobile Broadband Connections

Mobile Broadband, sometimes referred to as WWAN (Wireless Wide Area Network), is a method of wireless data access to the Internet using a mobile operator's cellular network.

Setting up mobile broadband access requires an activated account with a mobile operator. By default, DCP Connection Manager configures your mobile broadband settings with the default settings on your Dell laptop. From DCP Connection Manager, mobile broadband settings can be added, removed, or edited.

NOTE: To establish a mobile broadband account, click the **Activate** button found on the **Connection Status** screen when you select **Mobile Broadband** from the **Connection** drop-down menu. This button will be labeled Activate only if mobile broadband service is not yet activated with the mobile operator.

To configure global Mobile Broadband settings—a superset of Mobile Broadband settings that may apply to all mobile broadband network connections—click the **Mobile Broadband** link on the **Global Settings** screen.

Creating a Basic Mobile Broadband Connection

1 Open **DCP Connection Manager→Profiles→Add**, select the **Mobile Broadband** check box, and then click **Next**. The **Profile Wizard Settings** screen for mobile broadband appears.

Most if not all of the following configuration information will be populated in this screen if your mobile broadband service is already activated. From this screen, default settings can be edited and mobile broadband connections can be associated with Location Profiles.

2 Enter a unique **Connection Name,** and select an existing **Mobile Broadband Network Connection** from the **Copy Profile From** drop-down list box. Then, click **Copy** to populate most or all of the fields with the network connection details.

Alternatively, you can enter a unique **Connection Name** and create a new mobile broadband network connection by manually entering details in the appropriate fields.

NOTE: To manually edit or add username/password and APN information, Dell recommends that you consult your enterprise systems administrator or your mobile broadband operator for further instructions.

3 Click **Next** to continue the Profile Wizard settings process, or click **Finish** to view the **Profile Wizard Summary** page.

Alternatively, you can click **Advanced** to configure advanced mobile broadband settings.

Figure 1-26.   Mobile Broadband Screen

Advanced Mobile Broadband Settings

1 From the **Profile Wizard - Mobile Broadband Settings** screen, click
   Advanced, and select one of the following advanced mobile broadband
   options:

   – Select **Enable Connect Prior to Logon** if you want to establish a
      mobile broadband connection prior to user logon to Windows.

   📝 **NOTE:** Connect Prior to Logon feature is available in this software release
      only on the Windows XP operating system. If you are running DCP Connection
      Manager on Windows Vista operating system, this setting will be disabled.

   – Select **Use VPN Connection** to automatically start the VPN configured
      with this network connection.

   – Select **Exclude from VPN enforcement** if you want to switch the
      Enforce VPN function off for this Location Profile. The **Enforce VPN**
      setting is located on the **Program Settings** screen.

2 Click **OK**.

3 Click **Next** to continue the Profile Wizard Settings process, or click **Finish**
   and the **Profile Wizard Summary** page appears.

Figure 1-27. **Advanced Mobile Broadband Window**

Activating Your Mobile Broadband Service

1 Open **DCP Connection Manager**→**Connection Status**→**Mobile Broadband**→**Activate**. A mobile-operator-branded or Dell-branded broadband activation screen associated with the mobile broadband device installed on your Dell laptop is launched.

2 Click **Continue** to begin the activation process. The activation process differs depending on your mobile operator. Please refer your mobile operator's help documentation (if provided) for activation support.

Alternatively, you can call the mobile operator directly to manually activate the Mobile Broadband service.

– Click **Help** for information regarding the activation process.

– Click **Close** to cancel the online activation process.

> **NOTE:** To re-activate or retrieve communication updates on demand for your Dell mobile broadband card, go to the **Global Program and Network Settings - Mobile Broadband** screen.

Figure 1-28.   Mobile Broadband Activation Screen

SMS Text Messaging

The **SMS Text Messaging** screen allows you to create and send new messages, view received messages, and store contact information.

NOTE: An active mobile broadband network connection is required for SMS text messaging to work.

1   Open **DCP Connection Manager**→**Connection Status**→**SMS Text Messaging**. The **SMS Text Messaging** screen displays.

2   To create a new SMS text message:

   a   Click the **compose** icon to create a new message.

   b   Enter a recipient name in the addressee field, or click **To** to open the address book and select a contact.

   c   Compose a message in the field below the **Addressee** field and click **Send**. A pop-up message appears if the SMS message was sent successfully.

Additional functionality includes:

• Click **Check New Messages** to view recent messages.

• Click **View** to switch between Inbox, Outbox, and Sent Box views.

• Select a message and click **Forward** to forward a message to another recipient.

- Select a message and click **Delete** to delete the message.
- Click **Delete All** to delete all messages in your Inbox.
- Add and delete contacts by clicking on the **Address Book** link, which opens the default contacts directory on your Dell laptop. DCP Connection Manager supports contact directories of the following applications:
  – Windows XP supports Microsoft Outlook® and Outlook Express
  – Windows Vista supports Outlook and Windows Contacts

To disable the SMS text messaging application in DCP Connection Manager, go to Program Settings.

NOTE: This setting is configurable only by users with Windows Local Administrator user privileges or better.

Figure 1-29. SMS Text Messaging Screen
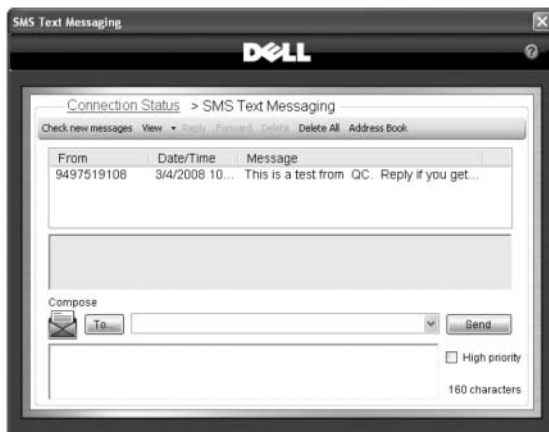
Ethernet Settings

Ethernet is network connectivity that is wired as opposed to wireless. Ethernet network connectivity examples include Windows local area networks (LAN), cable modems, and DSL. By default, DCP Connection Manager configures your Ethernet settings with the default settings on your Dell laptop. From this screen Ethernet settings can be edited.

1 From the **Profile Wizard Settings** screen, select **Ethernet**. DCP Connection Manager automatically populates the Ethernet settings according to current settings on your Dell laptop.

2 To change the Ethernet settings for this Location Profile, select the **Static address** radio button and enter the required IP and DNS information.

> ✎ **NOTE:** Enable 802.1x credentials starts the Windows Zero Configuration (WZC) service in Windows XP. WZC service is started by default in Windows Vista.

3 Click **Next** to continue the Profile Wizard Settings process, or click the **Finish** button to view the Profile Wizard Summary page.

Figure 1-30.   Profile Wizard Ethernet Screen
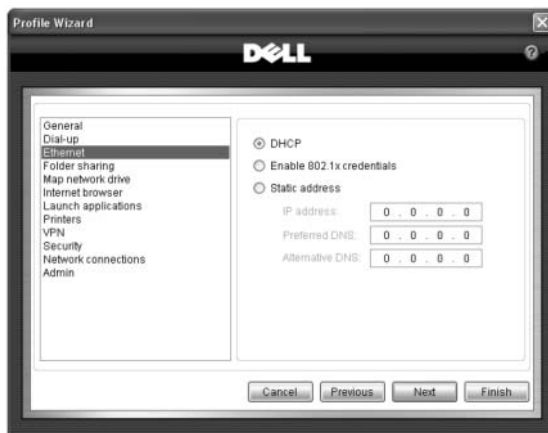
Dial-Up Connections

Dial-up is a type of Internet access that uses a telephone line. By default, Connection Manager configures your Dial-up settings with the default settings on your Dell laptop. From DCP Connection Manager, dial-up settings can be added, removed, or edited.

