Honeywell

THE POWER OF **CONNECTED**

Dolphin Power Tools

Version 5.x for Honeywell Hand Held Computers
powered by Android™ 7

User Guide

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Customer Support

Technical Assistance

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to www.hsmcontactsupport.com.

For our latest contact information, see www.honeywellaidc.com/locations.

1

INTRODUCTION

Overview

Some Honeywell hand held computers include Power Tools apps and utilities you can use to perform standard system tasks and advanced computer customization and configuration. The apps and utilities included vary depending on the computer model, operating system (OS) and the Power Tools version installed.
To see a brief summary about each software app, see page 2.

Honeywell also offers advanced EZConfig for Mobility software for your workstation computer (e.g., desktop or laptop). The advanced software package is used to export custom configuration XML files and generate bar codes when you need to update multiple Honeywell computers with the same configuration set.
To learn how to download and install EZConfig for Mobility, see page 27.

About Graphic and Hardware References Included in this Guide

The screen captures and icons illustrated in this guide may differ from what appears on your hand held computer since variations occur depending on the computer hardware, OS, and software application versions.

The following navigation commands can be found either on the computer touch screen or on the hardware buttons. The icons vary depending on the model and OS.

	Home	Recent	Search	Back
Icons	⌂	⎚	◯	←
	◯	◻		◁

Access All Apps

To access the all apps screen from the Home screen on the computer, tap ⋀ or swipe up from the bottom of the screen.

Software Requirements

Hand Held Computers

Power Tools version 5 is designed to work with Honeywell hand held computers powered by Android 7 or higher.

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ .

3. Touch **Diagnostic Information** ℹ .

4. Touch **SysInfo**. The version number is located under "Power Tools and Demos Info".

Workstation Computers

The optional EZConfig for Mobility software suite is designed to work with the following Microsoft® operating systems: Microsoft Windows® XP, Microsoft Windows 2000, Microsoft Windows NT, Microsoft Windows Vista®, Microsoft Windows 7, Microsoft Windows 8, Microsoft Windows 10, and Microsoft.NET Framework 2.0.

How to Access the Power Tools

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ .

3. Touch an app icon to open the tool.

About the Power Tools

Note: *The tools provided may vary depending on your computer model, OS version, and Power Tools version.*

Icon	Description	Page
	BattMon provides information on the charge status and health of the battery, and provides access to activate battery status notifications and battery charging history logs.	75
	Configure Autorun provides the ability to set applications to automatically run after a reboot.	53

Icon	Description	Page
	EZConfig supports advanced customization and configuration of the hand held computer. EZConfig includes a standard XML editor and configuration bar code scanner feature.	49
	Diagnostic Information provides access to system statistics, notifications and version information about the computer.	76
	The WiFi Diagnostic app provides a central location to view data about connected and available Wi-Fi network access points within range of the integrated WLAN radio in the mobile computer. The app includes a built-in Ping utility that can be used for troubleshooting and testing connections and an IPConfig utility that can be used to assign a static IP Address.	70
	WirelessTether provides the ability to enable range tracking and customized out-of-range alerts for Bluetooth devices paired and tethered to your hand held computer.	69

Exit the Power Tools

Touch the **Back** or **Home** to exit Power Tools. For information on button locations, consult the user guide specific for your hand held computer model. Product guides are available for download from www.honeywellaidc.com.

About Software Updates

Honeywell provides patches and security updates for existing software products at no additional charge. Software upgrades (from one major version to another) may involve additional charges. Some licensed software that Honeywell distributes requires user registration and log in before the software can be downloaded.

Support for Honeywell Safety and Productivity Solutions products is available online through the Technical Support Portal.

Software downloads can be accessed through the Technical Support Downloads Portal.

1. Go to www.honeywellaidc.com.

2. Select **Get Resources** > **Software**.

3. Click on the *Technical Support Downloads Portal* link, https://hsmftp.honeywell.com.

4. Create an account if you have not already created one. You must login to download the software.

5. Install the *Honeywell Download Manager* tool on your workstation (e.g., laptop or desktop computer) prior to trying to download any files.

6. Locate the app or upgrade you want to download in the Software directory tree.

7. Select **Download**. Follow the prompts to download the file.

About Transferring Files via USB Connection

If you plan on using a USB connection to transfer the upgrade files to the hand held computer, make sure you set the USB connection to allow file transfers. To learn more, see the user guide for your hand held computer model.

Install Software Updates with AutoInstall

Important: *The hand held computer must have power for the entire length of the upgrade process or it could become unstable. Do not attempt to remove the battery during the process.*

1. Swipe up from the bottom of the Home screen to access all apps.

2. Tap **Settings** > **Provisioning mode** under *Honeywell Settings*.

3. Tap the toggle button to turn Provisioning mode **On**.

4. Save the upgrade file (*.zip or *.apk) in one of the following folders on the hand held computer:

   - **Internal shared storage\honeywell\autoinstall**
     Software upgrades saved to this folder for installation, do not persist when a Full factory reset or Enterprise data reset is performed.

   - **IPSM card\honeywell\autoinstall**
     Software upgrades saved to this folder, do not persist when a Full factory reset is performed. However, the upgrade does persist if an Enterprise data reset is performed.

5. Swipe up from the bottom of the Home screen to access all apps.

6. Tap **AutoInstall Settings** and verify **Autoinstall** is enabled ☑.

7. Tap **Packages Update** from the AutoInstall Settings screen.

   The computer automatically initiates a reboot and installs the software upgrade. The system update screen appears during the upgrade process. When the update is finished, the lock screen appears.

8. Once installation is complete, turn Provisioning mode **Off**.

Note: *Some updates do not require the computer to reboot before installation.*

Optional microSD Card Method

The hand held computer comes equipped with a microSD card socket. You can install an upgrade from a microSD card you insert in the computer.

Important: *The hand held computer must have power for the entire length of the upgrade process or it could become unstable. Do not attempt to remove the battery during the process.*

1. On the hand held computer, swipe up from the bottom of the Home screen to access all apps.

2. Tap **Settings** ⚙ > **Provisioning mode** under *Honeywell Settings*.

3. Tap the toggle button to turn Provisioning mode **On**.

4. Tap **AutoInstall Settings** 📀. Verify **Autoinstall** is enabled ☑.

5. Press and hold the **Power** button, and then tap **Power off**.

6. On your workstation (e.g., laptop, desktop computer), format the microSD card and create a `\honeywell\autoinstall` folder on the root of the card.

7. Save the upgrade file in the **autoinstall** folder.

8. Install the microSD card in the computer, and then press the **Power** button.

   The computer automatically runs the upgrade found in the autoinstall folder on the card. The system update screen appears during the upgrade process. When the upgrade is finished, the lock screen appears.

9. Once installation is complete, turn Provisioning mode **Off**.

About the Honeywell Upgrader

Use the Honeywell Upgrader app (HUpgrader) to check for and install OTA updates, and view the current OTA version installed on the computer.

Install OTA Updates

To use the HUpgrader to install an Over–the–Air (OTA) update file downloaded from the Technical Support Downloads Portal:

1. On the hand held computer, swipe up from the bottom of the Home screen to access all apps.

2. Tap **Settings** ⚙ > **Provisioning mode** under *Honeywell Settings*.

3. Tap the toggle button to turn Provisioning mode **On**.

4. Save the OTA file (*.zip) in the following folder on the hand held computer:

   • `Internal shared storage\Download`

5. Tap **HUpgrader** to open the Honeywell Updater app.

6. Tap ⋮, and then tap **Select OTA from storage**.
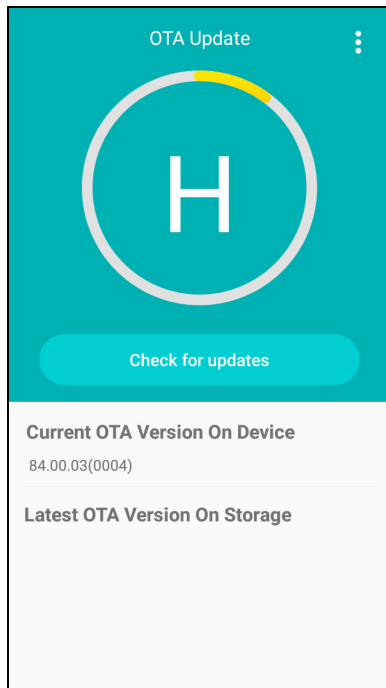
7. Select the storage location (i.e., Internal Storage) where you saved the file.

8. Tap the OTA update file. The computer examines the file, and then starts the installation.
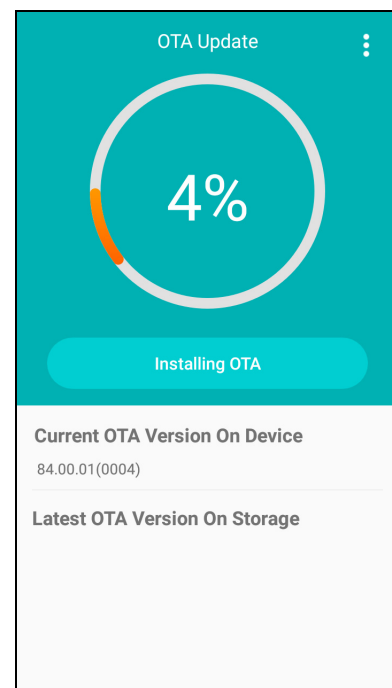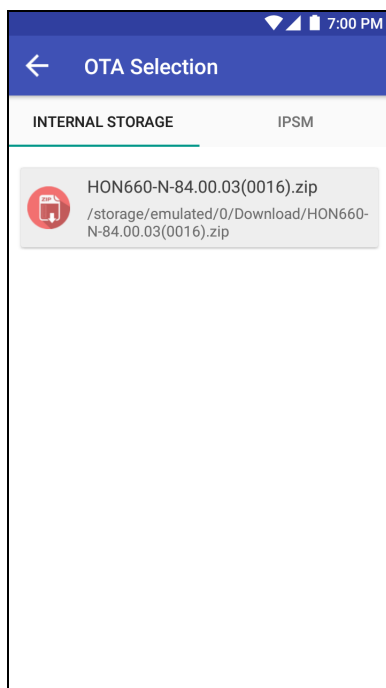
9. Once the installation is complete (100%), select **OK** when prompted to **Reboot** the computer. The computer reboots and finishes the update.

2

ABOUT FILE STORAGE ON THE COMPUTER

Overview

Honeywell hand held computers running Android 7 utilize XML configuration files to define the default settings that persist after a simple Reboot (restart) or Enterprise data reset. The storage location and name of an XML file defines the parameters the computer uses for operations. You can copy and edit the files to change the default settings of the computer but you should never delete, rename or move an XML file from its native location.

More Information

- To learn how to use the standard editor on the hand held computer to modify XML files, see page 23.

- To learn how to install and use the optional advanced EZConfig Editor, see page 27.

- To see an example of how to Configure the Computer Using the Standard Editor, see page 16.

- To see an example of how to Configure the Computer Using the Advanced Editor and AutoInstall, see page 17

- To see an example of how to Configure the Computer Using the Advanced Editor and Bar Codes, see page 19.

Default XML Storage Locations on the Computer

On the hand held computer, the location where an XML file is stored determines whether the configuration file should be implemented after a Reboot or Enterprise data reset.

Important: *File paths are case sensitive.*

About Provisioning Mode

Once you complete the out-of-box initial setup process, Provisioning mode is automatically turned Off (disabled) to improve device security against unwanted modifications to the system.

When Provisioning mode is turned off (disabled):

- Configuration bar codes do not scan and process.
- `\honeywell\autoinstall` folders are inaccessible.

Note: *To learn more about network and security for Honeywell mobile computers with Android operating systems, see the Network and Security Guide available for download from* *www.honeywellaidc.com.*

Enable Provisioning Mode

1. Swipe up from the bottom of the Home screen to access all apps.

2. Tap **Settings** ⚙ > **Provisioning mode** under *Honeywell Settings*.

3. Tap the button to toggle Provisioning mode **On**.

File Directories and Descriptions

Provisioning mode must be turned On (enabled) to view and modify the files in the directories noted in this section.

`/storage/IPSM/honeywell/ezconfig`

Directory Characteristics:

- **`IPSM card\honeywell\ezconfig`** when viewed remotely via a USB connection and file browser (e.g., File Explorer or Windows explorer).
- This folder is created and populated when the Power Tools software is initially installed on the computer at the factory.
- The XML files stored in the directory contain default settings that persist after a reboot or Enterprise data reset unless otherwise specified.
- If a Full factory reset is performed, the files in this directory revert back to their factory state.

`/storage/IPSM/honeywell/ezconfig/generated`

Directory Characteristics:

- **`IPSM card\honeywell\ezconfig\generated`** when viewed remotely via a USB connection and file browser (e.g., File Explorer or Windows explorer).
- This folder is automatically created and populated the first time you access the EZConfig app on the hand held computer.

- When you use the standard editor within the EZConfig app on the hand held computer to edit an XML file, the modified file is saved in this folder.

- The XML files stored in this directory persist after a reboot or an Enterprise data reset.

- If a Full factory reset is performed, the files in this directory are deleted.

Note: *To apply a modified XML configuration file, you must use the* **Update Configuration** *command, and then if prompted,* **Reboot** *the computer. Simply saving the file does not apply the new configuration. When you run the Update Configuration command, files in the* `/storage/IPSM/honeywell/ezconfig` *folder are updated and the configuration change persists after an Enterprise data reset.*

`Storage/honeywell/ezconfig/generated`

Directory Characteristics:

- `Internal shared storage\honeywell\ezconfig\generated` when viewed remotely via USB connection and file browser (e.g., File Explorer or Windows explorer).

- This folder is automatically created and populated the first time you select the Generator option in the EZConfig Power Tool app.

- When the XML files in the folder are generated, they include any custom configurations that have been implemented and saved in the `/storage/IPSM/honeywell` folder.

- The XML files stored in this directory do not persist after a Enterprise data reset.

Note: *The Generator option is used to create copies of the current computer configuration files that are then exported and used in the advanced EZConfig Editor on a workstation computer (e.g., laptop or desktop).*

`/storage/IPSM/honeywell/persist`

Directory Characteristics:

- `IPSM card\honeywell\persist` when viewed remotely via a USB connection and file browser (e.g., File Explorer or Windows explorer).

- This folder is created the first time EZConfig bar codes are scanned to implement a configuration change on the computer.

- The XML files located in the folder are automatically created from the content of the bar codes scanned.

- If a reboot or Enterprise data reset is performed, the XML files in this directory ensure the custom settings implemented by scanning any EZConfig bar codes persists.

- If a Full factory reset is performed the `persist` folder is deleted.

`Storage/honeywell/persist`

Directory Characteristics:

- `Internal shared storage\honeywell\persist` when viewed remotely via a USB connection and file browser (e.g., File Explorer or Windows explorer).

- This folder is created the first time EZConfig bar codes are scanned to configure the computer.

- The XML files located in the folder are automatically created from the content of the scanned bar codes.

- If an Enterprise data reset or a Full factory reset is performed, the `persist` folder is deleted.

To learn more about default XML configuration files on the computer and their storage locations, see page 13.

About the AutoInstall Folders

On standard hand held computers the AutoInstall feature is enabled by default. When Provisioning mode is turned on (enabled) and the AutoInstall feature is enabled, during the power-up boot or reboot process, the following folders are searched for Android application packages (.apk) or .zip files containing applications.

- `Internal shared storage\honeywell\autoinstall` on the computer

- `IPSM card\honeywell\autotinstall` on the computer

- `honeywell\autoinstall` on a microSD card if installed in the computer

Each apk file found is then compared to the applications already installed on the hand held computer and:

- If the application is not installed, AutoInstall installs the application.

