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Configuring the WLAN Connection

Introduction

This WLAN Secure Wireless Client (SWC) User’s Guide is relevant for Dolphin terminals with a Windows CE 5.0, Windows Mobile 5.0, Windows Mobile 6.x or Windows Embedded Handheld 6.5 operating system and an integrated 802.11a/b/g/n radio.

Note: Screen captures/icons in this user’s guide may differ from what appears on your device due to operating system and model type.

The WLAN SWC application configures the wireless connection of the 802.11a/b/g/n radio in the Dolphin terminal. To verify the WLAN SWC version loaded on the terminal, do one of the following based on the device OS type:

- Tap the WLAN SWC icon on the Today or Desktop screen, then select the About tab.
- Tap Start > WLAN SWC, then select the About tab.

WLAN SWC Screen Layout

The layout of the WLAN SWC application window differs slightly depending on the operating system; however, the content of the window is consistent for all supported OS versions unless otherwise noted. For example, on terminals running Windows CE, the access tabs for additional screens appear near the top of the window instead of near the bottom of the window for Windows Mobile or Windows Embedded Handheld devices.

Server-Assigned IP Addresses

Please note that all server-assigned IP addresses use Dynamic Host Configuration Protocol (DHCP).

Accessing the WLAN SWC

Windows Default (Titanium) Home Screen in Windows Embedded Handheld

To access the WLAN SWC, tap Start > WLAN SWC.

The WLAN SWC opens to the Status tab, which is empty until a connection is configured. After a connection to an access point or network is configured and active, the tab displays the connection status.

Changing the Windows Default (Titanium) Home Screen to the Classic Today Screen Layout

To customize the default screen layout:

1. Tap Start > Getting Started > Set Background.
2. Tap the arrow next to “Change the background image in Setting > Home.”
3. Tap Items on the horizontal scroll bar at the top of the screen.
4. Un-check the Windows Default box to switch to the Classic Today screen layout.
5. Select the items (e.g., calendar, time, email) you want to appear on the Classic Today screen.
6. Tap **OK**, then **OK** again.

**Classic Today Screen in Windows CE, Windows Mobile and Windows Embedded Handheld**

To access the WLAN SWC, tap the **Today** screen command bar.

The WLAN SWC application opens displaying the **Status** tab, which is empty until a connection is configured. After a connection to an access point or network is configured and active, the tab displays the connection status.

*Note: The WLAN SWC icon changes color to indicate the status of the radio; see Command Bar WLAN SWC Status Icon.*

**Command Bar WLAN SWC Status Icon**

The command bar WLAN SWC icon changes color according to the status of the 802.11a/b/g/n radio. The color of the icon matches the status displayed on **Status Tab** (see page 1-16) of the WLAN SWC application window.

*Note: The Windows Default (Titanium) Home screen does not include a command bar. To see the command bar and WLAN SWC status icon, you would need to switch to the Classic Today screen layout.*

<table>
<thead>
<tr>
<th>Color</th>
<th>Meaning</th>
<th>Matching Status</th>
</tr>
</thead>
</table>
| Gray  | The radio is:  
  - Disabled  
  - Idle  
  - Not connecting | NO RADIO  
  RADIO OFF  
  DISCONNECTED  
  INACTIVE |
| Yellow| The connection is:  
  - Associating (icon stops spinning)  
  - Authenticating (icon stops spinning)  
  - Negotiating DHCP address (icon spins clockwise)  
  - Out-of-Range | ASSOCIATING  
  AUTHENTICATING |
| Red   | Authentication failed and the connection failed as a result. | ASSOCIATED  
  (but not authenticated) |
| Green | The connection is authenticated with a valid DHCP address. | COMPLETE |

**Connection Status Indicator**

A radio signal strength indicator appears at the top of the screen or on the command bar near the bottom of the screen (Classic Today screen only). The quantity of bars highlighted indicates the strength of the signal when the radio is transmitting. The higher the quantity the higher the signal strength. If the radio is not transmitting, a small “x” appears either over or near the bars.
Enabling the WLAN Radio Driver

The radio driver must be enabled for the radio to transmit a signal. You cannot connect to a network unless the radio is enabled. For details about enabling and disabling the terminal radios, refer to the User's Guide specific to your Dolphin model.