1 Open **DCP Connection Manager**→**Profiles**→**Add**, select the **Dial-up** check box, and then click **Next**. The **Profile Wizard Settings** screen for dial-up appears.

2 Enter a connection name of your choice.

3 Enter a dial-up phone number associated with this account.

4 Enter a username and password for this account.

5 Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Alternatively, you can click **Advanced** to continue configuring an advanced dial-up network connection and set additional dial-up options.

Figure 1-31. **Profile Wizard Dial-Up Screen**

Advanced Dial-up Settings

From the **Profile Wizard - Dial-up Settings** screen, click **Advanced**. The following advanced dial-up settings are available:

• Enable the **Connect Prior to Logon** option if you choose to establish a dial-up network connection prior to user logon to Windows.

> **NOTE:** Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on Windows Vista operating system, this setting will be disabled.

• Use **VPN Connection** to automatically start the VPN configured with this network connection.

• **Exclude from VPN enforcement** switches the Enforce VPN function off for this Location Profile. The **Enforce VPN** setting is located on the **Program Settings** screen.

- **Enable Call Waiting Support**. By default, call waiting is disabled when a dial-up network connection is made.

Figure 1-32.   Advanced Dial-Up Settings Screen

Folder Sharing Settings

You can associate shared folders with a Location Profile. By default, the Location Profile Wizard configures your Shared Folder settings with the default settings on your Dell laptop. From this screen, shared folder settings can be added, removed, or edited.

NOTE: The Folder Sharing setup option is available only when associated with a Location Profile (not Network Connections).

1 From the **Profile Wizard Settings** screen, select **Folder Sharing**. To add or change these settings for a particular Location Profile, you can do the following:

– Browse for and select a folder(s) to share when using this Location Profile or Network Connection.

– Click **Next** to continue the **Profile Wizard Settings** process.

– Click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-33. Profile Wizard Folder Sharing Screen
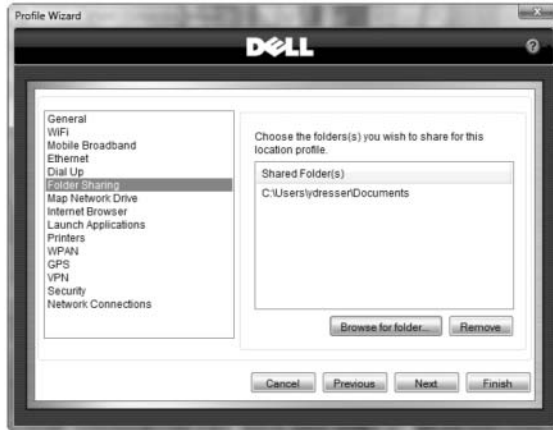
Mapping Network Drive Settings

You can associate a Network Drive and its network folders with defined Location Profiles to be accessible in Windows Explorer when a Location Profile is started. By default, the Location Profile Wizard configures your mapped network drive settings with the default settings on your Dell laptop. From this screen, mapped network drive settings can be added, removed, or edited.

> NOTE: The **Map Network Drive** set-up option is available only when associated with a Location Profile (not Network Connections).

From the **Profile Wizard Settings** screen, select **Map Network Drive**. DCP Connection Manager automatically populates the Map Network Drive settings according to existing settings on your Dell laptop.

1 To add or change these settings for a particular Location Profile, you can do any of the following:

– Select the network drive to map and enter the path name of the network folder.

– Click **Browse** to select a drive and network folder.

– Click **Add** to map the folder to the drive.

– Select a a network path from the list, and click **Remove** to delete the mapping.

2 Click **Next** to continue the Profile Wizard Settings process, or click the **Finish** button to reach the **Profile Wizard Summary** page.

Figure 1-34. **Profile Wizard Map Network Drive Screen**

Internet Browser Settings

Internet browser settings may be specified for a Location Profile. By default, the Location Profile Wizard configures your Internet Browser with the default settings on your Dell laptop. From this screen, default settings can be edited. The supported Internet Browsers are Internet Explorer® and Firefox.

NOTE: The Internet browser set-up option is available only when associated with a Location Profile (not Network Connections).

1 From **Profile Wizard Settings** screen, select **Internet Browser**.

2 To change these settings for a particular Location Profile, do one of the following:

- Enter an Internet address in the **Home Page** field to specify a default website when you launch your Internet browser.

- Check **Use Proxy for LAN settings** to optionally configure your Internet browser to use a proxy server to connect to the Internet when on a corporate LAN. In the **Name** field, enter the address of the proxy server to use for Internet access. In the **Port** field, enter the port number that is used by the proxy server (for example, 8080 for a corporate proxy server).

Alternatively, you can select **Bypass proxy for local addresses** if you do not want to use a proxy server for specific addresses on your corporate LAN.

> ✎ **NOTE:** A proxy server acts as a security barrier between your internal network and the Internet, keeping others on the Internet from being able to obtain access to information that is located on your internal network.

3 Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Launch Applications Settings

You can associate applications with defined Location Profiles to automatically start or stop when a defined Location Profile is started.

> ✎ **NOTE:** Launch Applications set-up option is available only when associated with a Location Profile (not Network Connections).

1 From the **Profile Wizard Settings** screen, select **Launch Applications**. To add or change these settings for a particular Location Profile, do one of the following:

- Add applications by clicking **Add**.

- Remove an application by selecting the application from the list box and clicking **Remove**.

- Choose the appropriate action from the drop-down list associated with the application: **Applied** (start) or **Disconnect** (stop).

2 Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-35.   Profile Wizard Launch Applications Screen

Printer Settings

You can associate a printer with a defined Location Profile to be the default printer when a specific Location Profile is started. The Location Profile Wizard configures the default printer settings on your Dell laptop. From this screen, default printer settings can be added, removed, or edited.

NOTE: The printer set-up option is available only when associated with a Location Profile (not Network Connections).

1   From the **Profile Wizard Settings** screen, select **Printers**.

2   To change the settings for a particular Location Profile:

   a   Check the **Enable default printer for this location profile** check box.

   b   Select a printer from the list box to be the default printer for this Location Profile from a list of printers currently accessible from your laptop.

   c   Select **Enable default printer** for this location profile.

3   Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

4   Click **Add** to launch the **Windows Add a Printer Wizard**.

Figure 1-36.   Profile Wizard Printers Screen

WPAN Settings

You may enable or disable Bluetooth and UWB (Ultra Wide Band) radios according to a Location Profile. By default, the Location Profile Wizard configures your WPAN (Wireless Personal Area Network) settings with the default settings on your Dell laptop.

✐ **NOTE:** WPAN set-up option is available only when associated with a Location Profile (not Network Connections).

1   From the **Profile Wizard Settings** screen, select **WPAN**.

   ✐ **NOTE:** These settings are visible only if these technologies are installed on your system.

2   To change these settings for a particular Location Profile:

   a   Click the various radio buttons to make your selections.

   b   Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-37. Profile Wizard WPAN Settings Screen

GPS Settings

You may enable or disable GPS according to a Location Profile. By default, the Location Profile Wizard configures your GPS setting with the default setting on your Dell laptop. The GPS option is available only when associated with a Location Profile (not Network Connections).

NOTE: GPS is dependent on service availability from your mobile operator.

1   From the **Profile Wizard Settings** screen, select **GPS**.

   NOTE: This setting is visible only if the technology is installed on your system.