- If the application is already installed, AutoInstall compares the versions. If the version in the autoinstall folder is newer than what is already on the computer, the application is installed.

When AutoInstall is turned off (not enabled), the contents of the `autoinstall` folders on the computer and on the optional microSD card are ignored.

To change the AutoInstall setting:

1. Swipe up from the bottom of the home screen to access all apps.

2. Touch **AutoInstall Settings** .

3. Touch **Enable AutoInstall** to toggle AutoInstall on or off.

XML File Descriptions and Locations for Power Tools 5.x

Note: The `/storage/IPSM` directory on the devise is the same as the `IPSM card` directory when viewed via a file browser (e.g., File Explorer or Windows Explorer) over a USB or Ethernet connection.

Important: **File paths are case sensitive.**

XML File	Configuration Settings for . . .	Location
autorun.xml	AutoRun app (see page 53)	`/storage/IPSM/honeywell/ezconfig`
battmon.xml	BattMon app (see page 75)	`/storage/IPSM/honeywell/ezconfig`
bluetoothleash.xml	WirelessTether app (see page	`/storage/IPSM/honeywell/ezconfig`
btprintdemo.xml	BTPrintDemo app	`/storage/IPSM/honeywell/ezconfig`
ezconfig.xml	EZConfig app	`/storage/IPSM/honeywell/ezconfig`
scandemo.xml	ScanDemo app	`/storage/IPSM/honeywell/ezconfig`
signature.xml	SignatureDemo app	`/storage/IPSM/honeywell/ezconfig`
BugReporterService.xml		`/storage/IPSM/honeywell/ezconfig/generated`
DataCollectionService.xml	Scanning	`/storage/IPSM/honeywell/ezconfig/generated`
DeviceConfig.xml	General settings (e.g., personal, system, wireless and networks, feedback, sound and battery).	`/storage/IPSM/honeywell/ezconfig/generated`
Provisioner.xml	Template file used to create instructions to install files for initially staging the computer.	`/storage/IPSM/honeywell/ezconfig/generated`
WebInterface.xml	APIs for web apps	`/storage/IPSM/honeywell/ezconfig/generated`

3

HOW TO CONFIGURE THE HAND HELD COMPUTER

Overview

Honeywell hand held computers running Android 7 utilize a set of XML files stored on the device, which define the default settings that persist after a restart or a Enterprise data reset. By editing the XML files, you can customize the computer configuration to meet your specific application needs.

To support customization, the computers come with an EZConfig app as part of the standard Honeywell Power Tools software package. The app has a built-in editor you can use to make quick and easy real time modifications to the XML files located on the computer. The EZConfig app also includes a scan feature you can use to implement configuration changes by scanning bar codes generated with the optional advanced editor that is part of the Honeywell EZConfig for Mobility software suite.

EZConfig for Mobility software runs on a workstation computer (e.g., desktop or laptop) and is available for download from www.honeywellaidc.com. The advanced EZConfig editor not only delivers the ability to create and export XML files but also the means to generate configuration bar codes you can use for updating multiple Honeywell hand held computers with the same configuration set.

More Information

Configure the Computer Using the Standard Editor

The following example shows how to configure the default Wi-Fi radio setting (e.g., enable or disable) using the standard editor provided on the hand held computer.

This example is based on the assumption the computer is powered by Android 7 and is running an up-to-date Power Tools version (5.x).

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **EZConfig** ⦀ .

3. Touch ☰ next to "EZConfig".

4. Touch **Generator**.

5. Touch **DeviceConfig** 📄 to open the file in the editor.

6. Touch **Wireless and networks** > **WiFi** > **WiFi Settings**.

   As you select each item, the tree structure expands to show the additional sub-sections. Touch the item again and the structure collapses.

7. Locate WifiEnable in the Key list, and then double-click in the Value column to edit the field.

8. Type either **3**, to enable Wi-Fi, or **1**, to disable Wi-Fi.

9. Touch the **Back** button to dismiss the keyboard.

10. Touch the three vertical dots ⋮ in the upper right corner of the screen.

11. Touch **Save**.

12. Touch the dots ⋮ again, and then select **Update Configure**.

13. **Reboot** the computer to apply the changes.

Configure the Computer Using the Advanced Editor and AutoInstall

The following example shows how to configure the default Wi-Fi radio setting (e.g., enable or disable) using the optional advanced editor provided with the EZConfig for Mobility software suite. To learn how to download and install EZConfig for Mobility, see .

This example is based on the following assumptions:

- The computer is powered by Android 7 and is running an up-to-date Power Tools version (5.x).

- EZConfig for Mobility has been installed on your workstation computer.

- An active communication connection has been established between the hand held computer and the workstation computer.

1. On the hand held computer, tap **Settings** ⚙ > **Provisioning mode** under *Honeywell Settings*.

2. Tap the toggle button to turn Provisioning mode **On** and then select **Back** twice.

3. Generate a copy of the XML file you want to change.

   a. Swipe up from the bottom of the Home screen to access all apps.

   b. Touch Power Tools ⚙ > EZConfig ▦ .

   c. Touch ☰ next to "EZConfig".

   d. Touch **Generator**.

4. Copy the generated XML file from the hand held computer to the workstation computer.

   a. Open your workstation file browser (e.g., File Explorer or Windows Explorer).

   b. Locate the hand held computer in the directory tree, and then browse to the `Internal shared storage\honeywell\ezconfig\generated folder`.

   c. Copy the DeviceConfig.xml file to the workstation. You can use the copy and paste or drag and drop commands.
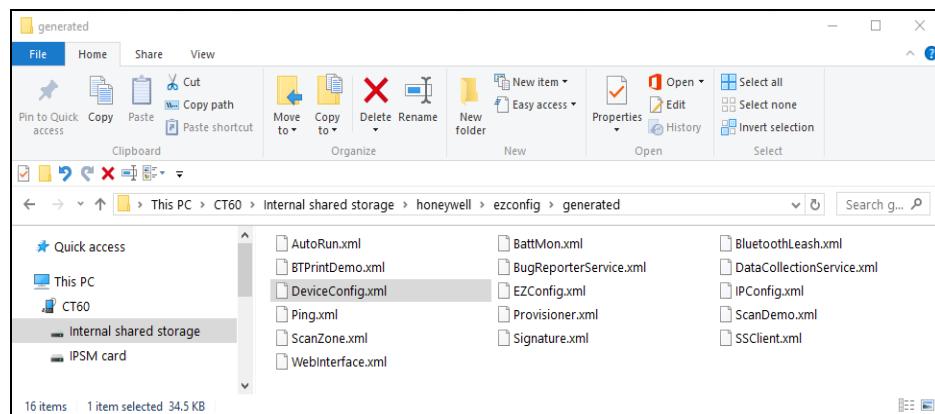
5. Open the XML file in the advanced EZConfig Editor your workstation computer.

a. Click **Start** > **All apps**> **Honeywell** > ☐ **EZConfig Editor**.

b. Click **File Open** 📂.

c. Select the DeviceConfig.xml file you copied to the workstation, and then click **Open**.

d. Click **OK** to continue if a message appears warning you the file was created with an older tool.

6. Modify the XML file.

a. Click **Wireless and networks** > **WiFi**> **WiFi Settings**.
If necessary, click on the "+" to expand and access.

b. Locate WifiEnable in the Key list, and then double-click in the Value column to edit the field.

c. Type either **3** to enable Wi-Fi or **1** to disable Wi-Fi as the default.
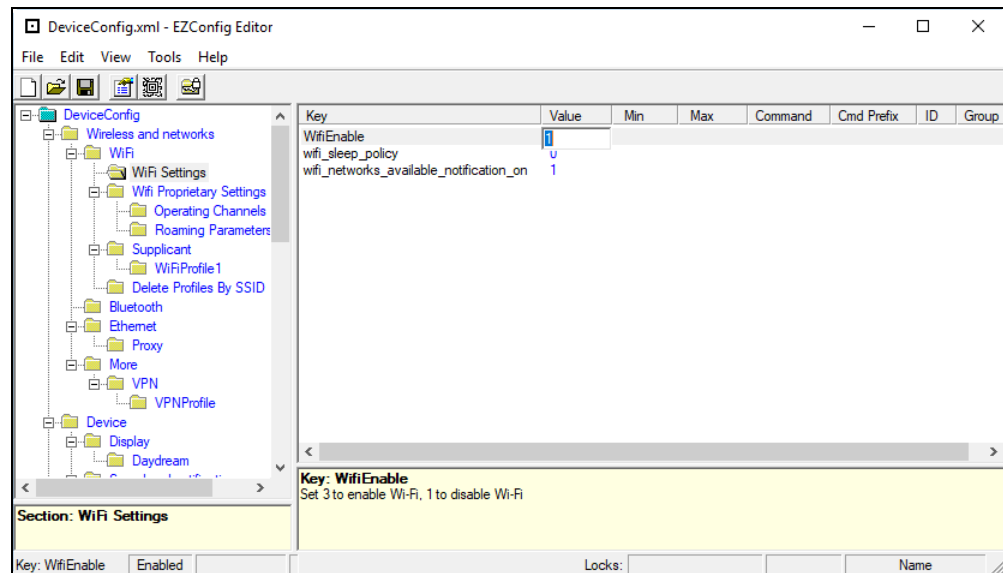
7. Touch **File** > **Save** or the save icon 💾.

Verify the file is was saved as an .xml file and not an .exm file.

8. Open your workstation file browser (e.g., File Explorer or Windows Explorer).

9. Save a copy of the modified DeviceConfig.xml into the `IPSM card\honeywell\persist` folder on the hand held computer. Do not rename the file.

• If the `honeywell` folder does not appear in the `IPSM card` directory, make sure Provisioning mode is turned On (enabled) on the hand held computer.

• You may need to create the `persist` folder under the `IPSM card\honeywell folder`. The `persist` folder only appears on the computer if you have scanned EZConfig bar codes.

10. **Reboot** the hand held computer to apply the changes.

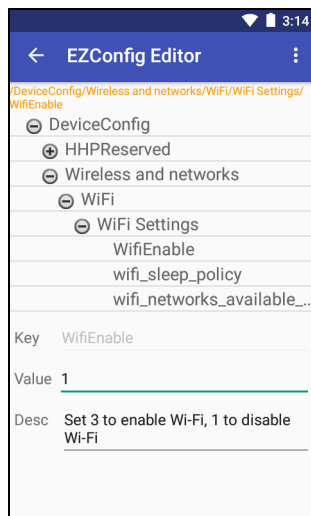# Configure the Computer Using the Advanced Editor and Bar Codes

The following example shows how to configure the default Wi-Fi radio setting (e.g., enable or disable) using the optional advanced editor provided with the EZConfig for Mobility software suite. To learn how to download and install EZConfig for Mobility, see .

This example is based on the following assumptions:

- The hand held computer is powered by Android 7 and is running an up-to-date Power Tools version (5.x).
- EZConfig for Mobility has been installed on your workstation computer.
- An active communication connection has been established between the hand held computer and the workstation computer.

1. On the hand held computer, tap **Settings** ⚙ > **Provisioning mode** under *Honeywell Settings*.
2. Tap the toggle button to turn Provisioning mode **On** and then select **Back** twice.
3. Generate a copy of the XML file you want to change.

    a. Swipe up from the bottom of the Home screen to access all apps.

    b. Touch **Power Tools** 🛠 > **EZConfig** ▥ .

    c. Touch ≡ next to "EZConfig".

    d. Touch **Generator**.

4. Copy the generated XML file from the hand held computer to the workstation.

    a. Open your workstation file browser (e.g., File Explorer or Windows Explorer).

    b. Locate the hand held computer in the directory tree, and then browse to the `Internal shared storage\honeywell\ezconfig\generated` folder.

    c. Copy the DeviceConfig.xml file to the workstation. You can use the copy and paste or drag and drop commands.
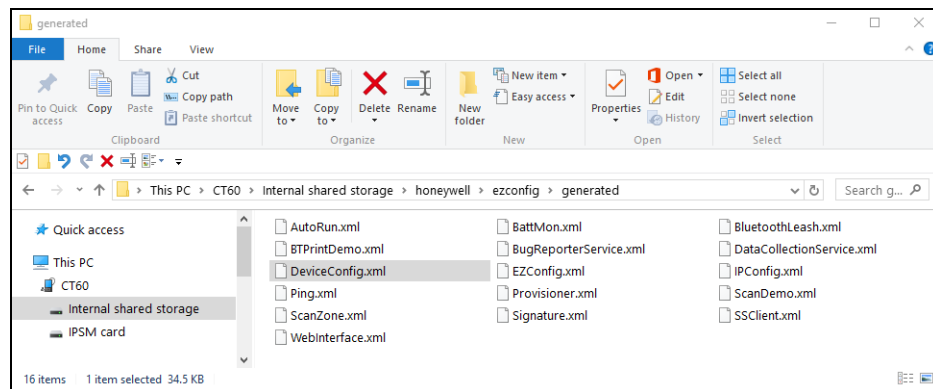
5. Open the XML file in the advanced EZConfig Editor on the workstation.

a. Touch **Start** > **All apps** > **Honeywell** > ☐ **EZConfig Editor**.

b. Touch **File Open** 📂.

c. Touch the DeviceConfig.xml file you copied to the workstation, and then click **Open**.

d. Touch **OK** to continue if a message appears warning you the file was created with an older tool.

6. Modify the XML file.

   a. Touch **Wireless and networks** > **WiFi**> **WiFi Settings**.
      If necessary, click on the "+" to expand and access.

   b. Find **WifiEnable** in the Key list, and then double-click in the **Value** column to edit the field.

   c. Type either **3** to enable Wi-fi or **1** to disable Wi-Fi as the default.
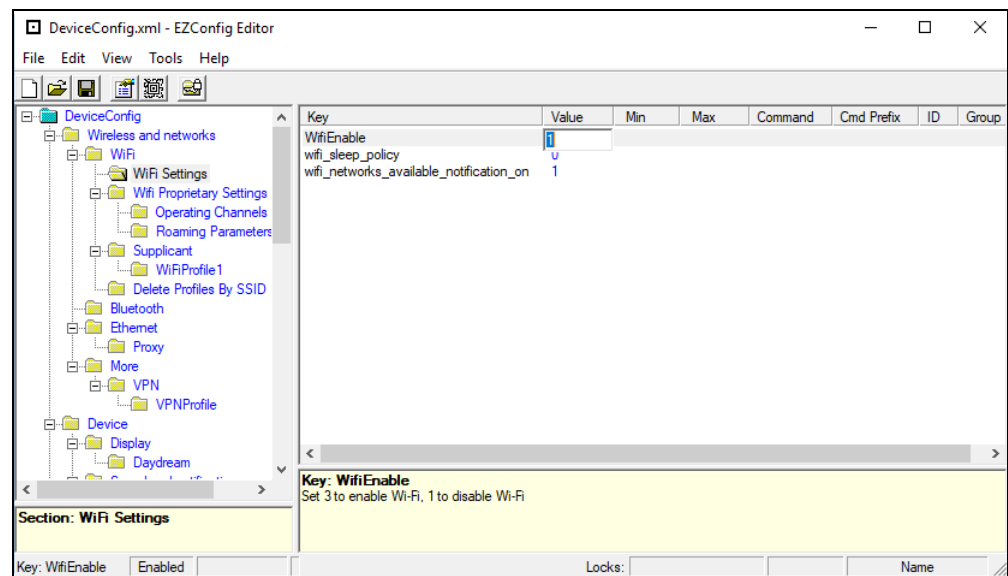
7. (Optional) Touch **File** > **Save** or the save icon 💾 if you want to keep a copy of the modified file on the workstation.