Note: User's Guides are available for download at www.honeywellaidc.com.

<table>
<thead>
<tr>
<th>For Dolphin Devices running:</th>
<th>To access radio configuration settings . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows CE 5.0</td>
<td>Tap the UP arrow in the lower, right corner of the screen.</td>
</tr>
<tr>
<td>Windows Mobile 6.x,</td>
<td>Tap Start &gt; Settings &gt; Connections &gt; Dolphin Wireless Manager.</td>
</tr>
<tr>
<td>Windows Embedded Handheld 6.5</td>
<td></td>
</tr>
<tr>
<td>Windows Mobile 5.0</td>
<td>Tap Start &gt; Settings &gt; Connections tab &gt; Radio Manager.</td>
</tr>
</tbody>
</table>

Establishing a Connection

⚠️ The parameters you enter in the WLAN SWC depend entirely upon the wireless network established in your facility. If you do not know what to enter in these fields, contact your network administrator.

1. Open the WLAN SWC; see Accessing the WLAN SWC on page 1-1.
2. Tap the Config tab and tap New.
3. You can create multiple profiles that use the same SSID by giving each profile a unique name in the “Profile Name” field on the Network window.

4. Type in the **SSID**.

5. Select a specific band if the connection is to be limited to b/g/n or a/n or leave the band set to **Auto**.

6. Select the **Assoc. Mode** that corresponds to your network configuration from the drop-down list.

<table>
<thead>
<tr>
<th>Select</th>
<th>To connect with…</th>
<th>For more information…</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>No authentication or encryption.</td>
<td>None (page 1-9)</td>
</tr>
<tr>
<td>WEP</td>
<td>WEP encryption.</td>
<td>WEP (page 1-11)</td>
</tr>
<tr>
<td>IEEE 802.1X (WEP)</td>
<td>EAP authentication.</td>
<td>IEEE 802.1X (WEP) (page 1-9)</td>
</tr>
<tr>
<td>WPA-Personal (PSK)</td>
<td>WPA encryption and PSK</td>
<td>WPA-Personal (PSK) &amp; WPA2-Personal (PSK) (page 1-11)</td>
</tr>
<tr>
<td>WPA2-Personal (PSK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPA-Enterprise (EAP)</td>
<td>WPA encryption and EAP</td>
<td>WPA-Enterprise (EAP) &amp; WPA2-Enterprise (EAP) (page 1-12)</td>
</tr>
<tr>
<td>WPA2-Enterprise (EAP)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The Dolphin 7600 with Windows CE 5.0 does not support EAP methods.

7. The fields and options required by the association mode, encryption, and EAP methods appear on the **Network Window** (see page 1-8) after each is selected.

8. If required by the association mode, select the **Encryption** method.

9. If required by the association mode, select the **EAP Method**; (see page 1-9).

10. If required or desired, enter keys or passwords.

11. Tap **OK**. You are returned to the Config tab where the SSID now appears in the list.
12. Select the device in the list and tap **Activate**. The configuration activates and the Dolphin terminal attempts to connect to the network according to the parameters you entered.

![Status tab](image)

13. The **Status** tab appears displaying the connection status.
**Config Tab**

You manage connections and configurations on the **Config** tab. You also determine which configuration the terminal uses to connect.

*Activating the Configuration*

To connect, you **must** select the configuration in the list and tap **Activate**. The terminal will not attempt to connect until you tap **Activate**.

The **Config** tab stores all the configurations you have created in the list. Multiple configurations can be enabled allowing for profile roaming. The active configuration will have an asterisk (*) next to its ID in the first column. To switch connections, simply select it on the **Config** tab and tap **Activate**.