2   Click a radio button to change the setting.

3   Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-38. Profile Wizard GPS Settings Screen

VPN Settings

You can associate VPN connections with specific Location Profiles that can be manually or automatically started when you connect to a defined network connection within a Location Profile. The Profile Wizard automatically discovers popular VPN clients if they are installed on your Dell laptop. From this screen, VPN clients and VPN profiles can be added or edited.

NOTE: To create a default VPN connection that does not require association with Location Profiles, go to **Program Settings**.

1. From the **Profile Wizard Settings** screen, select **VPN**. The Profile Wizard discovers any supported VPN clients installed on your Dell laptop, and presents them to you in the **VPN Client** drop-down list.

2. Click the **VPN Client** drop-down list box to select your VPN client. The **Profile** drop-down list box displays.

   The following VPN clients are supported:

   • Check Point

   • Cisco Systems

   • Microsoft

   • Nortel Networks

NOTE: If your VPN client is not listed, you can map to a VPN client application (.exe) installed on your Dell laptop by selecting **Extended** from the VPN Client drop-down list.

3   Click the **Profile** drop-down list box to select the appropriate VPN Profile.

Alternatively, you can click the **Add** button to create a new VPN Profile. Complete the required fields, and click **OK** to return to the Profile Wizard Settings screen.

NOTE: Consult the IT administrator that supports your VPN service for details on configuring a new VPN profile.

Figure 1-39. Profile Wizard VPN Screen

Figure 1-40. Create VPN Profile Screen

4 Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

To automatically start this VPN profile for any of the network connections associated with a Location Profile, go to the respective **Wi-Fi**, **Mobile Broadband**, or **Dial-up Advanced Network** screens and check the **Use VPN Option** check boxes.

Extended VPN Support

1 Select **Extended** from the **VPN Client** drop-down list box. The **Other VPN Application** and **Arguments** fields will appear.

2   Click **Browse** to open Windows Explorer and map to the VPN client .exe file.

3   Click **OK** to return to the VPN Settings screen.

4   Enter any instructions provided by the VPN client provider to enable automatic launch of the VPN client in the **Arguments** text box.

    NOTE: Consult your VPN client software documentation for details.

5   Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Security Settings

You can associate certain security settings with a Location Profile. By default, the Location Profile Wizard configures your security settings with the default settings on your Dell laptop. From this screen, default security settings can be added, removed, or edited.

NOTE: Security options are available only when associated with a Location Profile (not Network Connections).

1   From the **Profile Wizard Settings** screen, select **Security**.

2   Edit your choices and click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-41.   Profile Wizard Security Settings Screen

Associate Network Connections with Location Profiles

You can associate network connections with a Location Profile from this screen.

1 From the **Profile Wizard Settings** screen, select **Network Connections**.

2 From the **Show** drop-down list, select the **Network Connection Types** you want to see in the list boxes.

3 From the list of available **Network Connections** in the **Configured Networks box**, select the appropriate network connections to associate with the Location Profile by highlighting the **Network Connection name(s)** and moving them to the **Networks to Search** box.

4 You can remove or disassociate network connections with a Location Profile by highlighting a **Network Connection name** in the **Networks to Search** box and moving it to the **Configured Networks** box.

5 Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

You can remove or disassociate network connections with a Location Profile by highlighting **Network Connection name(s)** from the **Networks to Search** box and moving it to the **Configured Networks** box. Click **Next** to continue the Profile Wizard Settings process, or click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-42.   Profile Wizard Network Connections Screen
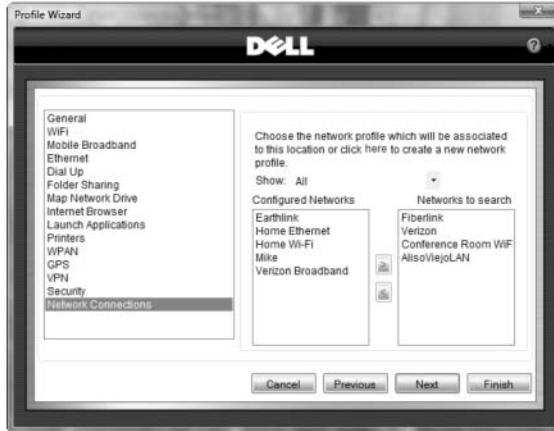
Global Program and Network Settings

This screen is an interface to a superset of Network Connection and DCP Connection Manager application settings, which are superseded only by Location Profile settings.

1   Open **DCP Connection Manager**→**Profiles**→**Change Settings**. The **Network Settings** screen appears.

2   To edit the settings, click one of the associated hyperlinks:

 • Program Settings

 • Hardware Switch

 • Location

 • Mobile Broadband

 • Wi-Fi Catcher™ Network Locator

Program Settings

Program Settings establish global network connection and DCP Connection Manager application parameters that are superseded only by Location Profile parameters. From Program Settings you can also enforce VPN security on any network connections associated with Location Profiles.

To access Program Settings, open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Program Settings**. The **Program Settings** screen appears.

The check boxes and fields on this screen allow you to:

- Set System Tray options
- From **Available technologies**, select the network connection types to be recognized and managed by the DCP Connection Manager.
- Disable the Wi-Fi or Mobile broadband technology whenever an Ethernet (wired) connection is established.
- Configure a default VPN profile that is superseded only by VPN profiles associated with Location Profiles.

To configure a default VPN profile:

1 Click the **VPN Client** drop-down list box to select your VPN client. The **Profile** drop-down list box appears. The following VPN clients are supported:

   - Check Point
   - Cisco Systems
   - Microsoft
   - Nortel Networks

   NOTE: If your VPN client is not listed, you can map to a VPN client application (.exe) installed on your Dell laptop by selecting Extended from the VPN Client drop-down list. See "Extended VPN Support" for more information.

2 Click the **Profile** drop-down list box to select the appropriate VPN Profile.

   Alternatively, you can click **Add** to create a new VPN Profile.

   NOTE: Consult the IT administrator that supports your VPN service for details on configuring a new VPN profile.

3 Complete the required fields and click **OK** to return to the **Profile Wizard Settings** screen (see Figure 1-40).

4 Check **Enforce VPN** to enforce VPN security on all network connections with VPN profiles associated with Location Profiles or with network connections without Location Profile attachment with the **Use VPN Connection option** selected.

> 🖎 **NOTE:** The setting for excluding VPN enforcement for a specific Network Connection is available for Wi-Fi, mobile broadband, and dial-up network connections on each of the respective **Advanced Network** screens.

5 Click **OK** to return to the **Global Program and Network Settings** screen.

Figure 1-43. Profile Settings Screen
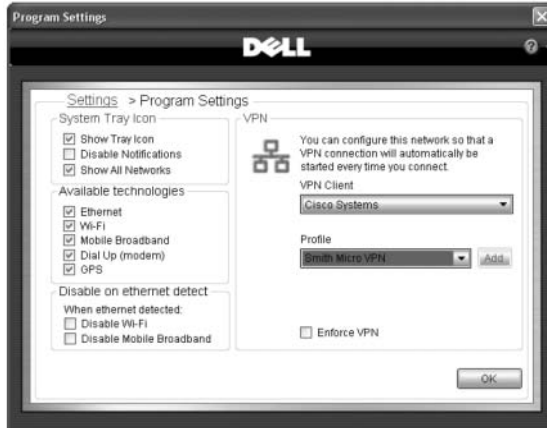
Extended VPN Support:

1 Select **Extended** from the **VPN Client** drop-down list box. The **Other VPN Application** and **Arguments** fields will appear.

2 Click **Browse** to open Windows Explorer™ and map to the VPN client .exe file.

3 Click **OK** to return to the **Program Settings** screen. Enter any instructions provided by the VPN client provider to enable automatic launch of the VPN client in the **Arguments** text box.

> 🖎 **NOTE:** Consult your VPN client software documentation for details.