   Verify the file is was saved as an .xml file and not an .exm file.

8. Create and print the EZConfig bar code(s).

   a. Touch the bar code 📱 icon in the tool bar.

   b. Touch **Full Contents** instead of Simplified under "Options" for this example.

   c. Touch **Print**. The default scale factor is 2. The lower the scale factor, the larger the bar code size printed.

For more information on bar codes, see About Creating EZConfig Bar Codes from XML Files on page 41.
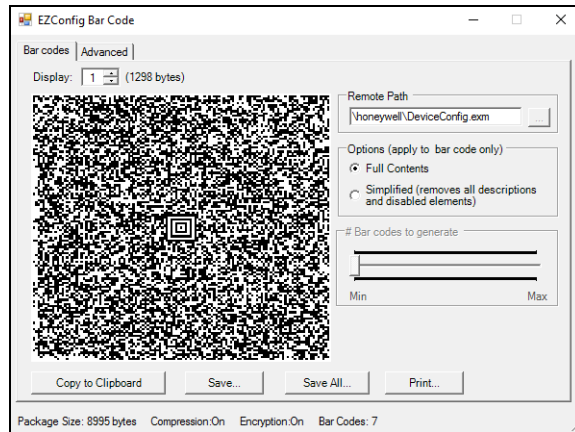
9. Scan the EZConfig bar code(s) with the hand held computer.

    a. Aim the scanner at the first configuration bar code, and then touch **Scan** or press any Scan button.

        EZConfig opens. Upon a successful scan, the display is updated to reflect the total number of configuration bar codes in the set and the code(s) that have been scanned.

    b. Scan the remaining bar code(s) in the set.

        After the last bar code has been scanned, the display reads, "Decode success, try to configure".

10. **Reboot** the computer to apply the changes.

The new configuration is saved in two locations on the device:

*   `Internal shared storage\honeywell\persist\DeviceConfig.xml` and

*   `IPSM card\honeywell\persist\DeviceConfig.xml`.

Note: *The persist folder only appears on the computer if you have scanned EZConfig bar codes.*

ABOUT THE EZCONFIG STANDARD EDITOR AND GENERATOR

Overview

This chapter details the standard generator and editor that is part of the EZConfig app included on your hand held computer. You can use the generator in conjunction with the standard editor to create custom XML files that persist after a reboot or Enterprise data reset. The standard editor gives you the ability to edit and save XML configuration files on the computer without the need for additional devices or software.

More Information

- To learn how to install and use the optional advanced EZConfig Editor, see page 27.

- To see an example of how to Configure the Computer Using the Standard Editor and generator, see page 16.

- To learn more about default XML configuration files on the computer and their storage locations, see page 9.

About the Generator in the EZConfig App

The generator is used in conjunction with the standard editor in EZConfig when you want to create a custom XML configuration based off the current default XML files stored on the computer.

When the Generator is accessed from inside the EZConfig Power Tools app, the default XML files stored in the `\storage\IPSM\honeywell\ezconfig` folder are automatically copied and saved in the `\storage\IPSM\honeywell\ezconfig\generated` folder. In addition to the copies, a DeviceConfig.xml file is also created and saved in the folder. When you select a file from the Generator screen, the copy opens in the standard editor.

You can either use the standard editor to make changes and deploy the new configuration right on the hand held computer or you can save the copy of the generated file and export it to your workstation computer where it can be edited with the advanced EZConfig Editor. To learn more about the advanced EZConfig Editor, see page 27.

Note: *The generated folder is automatically created the first time you select the Generator option in the app.*

How to Use the Generator to Create a Custom XML File

To create a custom XML file that persists after a reboot or Enterprise data reset using the Generator and standard Editor:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **EZConfig** ▥ .

3. Touch ≡ next to "EZConfig".

4. Touch **Generator**.

5. Select the XML file to edit. A copy of the XML file opens in the standard EZConfig Editor.

6. Customize the XML file.

7. Touch ⋮ , and then select **Save**.

8. Touch ⋮ again, and then select **Update Configure**. If prompted, reboot the computer to apply the changes.

How to Open an XML File in the Standard Editor

To open an XML in the standard Editor without using the Generator:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **EZConfig** ▥ .

3. Touch ≡ next to "EZConfig".

4. Touch **Editor**.

5. Touch **OPEN XML** and browse to the storage location of the XML file.
   To view descriptions and file locations for XML files on the hand held computer, see page 13.

6. Touch the name to open the XML file for editing.

About the XML File Structure and Standard Editor

The XML file format is comprised of sections and keys. The keys contain the values that configure the hand held computer. A multi-level, hierarchical, tree structure is supported. The computer reads the highest level (section) first, and then reads the key values in each subsection. In general, the section keys located at the beginning of the XML file identify the XML file. The section keys at the end identify the application version. The key values for file identification and version cannot be edited.

Keys that contain configurable parameters are located in the section(s) between the read only keys at the beginning and end of the XML file. When you select a key from the section tree, the key name, current value, and description appear in the bottom half of the screen. Key fields that can be edited are selectable.

Touch ← to return

The selected key and/or section path appears at the top.

Sections appear in the top half of the screen. Touch the "+" or "–" icon to expand or collapse a

Key name, value and description appear in the bottom half of the window.

Touch ⋮ to open menu.

EZConfig Editor ⋮
← 3:14

/DeviceConfig
⊖ DeviceConfig
⊕ HHPReserved
⊕ Wireless and networks
⊕ Device
⊕ Personal
⊕ System
⊕ Honeywell Settings
⊕ Other settings

Key   DeviceConfig

Value

Desc

Launch Associated App

Update Configure

Save

About

How to Edit an XML File

1. Open the XML file in the standard Editor (see page 24).

2. Touch the + icon to expand the sections and locate the key you want to edit.

3. Touch the key in the section tree, and then select inside one of the Key, Value, or Desc fields to edit the information.

A selected field is underlined in green. If a field is shaded in gray, the text cannot be edited (see example below).

The Key name is not editable (gray).

The Value field is selected.

Brief description of available options.

WifiEnable is the selected Key.
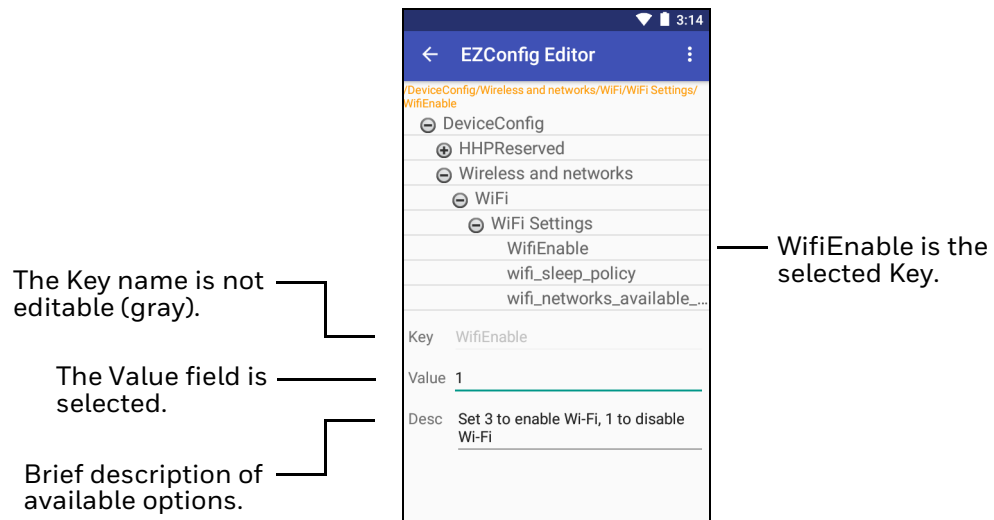
4. Edit the text. If you want to close the on-screen keyboard and edit another field, use the **Back** button, and then select the other field.

5. Touch ⋮, and then select **Save**. Saving does not apply the changes to the application.

6. Touch ⋮ again, and then select **Update Configure**. If prompted, reboot the computer to apply the changes.

About Launching Associated Applications

Some XML files have application associations. To automatically save the XML file and launch the associated application while the XML file remains open:

1. With the XML file open in the standard Editor, touch ⋮.
2. Select **Launch Associated App**. This option is enabled only when there is an application associated with the XML file.

ABOUT THE ADVANCED EZCONFIG EDITOR

Overview

This chapter details the advanced EZConfig Editor that is part of the optional EZConfig for Mobility software suite, available for download from www.honeywellaidc.com. Unlike the standard editor on the hand held computer, the advanced EZConfig Editor works on your workstation computer (e.g., desktop or laptop).

The advanced editor not only delivers the ability to create, edit and export XML files but also the means to generate configuration bar codes that you can use for updating multiple hand held computers with the same configuration set.

Note: *The EZConfig Editor can be used with EXM files and XML files. This document concentrates on the XML files for hand held computers powered by Android 7. Some functions of the EZConfig Editor on the workstation are not applicable to devices with Android and are not covered here.*

More Information

- To learn how to use the standard editor on the hand held computer, see page 23.

- To see an example of how to Configure the Computer Using the Advanced Editor and AutoInstall, see page 17

- To see an example of how to Configure the Computer Using the Advanced Editor and Bar Codes, see page 19.

- To learn more about default XML configuration files on the hand held computer and their storage locations, see page 9.

How to Install EZConfig for Mobility

1. Go to www.honeywellaidc.com.

2. Touch **Get Resources** > **Software**.

3. Click on the *Technical Support Downloads Portal* link, https://hsmftp.honeywell.com.

4. Create an account if you have not already created one. You must login to download the software.

5. Install the Honeywell Download Manager tool on your PC prior to trying to download any files.

6. Navigate to **Software** > **Software and Tools** > **EZConfig for Mobility**.

7. Touch the **EZConfig for Mobility** software file (*.zip).

8. Touch **Download**. Follow the prompts to download the file (*.zip).

9. Double-click on the downloaded **EZConfig for Mobility.zip** file.

10. Double-click on the **Setup.exe** file.

11. Touch **OK**. Follow the prompts to install EZConfig for Mobility. The default installation folder is
    `C:\Program Files (x86)\Honeywell\EZConfig for Mobility.`

How to Open an XML File in the Advanced Editor

To open an XML file stored your workstation (e.g., laptop or desktop):

1. Open the EZConfig Editor on your workstation PC.
   Touch **Start** > **All apps** > **Honeywell** > ▫ **EZConfig Editor**.

2. Touch **File Open** 📂.

3. Browse to the location of the XML file.

4. Touch the file and click **Open**.

5. Touch **OK** to continue if a message appears warning you the file was created with an older tool.

To open an XML file stored on the hand held computer:

1. Establish an active communication connection (e.g., USB, Ethernet) between the workstation computer and the hand held computer.

   If you are using a USB connection, you must enable the USB **Transfer files** option on the hand held computer. See the product user guide for more information about the setting.

2. Open the EZConfig Editor on your workstation PC.
   Touch **Start** > **All apps** > **Honeywell** > ▫ **EZConfig Editor**.

3. Click the **Open File** 📂.

4. Touch the hand held computer (e.g., **CT60**) in the directory tree.

5. Browse to the location of the XML file. To learn about default file storage locations on the computer, see page 9.

6. Touch the file and click **Open**.

7. Touch **OK** to continue if a message appears warning you the file was created with an older tool.

About the Toolbar and Menus

Menus and a command toolbar are located at the top of the EZConfig Editor screen. When a file is open, all the toolbar commands appear. If no file is open, some of the icons appear gray.

File Menu

The following table describes each File menu option and provides the equivalent toolbar icon, if applicable.

Menu Item	Icon	Description
New		Creates a new document. There are two types of documents: • **Configuration Document** See How to Create a New XML Configuration Document (page 40). • **Registry Document** This option is not relevant for devices running Android.
Open		Opens an XML file located on either the workstation computer or the hand held computer. • To open a file on the hand held computer, you must first establish an active communication channel between the workstation and hand held computer. When using a USB connection, the USB **Transfer file** option must be enabled on the hand held computer. See the product user guide for more information.
Recent Files		Lists the recent files opened with the advanced EZConfig Editor.
Open from Device		Menu item not available. Use **Open** instead.
Save		Saves the open file to a location you select on the workstation. This menu item is disabled for new and imported files; use **Save As** instead.

Menu Item	Icon	Description
Save As		Saves the open file with a new name (optional) to the location you select on the workstation or the hand held computer.
		• When you are using the **Save As** command, make sure you add ".xml" as the file extension at the end of the name or the file is automatically saved with an ".exm" file extension.
Save to Device As		Menu item not available. Use **Save As** instead.
Create EZConfig Bar Code		Embeds the open XML file in an Aztec bar code. To learn more, see How to Generate EZConfig Bar Codes from an XML File on page 41.
Properties		Shows the associated application path and arguments of the open XML file.
Exit		Closes the advanced EZConfig Editor.

Edit Menu

For Edit menu options, see How to Work with Sections on page 32.
For Key Edit menu options, see How to Work with Keys on page 37.

View Menu

The following table describes View menu options and provides the equivalent toolbar icon, if applicable.

Menu Item	Icon	Description
Show Locks		Shows or hides the icons indicating if a subsection or key is locked. The key icon means that the section's keys are locked. The lock icon means the section's subsections are locked. To learn more about locks, see How to Read the Status Bar on page 32.

Tools Menu

The following table describes Tools menu options.

Menu Item	Description
Launch Associated Application	Menu item not available.

Menu Item	Description
Simplify Document **Important:** You cannot undo this action!	Simplifies the XML file to make it smaller in size. This option should be used with caution. Simplifying permanently removes: • **Disabled sections and keys** • **Descriptions** • **Bar code settings** Instead of using this option, consider using the simplify option when you generate configuration bar codes. You can simplify the file embedded in the bar code without affecting the open XML file. This reduces the size of the bar code package yet keeps the disabled sections, descriptions and bar code settings in the open XML file for future reference. To learn more, see Simplified (page 44) on the About the EZConfig Bar Code Window.
Warm Boot Device	Menu item not available.
Factory Reset Device	Menu item not available.

View Open XML Files in the Advanced EZConfig Editor

When you open a file in the EZConfig Editor, the XML file content appears in several sections on the screen. Each part of the screen contains content specific to the folder selected in the root node section tree located in the top left quadrant of the screen. When you select a folder, the other areas of the screen update to reveal the content and parameters of the selected section. The folder color indicates the status.

To learn more about color indicators, see About Section-Level Merge Modes on page 35.