**Buttons**

- **Modify**
  - To modify an existing configuration, select it in the list and tap **Modify**. The Network window appears displaying the data for the selected configuration. Make your changes and tap **OK** to save. Then, tap **Activate** to start connecting.

- **New**
  - To manually add a connection, tap **New**. A blank Network window appears. Complete Steps 5–8 of **Establishing a Connection** (see page 1-3).

- **Delete**
  - To delete a connection, select it in the list and tap **Delete**.

- **Export**
  - To export the configured network profiles to a registry file, tap **Export**. This file can be used to provision other devices.

  All user name/password information is encrypted.
Using the Scan Feature

The Scan button on the Config tab queries for the local, configured, wireless network for devices in range of the terminal. When you tap **Scan** on the Config tab, the query starts, and the results appear on the Scan window.

<table>
<thead>
<tr>
<th>SSID</th>
<th>dB</th>
<th>Ch</th>
<th>MHz</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>guest2b</td>
<td>-53</td>
<td>11</td>
<td>2452</td>
<td>[WPA2-ED]</td>
</tr>
<tr>
<td>guest2b</td>
<td>-54</td>
<td>11</td>
<td>2452</td>
<td>[WPA2-ED]</td>
</tr>
<tr>
<td>guest2b</td>
<td>-67</td>
<td>1</td>
<td>2412</td>
<td>[WPA2-ED]</td>
</tr>
<tr>
<td>e2</td>
<td>-74</td>
<td>149</td>
<td>5745</td>
<td>[WPA2-ED]</td>
</tr>
<tr>
<td>e2</td>
<td>-90</td>
<td>1</td>
<td>2412</td>
<td>[WPA2-ED]</td>
</tr>
<tr>
<td>guest</td>
<td>-53</td>
<td>11</td>
<td>2452</td>
<td></td>
</tr>
<tr>
<td>guest</td>
<td>-66</td>
<td>1</td>
<td>2412</td>
<td></td>
</tr>
<tr>
<td>xfinitywi</td>
<td>-81</td>
<td>6</td>
<td>2437</td>
<td></td>
</tr>
<tr>
<td>TWWiFi</td>
<td>-81</td>
<td>6</td>
<td>2437</td>
<td></td>
</tr>
<tr>
<td>CableWiFi</td>
<td>-94</td>
<td>6</td>
<td>2437</td>
<td></td>
</tr>
<tr>
<td>xfinitywi</td>
<td>-94</td>
<td>6</td>
<td>2437</td>
<td></td>
</tr>
</tbody>
</table>

**Buttons**

**Add**
Tap this button after you’ve selected an item in the list. It opens the Network Window (see page 1-8) so that you can configure the connection.

**Rescan**
Tap this button to rescan the wireless network if you don’t see the Access Point you're looking for in the list.

**Close or OK**
Tap this button to close the Scan window and return to the Config Tab.

**Columns**

**SSID**
Displays the SSID of the Access Point. (This is the name of the Access Point you are connecting to.)

**dB**
Displays the signal in dBMs.

**Ch**
Displays the operating channel number.

**MHz**
Displays the operating frequency in MHz

**Flags**
Displays the association mode and encryption required to connect to the device.

**BSSID**
Displays the full BSSID. (This is the MAC address of the Access Point.)
Network Window

The Network window contains the configuration options to configure how the terminal connects to your wireless network.

You access the Network window from the Config Tab (see page 1-6) by doing one of the following:

- Tapping New on the Config tab.
- Scanning for wireless network devices and adding them to your network; see Using the Scan Feature on page 1-7.
- Selecting an existing configuration and tapping Modify.