4 Click **Next**.

5 To automatically launch this VPN service when making network connections, select the **Automatically start VPN on connection** check box.

6 Check **Enforce VPN** to enforce VPN security on all network connections associated with Location Profiles and with the **Use VPN Connection** option selected.

7   Click **OK** to return to the **Global Program and Network Settings** screen.

Mobile Broadband

The **Mobile Broadband** screen provides a superset of parameters used to refine connection, security, and other mobile broadband-related rules.

Lock Code is a security setting for the Subscriber Identity Module (SIM), an integrated circuit installed on your mobile broadband card that contains user and account information. Many GSM-network-based mobile broadband cards are provisioned with a Personal Identification Number (PIN), locking user access to the mobile broadband card and service. When you insert (or connect) a mobile broadband card and/or launch the DCP Connection Manager application, you may be required to enter a PIN provided by your mobile operator.

Mobile operators frequently limit the number of incorrectly entered PIN attempts from three (3) to ten (10). Failure to enter a correct PIN within the number of permitted attempts locks the mobile broadband card. If the mobile broadband card locks, you can re-enable the PIN mechanism by entering a Personal Unblocking Key (PUK). Contact your mobile operator to receive the PUK. After entering a correct PUK, you can reset the PIN.

✍ **NOTE:** The Lock Code and Network Selection controls are visible only if your mobile operator is GSM-network-based.

1   Open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Program Settings**→**Mobile Broadband**. The following Mobile Broadband settings are available:

– **Connection Mode** enables you to set roaming and service selection rules for your mobile broadband service.

– **Roaming** allows you to set roaming rules when using your mobile broadband service outside your basic coverage area. From the **Roaming** drop-down box the following options are available:

•   **Home**—No roaming allowed.

•   **Auto**—Roaming is allowed.

•   **Roaming Only**

○ **NOTE:** Consult your mobile broadband service agreement for roaming service availability and applicable charges.

– **Data Network** allows you to set network service selection rules. See Table 1-7 for a list of options based upon the network type (GSM or CDMA) of your mobile operator.

– **Network Selection** allows you to control the selection behavior (Automatic or Manual) when multiple mobile broadband accounts are configured on your Dell laptop.

– **Lock Code**

   • Click **Enable/Disable PIN Lock** to either lock or unlock the SIM installed on your mobile broadband device.

   • Click **Change PIN Code** to change the PIN code associated with the SIM installed on your mobile broadband device.

– **Disable SMS**

– Unchecking **Show Activation Reminder** suppresses the **Activation Reminder** pop-up screen from displaying when DCP Connection Manager starts.

– **Activate** enables on-demand activation or communication updates of your Dell mobile broadband card with the mobile operator.

2 Click **OK** to return to the **Global Program and Network Settings** screen.

Table 1-7.   Network Service Selection Rules

GSM	Average Speed	CDMA	Average Speed
Auto	GPRS & 3G	**Auto**	1x RTT & EVDO
GPRS Only	30 – 90 Kbps	**1xRTT Only**	60 – 80 Kbps
3G Only	300 Kbps – 1 Mbps	**EVDO Only**	300 – 800 Kbps

Figure 1-44.   Mobile Broadband Settings Screen
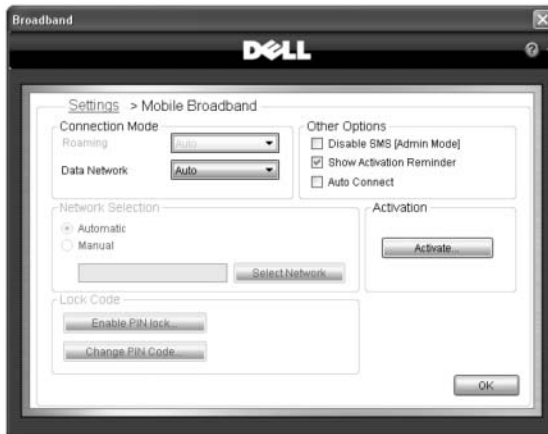
Location Settings

This screen allows you to set Location Profile switching rules when at least one Location Profile is configured on your Dell laptop.

1   Open **DCP Connection Manager→Profiles→Change Settings→Program Settings→Location**. The **Location Settings** screen appears.

- Select **Automatic** if you want to enable DCP Connection Manager to connect to the first available network connection.

- Check **Show Confirmation** if you want to display Location Profile name confirmation messages whenever Location Profiles are applied.

- Check **Location Order** if you choose to enable DCP Connection Manager to apply the existing order of Location Profiles based upon the first network connection available.

- Check **Auto Promote** if you choose to enable DCP Connection Manager to automatically connect to the next available Location Profile if the current network connection is lost.

2   Click **OK** to return to the **Global Program and Network Settings** screen.

Figure 1-45.   Location Settings Screen

Radio Hardware Switch Settings

The **Radio Hardware Switch** is located on the side or front of your laptop. From this screen you can associate Wi-Fi, Bluetooth, mobile broadband, and other wireless radio technologies and other settings, such as the Wi-Fi Catcher Network Locator feature, to be enabled/disabled from the Radio Hardware Switch located on your Dell laptop.

NOTE: The Radio Hardware Switch feature may not be available on certain Dell laptops.

1   Open **DCP Connection Manager→Profiles→Change Settings→Hardware Switch**.

2   Select the appropriate check boxes and click **OK** to return to the **Global Program and Network Settings** screen.

Figure 1-46.   Hardware Information Screen
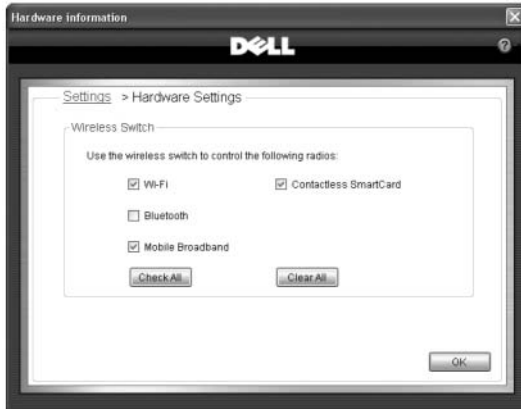
Wi-Fi Catcher Network Locator

> ![NOTE icon] **NOTE:** The Radio Hardware Switch feature may not be available on certain Dell portable systems.

If your Dell laptop has a Radio Hardware Switch, you can use its **Dell Wi-Fi Catcher™ Network Locator** feature to scan for specific Wi-Fi networks in your vicinity. The Dell Wi-Fi Catcher Network Locator feature can scan and notify you of available Wi-Fi networks regardless of whether your laptop is turned on or off, in hibernate mode, or in standby mode.

To scan for Wi-Fi networks, slide the **Radio Hardware Switch** over to the far right and hold the switch in this position for a few seconds. An LED located near the Dell Wi-Fi Catcher Network Locator button indicates the progress and results of the scan for Wi-Fi network connections. The following table defines the LED status:

Table 1-8.   LED Status Indicator

LED Status	Description
Blinking green	Search for Wi-Fi network connection is in progress
Solid green	Found Wi-Fi network connection with a strong signal strength
Solid yellow	Found Wi-Fi network connection with a weak signal strength
LED off	No network connection detected

NOTE: Because the Wi-Fi Catcher Network Locator feature is not configured for use when your laptop is shipped to you, you must first use DCP Connection Manager to configure the switch to control Wi-Fi network connections.

Enabling Wi-Fi Catcher Network Locator

1   Open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Wi-Fi Catcher**. The **Wi-Fi Catcher** settings screen appears.