EZConfig Editor with DeviceConfig.xml Open
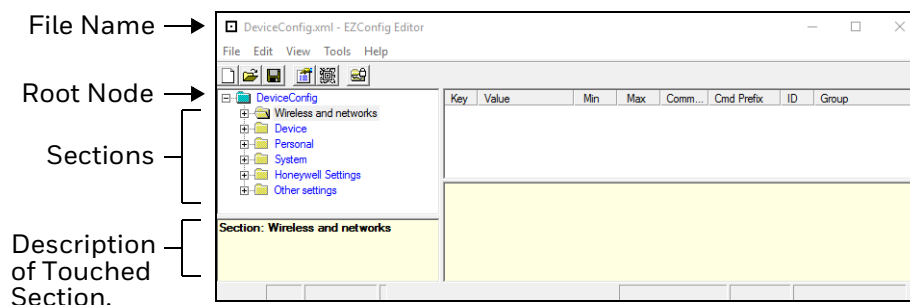
EZConfig Editor with Key Selected

Touched Key

Touched
Section

Keys & Values in
Touched Section

Description of
Touched Key

Status of
Touched
Key
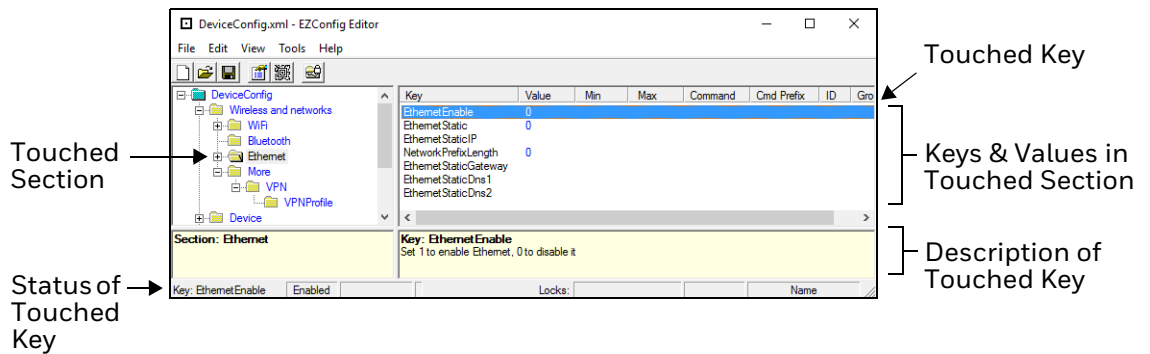
How to Read the Status Bar

The Status Bar appears at the bottom of the window. Information about the selected section or key appears in the following locations.

Status Bar When a Section is Touched

Section
Name

Merge
Mode

Locks on Subsections and Keys
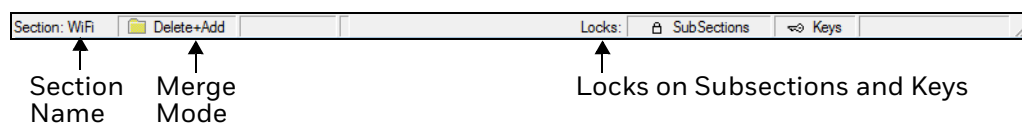
To learn more, see About Section-Level Merge Modes and About Section Locks on page 35.

Status Bar When a Key is Touched

Key
Name

Enabled
or
Disabled

Read
Only

Encrypted

Key Locked by Section
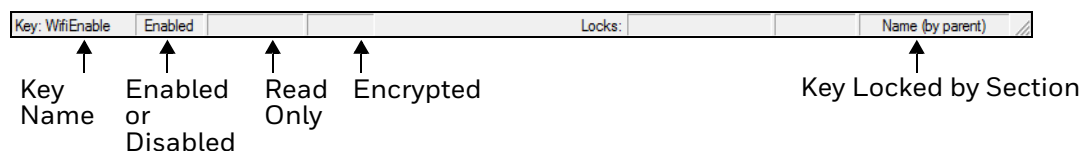
To learn more, see About Key Lock Types on page 39.
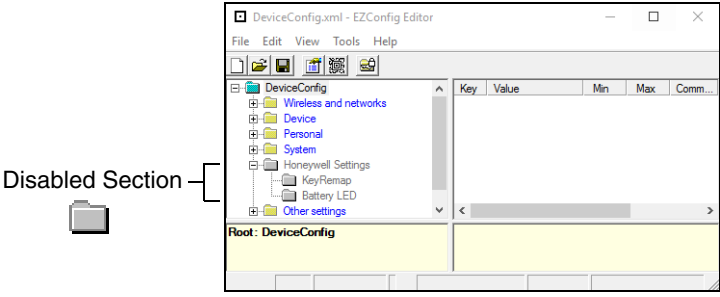
How to Work with Sections

The XML file format supports a multi-level hierarchal (tree) structure that appears in the top left quadrant of the window. The root node identifies the XML file. When you click on the root node, "Root" appears in the name and description area below the tree structure.

Sections appear under the root node and can be expanded or collapsed by selecting the "+" or "-" sign. You can select a section by clicking on name. Only one section can be selected at a time. When a section folder is selected, the keys for the section appear in the upper right quadrant of the screen.

About the Edit Menu Commands for Sections

Touch a section and either click **Edit** to see the available options or right-click to view a pop-up menu of edit commands.

Menu Item	Description
Rename	Activates the name so that you can rename the section. You cannot modify the name if the section is locked; see About Section Locks on page 35.
Cut	Cuts a selected section.
Copy	Copies a selected section.
Paste	Pastes the section that was just cut or copied into a new location at the same level as the original cut or copied section. The pasted section is added above any selected section.
Paste as Child	Pastes the section that was just cut or copied as a child of the selected section. You can cut, copy and paste sections within an XML file or across XML files (see page 34).
Delete	Deletes a selected section. Because you cannot undo a delete, consider disabling the section (see Disable All on page 33) instead of deleting.
Enable	Enables sections that were previously disabled. You can enable a section only if the parent section is enabled. Sections are enabled by default. To enable all the keys inside a selected section: • Hold down the SHIFT button, right-click and then select Enable All.
Disable All	Disables sections and all of its keys. Disabled sections remain in the file and appear as a gray folder. If you disable a section that has child sections, all of the child sections and their keys are automatically disabled. The child section folders also appear in gray. When reading the XML file, the hand held computer behaves as though disabled sections are not there and moves on to read the next enabled section. Disabled sections can be removed from the XML file permanently using the Simplify Document (see page 31) option. If you want to keep the disabled sections in the XML file on the workstation but not in the file deployed to the hand held computer, use the Simplified option (see page 44) when creating the EZConfig bar code package.

Menu Item	Description
Insert Section	Inserts a new section above the selected section. You can also press the Insert key (INS). If you want to add a section directly under the root node, use the Append Child Section since all sections are child sections of the root node.
Append Child Section	Adds a new child section to a selected section. The new child section is inserted below the previous section.

How to Modify a Section Name

1. Double-click on the section or select **Edit** > **Rename** with the section selected.

2. Type in the new name.

3. Press **Enter**.

Note: *You cannot modify the name if the section is locked or disabled; see About Section Locks on page 35.*

How to Modify a Section Description

Descriptions are not required to process key values but do help document the XLM file and they often contain valuable information.

1. Click on the section.

2. Click inside the section description box (lower left quadrant of the screen).

3. Type the new description.

Note: *You cannot modify descriptions of locked sections.*

How to Move a Section

To move sections within an XML file, use the drag and drop method. By default, sections are dropped at the same level in the tree.

For additional functionality when using drag and drop, press and hold:

• ALT to move a section as a child section.

• CTRL to copy a section and drop the copy at the same level in the tree.

• CTRL + ALT to copy a section and drop the copy as a child section.

Note: *You can select only one section at a time.*

How to Copy Sections Between Two XML Files
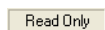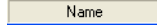
1. Open two instances of the EZConfig Editor. One instance for each XML file.

2. Touch the section you want to copy.

3. Right-click and select **Copy** or select **Edit** > **Copy**.

4. Touch a section in the target XML.

5. Do one of the following:

    - Right-click and select **Paste** if you want the section added above the selected section.

    - Right-click and select **Paste Child** if you want the section added to the target section as a child (subsection).

Note: *To paste the first section into a new file, you would use the Paste Child option since all sections are child sections of the root node.*

About Section Locks

The status bar, at the bottom of the window, indicates what type of lock is applied to a selected section.

Lock Type	Status Bar Indicator	Description	Effect
Read Only	Read Only	The section name and description are locked as read-only. They appear in red.	Section name and description cannot be modified.
Lock Name	Name (by parent)	The child section name is locked by the parent section.	Section name and description cannot be modified.
	Name	The section name is locked individually.	Name and Description cannot be modified.
Lock Key	Keys	All keys are locked.	Key names and descriptions cannot be modified. Keys cannot be added, moved, or deleted within the section.
Lock SubSection	SubSections	All immediate subsections are locked.	Immediate subsection names and descriptions cannot be modified. Immediate subsections cannot be added, moved, or deleted.

Note: *All locks are applied to each individual section and are not recursive. Only text that appears in blue can be modified.*

About Section-Level Merge Modes

Merge modes determine how sections are handled when an updated XML file is deployed to a device where an existing version of the XML file already exists. At the time of shipment, all XML files saved on hand held computers have section-level merge modes defined according to the content of the sections.

Merge modes are indicated by the color of the folder icon and in the Status Bar at the bottom of the window.

Mode	Description	Merge Effect
📁 Delete + Add	Deletes non-common children elements (i.e., subsections and keys) in the target file, and then adds the new information from the bar code. The new section replaces the old section. This is the default merge mode for new sections. The section folder appears yellow.	Exclusive
📁 Disable + Add	Disables non-common children elements (i.e., subsections and keys) in the target file, and then adds the new information from the bar code. The section folder appears orange. Disabled sections and keys removed from the simplified bar code end up as disabled in the target file.	Exclusive
📁 Add Only	Adds new information (i.e., sections and keys) to the existing section. If this is a brand new section, the new section is added to the existing XML file. The section folder appears blue. Disabled sections removed from the simplified bar code are not modified in the target file.	Inclusive

How to Change a Section-Level Merge Mode

1. Touch a section.

2. Right-click to access the Edit menu. A check mark appears next to the current Section-Level Mode.
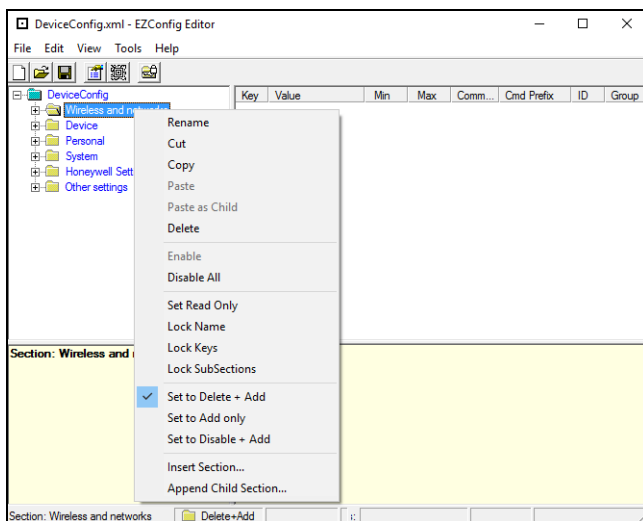
3. Touch a section-level merge mode (i.e., Set to Delete + Add, Set to Add only, Set to Disable + Add). The folder color and merge mode indicator in the status bar at the bottom of the window changes immediately after selection.

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How to Work with Keys

Keys reside inside sections and have a Name, a Description, and a Value.

About the Edit Menu Commands for Keys

Touch a key and either click **Edit** to see the available options or right-click on your mouse to view a pop-up menu that includes the edit commands.

Menu Item	Description
Rename	Activates the key name so that you can rename the key. Rename is disabled if the key is locked or disabled; see About Key Lock Types (page 5-39).
Cut	Cuts the selected key.
Copy	Copies the selected key.
Paste	Pastes the key just cut or copied into the selected section. Disabled keys can be pasted only as children of a section.
Paste as Child	Pastes the key just cut or copied into the selected section. Keys are not multi-level; all keys paste at the same level within a section. You can cut, copy and paste keys within an XML file or across XML files.
Delete	Deletes the selected key. You cannot undo a delete; you might want to consider disabling the key rather than deleting.
Enable	Enables keys that were disabled. When a key is enabled, the client application can read and apply the key value. When you enable a key, make sure to specify a value for that key. Do not leave the value blank. To enable a key, its parent section must be enabled.
Disable	Disables keys. Keys appear gray if they have been disabled. Disabled Key The computer does not read disabled keys, and disabled keys are deleted if the file is simplified; see Simplify Document on page 31. Disabling a Key is not the same as setting the Key Value to "0" or "Disable". When you disable a Key the hand held computer behaves as if the key is not there when reading the file and simply moves on to read the next enabled key. An enabled key, with a value set to "Disabled" or "0" is still recognized when the hand held computer reads the file.
Insert New Key	Inserts a new key above the selected key. You can also press the Insert key (INS).

How to Modify Key Names

1. Double-click on the key or select the key and click **Edit** > **Rename**.

2. Type in the new name.

3. Press **ENTER**.

Note: *You cannot modify the description if the key is locked; see About Key Lock Types on page 39. Only text that appears in blue can be modified.*

How to Modify Key Values

1. Double-click on the value for the key or select the value for the key and click **Edit** > **Rename**.
   If no value shows, click in the value column next to the key name.

2. Type in the new value.

3. Press **ENTER**.

How to Modify Key Descriptions

Descriptions are not required to process key values but do help document the XML file and often contain valuable information.

1. Click on the key.

2. Click inside the key description box (lower right quadrant of the screen).

3. Type the new description.

Note: *You cannot modify the description if the key is locked; see About Key Lock Types on page 39.*

How to Move Keys

To move keys within an XML file, use the drag and drop method. Press and hold the CTRL key to drag and drop a copy of the key to the new location.

Note: *You cannot move a key if it is locked by its section.*

How to Copy Keys Between Two XML Files

To copy keys between XML files:
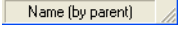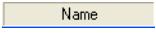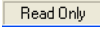
1. Open two instances of EZConfig Editor. One instance for each XML file.

2. Touch the key you want to copy.

3. Right-click and select **Copy**.

4. Touch the target section where you want to add the key.

5. Right-click and select **Paste**.

Note: *Keys are always added at the same level within a section.*

About Key Lock Types

The status bar, at the bottom of the window, indicates what type of lock is applied to a selected key.

Lock Type	Status Bar Indicator	Description	Effect
Name Lock	Name (by parent)	Keys are locked by the section.	Name and Description cannot be modified. Keys cannot be added, moved, or deleted within the section.
	Name	The key name is locked individually.	Name and Description cannot be modified. These keys can be moved.
Read Only	Read Only	Read-only keys cannot be modified in any way. They appear in red.	Name, Description, and Value cannot be modified. Keys cannot be added, moved, or deleted within the section.
Encrypted	Encrypted	The key value appears as asterisks (*) for added security.	Encrypted keys are also stored encrypted in the XML file. If you open the XML file in a text editor, you won't see the data as clear text.

Note: *Locked and Read Only properties are not recursive. Properties are applied to each individual key. Only text that appears in blue can be modified.*

How to Change a Key Lock Type

1. Touch a key.
2. Right-click to access the edit menu.
3. Touch a lock type (i.e., Encrypt/Decrypt 40-Bit, Encrypt/Decrypt 128-Bit, Set/Remove Read Only, Lock/Unlock Name). The color of the key text changes depending on your selection.

Save an XML File Directly to the Hand Held Computer

1. Establish an active communication connection (e.g., USB, Ethernet) between the workstation computer and the hand held computer.

   If you are using a USB connection, make sure the USB **Transfer File** setting is enable on the hand held computer. See the product user guide for more infor-mation about the setting.
2. Open the file in the advanced EZConfig Editor on your workstation.
3. Click **File** > **Save As**.
4. Touch the hand held computer in the directory tree (e.g., CT60).

5. Browse to where you want to save the XML file. To learn about default XML file storage locations on the computer, see page .

6. Touch the target folder and click **Save**. The file is downloaded directly to the hand held computer.

How to Create a New XML Configuration Document

To create new XML files that are configuration documents, you can open an existing XML file and save it with a new name or create a new XML file from scratch.