The Network window prompts you to complete the fields required by the connection options you select. For example,

<table>
<thead>
<tr>
<th>No Authentication or Encryption</th>
<th>WPA (EAP)</th>
<th>WEP</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Network Window" /></td>
<td><img src="image2" alt="Network Window" /></td>
<td><img src="image3" alt="Network Window" /></td>
</tr>
</tbody>
</table>

(Use the Browse button ... to load files located on the terminal into this configuration.)
**Association Modes**

The association mode you select from the Assoc. Mode drop-down list determine the fields that appear on the Network window. Different types of association modes require specific information or offer certain configuration options.

The available association modes are:

- **None** (see page 1-9)
- **WEP** (see page 1-11)
- **IEEE 802.1X (WEP)** (see page 1-9)
- **WPA-Personal (PSK) & WPA2-Personal (PSK)** (see page 1-11)
- **WPA-Enterprise (EAP) & WPA2-Enterprise (EAP)** (see page 1-12)

*Note: The Dolphin 7600 with Windows CE 5.0 does not support EAP methods.*

**None**

Selecting **None** as the association mode means that there is no authentication or encryption in the connection process.

**IEEE 802.1X (WEP)**

**Available EAP Methods**

IEEE 802.1X (WEP) (page 1-9) and WPA-Enterprise (EAP) & WPA2-Enterprise (EAP) (page 1-12) support the following EAP methods:

- LEAP
- PEAPv0-MSCHAPV2
- PEAPv1-MSCHAPV2
- PEAPv1-GTC
- PEAPv1-TLS
- FAST-MSCHAPV2
- FAST-GTC
- FAST-TLS
- TLS
- TTLS-MD5
- TTLS-MSCHAPV2
- TTLS-GTC

**Completing the EAP Fields**

Depending on the EAP method selected, the following fields (may) appear or disappear based on what the selected protocol requires or offers for its configuration:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identity</strong></td>
<td>This is the 802.1X identity supplied to the authenticator. The identity value can be up to 63 ASCII characters and is case-sensitive.</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>This is the password used for MD5-Challenge or EAP authentication. It may contain up to 63 ASCII characters and is case-sensitive. Asterisks appear instead of characters for enhanced security.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Anonymous ID</strong></td>
<td>Enter the anonymous ID. This ID creates a tunnel through which the real ID (as entered in the Identity field) can pass. For additional security, make this ID different than the one entered in the Identity field.</td>
</tr>
<tr>
<td><strong>File Store</strong></td>
<td>Click one of these radio buttons to select the location of the certificate(s). For example, if the certificate is stored in IPSM or an SD card as a file, then use <strong>File Store</strong>. Or, if the certificate is installed on the device in the Windows Certificate Store, then choose <strong>Cert Store</strong>.</td>
</tr>
</tbody>
</table>
| **CA Cert. & Client Cert.**  | Tap the **Browse** button to load a CA or Client certificate located on the terminal.  

- CA certificates are any certificates created by a certified authority (CA). This certificate is used to verify the identity of the RADIUS server.  
- Client certificates contain information that identifies the user, as well as information about the organization that issued the certificate. This ensures that you can encrypt data end-to-end. |
| **Private Key**              | Tap the **Browse** button to load a private key located on the terminal.  

If you have loaded a private key, enter the password that unlocks the private key. |
| **Priv Key Pass**            | If you have loaded a private key, enter the password that unlocks the private key. |
| **Tunnel PAC &/or Machine PAC** | Tap the **Browse** button to load a tunnel and/or machine PAC located on the terminal.  

*Note: For EAP-FAST, a one-time provisioning exchange establishes a shared secret, called a Protected Access Credential (PAC) Key. That PAC Key is used for all subsequent authentications.* |
| **Provisioning**            | Provisioning refers to service activation and involves programming various network databases with the customer’s information. Select the provisioning method from the following options:  
- No Provisioning  
- Anonymous  
- Authenticated  
- Anonymous + Authenticated |
WEP
When you select WEP as the association mode, you can select Open or Shared Encryption and enter your keys.