2   Select the check box to **Enable Wi-Fi Catcher Network Locator**.

3   Select **Search for ANY available network** or **Search for PREFERRED networks** from the radio buttons.

    Alternatively, click **Select Preferred Networks** to associate a discrete list of Wi-Fi networks the Wi-Fi Catcher Network Locator will scan.

4   Click **Advanced Settings** to select additional Wi-Fi network search options for the Wi-Fi Catcher Network Locator.

    Alternatively, click **OK** to return to the **Global Program and Network Settings** screen.

Designate Preferred Networks

1   Open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Wi-Fi Catcher**→**Select Preferred Networks**. The **Preferred Networks** screen displays.

2   Select a **configured Wi-Fi Network Connection** from the list box on the left and click the **arrow** to move that Network Connection to the **Networks to Search** list box on the right.

    If the Wi-Fi network you wish to add is not available in the **Configured Networks** list box, enter a **Wi-Fi network name (SSID)** in the **Add SSID to Search** text box and click **Add**.

3 Click **OK** to return to the **Wi-Fi Catcher** screen.

Figure 1-47.   Wi-Fi Catcher Preferred Network Screen

Advanced Wi-Fi Catcher Settings

1 Open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Wi-Fi Catcher**. Then, click **Advanced Settings**. The **Advanced Configuration** screen displays.

2 Select your preferred Wi-Fi network strength search criteria.

3 Select Wi-Fi bands to scan. A - B - G - N bands are supported.

4 Click **OK** or **Apply** to return to the **Wi-Fi Catcher** screen.

Figure 1-48. Wi-Fi Catcher Advanced Configuration Screen
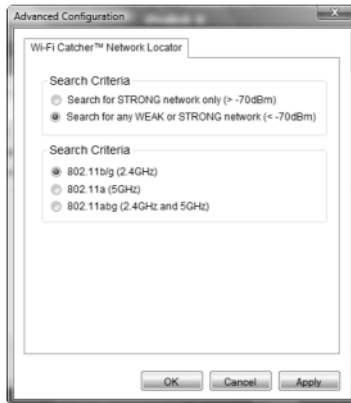
Troubleshooting

The Troubleshooting screen presents resources for diagnosing and correcting network connectivity problems.

To access the Troubleshooting screen, open **DCP Connection Manager**→**Troubleshooting**. You can perform the following actions:

- Click a link to one of the **User Manual FAQs**.

- Click a link to one of the **Useful Web Links**.

- Click **Run Diagnostics**.

- Click **View hardware details**.

- Click **View site survey** to scan a list of detected Wi-Fi access points in your vicinity and associated network details.

Figure 1-49.   Troubleshooting Screen

Diagnostics Overview

Diagnostics performs a sequence of tests for each network connection type installed and managed by DCP Connection Manager, and provides pass/fail indicators regarding software, hardware, and network connections:

- Software tests verify that your drivers are installed correctly.

- Hardware tests verify the full functionality of the network adapters for each of the network connection types.

- Network tests verify that networks are online and available.

📖 **NOTE:** Wi-Fi diagnostics is supported only for the Broadcom Wi-Fi adapter card in DCP Connection Manager 1.0.

Table 1-9.   Diagnostic Tests and Descriptions

Diagnostic Categories	Diagnostic Tests	Diagnostic Test Descriptions
Connection Diagnostics	Associations	Association is the establishment and maintenance of a link between network adapters. When security is enabled, the network adapters exchange only security credentials. This test checks for connectivity, and passes if the client is associated successfully.
	Authentication Test	Tests if the user name, password, and APN entered are correct.
	Local IP Address Test	Verifies the network adapter has been assigned a valid IP Address.
	Gateway IP Ping Test	Pings the gateway IP Address.
	DNS IP Ping Test	Pings the Domain Name Server IP Address.
	Internet Website Domain Ping Test	Test checks if a web host or IP Address is reachable across the Internet with current settings.
LAN Diagnostics	EEPROM Test	This test verifies the content of the EEPROM by reading a portion of the EEPROM and computing the checksum.
		The test fails if the computed checksum is different than the checksum stored in the EEPROM.
	Register Test	This test verifies the read and writes capabilities of the network controller registers by writing various values to the registers and verifying the result. The device driver uses these registers to perform network functions such as sending and receiving information. If the test fails, the network adapter may not be working properly.
	Interrupt Test	Test verifies that the NDIS driver is able to receive interrupts from the LAN adapter.

Diagnostic Categories	Diagnostic Tests	Diagnostic Test Descriptions
	Link & Duplex Test	Verifies duplex capabilities of the LAN adapter.
Wi-Fi Diagnostics	Adapter Test	The test passes if the Wi-Fi adapter is present and accessible. The test fails if the Wi-Fi adapter is not present or present but disabled.
	DMA Test	Test verifies that the NDIS driver is able to send packets and receive packets from the Wi-Fi adapter.
	Control Registers Test	Test evaluates the read and write capabilities of the Wi-Fi adapter registers.
	Memory Test	Test determines if the internal memory of the Wi-Fi adapter is functioning properly; the Wi-Fi adapter itself cannot function properly unless its internal memory is functioning.
	Interrupt Test	Test verifies that the NDIS driver is able to receive interrupts from the Wi-Fi adapter.
	Loopback Test	Test verifies that the NDIS driver is able to send packets and receive packets from the Wi-Fi adapter.
	Radio Test	Tests if the Wi-Fi radio is switched on.
Mobile Broadband Diagnostics	Adapter Test	The test passes if the Mobile Broadband adapter is present and accessible. The test fails if the adapter is not present or present but disabled.
	SIM Present Test (GSM only)	Checks if SIM card is present.
	SIM Read Test (GSM only)	Checks if data can be read from SIM card
	Radio Test	Tests if the Mobile Broadband radio is switched on.
	Signal Strength Test	Verifies that the Mobile Broadband signal strength is adequate for data transmission.

Diagnostic Categories	Diagnostic Tests	Diagnostic Test Descriptions
	Temperature	Verifies that the temperature of the Mobile Broadband adapter is in admissible range.
Dial-up Diagnostics	Adapter Test	The test passes if the dial-up adapter is present and accessible. The test fails if the adapter is not present or present but disabled.
	Manufacturer	Verifies device manufacturer.
	Version	Verifies driver version.
	Model Identification	Identifies model of dial-up adapter.
	Dial Tone Test	Checks if dial tone can be detected.

Using Diagnostics

1   Open **DCP Connection Manager**→**Troubleshooting**→**Run Diagnostics**. The Diagnostics screen displays. You can expand any of the **Diagnostics** categories and click on a specific diagnostic test to view a brief description of the test in the **Test Information** text box.

2   Select the diagnostics to run and click **Run Selected**. Pass/Fail test results display adjacent to the individual test.

3   Click **OK** to return to the **Troubleshooting** screen.

Alternatively, you can click **View Connection Log**, and the **Connection Log Screen** appears. Or, click **View Status Log**, and the **Status Log Screen** appears.

Figure 1-50. Run Diagnostics Screen
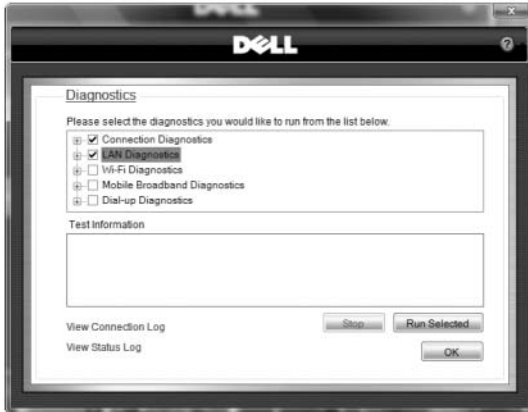
Figure 1-51. Run Diagnostics Results Screen

Connection Log

The Connection Log screen provides real-time data of your network connections activity. From the **Connection Log** screen, you can filter data in the log, export the log to a file using the current filter, or you can clear the log.