To create a new XML file from scratch:

1. Click **File** > **New** > **Configuration Document**. The root node is created and appears as the top level section.

File Name →

Root Node →

Root Section
Name &
Description →
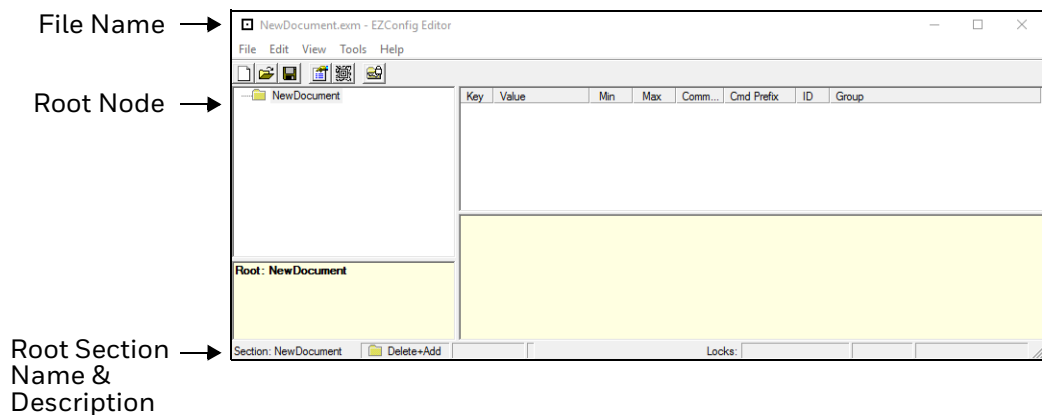
2. Click **File** > **Save As**.

3. Type the new file name. Include an ".xml" extension in the name (e.g., ConfigurationB.xml). If you do not include ".xml", the software defaults to an ".exm" file extension.

4. Click **Save**. The root node name and description automatically update to match the file name.

5. To create the first subsection, select the root node, right-click, and then select **Append Child Section**.

6. Type a name for the section, and then press **Enter** or click outside the text field.

7. (Optional) Double-click on the section description to edit or add information.

8. Continue to add sections as needed.

   • To add a new section at the same level, right-click, and then select **Insert Section**.

   • To add a new section one level down, right-click, and then select **Append Child Section**.

9. To add keys, select a section.

10. Right-click in the key value section, and then select **Append Key**.

11. Type a name for the Key and press **Enter**. You can also click outside the text field to leave the text input field.

12. (Optional) Double-click on the key description if you want to edit or add information.

13. Continue adding sections and keys.

14. If necessary, associate the XML file with an application. To learn how see About Creating EZConfig Bar Codes from XML Files (page 41).

15. Click **File** > **Save**.

About Creating EZConfig Bar Codes from XML Files

When you generate EZConfig bar codes from within the advanced editor, the software embeds the open XML file into a package of Aztec bar codes. The codes can then be scanned, decoded and deployed with the EZConfig app on the hand held computer. This allows the quick and easy configuration of one or multiple hand held computers with the same configuration set without the need to connect the devices to a workstation computer.

This section explains how to generate EZConfig Bar Codes from within the advanced EZConfig Editor. You can also generate bar code packages from the EZConfig Packager utility. Both the advanced EZConfig Editor and the EZConfig Packager are part of the EZConfig for Mobility software suite. The EZConfig Packager utility provides the ability to add more than one XML file to an EZConfig bar code package. To learn more about the EZConfig Packager utility, see the user guide provided with the software.

How to Generate EZConfig Bar Codes from an XML File

When creating a bar code, the advanced editor automatically encrypts and compresses the data in the XML file. The XML file is stamped with the time and date the moment EZConfig Editor creates the bar code. The amount of data in the XML file determines how many bar codes are generated in the package and the physical size of each bar code. More data means a larger quantity of bar codes and a larger bar code size. You must scan all the bar codes to deploy the package on the computer. To learn more about changing the quantity and code size, see page 42.

To generate a bar code package:

1. Open the XML file you want to generate as bar codes in the advanced EZConfig Editor.

2. Click **File** > **Create EZConfig Bar Code** or select the ▣ icon on the toolbar.

The advanced editor generates the bar code(s) and opens the EZConfig Bar Code window. Details of the bar code package appear in the window.
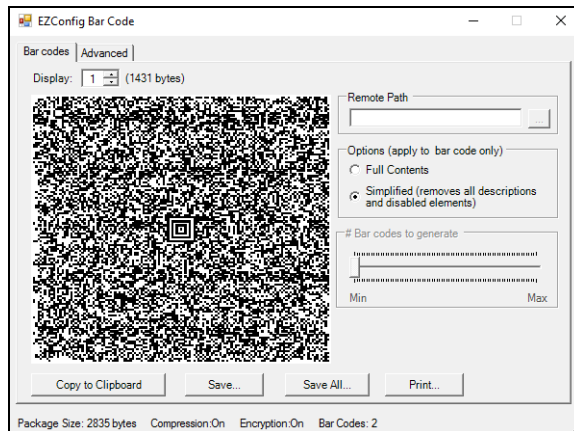
3. (Optional) Modify the package settings. To learn how, see About the Bar Code Tab Settings on page 43 or About the Advanced Tab Settings on page 44.

4. Touch how you want the bar codes exported.

- Export a bar code sheet containing the generated bar codes. The sheet can be printed from a laser printer, copied to the clipboard, or saved as an HTML file. To learn more, see About the Print and Save Options on page 47.

- Export individual bar code(s) as .tif or .png graphic files that can then be emailed or printed. To learn more, see About the EZConfig Bar Code Window on page 43.

How to Change the Bar Code Size and Quantity

The amount of data in the XML file determines how many bar codes are generated and the physical size of each bar code. More data means a larger quantity of bar codes and a larger bar code size. You must scan all the bar codes to deploy the package on the hand held computer. EZConfig Editor offers four ways to control how many bar codes are produced and adjust the size of each bar code.

You can:

- Set the byte size limits the determines how much data each bar code can contain; see Max bar code size on page 45.

- Split the data across a specified number of bar codes; see # Bar codes to generate on page 44.

- Simplify the XML file in the bar code; see Simplified on page 44.

- Scale the bar codes on the bar code sheet; see Bar Code Scaling Factor on page 47.

About the EZConfig Bar Code Window

The EZConfig Bar Code Window is broken into two tabs: the Bar Codes tab and the Advanced tab. The Bar Codes tab previews and customizes the generated bar code(s). The Advanced tab contains settings that tell the EZConfig app how to process the XML file on the hand held computer.

The following information is provided at the bottom of either tab:

- **Package Size**
  The total size of the bar code package.

- **Compression and Encryption**
  Notifies you that compression and encryption are both turned On. Compression and encryption are always turned On by default. EZConfig Editor uses 128-bit encryption automatically.

- **Bar Codes**
  The total number of bar codes generated. This number changes as you move the slider on the Bar Codes tab.

About the Bar Code Tab Settings
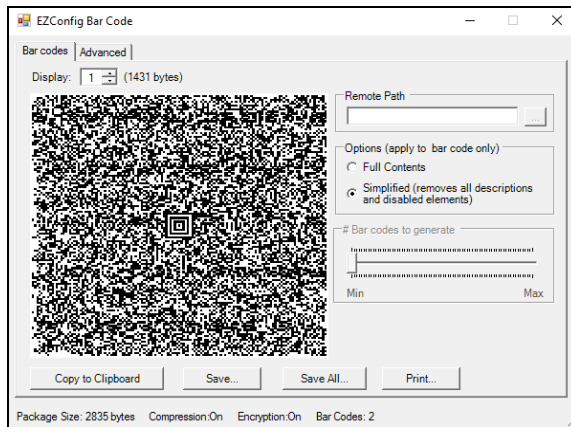
Field/Option	Description
Display	Indicates which bar code is appears in the preview area. The default value is "1"; the first bar code in the package. If more than one bar code was generated, you can use the up and down arrows to scroll through the bar codes.
(___ bytes)	Displays the exact byte size of the bar code displayed in the preview area. The total Package Size appears at the bottom of the window. The sum of bar code size is typically larger than the package size.
Remote Path	Defines the name and active storage location of the XML file. The active storage location is where you want the XML file deployed on the hand held computer. You can modify the field by clicking on it and typing in a new file name and location. For example: `\storage\IPSM\honeywell\deviceconfig.xml`

Field/Option	Description
Full Contents (Radio button located under "Options")	When selected, includes the full content of the XML file in the bar code, without simplifying.
Simplified (Radio button located under "Options")	When selected, simplifies the XML file in the bar code, which removes disabled sections, description information, and bar code settings (if any). Simplification decreases the size of the bar codes without simplifying the XML file. Only the bar codes are affected by this option. Simplified is selected by default. The Package Size field at the bottom of the window displays the differences in total package size. Individual bar code size can be seen in the Display field.
# Bar codes to generate	This adjustment is active only if the Always use minimum # bar codes (page 45) option is not selected on the Advanced tab. When the slider is active, click and drag the slider toward minimum (Min) or maximum (Max) to change the number of bar codes generated. As you move the slider, the bar code preview and the number located next to "Bar Codes", at the bottom of the window, update to show the change.
Copy to Clipboard	Copies the bar code in the preview area to the clipboard. Use this option to paste the bar code into another application.
Save	Saves the bar code in the preview area as a graphic file (.png or .tif). By default, the name of the graphic file is the same as the name of the open XML file. You can enter a different name when saving.
Save All	Saves all bar codes in the package as individual graphic files. By default, the graphic files are saved with the same name as the open XML file and sequential numbering at the end to distinguish the individual graphic files from each other (e.g., DeviceConfig0001.png and DeviceConfig0002.png).
Print	Opens the printing window where you can select print options and print the bar code package. To learn more, see About the Print and Save Options on page 47.

About the Advanced Tab Settings
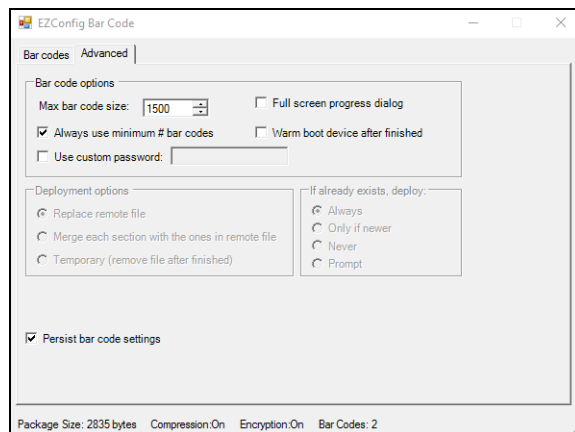
Bar Code Options

These options determine some of the basic bar code parameters.

Field	Description
Max bar code size	Sets the maximum amount of data (in bytes) one bar code can contain. The lower the number of bytes, the smaller the bar code. Use the up or down arrows to adjust the amount. The total number of bar codes created and the total package size (in bytes) appears at the bottom of the screen.
Always use minimum # bar codes	By default, this option is enabled. The data is calibrated to minimize the quantity of bar codes generated for the package. This option disables, the bar code adjustment slider on the Bar Codes tab.
Use custom password	Enables password-protection for the bar code package generated. If you enable the password requirement, the same password must be entered on the hand held computer or the bar code data does not process. If the passwords do not match, a message stating, "This config file is not supported" appears on the screen. To enable password-protection, check the box next to "Use custom password", and then enter the password in the field provided. The password must contain 16 characters and is only visible as long as the EZConfig Bar Code window is open. If you close the window and reopen it, the password no longer appears due to the encryption. To learn how to enter the password on the hand held computer, see How to Set a Custom Password for EZConfig Bar Codes on page 50.
Full screen progress dialog	This option runs the deployment progress dialog box on the hand held computer in full screen mode so that the user cannot open another application while the bar codes are being deployed on the computer.
Warm boot after finished	This option is not supported for Android devices.

Deployment Options

These options determine how to deploy the XML file on the hand held computer.

Field	Description

Replace remote file	Replaces the existing file; no section-level merge modes are applied. This option determines how the XML file should be deployed if an XML file of the same name and location exists on the hand held computer.
	
	When selected, the following options are available under "If already exists, deploy":
	
	• **Always**
	  Touch to always replace the existing file.
	
	• **Only if newer**
	  Touch to replace the existing file only if the file in the bar code is newer than the existing.
	
	• **Never**
	  Do not deploy the new file; this preserves the existing file.
	
	• **Prompt**
	  EZConfig Client asks the user if they want to overwrite the existing file during deployment.

Merge each section... (Default selection)	Deploys information according to the section-level merge mode settings; see About Section-Level Merge Modes on page 35.
	
	When selected, the following options are available under "If already exists, deploy":
	
	• **Always**
	  The section-level merge mode settings are always used.
	
	• **Only if newer**
	  The section-level merge mode settings are only used if the sections are newer than the existing files on the computer.

Temporary	Temporarily deploys the XML file with a temporary name, and then deletes the file after processing is finished. If the hand held computer contains a previous XML file with the same name, the previous XML file is preserved. When you enable the Temporary option, you should also enable the "Wait until finished" option in the documents Properties form. **Warning:** Applications that stay in the background (e.g., Scanwedge or Rasman) should not be used with temporary files.

Persist Bar Code Settings

This option determines if the EZConfig Bar Code build settings are stored within the XML file and bar codes.

Field	Description
Persist bar code settings	When enabled (☑) the settings from the Bar Codes and Advanced tabs are stored within the XML file so that the same bar code settings are applied the next time a bar code is created. This increases the size of both the XML file and the bar code(s). If the **Simplified** option on the Bar Code tab is selected, bar code setting information is not included in the bar code but remains in the open XML file.

About the Print and Save Options

On the Bar Codes tab, when you click **Print**, a bar code printing window opens offering you a number of printing options.

Field/Option	Description
Preview Area	This is the largest section of the tab window and provides a preview of the bar code sheet. Use the scroll bars to see all the bar codes.
Header	Type in a custom header for the page.
Footer	Type in a custom footer for the page.
Bar Code Scaling Factor	Adjusts the size of each bar code by scaling all of them up or down, which determines how many bar codes can fit on each page. This does not change the amount of data in each bar code, just the size of the bar code on the page.
Save	Saves the bar code sheet as an HTML file.
Preview	Select to see a print preview. Click **Print** on this window to print your bar codes.

6 ABOUT THE SCAN FEATURE IN THE EZCONFIG APP

Overview

The scan wedge feature in the EZConfig app on the hand held computer decodes configuration bar codes created in the advanced EZConfig Editor and updates the computer to the embedded configuration. If an application is associated with the XML file embedded in the bar code(s), the EZConfig app launches the application to processes the decoded data.

The scan wedge feature in the EZConfig app decodes bar codes with 40-bit and 128-bit encryption.

More Information

The scan wedge feature is managed through the **Settings** app. Swipe up from the bottom of the Home screen to access all apps and then select **Scanning** under *Honeywell Settings*.

To learn more about managing the Scanning settings, see the user guide for your hand held computer model.

How to Scan EZConfig Bar Codes

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **EZConfig** .

3. Aim the scanner at the first configuration bar code, and then select **Scan** on the screen. The total number of bar codes in the configuration set and the total number of bar codes successfully scanned appear on the screen.

4. Scan the remaining bar code(s) in the set. The bar codes can be scanned in any order.

After the last bar code has been scanned, a "Decode success, try to configure" message appears indicating the new configuration has been saved in two loca-tions on the device:

- `Internal shared storage\honeywell\persist\DeviceConfig.xml`
- `IPSM card\honeywell\persist\DeviceConfig.xml`

5. **Reboot** the computer to apply the changes.