WPA-Personal (PSK) & WPA2-Personal (PSK)

Supported Encryption Methods
- TKIP
- AES-CCMP
- TKIP+CCMP

PSK (Pre-Shared Key)
The PSK field is where you enter the pre-shared key. This field accepts ASCII keys between 8–63 characters long. A hexadecimal PSK can also be entered instead of an ASCII key. Hexadecimal PSKs must be exactly 64 characters and can only contain hexadecimal digits (A–F, 0–9).
Characters are visible the first time you enter them in this field; however, those characters will appear as asterisks (*) the next time this configuration is opened.
Secret passwords or encryption keys are entered into both sides of the message exchange ahead of time. Preshared keys (PSK) are typed into the clients and servers (authentication servers, access points, etc.).

**WPA-Enterprise (EAP) & WPA2-Enterprise (EAP)**

![Network configuration interface]

*Note: The Dolphin 7600 with Windows CE 5.0 does not support EAP methods.*

**Supported Encryption Methods**
- TKIP
- AES-CCMP
- TKIP+CCMP

**Available EAP Methods**
The following EAP methods are supported:
- LEAP
- PEAPv0-MSCHAPV2
- PEAPv1-MSCHAPV2
- PEAPv1-GTC
- PEAPv1-TLS
- FAST-MSCHAPV2
- FAST-GTC
- FAST-TLS
- TLS
- TTLS-MD5
- TTLS-MSCHAPV2
- TTLS-GTC
For details, see [Completing the EAP Fields](#) on page 1-9.

The checkbox under the Password field prompts the user to the SSID and password every connection attempt.
**Common Configurations**

This section contains some of the most common network configurations in detail, including:

- **WEP** (see page 1-13)
- **PEAPv1-MSCHAPV2** (see page 1-14)
- **WPA-PSK** (see page 1-14)

**WEP**

When you select WEP as the association mode, you can select Open or Shared encryption to authenticate via a specific key.

1. Open the WLAN SWC; see Accessing the WLAN SWC on page 1-1.
2. Tap the **Config** tab.
3. Tap **New**.
4. On the Network window, type in the **SSID**.
5. Select **WEP** as the **Assoc. Mode**.
6. Select an **Encryption** method (i.e., Open or Shared), configure your Key(s), then tap **OK**.
7. On the Config tab, select the network in the list and tap **Activate**. The terminal begins connecting.
8. When connected, the **Status Tab** (page 1-16) appears displaying the results.
**PEAPv1-MSCHAPV2**

1. Open the WLAN SWC; see *Accessing the WLAN SWC on page 1-1*.
2. Tap the Config tab.
3. Tap New.
4. On the Network window, type in the SSID.
5. Select IEEE 802.1X (WEP) as the Assoc. Mode.
6. Select PEAPv1-MSCHAPV2 as the EAP Method.
7. Enter the Identity (see page 1-9) and Password (see page 1-9).
8. If you want to, you can enter an Anonymous ID (see page 1-10) or a CA or Client certificate (see page 1-10).

   *Note: If you selected PEAPv1-TLS, you can also load a Private Key (page 1-10) and enter a private key password.*

9. Tap OK and you are returned to the Config tab.
10. On the Config tab, select the network in the list and tap Activate.
11. The terminal begins connecting.
12. When connected, the Status tab (see page 1-16) appears displaying the results.

**WPA-PSK**

1. Open the WLAN SWC; see *Accessing the WLAN SWC on page 1-1*.
2. Tap the Config tab.
3. Tap New.
4. On the Network window, type in the SSID.
5. Select WPA-Personal (PSK) as the Assoc. Mode.
6. Select the Encryption method (TKIP, AES-CCMP, or TKIP + CCMP).
7. Enter the pre-share key (see page 1-11) in the PSK field.
8. Tap OK and you are returned to the Config tab.
9. On the Config tab, select the network in the list and tap Activate.
10. The terminal begins connecting.
11. When connected, the Status Tab (page 1-16) appears displaying the results.
**Static IP**

You establish a static IP through the radio driver, not the WLAN SWC. After the static IP address is established in the radio driver, you configure your wireless connection in WLAN SWC as usual.