1 Open **DCP Connection Manager**→**Troubleshooting**→**Diagnostics**→**View Connection Log**. From the **Connection Log** screen, you can do the following:

- To view a specific Network Connection, select the **Connection Type** check box and select a **Network Connection Type** from the drop-down list.

- To filter a date range, check the **Date Range** check box and select a date range.

- Click **Export** to save the log in an exportable file format.

- Click **Clear** to clear the log.

2. Click **OK** to return to the **Diagnostics** screen.

Figure 1-52. Connection Log Screen
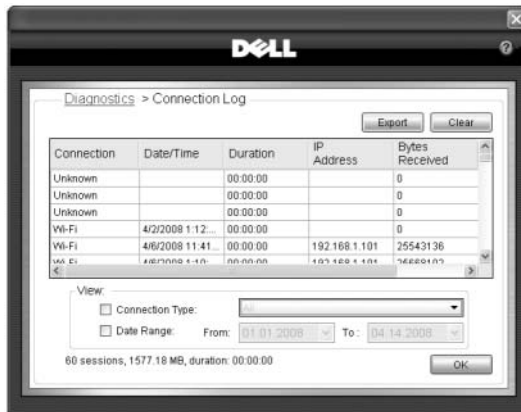
Status Log

The Status Log screen reports on network connection and application-level events.

1 Open **DCP Connection Manager**→**Troubleshooting**→**Run Diagnostics**→**View Status Log**. From the **Status Log** screen you can do the following:

- To filter the Status Log, select the **Status Type** check box and choose a category from the **Status Type** drop-down list.

- To filter a date range, select the **Date Range** check box and choose a date range.

- Click **Export** to save the log in an exportable file format.

- Click **Save** to keep a record of the log file.

- Click **Clear** to clear the log.

2 Click **OK** to return to the **Run Diagnostics** screen.

Figure 1-53. **Status Log Screen**
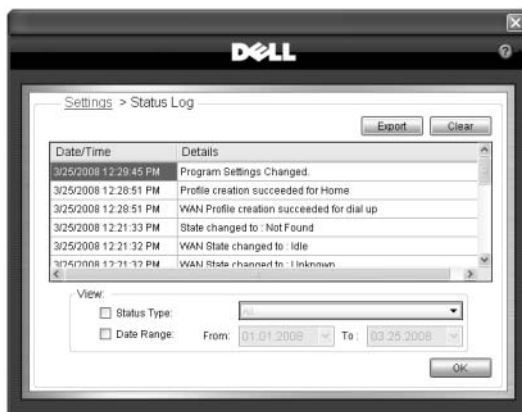
Network Status Details

The **Network Status Details** screen provides lower-level details of the Network Connection selected.

1 Open **DCP Connection Manager**→**Connection Status**→**View Network Status Details**. The **Network Status Details** screen appears.

2 Click **OK** to return to the **Connection Status** screen.

Figure 1-54.   Network Status Details Screen
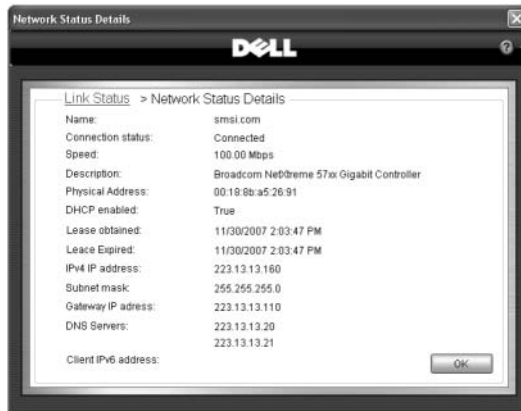
Hardware Details

The **Hardware Details** screen displays hardware details for each of the network connection types installed on your Dell laptop and being managed by the DCP Connection Manager.

NOTE: If a Network Connection Type is not recognized by Windows device manager, then the network connection technology will not be listed in the drop-down list.

All hardware information available is shown on this screen.

1   Open **DCP Connection Manager**→**Troubleshooting**→**Hardware Details**. The **Hardware Details** screen appears.

2   Select a **Network Connection Type** from the **Board** drop-down list to view the associated **Hardware Details**.

3   Click **OK** to return to the **Troubleshooting** screen.

Figure 1-55.   Hardware Details Screen

Software Version Information

1   Click the question mark in the upper right corner of the **DCP Connection Manager** screen.

2   Select **About**. The **Software Information** screen appears.

3   Click **OK** to return to the **Troubleshooting** screen.

Figure 1-56.   About DCP Connection Manager Screen

Wi-Fi Networks Site Survey

The **Available Wi-Fi Networks** screen monitors and displays detailed information on detected Wi-Fi access points. Data is updated continuously until you click one of the Wi-Fi network connections displayed.

1   Open **DCP Connection Manager→Troubleshooting→View Site Survey**. The **Available Wi-Fi Networks** screen displays.

2   To filter for a specific Wi-Fi access point, select the access point (**Network Name**) from the **Select networks to be monitored** drop-down box and click **Search**.

3   Click **Start/Freeze** to start or stop the continuous scan for Wi-Fi. The following functions are available:

   •   Click the **Options** drop-down list to change the scan interval and sort order of the network names displayed.

   •   Click **Start Logging** to open a **Save As** dialog box and start logging data to a file.

   •   Double-click a **Network Name** to create a Wi-Fi network connection through the **Profile Wizard**.

Figure 1-57.   Available Wi-Fi Networks Screen
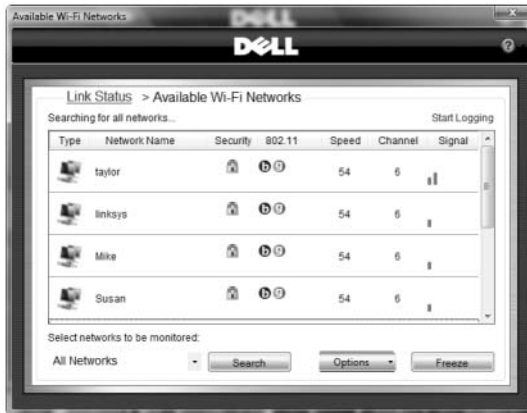
Frequently Asked Questions

Why can't I find any wireless networks?

- Verify that the Wi-Fi radio is enabled and that the Radio Hardware Switch, located on the Dell laptop, is in the ON (middle setting) position. To enable the Wi-Fi radio, open DCP Connection Manager and check the **Wi-Fi** check box in the **Radio Controls** section of the **Device Status** screen.

  📝 **NOTE:** Ensure that the **Airplane Mode** check box is also unchecked.

- The Radio Hardware Switch, which may control the Wi-Fi radio function, may be turned off. To check if the Radio Hardware Switch controls the Wi-Fi radio function, open **DCP Connection Manager**→ **Profiles**→**Change Settings**→**Hardware Switch**. If the Wi-Fi radio is enabled, verify that the Radio Hardware Switch is in the **ON** (middle setting) position.

  📝 **NOTE:** The Radio Hardware Switch feature may not be available on certain Dell portable systems.

- Enable the Wi-Fi Catcher Network Locator feature. Open **DCP Connection Manager**→**Profiles**→**Change Settings**→**Wi-Fi Catcher**. Select the **Enable Wi-Fi Catcher Network Locator** check box to associate the Wi-Fi Catcher Network Locator feature with the Radio Hardware Switch. Next, activate the Wi-Fi Catcher Network Locator from the Radio Hardware

Switch by sliding the switch to the far right toward the antenna icon and holding the switch in this position for a few seconds, then letting go of the switch.