Note: *The* `persist` *folder is created in both locations the first time the hand held computer is used to scan EZConfig bar codes. The XML files saved in the persist folders on the computer include the data embedded in the bar codes. The name of the files are the same as the name of the XML file used to generate the bar codes in the advanced EZConfig Editor.*

About Multiple Bar Code Packages

Some XML files generate more than one bar code. If multiple bar codes were generated, the EZConfig app recognizes that there is more than one bar code in the package and tracks each bar code scanned and decoded. Bar codes can be scanned in any order, but the data is not deployed until all the bar codes in the package have been scanned.

About the EZConfig Scan Window

The following information appears on the app screen when you scan an EZConfig bar code:

Field	Description
Is EZConfig barcode	Identifies the scanned bar code as an EZConfig bar code.
Total barcodes	Displays the total number of bar codes in the set.
Current barcode	Identifies the last bar code scanned.
Scanned barcodes	Identifies all bar codes in the set that have been scanned.

How to Set a Custom Password for EZConfig Bar Codes

When you use the advanced EZConfig Editor to generate bar codes, you have the option to enable password-protection (). If you enable the password requirement, the same password must be entered on the hand held computer or the bar code data does not process.

To enable the password on the computer:

1. Touch ⋮ , and then tap Set custom password.

Touch ⋮ to open menu.

Set custom password

About
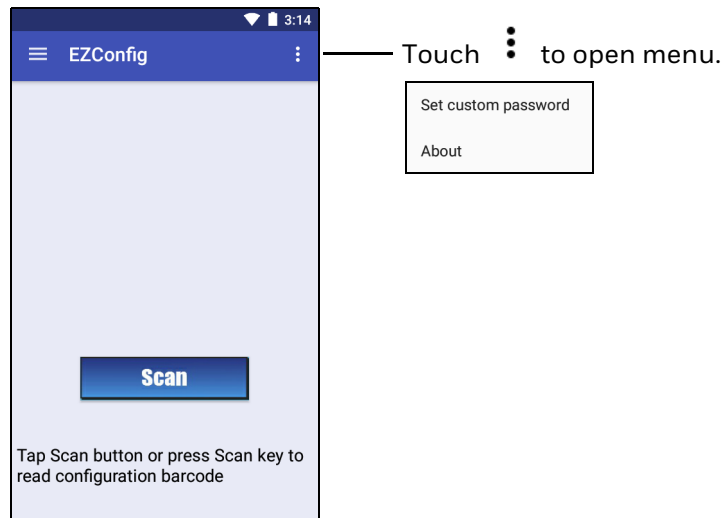
2. Check the **Set custom password** box.
3. Touch the entry field (green line) and enter the password.

   Passwords are case sensitive and must match the password created in the advanced EZConfig Editor when the bar code package was generated.
4. Touch outside the password box to exit the screen.

Note: *If the password entered does not match the password used when the bar code was created, the "This config file is not supported" message appears on the hand held computer.*

To remove the password:

1. Touch ⋮, and then tap **Set custom password**.
2. Touch the box next to Set custom password to remove the check mark.

7

ABOUT THE CONFIGURE AUTORUN AND AUTOINSTALL APPS

Overview

Two apps affect how the computer behaves on startup:

- **Configure Autorun**
  Set the applications you want automatically launched after a computer reboot.

- **AutoInstall**
  Specify if files located `honeywell\autoinstall` folders are automatically installed after a computer reboot.

About the Configure Autorun App

The Configure Autorun app is used to specify the applications you want automatically launched after a computer reboot. Applications that can be set to run automatically are listed on either the **Normal** screen or the **Autorun** screen. You can toggle between the two screens by selecting the heading. The heading that the app appears under indicates if it has been set to automatically run after a reboot. If an application is set to auto-run, it is moved from the **Normal** screen to the **Autorun** screen.

How to Configure an App to Autorun

1. Swipe up from the bottom of the home screen to access all apps.

2. Touch **Power Tools** > **EZConfig** .

3. Touch **Configure Autorun** .

4. Touch **Normal** if it is not already selected.

5. Touch and hold an app.

6. Touch **OK** to confirm. The app now appears on the Autorun tab instead of the Normal tab.

You can use the same method in reverse to remove an app from the Autorun list:

1. Touch the **Autorun** tab if it is not selected.

2. Touch and hold the app on the list you want to remove from the Autorun list.

3. Touch **OK** to confirm. The app now appears on the Normal tab instead of the Autorun tab.

About the AutoInstall App

Note: *AutoInstall requires Provisioning mode be turned On. To learn more see, About Provisioning Mode on page 10.*

The AutoInstall feature is enabled by default. When AutoInstall is enabled, during the power-up boot or reboot process, the following folders are searched for zip files containing applications:

- `\Internal shared storage\honeywell\autoinstall` on the computer
- `\IPSM card\honeywell\autotinstall` on the computer
- `\honeywell\autoinstall` on a microSD card if installed in the computer

Each zip file found is then compared to the applications already installed on the hand held computer and:

- If the application is not installed, AutoInstall installs the application.
- If the application is already installed, AutoInstall checks to see if the zip file contains a newer version of the application, and then installs the newer version.
- If the application is already installed and there is not a newer version, AutoInstall ignores the installation file.

When AutoInstall is not enabled, the contents of the `autoinstall` folders on the computer and on the SD card (if installed) are ignored.

How to Disable File AutoInstall

1. Swipe up from the bottom of the home screen to access all apps.

2. Touch **AutoInstall Settings** .

3. Remove the check mark from the **Enable AutoInstall** box to disable the option.

About App Verification

The Verify apps feature is enabled by default in the AutoInstall app. This feature is used to protect against the installation of apps that may cause harm to the hand held computer. Upgrade files containing apps that are identified as possibly unsafe for the computer are either disallowed or a warning appears before the installation giving you a chance to prevent the install.

How to Manually Initiate an Upgrade Package

1. Swipe up from the bottom of the home screen to access all apps.

2. Touch **AutoInstall Settings** .

3. Touch **Packages update** to load any upgrade packages in the autoinstall folder.

ABOUT EZCONFIG BAR CODES AND PROVISIONING

Overview

Create and scan EZConfig bar codes with the computer to automatically install applications, files and settings specific to your business environment.

When scanned, the bar code(s) instruct the hand held computer to download and install files from a network location set up by the device administrator. The source location defined in the bar code is typically a URL. The file types on the network can be software updates, software applications, licenses, XML configuration files or general files you want to copy to the computer.

EZConfig bar codes are created using the advanced EZConfig Editor that runs on a workstation computer (e.g., laptop or desktop computer). The editor allows you to customize a Provisioner.xml file that defines the source location of the files and the action desired. After editing the Provisioner.xml file, you can generate bar code(s) from within the advanced editor, and then scan the code(s) with the hand held computer to implement the instructions.

More Information

- To learn how to download, install and use the optional advanced EZConfig Editor, see page 27.

- To learn more about default XML configuration files on the computer and their storage locations, see page 9.

Before you Start

Before you can create a custom Provisioner.xml file, you need to:

1. Identify the files you want installed on the computer. For each file you need to know the source location (network URL) and the action you want to perform.

   Source Location (Network URL) Requirements and Guidelines

   - Supported protocols are HTTP, HTTPS and FTP.

- The source location must be accessible to the hand held computer (e.g., an active network connection is required).

- The source location cannot require a log-in. If a log-in is required by the server, the computer is unable to reach the files.

Possible Actions

- Install a software update.

- Install an Android software application.

- Install settings with an XML file.

- Install a license.

- Copy a file to a specific location on the computer.

- Run - send an Intent, start an Activity or Process

- Rename file or directory

- Create file or directory

- Delete file or directory

- Empty directory

- Reboot device

- Enterprise data reset device

- Full factory reset device

2. Download and install EZConfig for Mobility on your workstation computer. The advanced EZConfig Editor is part of the EZConfig for Mobility software suite.

   To learn how to download and install EZConfig for Mobility, see page 27.

3. Establish an active communication connection that allows file transfers between the hand held computer and your workstation computer.

How to Edit the Provisioner.xml File

1. Copy the generated Provisioner.xml file from the hand held computer to the workstation computer.

   a. Open a file browser on your workstation (e.g., File Explorer or Windows Explorer).

   b. Browse to the `IPSM Card\honeywell\ezconfig\generated` folder on the hand held computer.

   c. Copy the Provisioner.xml file to the workstation computer. You can use copy and paste or drag and drop commands.

2. Open the XML file in the advanced EZConfig Editor on your workstation computer.

a. Click **Start** > **All Apps** > **Honeywell** > ⊡ **EZConfig Editor**.

b. Click **File Open** 🗁.

c. Touch the Provisioner.xml file you copied to the workstation, and then click **Open**.

d. Click **OK** to continue if a message appears warning you the file was created with an older tool.

3. Click on the **Task** section. You may need to click the plus "+" icon to expand the sections.
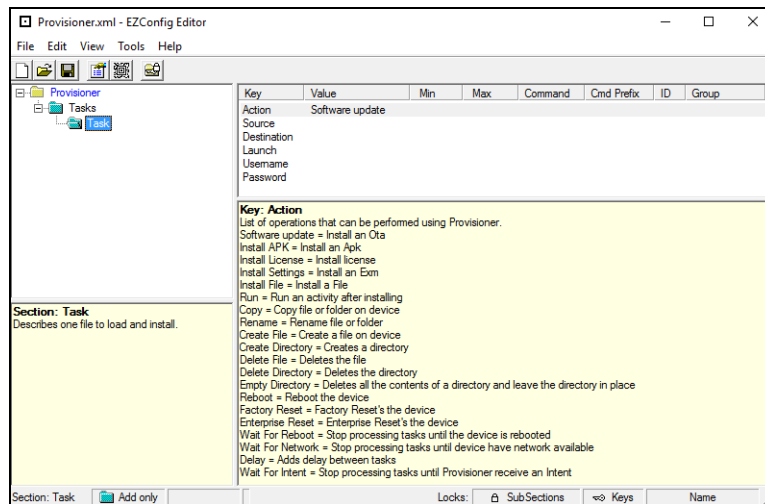
Each **Task** defines a set of instructions for a single file. How you edit the key values in the task determines the actions taken when the bar code is scanned. You can add more than one **Task** to the Provisioner.xml file if you have more than one file that requires instructions. To learn how to add additional tasks, see page 64.

4. Double-click on the Action key **Value** to open and select an action for the Task.
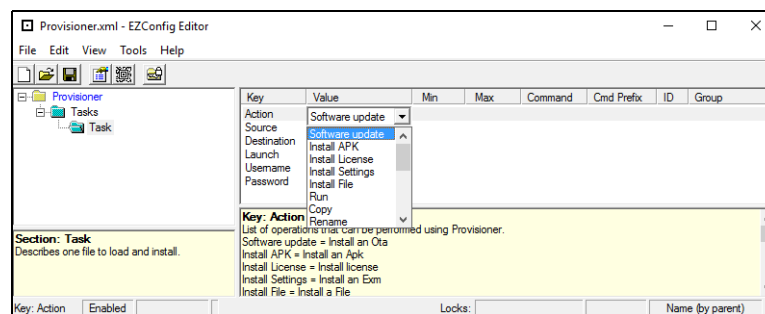
5. Edit the relevant Value fields for the **Source**, **Destination** and **Launch** keys.

6. (Optional) Click **File Save** 🖫 if you want to keep a copy of the modified file on the workstation.

About the Task Keys

Key	Purpose
Action	Sets how the file is processed after it is downloaded. Most Tasks handle one file and the Action value specifies how a file is processed after it is downloaded. For detailed information on each value, see About Action Values on page 60.
Source	Specifies the source location of the file. The Source could be a URL or a local file depending on the Action value selected. The URL specified must be accessible from the hand held computer via an active network connection and include the protocol used to access the file on a server (e.g., http:// or https://). Supported protocols are HTTP, HTTPS and FTP. The source location cannot require a log-in. If a log-in is required by the server, the hand held computer is unable to reach the files.
Destination	The **Destination** key value is only relevant for the following Action values: Install File, Copy, Rename, Create File. The Destination key value is ignored for any other Action values.
Launch	If the Action value is set to **APK**, the **Launch** value is the name of an application package that is opened after the installation completes. The **Launch** value is optional.
Reboot	Forces a reboot after the file is installed. This option is not typically used since the device reboots as needed to complete an installation.

About Action Values

Action Value	XML Value	File or Directory Type	Effect after downloading the file
Software Update	InstallOta	Over the Air (OTA) software update (*.zip)	Reboots the hand held computer and initiates the software update.
Install APK	InstallApk	Android application (*.apk)	Stores the file in non-volatile storage, reboots the computer, and then initiates application installation. (Optional) The Launch value defines the package name to launch after the .apk installation. To learn more see About Launch Values.
Install License	InstallLicense	Honeywell Android application (*.xml)	Installs the license in secure storage.
Install Settings	InstallExm	Honeywell settings (*.xml)	Applies the settings in the file.
Install File	InstallFile	Any file	Copies the file to a specific location on the computer. The **Destination** value specifies full path and file name where the file is to be located.
Run	Run		Uses the **Launch** value to perform an action.

Action Value	XML Value	File or Directory Type	Effect after downloading the file
Copy	Copy	Any File or Directory	Copies the local files and/or folder on the computer from one location to another. If the **Source** value is a folder, then the **Destination** value is treated as a folder. If the **Source** value is a file and the **Destination** value ends in "/", then the **Destination** is treated as a folder and the file is copied into the folder. If the **Source** value is a file and the **Destination** value is a file, then the contents are copied to the destination file.
Rename	Rename	Any File or Directory	Renames the local file or directory on the computer.
Create File	CreateFile	Any File	Creates a new file. **Destination** value defines the name of the file to be created. **Source** value defines the content of the new file. For an empty file leave the field blank.
Create Directory	CreateDirectory	Any Directory	Creates a new directory. The **Source** value defines the path of the directory to be created.
Delete File	DeleteFile	Any File	Deletes the file specified in the **Source** value field.
Delete Directory	DeleteDirectory	Any Directory	Deletes the directory specified in the **Source** value field.
Empty Directory	EmptyDirectory	Any Directory	Deletes the all the contents of a directory but leaves the directory in place. The **Source** value defines the path of the directory to be emptied.
Reboot	Reboot		Reboots the device.
Full factory reset	FactoryReset		Resets the device to the factory state.

About Launch Values

When Install APK or RUN is selected for the Action, you have the option to define a Launch key value. The Launch value must be the package name of the activity you want to automatically open after the install. Here are two methods for finding the package name of an application:

- If the application is installed on a computer and you use the Android Debug Bridge (ADB), run the command: adb shell pm list packages –f.
- If you developed the application, look in the AndroidManifest.xml file.

The following Launch values may be used for Install APK and Run actions.

Launch Value	Action Taken	Details
starts with "am "	Start an activity, start a service, or broadcast an intent.	See the Android documentation for the "am" android shell command.
is a valid package name	Opens the front-door activity of an application.	See the Android documentation for PackageManager.getLaunchIntentForPackage (packageName).

How to Generate EZConfig Bar Codes

This section explains how to generate EZConfig Bar Codes from within the advanced EZConfig Editor. You can also generate bar code packages from the EZConfig Packager utility. Both the advanced EZConfig Editor and the EZConfig Packager are part of the EZConfig for Mobility software suite. The EZConfig Packager utility provides the ability to add more than one XML file to an EZConfig bar code package. To learn more about the EZConfig Packager utility, see the user guide provided with the software.

1. When you are finished editing the Provisioner.xml file, click the bar code icon in the tool bar.

2. Click **Full Contents** under "Options (apply to bar code only)".

3. Click **Print**. The default scale factor is 2. The lower the scale factor the larger the bar code size printed.

To learn more about generating bar codes with the advanced EZConfig Editor, see About Creating EZConfig Bar Codes from XML Files on page 41.