**Setting up a Static IP on Windows Mobile and Windows Embedded Handheld Devices**

1. Tap **Start > Settings > Connections (tab or icon) > Network Cards.**

2. Tap on the network adapter. The adapter name will begin with “SWC IM” followed by the radio driver name in parentheses.

3. The IP address tab opens. Select **Use specific IP address.**
a. Enter the IP address:

b. Enter the Subnet mask:

c. Enter the Default gateway:

4. Tap OK.

5. Open the WLAN SWC and configure the wireless connection.

-setting up a static ip on windows ce 5.0 devices-

1. Tap Start > Control Panel > Network and Dial-up Connections.

2. Double-tab the radio driver.

3. The radio driver opens displaying the IP Address tab. Select Specify an IP address.

4. Tap OK.

5. Open the SWC and configure the wireless connection.

**Status Tab**

The Status tab displays the connection status of the current, activated connection; see Activating the Configuration on page 1-6.

The WLAN SWC opens to the Status tab, which is empty until a connection is configured. After a connection to an access point or network is configured and active, the tab displays the connection
status. See Accessing the WLAN SWC on page 1-1.

Buttons

Deactivate
The Deactivate button disconnects the device from the network and deactivates the profile.

Reconnect
Use the Reconnect button to refresh the connection by forcing the client to disconnect first.

Status Field

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO RADIO</td>
<td>The SWC does not recognize the WLAN radio driver.</td>
</tr>
<tr>
<td>RADIO OFF</td>
<td>The radio is not enabled.</td>
</tr>
<tr>
<td>DISCONNECTED</td>
<td>The radio connection is disconnected.</td>
</tr>
<tr>
<td>INACTIVE</td>
<td>There are either no profiles or there are no activated profiles on the Config tab.</td>
</tr>
<tr>
<td>ASSOCIATING</td>
<td>The terminal connection is associating.</td>
</tr>
<tr>
<td>ASSOCIATED</td>
<td>The terminal connection is associated.</td>
</tr>
<tr>
<td>AUTHENTICATING</td>
<td>Authentication is in process.</td>
</tr>
<tr>
<td>COMPLETE</td>
<td>The connection is associated, authentication completed successfully, and active.</td>
</tr>
</tbody>
</table>

BSSID Field

The BSSID is the MAC address of the Access Point.
Working in Ad Hoc Mode

Introduction

Most installed wireless LANs today use "infrastructure" mode that requires the use of one or more access points. With this configuration, the access point provides an interface to a distribution system (e.g., Ethernet), which enables wireless users to utilize corporate servers and Internet applications.

As an optional feature, however, the 802.11 standard specifies "ad hoc" mode, which allows the radio network interface card (NIC) to operate in what the standard refers to as an independent basic service set (IBSS) network configuration. With an IBSS, there are no access points. User devices communicate directly with each other in a peer-to-peer manner.

Even though it is a peer-to-peer connection, there must still be a host and a client; a host to initiate an ad hoc connection and a client to join an existing ad hoc connection.

Requirements

Both peer devices must have static IPs with the same Default Gateway. Therefore, you must set up a static IP on the terminal (see Static IP on page 1-15).

Initiating an Ad Hoc Connection

You need to set up an ad hoc profile in the WLAN SWC.

1. Open the WLAN SWC; see Accessing the WLAN SWC on page 1-1.
2. Tap the Config tab and tap New.
3. On the Network window, select Ad Hoc or Ad Hoc (WEP) as the Assoc Mode.
4. In the SSID field, enter the network name to use for the connection.
5. Tap OK.
6. On the Config tab, select the name of the profile (the SSID name) and tap Activate to launch the connection.
Setting up the WLAN SWC with DeviceConfig

Overview

DeviceConfig configures the Dolphin terminal. DeviceConfig consists of the DeviceConfig.exe and the DeviceConfig.exm file. DeviceConfig.exe looks for and applies the settings in the DeviceConfig.exm file. You can use the EZConfig Editor to edit the WiFi settings in the DeviceConfig.exm file on the terminal. When you Hard reset (Cold Boot) the terminal and enable the WiFi radio (if it is not enabled by default), the WLAN SWC connects according to the modified settings located in the DeviceConfig.exm.