- The Disable on Ethernet Detect function may be turned on.
  - Open **DCP Connection Manager→Profiles→Change Settings→Program Settings**.
  - Verify that the **Disable Wi-Fi** check box is unchecked.

- Weak Wi-Fi radio signal due to interference from other equipment or from having your Dell laptop outside the wireless access point boundary region. To resolve the issue, try moving closer to the Wi-Fi access point or connect to another Wi-Fi network.

- Run the Wi-Fi diagnostic tests on the Diagnostics screen to see if there are any problems with the Dell wireless LAN card, wireless software, or wireless network. Open **DCP Connection Manager→ Troubleshooting→Run Diagnostics**.

- Verify from the **Connection Status** screen that you have an already configured Wi-Fi network connection.

Why can't I connect to a wireless network?

- If you are trying to connect to a basic Wi-fi network, the Key information entered may be incorrect. Check to ensure you have the correct Key and that it is typed in accurately.

- If you are trying to connect to an advanced Wi-Fi network, the encryption and security settings may not match the Wi-Fi network. Check with the IT administrator that supports your organization's wireless network for further support.

- Weak Wi-Fi radio signal due to interference from other equipment (microwave oven, cordless phone) or from having your Dell laptop outside the wireless access point boundary region may be the problem. To resolve the issue, try moving your Dell laptop closer to the Wi-Fi access point or connect to another Wi-Fi network.

- Run the Wi-Fi diagnostic tests found on the Diagnostics screen to see if there are any problems with the Dell wireless LAN card, wireless software, or wireless network. Open **DCP Connection Manager→Troubleshooting→Run Diagnostics**.

- Verify from the Connection Status screen that you have an already configured Wi-Fi network connection.

Why is my Internet connection so slow?

- You may be using a dial-up network connection to access the Internet. Try switching to a faster network connection type such as Broadband Cable, DSL, Ethernet, Wi-Fi or Mobile Broadband.

- Using a Wi-Fi network to access a faster network connection type (Broadband Cable, DSL, or high speed LAN to reach the Internet will impact connection speed. Weak Wi-Fi radio signal due to interference from other equipment or from having your Dell laptop near the wireless AP boundary region may further impact connection speed. To resolve the issue, try moving closer to the Wi-Fi access point or connect to another Wi-Fi network.

- Accessing the Internet over a VPN will impact connection speed. Disconnect the VPN whenever it is not required. Refer to VPN Settings within DCP Connection Manager Help, or refer to the documentation from the provider of the VPN software application installed on your Dell laptop.

- Run the diagnostic tests found on the Diagnostics screen to see if there are any problems with the network adapters or network software installed on your Dell laptop. Open **DCP Connection Manager**→ **Troubleshooting**→**Run Diagnostics**.

How do I activate my Dell mobile broadband card?

See "Activating Your Mobile Broadband Service."

Administrator Operations

This chapter provides a central reference place to the DCP Connection Manager tasks typically used by system administrators and help desk personnel.

📝 **NOTE:** Many of these tasks are available only to users with Windows Local Administrator account privileges or better.

- Local Administrator Only functions
- Enterprise Branding
- Command Line Switches
- Profile Creation and Distribution Options

- Profile Security
- Connect to a Network Prior to Windows Logon
- Third-Party GINA Support for Windows XP
- Troubleshooting

Administrator-Only Functions

Administrator-only functions are available only to users with Windows Local Administrator account privileges or better. These functions are not available to users with Windows Local User account privileges.

- Program Settings
  - Enable/disable SMS
  - Enforce VPN (terminate network connection if a VPN associated with a network connection is disconnected)
- Profile Security
  - Lock Location Profiles and Network Connections so they can not be unlocked or removed by unauthorized users.
- Network Connection settings
  - Enable **Connect Prior to Logon** for Wi-Fi, mobile broadband, and dial-up network connections.

Profile Security

Profile security and access control is available only to users with Local Administrator or better user account privileges through the **Admin** screen.

1 From the **Profile Wizard Settings** screen, select **Admin**.

2 Edit your choices and click **Finish** to reach the **Profile Wizard Summary** page.

Figure 1-58.   Profile Wizard Admin Screen
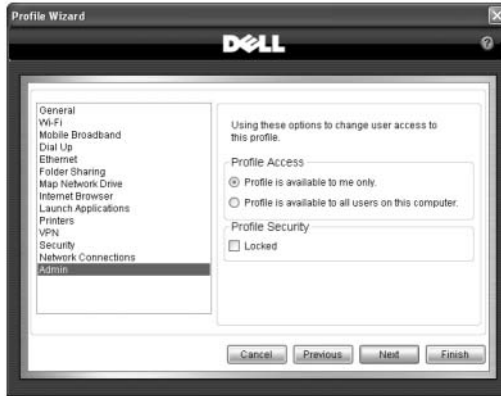
Profile Distribution Options

Administrators can create Location Profiles and export and save them as a separate .xml file for distribution as part of a hard disk image or installation after client systems have been deployed.

The following two methods are available for distributing saved profiles to other Dell portable systems:

- Import .xml profiles locally by running the Import Settings function from within DCP Connection Manager.
- Distribute .xml profiles remotely using any software management system or Microsoft

Windows Group Policy Objects based on a predefined policy. The steps required for creating and distributing .xml profiles are as follows:

1 Create a profile using the DCP Connection Manager Profile Wizard. To start the Profile Wizard open **DCP Connection Manager→Profiles**, then click **Add**. Complete all of the **Profile Wizard** screens necessary to include all the **Network Connections** and **Network and User-Related Location Profile Settings** for the profile you want to create.

2 Go to the **Global Program and Network Settings** screen to set any global application settings for the profile you want to create. Open **DCP Connection Manager→Profiles→Change Settings**.

3 To export and save a profile, open **DCP Connection Manager**→**Profiles**→**Export Profiles and Settings**. There are five filter options available for selecting Location Profiles, Network Connections, and Network-Related Settings to export using the DCP Connection Manager Export feature:

- **Location Profiles**—Includes all Location Profiles (and Network Connections and Network and User-Related Location Profile Settings) only

- **All Networks**—Includes all network connections only

- **Mobile**—Includes mobile broadband network connections

- **Wi-Fi**—Includes Wi-Fi network connections

- **Dial-up**—Includes dial-up network connections

To export a profile:

a Choose the profile type to export.

b Select and move **Location Profiles** or **Network Connections for export** from the list box on the left and move to the right list box.

c Make an import handling choice:

- **Include adapter settings** check box supports only Wi-Fi adapter settings today.

- **Include program settings** check box exports all Global Program and Network Settings.

- Check **Include Credentials** check box to include all credential and security information such as usernames, passwords, and network security keys in the encrypted export .xml file.

d Click **OK** to open the **Save As** screen.

e Save the file as an .xml file. Before importing this file, you must rename the file "NetworkUCM.xml."

f Click **Save** to return to the **Export** screen.

4 Import or distribute the .xml profile into the System32 folder of Windows: **C:\\Windows\System32\NetworkUCM.xml**. To use the **Import Profiles and Settings** option available within DCP Connection Manager:

a Open **DCP Connection Manager**→**Profiles**→**Import Profiles and Settings**. The **Windows Explorer** screen opens.

> **b** Locate the saved .xml profile file for import and rename the file "NetworkUCM.xml" if the file is named differently.
>
> **c** Click **Open** to run the Import routine of the NetworkUCM.xml file into the System32 folder of Windows: **C:\\Windows\System32\NetworkUCM.xml**. The Windows Explorer screen closes.

NOTE: You can distribute the .xml profiles remotely using any software management system or Microsoft Windows Group Policy Objects based on a predefined policy.