How to Scan EZConfig Bar Codes

Once you have generated bar codes based on the modified Provisioner.xml file, use the EZConfig app on the hand held computer to scan and implement the installation instructions.

Note: *You may not need to manually open EZConfig. Some Honeywell hand held computers have the scanner enabled by default. Try pressing one of the scan buttons on the computer to activate and scan the bar code(s). If the scanner is already enabled, EZConfig automatically opens when you scan the first bar code.*

1. Aim the scanner at the first configuration bar code, and then select **Scan** or press any Scan button (model dependent).

   The EZConfig app opens. Upon a successful scan, the display is updated to reflect the total number of configuration bar codes in the set and the total amount of code(s) that have been successfully scanned.

2. Scan the remaining bar code(s) in the set. When all the bar codes in the package have been scanned, EZConfig deploys the installation instructions.

To learn more, see About the Scan Feature in the EZConfig App on page 49.

How to Check the Status from the Notification Panel

A ⬇ notification icon appears in the status bar at the top of the screen when Provisioning actions are started. You can view additional status details by accessing the Notification Panel and the Provisioning Status screen.

1. Swipe down from the top of the screen to open the Notification Panel.

2. Select the Provisioning notification.

3. Status details are organized into three screens: **Active**, **Complete**, and **Errors**.

   - Touch **Active** to view Provisioning tasks that are still in progress.

   - Touch **Complete** to view recent Provisioning tasks that were successfully completed.

   - Touch **Errors** to view recent Provisioning tasks that failed.

Clear the Status Screens and Hide the Provisioning Notification

1. Touch ⋮ in the upper right corner of the Provisioning status screen.

2. Touch **Clear Complete** and **Errors** to clear the history and hide the provisioning notification.

About Boot and Enterprise Reset Tasks

If the Provisioner.xml file contains a EnterpriseResetTasks section, then all tasks in the section are saved and activated after subsequent Enterprise data resets. The section replaces all previously saved EnterpriseResetTasks sections.

If the Provisioner.xml file contains a BootTasks section, then all tasks in the section are saved and activated after subsequent reboots, once the EnterpriseResetTasks have been completed. The BootTasks section replaces all previously saved BootTasks sections.

How to Add a Task to the Provisioner.xml File

Each Task defines a set of instructions for a single file.

1. Open the custom Provisioner.xml file in the advanced EZConfig Editor.

2. Right-click on an existing **Task**.

3. Touch **Copy**.

4. Right-click the **Task** again, and then select **Paste**.

5. Update the key **Values** for the new **Task**.

How to Delete a Task in the Provisioner.xml File

1. Open the custom Provisioner.xml file in the advanced EZConfig Editor.

2. Right-click the **Task**.

3. Touch **Delete**.

Samples

The examples in this section are represented in XML. The XML file is compatible with the EZConfig for Mobility utility.

Sample Pattern: Persist on Device

Purpose

Install an application and maintain a backup copy on the device.

Summary

- When the network is available, download the APK to persistent storage and install it.

- After Enterprise data reset, re-install the APK from persistent storage.

Example of Provisioner.xml File

The table below shows how the tasks would be defined in the Provisioner.xml file using the editor in EZConfig for Mobility.

Task			
Section	**Key**	**Value**	**Task Summary**
Task	Action	Install APK	When the network (Source) is available, download the SampleApp.apk (Source) from the server to the computer's persistent storage (Destination) as the same name, install the APK (Action), and then start its front-door activity (Launch).
	Source	http://my_server_url/SampleApp.apk	
	Destination	%ipsm%/my_apks/SampleApp.apk	
	Launch	com.example.SampleApp	
EnterpriseResetTask			
Section	Key	Value	Task Summary
Task	Action	Install APK	After Enterprise data reset, install APK (Action and Source) into Android, and then start its front-door activity (Launch). No Destination is required since the .apk file is located on the device.
	Source	%ipsm%/my_apks/SampleApp.apk	
	Destination		
	Launch	com.example.SampleApp	

Sample Pattern: Persist on Server

Purpose

Install an application and maintain a backup copy on the server.

Summary

- Download and install the APK.

- After Enterprise data reset, re-download and install the APK.

Example of Provisioner.xml File

The table below shows how the tasks would be defined in the Provisioner.xml file using the editor in EZConfig for Mobility.

Task			
Section	**Key**	**Value**	**Result**
Task	Action	Install APK	When the network (Source) is available, download the SampleApp.apk (Source) from the server to the computer's persistent storage, install the APK (Action), and then start its front-door activity (Launch).
	Source	http://my_server_url/SampleApp.apk	
	Destination		
	Launch	com.example.SampleApp	

Task			
Section	**Key**	**Value**	**Result**
EnterpriseResetTask			
Section	Key	Value	Result
Task	Action	Install APK	After Enterprise data reset, download the SampleApp.apk (Source) from the server to the computer's persistent storage, install the APK (Action), and then start its front-door activity (Launch).
	Source	http://my_server_url/SampleApp.apk	
	Destination		
	Launch	com.example.SampleApp	

Sample Pattern: Two-stage Provisioning

Purpose

To keep the initial bar code package small when provisioning many files.

Summary

Use the EZPackager utility to create a small bar code package that includes two XML files:

- DeviceConfig.xml
  This file configures the device network settings for access to the source server where the full Provisoner.xml file should be located.

- Provisioner.xml
  This file includes a single task. The task should define the action to download the full Provisoner.xml file from the server to the computer, and then Launch the XML configuration. The full Provisoner.xml file that resides on the server lists the complete steps of the installation.

Note: *The EZPackager utility is part of the EZConfig for Mobility software suite. To learn more about how to use EZPackager, see the user guide provided with the software.*

How to Clear Old Provisioning Tasks on a Test Computer

While developing and testing Provisioner.xml files, you may need to clear the provisioning tasks from your test computer. Tasks can be cleared using a Provisioner.xml file. The results of the prior provisioning tasks remain intact, such as installed applications and files.

You can generate a bar code that contains Provisioning commands to clear all current tasks and empty the Enterprise-reset tasks. Create the bar code using EZConfig for Mobility with the following XML file:

```
<?xml version="1.0" encoding="UTF-8"?>

<ConfigDoc name="Provisioner">
```

```
<Section name="CommandTask">

   <Key name="Action">ClearAllTasks</Key>

</Section>

<Section name="EnterpriseResetTasks">

</Section>

<HHPReserved name="Tool Version">

   <Key name="EXMVersion" flags="16">1.0.1</Key>

</HHPReserved>

</ConfigDoc>
```

9 ABOUT THE NETWORK APPS

Overview

The WirelessTether app gives you the ability to enable range tracking and customize out-of-range alerts for Bluetooth devices paired and tethered to your hand held computer. To learn more, see About the WirelessTether App on page 69.

The WiFi Diagnostic app provides a central location to view diagnostic information about connected and available Wi-Fi networks within range of the WLAN radio in the computer. Additional utilities within the WiFi Diagnostic app mirror command prompt functions (DOS-prompts) used on your workstation computer. To learn more, see About the WiFi Diagnostic App on page 70.

About the WirelessTether App

Once you pair Bluetooth devices (e.g., printers, scanners, and headsets) with your hand held computer, you can use the WirelessTether app to set up custom out-of-range tracking alerts for the devices. You can set a custom alert for each device being tracked by configuring the following settings:

- **Alert type**
  Set the alert type to either Alert dialog or Notification/Toast.

- **Vibration**
  Turn vibration feedback on or off for an out-of-range alert.

- **Sound**
  Turn sound feedback on or off for an out-of-range alert.
  When sound is enabled, select from the list of available sound options.
  If multiple devices are tethered to the computer, device identification is easy when you set a different sound for each device tethered to the computer.

Enable and Configure Bluetooth Device Out-of-Range Alerts

Note: *Before using the WirelessTether app, you must pair the Bluetooth device with your hand held computer and the device must be in Bluetooth communication range. To learn how, see the user guide for your hand held computer model.*

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **WirelessTether** 📱.

3. Touch a device from the **Paired devices** list.

   Once the link is established, the device appears under **Tethered devices**.

4. (Optional) Touch the **settings** icon ⚙ next to the tethered device to customize the out-of-range alert.

   a. Select a notification type (i.e., **Alert dialog** or **Notification/Toast**).

   b. Turn **Vibration** feedback on ⬤ or off ◯.

   c. Turn **Sound** feedback on ⬤ or off ◯.

   d. Select an alert **Sound** from the list. Swipe up or down to scroll through the options.

5. Touch the **Back** button to return to the Wireless Tether screen.

How to Untether a Device

1. Open the **WirelessTether** 📱 app.

2. Touch a device from the **Tethered devices** list.

3. Touch **OK** to confirm you want to untether the device from the computer.

About the WiFi Diagnostic App

The WiFi Diagnostic app provides a central location to view data about connected and available Wi-Fi network access points within range of the integrated WLAN radio in the mobile computer. You can also troubleshoot a network connection using the built-in Ping utility or assign a static IP Address with the IPConfig utility.

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **WiFi Diagnostic** 📶.

3. Select one of the following:

   • **WIFI INFO** — View information on the active WI-FI network connection, including the WiFi NIC (IP and MAC address), the access point (Status, ESSI, and BSSID), the configuration used (Cipher, Group Ciphers, and Protocol) and RF signal information (RSSI, Link and Channel).

- **SCAN** — Scan for available network access points within range of the WLAN radio. A list of network access points appears with specifications for each, including MAC address, channel, encryption, band and RSSI value. You can change the network scan behavior by selecting the TimerScan On/Off button. The default scan time is 2 seconds.
- **PING** — Select to access the ping utility. To learn more, see How to Use the Ping Utility in the WiFi Diagnostic App on page 72.
- **RSSI** — Select to view Received Signal Strength Indicator (RSSI) for the current AP network connection.

View Computer Network Adapter Information

1. Swipe up from the bottom of the Home screen to access all apps.

2. Open the **WiFi Diagnostic** 📶, and then select **WIFI INFO**.

3. Touch ⋮, and then select **IPConfig**.

   Listed under each on-board network adapter name (e.g., wlan0) are specifications relevant for that specific adapter, including the following:

   - **MAC Addr** — MAC address of the network adapter.
   - **IP Addr** — IP address of the network adapter.
   - **Subnet Mask** — Subnet mask for the IP address of the network adapter.
   - **Flags** — Interface flags.

Configure a Network Adapter Interface to Use a Static IP Address

Built into the WiFi Diagnostic app is an IPConfig utility that displays and modifies IP parameters for the on-board network adapters in the computer. You can use the IPConfig utility to configure the on-board network adapter to use a static IP address.

1. Open the **WiFi Diagnostic** app 📶, and then select **WIFI INFO**.

2. Touch ⋮, and then select **IPConfig**.

3. Touch the adapter you want to configure.

4. Check the **Use static IP** box.

5. Touch one of the following and enter the appropriate information in IP address format.

   - **IP address** — Set static IP Address
   - **Gateway** — Set gateway Address
   - **DNS1** — Set preferred Domain Name Server Address

- **DNS2** — Set alternate Domain Name Server Address

6. Touch ✓ to dismiss the keyboard, and then **OK**.

7. Touch **Apply** to save configuration.

How to Use the Ping Utility in the WiFi Diagnostic App

Built into the WiFi Diagnostic app is a Ping utility that provides a GUI-based version of the traditional command line ping utility. Pinging sends out an echo request from the mobile computer to a specific computer on a network. Use the Ping utility to test communication links or to verify a specific IP address is working.

1. Open the **WiFi Diagnostic** app .

2. Select **PING**.

3. Input the destination (IP Address) using the keypad or virtual keyboard.

   On computer models with only a touch screen, select ✓ to dismiss the keyboard.

4. Touch ▶ to initiate the ping utility. The ping statistics appear on the screen.

5. Touch ■ to stop the ping utility.

6. (Optional) Touch ⋮, and then select **Clear** to delete the results from the screen.

Modify the Ping Utility

1. On the **PING** screen in the **WiFi Diagnostic** app .

2. Touch ⋮, and then select **Settings** ⚙.

3. Touch and modify any of the following settings:
   - **Timeout** — Set the time (seconds) to wait for a response.
   - **Send packet size** — Set the packet size (data bytes) to be sent. The default is 64.
   - **Send count** — Set the number of ECHO_REQUEST packets to send. Infinite is the default.
   - **TTL** — Set the Time To Live (TTL). TTL is the maximum number of times a packet is allowed to travel through the network before it is discarded.
   - **ToS** — Set the Type of Service (TOS); it should be eight bits broken into five subfields.
   - **MTU discovery** — Select the path Maximum Transmission Unit (MTU) discovery.

- **Wait seconds** — Indicate the wait interval between sending each packet.

4. If applicable, select ✅ to dismiss the keyboard, and then select **OK**.

5. Touch **Back** to return to the Ping utility screen.

View Route Information in the WiFi Diagnostic App

Built into the WiFi Diagnostic app is a Route utility that allows you to view the rules that govern how packets destined for various subnets are routed. These rules define gateways on an interface subnet that the computer may use to route packets to hosts on other subnets when a connection is established. Use the app to view IP Address route information, including: Destination, Gateway, Mask, Iface and Metric.

1. Open the **WiFi Diagnostic** app 🛜, and then select **WIFI INFO**.

2. Touch ⋮, and then select **Route**.

10 BATTERY AND DIAGNOSTIC INFORMATION

Overview

Important system and battery diagnostic information is available through the BattMon app (see below) and Diagnostic Information app (see page 76) on the hand held computer.

About the BattMon App

Use the BattMon app to view information on the charge status and health of the battery or to activate battery status notifications and enable recording the battery charging history. When you open the app, the following information appears on the screen:

- The battery charge level (%) is indicated in text format.
- The battery health appears under the charge level.
- The wallpaper contains a battery icon that is shaded blue in 20% increments to correspond to the level of battery charge.
- The battery icon displays a lightning bolt graphic when external power is attached.

Note: *To start BattMon automatically after each reboot, move the BattMon app from the Normal list to the Autorun list in the Config Autorun app (see page 53).*

How to Record and View the Battery Charging History

1. Swipe up from the bottom of the Home screen to access all apps.
2. Touch **Power Tools**   > **BattMon** .

3. Touch the on ⬤/off ⚪ switch to toggle recording the battery charging history. The default setting for this option is off.

4. To view the log, select ≡ at the top of the app screen.

5. Touch ← to return to the BattMon screen.

How to Delete All the Charging Records

1. Open the **BattMon** app 📱, and then select ≡ at the top of the app screen.

2. Touch 🗑.

3. Touch **OK** to confirm deleting all records.

4. Touch ← to return to the BattMon screen.

How to Enable or Disable Battery Status Notifications

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** ⚙ > **BattMon** 📱.

3. Touch the on ⬤/off ⚪ switch to toggle battery status notifications on or off. The default setting for this option is off.

   A BattMon icon 📱 appears in the status bar at the top of the screen and a "BattMon is working" notification shows if you swipe down from the top of the screen.

🔲 About the Diagnostic Information App

The Diagnostic Information app provides a central location to find important diagnostic and system information about the hand held computer. The main dashboard shows general Notifications about the battery charge level, the battery health, and WLAN AP associations. Wi-Fi and Phone signal strengths are listed along with the percentage of charge remaining on the battery. Touch Connections, System Memory, SysInfo, Devices, or Information from the dashboard to view detailed statistics about an item.

How to View Connection Information

To view the status of any Ethernet, USB, or ActiveSync (if supported) connection:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **Diagnostic Information** .