DeviceConfig.exm File

The DeviceConfig.exm file contains terminal configuration settings. This file’s configuration settings persist through reboots and should be considered system defaults.

Configuring the DeviceConfig.exm File using the EZConfig Editor

EZConfig Editor creates, edits, and manages EXM files for Dolphin terminals. There are two versions of EZConfig Editor: one for the Dolphin terminal and one for the workstation. In the workstation editor, EXM files are edited, saved, then transferred to the terminal. In the terminal editor, EXM files are edited and saved right on the terminal.

Installing EZConfig for Mobility on your Workstation (PC)

2. Locate the product page for your Dolphin model.
3. Select the Software tab.
4. Under the Tools and Utilities heading, click on the listing for EZConfig for Mobility Setup.
5. Follow the security directions as prompted on the screen and click on Download.
6. When prompted, select Save, then select a location on your PC (e.g., your desktop).
7. Double click on the downloaded EZConfig for Mobility Setup.zip file.
8. Double click on the Setup.exe file. Select OK.
9. Follow the screen prompts to install the EZConfig for Mobility program. Once the software is installed, you may delete the zip file.

Modifying the DeviceConfig.exm file

The following instructions explain how to modify the DeviceConfig.exm file using the workstation (PC) version of EZConfig Editor.

1. On your PC, click Start > All Programs > Honeywell > EZConfig for Mobility > EZconfig for Mobility.
2. Select File > Open or click on the Open toolbar button 📄.
3. Select the DeviceConfig.exm file, then click Open.
4. By default, all sections except the About section are disabled in the DeviceConfig.exm, which means that the key values are not applied to the terminal. To use the DeviceConfig.exm file to configure the
terminal, enable the sections and keys required by your configuration.

Right-click and select Enable on the following sections: Radio Manager > WiFi > Security > Supplicant > Profile 1.

Note: Enabling the WiFi section turns the 802.x radio on at startup.

5. Select the Profile 1 section.

6. The keys in the Profile 1 section match the field on the Network Window (see page 1-8). Double-tap on each key value you want to configure and select the desired configurations from the drop-down list.

7. The items in each drop-down list are the same as the items in the drop-down lists on the Network Window (see page 1-8).

8. Select or enter all the items required by your configuration.
a. For Tunnel PAC, Machine PAC, and CA and Client Certificate keys, enter the exact path on the terminal where the PAC and certificate files are located.

The PAC and certificate files **must** be saved on the terminal first!

b. If your configuration uses WEP, select the key type from the drop-down list.

Key validation does not occur when you enter the key in WEP Key1–4 but does occur when the DeviceConfig.exm file is activated on the terminal.

9. Save the DeviceConfig.exm file on your workstation for future reference and close.

**Setting up the Terminal**

1. Select **File > Save to Device As.**

2. Select the appropriate folder(s) for your Dolphin model.

   *Note: If you want the settings to persist through all types of resets (e.g., Soft, Hard and Factory Resets) and kernel upgrades, save the DeviceConfig.exm file to both the permanent and active storage locations.*