Enterprise Branding

DCP Connection Manager allows for customizable enterprise branding elements in two separate sections of the application:

- From the **Connection Status** screen, one or more domain names and unique images may be used to replace the default domain name and icon of a network connection. This is the rightmost icon in the **Connection Status Screen** diagram.

- From the **Troubleshooting** screen, two custom links can be added: one FAQ Link and up to three Web Links. The Troubleshooting FAQ and Web Links elements may be localized for any number of the 13 supported languages by appending a language code to a Title tag and typing the Title string in the associated language. The DCP Connection Manager language version running on the Dell notebook will reflect the language appropriate FAQ Link and Web Link titles at runtime.

Enterprise Branding is configurable from an XML file located at: **C:\Program Files\Dell\DellControlPoint\Connection Manager\EnterpriseBranding.xml**.

NOTE: Restarting DCP Connection Manager is required for the changes to take effect.

The Enterprise Branding configuration file is depicted below:

```
<?xml version="1.0" ?>

  <Branding xmlns:xsi=
  "http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">

    <ConnectionSettings>
```

```xml
<Domain>
   <Name>domain1</Name>
   <Image>domain1.png</Image>
</Domain>
<Domain>
   <Name>domain2</Name>
   <Image>domain2.png</Image>
</Domain>
</ConnectionSettings>
<Troubleshooting>
   <!--FAQLink ID="1" Link=
   "http://help.html#dostuff">
      <Title>How to do stuff</Title>
      <Title-es>Cómo a rellene</Title>
   </FAQLink -->
<WebLinks>
   <Reference ID="1" Link=
   "http://www.MyCompany.com">
      <Title>Visit My Company</Title>
      <Title-es>Visite a mi compañía</Title>
   <Reference>
   <Reference ID="2" Link="">
      <!--Reference ID="3" Link="">
   </Reference !-->
</WebLinks>
   </Troubleshooting>
</Branding>
```

Table 1-10.   Supported ISO Standard Language Codes

Language	Language Sub Tag
Chinese (Simplified)	zh-CHS
Chinese (Traditional)	zh-CHT
Danish	da
Dutch	nl
English	en
French	fr
German	de
Italian	it
Japanese	ja
Korean	ko
Norwegian	no
Polish	pl
Portuguese	pt
Russian	ru
Spanish	es
Swedish	sv

Command-Line Switches

Command-line switches are used to modify a command-line instruction away from default behavior. They can be used at install time or run time, and are primarily used by experienced IT administrators and users.

- **Install Time Command-Line Switches**—Command-line switches can be used during installation of DCP Connection Manager when they follow the executable name. For example:

  ```
  Setup.exe /s
  ```

  See Table 1-11 for a list of currently supported install-time switches.

Table 1-11.   Supported Install-Time Switches

Function	Switch
Summary of available command line switches	/?
Silent install	/s
Silent uninstall application + driver	/remove
Silent repair	/repair
Install application without drivers	/bypass
Trust Third-Party GINA (applies only to Windows XP)	/trust
Import profiles after install via command-line versus using the Import Settings screen in DCP Connection Manager user interface.	/import [full path to file] Example: /import C:\temp\networkucm.xml **NOTE:** The profile .xml file must be renamed "networkucm.xml" prior to executing the import command.
Generate installation log in working directory	/record
Skips corresponding driver installations. The /bypass switch skips all driver installations.	• /skip_1—Intel® Gigabit LAN • /skip_2—Novatel WWAN • /skip_3—Ericsson WWAN • /skip_4—Conexant • /skip_5—Broadcom LAN • /skip_6—Broadcom WLAN • /skip_7—Intel WLAN Example: setup.exe /skip_1 /skip_5

Function	Switch
Disable corresponding network adapters	• `/disable_broadband`
	• `/disable_dialup`
	• `/disable_ethernet`
	• `/disable_gps`
	• `/disable_wifi`
	Example: `setup.exe /disable_broadband /disable_dialup`

- Run Time Command-Line Switches—Run time switches can be used after the DCP Connection Manager application has been installed. For example:

    `Dell.UCM.Console.exe /export`

    See Table 1-12 for a list of currently supported run-time switches.

Table 1-12.   Supported Run-Time Switches

Function	Switch
Export profiles via command-line versus using the Export Settings screen in DCP Connection Manager user interface.	**/export** [profile1, profile2, ...] [**/a**] [**/p**] [**/f**]{output filename} where /a = export adapter settings /p = export program settings /f = specify output file path Example: /export profile1, profile2 /p /f C:\output.xml **NOTE:** The profile .xml file must be renamed "networkucm.xml" prior to executing an import command.

Single Sign-On

Connect to a Network Prior to Windows Logon

The option to make a specific network connection prior to passing Windows logon user name and password credentials to authenticate and attach the user to a network domain is handled via a Connect Prior to Logon option and applies to the following network connection types:

- Wi-Fi
- Mobile Broadband
- Dial-up

NOTE: The Connect Prior to Logon feature is available in this software release only on the Windows XP operating system. If you are running DCP Connection Manager on Windows Vista operating system, this setting will be disabled.

Wi-Fi

1 Open **DCP Connection Manager**.

- *For a new connection:*

Open **DCP Connection Manager→Profiles**, then select the **Wi-Fi** checkbox and click **Next**. The **Profile Wizard Settings** screen for Wi-Fi appears.

- • *For an existing connection:*

    Open **DCP Connection Manager→Profiles**. Right-click the network connection name and select **Properties** from the drop-down box to open the associated **Profile Wizard Settings** screen.

2 Click **Advanced** to open the **Advanced Wi-Fi Network Connection** screen.

3 Select the **Enable Connect Prior to Logon** check box.

4 Click **OK** to return to the **Profile Wizard Settings** screen for Wi-Fi.

Mobile Broadband

1 Open **DCP Connection Manager**.

- • *For a new connection:*

    Open **DCP Connection Manager→Profiles→Add**. Select the **Mobile Broadband** check box, then click **Next**. The **Profile Wizard Settings** screen for mobile broadband appears.

- • *For an existing connection:*

    Open **DCP Connection Manager→Profiles**. Right-click the network connection name and select **Properties** from the drop-down box to open the associated **Profile Wizard Settings** screen.

2 Click **Advanced** to open the **Advanced Mobile Broadband Network Connections** screen.

3 Select the **Enable Connect Prior to Logon** check box.

4 Click **OK** to return to the **Profile Wizard Settings** screen for mobile broadband.

Dial-up

1 Open **DCP Connection Manager**.

- • *For a new connection:*

    Open **DCP Connection Manager→ Profiles→Add**, then select the **Dial-up** check box and click **Next**. The **Profile Wizard Settings** screen for Dial-up appears.

- *For an existing connection:*

  Open **DCP Connection Manager**→**Profiles**, then right-click the network connection name and select **Properties** from the drop-down menu to open the associated **Profile Wizard Settings** screen.

2 Click **Advanced** to open the **Advanced Dial-up Network Connection** screen.

3 Select the **Enable Connect Prior to Logon** check box.

4 Click **OK** to return to the **Profile Wizard Settings** screen for Dial-up.

Third-Party GINA Support for Windows XP

ControlPoint supports and trusts third-party GINA (Graphical Identification and Authentication) files that strictly conform to Microsoft's GINA model and dialogs. ControlPoint's GINA hook allows another application's GINA to prompt for user credentials. Otherwise, Connection Manager and the third-party application both independently prompt for user credentials.

For Windows XP, follow these steps to establish a third-party application GINA trust relationship:

1 Install the third-party application before DCP Connection Manager.

2 Install DCP Connection Manager, create your network connections, and select the **Connect Prior to Logon** check boxes for the appropriate network connections.

3 From the command line, set the Trust switch, as follows:

```
/trust
```