3. Touch **Connections** to view information on each connection type.

4. Touch ← to return to the Diagnostic Information screen.

Note: *To refresh the information, select ⋮ , and then **Refresh**.*

How to View System Memory Statistics

To view used, free and total space statistics about the Storage, Flash Memory or Physical Memory:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **Diagnostic Information** .

3. Touch **System Memory**.

4. Touch ← to return to the Diagnostic Information screen.

Note: *To refresh the information, select ⋮ and then **Refresh**.*

How to View SysInfo

To view a detailed compilation of information on firmware versions, application versions, system parameters, as well as network and radio information:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **Diagnostic Information** .

3. Touch **SysInfo**. Swipe up or down to scroll through the information.

4. (Optional) Touch ⋮ , and then **Save** to generate a `SYSINFO.txt` file under the `Internal shared storage\honeywell\sysinfo` folder on the computer.

5. Touch ← to return to the Diagnostic Information screen.

The information displayed is not editable from the System Info screen. Only changes made to the computer configuration affect the System Info list.

How to View Information About Integrated and Connected Devices

To access additional links to statistics on any integrated devices (e.g., scanner, camera, GPS, Bluetooth, USB) or wired devices connected to the computer:

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **Diagnostic Information** .

3. Touch **Devices**.

4. Touch a device on the list to view detailed information.

    For example, if Scanner is selected, you can view the Scanner ID, Scanner Name, Frame Width, Frame Height, Full Decoder Version, Fast Decoder Version, and Control Logic Version.

5. Touch ← to return to the Diagnostic Information screen.

Note: *To refresh the information, select* ⋮ *and then* **Refresh**.

How to View Information About the Computer

1. Swipe up from the bottom of the Home screen to access all apps.

2. Touch **Power Tools** > **Diagnostic Information** .

3. Touch **Information**. Swipe up or down to scroll through the following:
    *   Model Number
    *   Device Name
    *   Android version
    *   Processor info
    *   Build Number
    *   Serial Number
    *   OEM Information
    *   Hardware configuration
    *   Wi-Fi Mac Address
    *   Bluetooth Mac Address

4. Touch ← to return to the Diagnostic Information screen.

Note: *To refresh the information, select* ⋮ *and then* **Refresh**.

A REFERENCE CHARTS

ASCII Conversion Chart (Code Page 1252)

Note: *This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.*

Non–Printable Characters					
DEC	HEX	Character (Code)	DEC	HEX	Character (Code)
0	00	NULL (NUL)	16	10	DATA LINK ESCAPE (DLE)
1	01	START OF HEADING (SOH)	17	11	DEVICE CONTROL 1 (DC1)
2	02	START OF TEXT (STX)	18	12	DEVICE CONTROL 2 (DC2)
3	03	END OF TEXT (ETX)	19	13	DEVICE CONTROL 3 (DC3)
4	04	END OF TRANSMISSION (EOT)	20	14	DEVICE CONTROL 4 (DC4)
5	05	END OF QUERY (ENQ)	21	15	NEGATIVE ACKNOWLEDGEMENT (NAK)
6	06	ACKNOWLEDGE (ACK)	22	16	SYNCHRONIZE (SYN)
7	07	BEEP (BEL)	23	17	END OF TRANSMISSION BLOCK (ETB)
8	08	BACKSPACE (BS)	24	18	CANCEL (CAN)
9	09	HORIZONTAL TAB (HT)	25	19	END OF MEDIUM (EM)
10	0A	LINE FEED (LF)	26	1A	SUBSTITUTE (SUB)
11	0B	VERTICAL TAB (VT)	27	1B	ESCAPE (ESC)
12	0C	FORM FEED (FF)	28	1C	FILE SEPARATOR (FS) RIGHT ARROW
13	0D	CARRIAGE RETURN (CR)	29	1D	GROUP SEPARATOR (GS) LEFT ARROW
14	0E	SHIFT OUT (SO)	30	1E	RECORD SEPARATOR (RS) UP ARROW
15	0F	SHIFT IN (SI)	31	1F	UNIT SEPARATOR (US) DOWN ARROW

Printable Characters								
DEC	**HEX**	**Character**	**DEC**	**HEX**	**Character**	**DEC**	**HEX**	**Character**
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45?	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C		
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	<DEL>

Extended ASCII Characters								
DEC	**HEX**	**Character**	**DEC**	**HEX**	**Character**	**DEC**	**HEX**	**Character**
128	80	€	171	AB	«	214	D6	Ö

Extended ASCII Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
129	81		172	AC	?	215	D7	×
130	82	,	173	AD		216	D8	Ø
131	83	ƒ	174	AE	®	217	D9	Ù
132	84	„	175	AF	¯	218	DA	Ú
133	85	…	176	B0	°	219	DB	Û
134	86	†	177	B1	±	220	DC	Ü
135	87	‡	178	B2	²	221	DD	Ý
136	88	ˆ	179	B3	³	222	DE	Þ
137	89	‰	180	B4	´	223	DF	ß
138	8A	Š	181	B5	?	224	E0	à
139	8B	‹	182	B6	¶	225	E1	á
140	8C	Œ	183	B7	·	226	E2	â
141	8D		184	B8	¸	227	E3	ã
142	8E	Ž	185	B9	¹	228	E4	ä
143	8F		186	BA	º	229	E5	å
144	90		187	BB	»	230	E6	æ
145	91	'	188	BC	¼	231	E7	ç
146	92	'	189	BD	½	232	E8	è
147	93	"	190	BE	¾	233	E9	é
148	94	"	191	BF	¿	234	EA	ê
149	95	•	192	C0	À	235	EB	ë
150	96	–	193	C1	Á	236	EC	ì
151	97	—	194	C2	Â	237	ED	í
152	98	˜	195	C3	Ã	238	EE	î
153	99	™	196	C4	Ä	239	EF	ï
154	9A	š	197	C5	Å	240	F0	ð
155	9B	›	198	C6	Æ	241	F1	ñ
156	9C	œ	199	C7	Ç	242	F2	ò
157	9D		200	C8	È	243	F3	ó
158	9E	ž	201	C9	É	244	F4	ô
159	9F	Ÿ	202	CA	Ê	245	F5	õ
160	A0	?	203	CB	Ë	246	F6	ö
161	A1	¡	204	CC	Ì	247	F7	÷
162	A2	¢	205	CD	Í	248	F8	ø
163	A3	£	206	CE	Î	249	F9	ù
164	A4	?	207	CF	Ï	250	FA	ú
165	A5	¥	208	D0	Ð	251	FB	û
166	A6	¦	209	D1	Ñ	252	FC	ü

Extended ASCII Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
167	A7	§	210	D2	Ò	253	FD	ý
168	A8	¨	211	D3	Ó	254	FE	þ
169	A9	©	212	D4	Ô	255	FF	ÿ
170	AA	ª	213	D5	Õ			

Symbology Chart

Symbology	Code ID (hex)
All Symbologies	(0x99)
Australian Post	A (0x41)
Aztec Code	z (0x7A)
British Post	B (0x42)
Canadian Post	C (0x43)
China Post	Q (0x51)
Chinese Sensible Code (Han Xin Code)	H (0x48)
Codabar	a (0x61)
Codablock A	V (0x56)
Codablock F	q (0x71)
Code 11	h (0x68)
Code 128	j (0x6A)
GS1-128	I (0x49)
Code 32 Pharmaceutical (PARAF)	< (0x3C)
Code 39 (supports Full ASCII mode)	b (0x62)
Code 49	l (0x6C)
Code 93 and 93i	i (0x69)
Data Matrix	w (0x77)
EAN-13 (including Bookland EAN)	d (0x64)
EAN-13 with Add-On	d (0x64)
EAN-13 with Extended Coupon Code	d (0x64)
EAN-8	D (0x44)
EAN-8 with Add-On	D (0x44)
GS1 Composite	y (0x79)
GS1 DataBar	y (0x79)
GS1 DataBar Limited	{ (0x7B)
GS1 DataBar Omnidirectional	y (0x79)
GS1 DataBar Expanded	} (0x7D)
InfoMail	, (0x2c)

Symbology	Code ID (hex)
Intelligent Mail Bar Code	M (0x4D)
Interleaved 2 of 5	e (0x65)
Japanese Post	J (0x4A)
KIX (Netherlands) Post	K (0x4B)
Korea Post	? (0x3F)
Matrix 2 of 5	m (0x6D)
MaxiCode	x (0x7 8)
MicroPDF417	R (0x52)
MSI	g (0x67)
NEC 2 of 5	Y (0x59)
OCR MICR (E 13 B)	O (0x4F)
OCR SEMI Font	O (0x4F)
OCR-A	O (0x4F)
OCR-B	O (0x4F)
PDF417	r (0x72)
Planet Code	L (0x4C)
Postal-4i	N (0x4E)
Postnet	P (0x50)
QR Code and Micro QR Code	s (0x73)
Straight 2 of 5 IATA	f (0x66)
Straight 2 of 5 Industrial	f (0x66)
TCIF Linked Code 39 (TLC39)	T (0x54)
Telepen	t (0x54)
UPC-A	c (0x63)
UPC-A with Add-On	c (0x63)
UPC-A with Extended Coupon Code	c (0x63)
UPC-E	E (0x45)
UPC-E with Add-On	E (0x45)
UPC-E1	E (0x45)

Country Codes

For the latest information on ISO 3166, International Standard for country codes and codes for their subdivisions, go to www.iso.org/iso/country_codes.

Country Name	Alpha-2 Code	Country Name	Alpha-2 Code
Afghanistan	AF	Liberia	LR
Åland Islands	AX	Libya	LY
Albania	AL	Liechtenstein	LI
Algeria	DZ	Lithuania	LT
American Samoa	AS	Luxembourg	LU
Andorra	AD	Macao	MO
Angola	AO	Macedonia, the former Yugoslav Republic of	MK
Anguilla	AI	Madagascar	MG
Antarctica	AQ	Malawi	MW
Antigua and Barbuda	AG	Malaysia	MY
Argentina	AR	Maldives	MV
Armenia	AM	Mali	ML
Aruba	AW	Malta	MT
Australia	AU	Marshall Islands	MH
Austria	AT	Martinique	MQ
Azerbaijan	AZ	Mauritania	MR
Bahamas	BS	Mauritius	MU
Bahrain	BH	Mayotte	YT
Bangladesh	BD	Mexico	MX
Barbados	BB	Micronesia, Federated States of	FM
Belarus	BY	Moldova, Republic of	MD
Belgium	BE	Monaco	MC
Belize	BZ	Mongolia	MN
Benin	BJ	Montenegro	ME
Bermuda	BM	Montserrat	MS
Bhutan	BT	Morocco	MA
Bolivia, Plurinational State of	BO	Mozambique	MZ
Bonaire, Sint Eustatius and Saba	BQ	Myanmar	MM
Bosnia and Herzegovina	BA	Namibia	NA
Botswana	BW	Nauru	NR
Bouvet Island	BV	Nepal	NP
Brazil	BR	Netherlands	NL
British Indian Ocean Territory	IO	New Caledonia	NC

Country Name	Alpha–2 Code	Country Name	Alpha–2 Code
Brunei Darussalam	BN	New Zealand	NZ
Bulgaria	BG	Nicaragua	NI
Burkina Faso	BF	Niger	NE
Burundi	BI	Nigeria	NG
Cambodia	KH	Niue	NU
Cameroon	CM	Norfolk Island	NF
Canada	CA	Northern Mariana Islands	MP
Cape Verde	CV	Norway	NO
Cayman Islands	KY	Oman	OM
Central African Republic	CF	Pakistan	PK
Chad	TD	Palau	PW
Chile	CL	Palestine, State of	PS
China	CN	Panama	PA
Christmas Island	CX	Papua New Guinea	PG
Cocos (Keeling) Islands	CC	Paraguay	PY
Colombia	CO	Peru	PE
Comoros	KM	Philippines	PH
Congo	CG	Pitcairn	PN
Congo, the Democratic Republic of the	CD	Poland	PL
Cook Islands	CK	Portugal	PT
Costa Rica	CR	Puerto Rico	PR
Côte d'Ivoire	CI	Qatar	QA
Croatia	HR	Réunion	RE
Cuba	CU	Romania	RO
Curaçao	CW	Russian Federation	RU
Cyprus	CY	Rwanda	RW
Czech Republic	CZ	Saint Barthélemy	BL
Denmark	DK	Saint Helena, Ascension and Tristan da Cunha	SH
Djibouti	DJ	Saint Kitts and Nevis	KN
Dominica	DM	Saint Lucia	LC
Dominican Republic	DO	Saint Martin (French part)	MF
Ecuador	EC	Saint Pierre and Miquelon	PM
Egypt	EG	Saint Vincent and the Grenadines	VC
El Salvador	SV	Samoa	WS
Equatorial Guinea	GQ	San Marino	SM
Eritrea	ER	Sao Tome and Principe	ST
Estonia	EE	Saudi Arabia	SA

Country Name	Alpha-2 Code	Country Name	Alpha-2 Code
Ethiopia	ET	Senegal	SN
Falkland Islands (Malvinas)	FK	Serbia	RS
Faroe Islands	FO	Seychelles	SC
Fiji	FJ	Sierra Leone	SL
Finland	FI	Singapore	SG
France	FR	Sint Maarten (Dutch part)	SX
French Guiana	GF	Slovakia	SK
French Polynesia	PF	Slovenia	SI
French Southern Territories	TF	Solomon Islands	SB
Gabon	GA	Somalia	SO
Gambia	GM	South Africa	ZA
Georgia	GE	South Georgia and the South Sandwich Islands	GS
Germany	DE	South Sudan	SS
Ghana	GH	Spain	ES
Gibraltar	GI	Sri Lanka	LK
Greece	GR	Sudan	SD
Greenland	GL	Suriname	SR
Grenada	GD	Svalbard and Jan Mayen	SJ
Guadeloupe	GP	Swaziland	SZ
Guam	GU	Sweden	SE
Guatemala	GT	Switzerland	CH
Guernsey	GG	Syrian Arab Republic	SY
Guinea	GN	Taiwan, Province of China	TW
Guinea-Bissau	GW	Tajikistan	TJ
Guyana	GY	Tanzania, United Republic of	TZ
Haiti	HT	Thailand	TH
Heard Island and McDonald Islands	HM	Timor-Leste	TL
Holy See (Vatican City State)	VA	Togo	TG
Honduras	HN	Tokelau	TK
Hong Kong	HK	Tonga	TO
Hungary	HU	Trinidad and Tobago	TT
Iceland	IS	Tunisia	TN
India	IN	Turkey	TR
Indonesia	ID	Turkmenistan	TM
Iran, Islamic Republic of	IR	Turks and Caicos Islands	TC
Iraq	IQ	Tuvalu	TV
Ireland	IE	Uganda	UG

Country Name	Alpha–2 Code	Country Name	Alpha–2 Code
Isle of Man	IM	Ukraine	UA
Israel	IL	United Arab Emirates	AE
Italy	IT	United Kingdom	GB
Jamaica	JM	United States	US
Japan	JP	United States Minor Outlying Islands	UM
Jersey	JE	Uruguay	UY
Jordan	JO	Uzbekistan	UZ
Kazakhstan	KZ	Vanuatu	VU
Kenya	KE	Venezuela, Bolivarian Republic of	VE
Kiribati	KI	Viet Nam	VN
Korea, Democratic People's Republic of	KP	Virgin Islands, British	VG
Korea, Republic of	KR	Virgin Islands, U.S.	VI
Kuwait	KW	Wallis and Futuna	WF
Kyrgyzstan	KG	Western Sahara	EH
Lao People's Democratic Republic	LA	Yemen	YE
Latvia	LV	Zambia	ZM
Lebanon	LB	Zimbabwe	ZW
Lesotho	LS		

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