<table>
<thead>
<tr>
<th>Dolphin Model</th>
<th>Active Storage Persist through Soft (Warm) and Hard (Cold) Resets</th>
<th>Permanent Storage Persist through a Factory Reset and Kernel Upgrades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dolphin 60s</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
</tr>
<tr>
<td>Dolphin 6000</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
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<tr>
<td>Dolphin 6100</td>
<td>\Honeywell</td>
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<tr>
<td>Dolphin 6110</td>
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<tr>
<td>Dolphin 6500</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
</tr>
<tr>
<td>Dolphin 70e Black</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
</tr>
<tr>
<td>Dolphin 7800</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
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<tr>
<td>Dolphin 99EX</td>
<td>\Honeywell</td>
<td>\IPSM\Honeywell</td>
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<tr>
<td>Dolphin 7850</td>
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<tr>
<td>Dolphin 9700</td>
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<tr>
<td>Dolphin 9900</td>
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<td>\IPSM</td>
</tr>
</tbody>
</table>

3. Hard Reset (Cold Boot) the terminal.
   *Note: Refer to the terminal User's Guide for additional information on the methods and types of resets supported by your Dolphin model.*

4. The WLAN SWC should start connecting using the DeviceConfig settings during Autoinstall.

5. After Autoinstall is complete and the terminal has finished rebooting, open the WLAN SWC (see page 1-1) to verify the configuration is connected and correct.
**Enabling a Profile**

You can have multiple profiles in the WLAN SWC section; however, one needs to be selected as the default configuration so that the configuration connects when the terminal boots up. To select a default configuration, enter the name of the profile as the Value in the **Active Profile** key of the **WiFi > Security > Supplicant** section.

**Changing Power Save Mode**

Power Save Mode is enabled in the radio by default.
Overview

The WLAN SWC offers a number of tools to help you administer your network configurations.

IP Tab

The IP tab enables you to view statistics about the terminal and active network connection.

Release IP
Tap this button to release the current IP address (usually assigned by DHCP).

Renew IP
Tap this button to obtain a new IP address from the DHCP server.
Advanced Tab

The Advanced tab runs several reports that allow you to monitor the background processing of the WLAN SWC. In addition, you can also execute certain commands.

The WLAN SWC supports the following reports and commands (the available options vary depending on the version of SW):

- STATUS (see below)
- STATUS_VERBOSE (see page 4-3)
- DEBUG on (see page 4-3) On
- DEBUG off (see page 4-3) Off

Select the report or command from the pull-down menu, then tap RUN to initiate. The results display on the screen.

STATUS

STATUS queries and retrieves current WPA/EAPOL/EAP status information.

For example:

```
bssid=02:00:01:02:03:04
ssid=test network
pairwise_cipher=CCMP
group_cipher=CCMP
key_mgmt=WPA-PSK
wpa_state=COMPLETED
ip_address=192.168.1.21
Supplicant PAE state=AUTHENTICATED
suppPortStatus=Authorized
EAP state=SUCCESS
```
**STATUS_VERBOSE**

STATUS_VERBOSE is the same as STATUS with more verbosity (i.e., more `variable=value` pairs).

For example:

```
bssid=02:00:01:02:03:04
ssid=test network
id=0
pairwise_cipher=CCMP
group_cipher=CCMP
key_mgmt=WPA-PSK
wpa_state=COMPLETED
ip_address=192.168.1.21
Supplicant PAE state=AUTHENTICATED
suppPortStatus=Authorized
heldPeriod=60
authPeriod=30
startPeriod=30
maxStart=3
portControl=Auto
Supplicant Backend state=IDLE
EAP state=SUCCESS
reqMethod=0
methodState=NONE
decision=COND_SUCC
ClientTimeout=60
```

**DEBUG on**

Enables debug output to a file in `\IPSM` folder.

**DEBUG off**

Disables previously enabled debug output.
Customer Support

**Technical Assistance**

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

- **Knowledge Base:** [www.hsmknowledgebase.com](http://www.hsmknowledgebase.com)
  Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

- **Technical Support Portal:** [www.hmsupportportal.com](http://www.hmsupportportal.com)
  The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

- **Web form:** [www.hsmcontactsupport.com](http://www.hsmcontactsupport.com)
  You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

- **Telephone:** [www.honeywellaidc.com/locations](http://www.honeywellaidc.com/locations)
  For our latest contact information, please check our website at the link above.