

IMPRES™ Battery Fleet Management Installation Guide

AUGUST 2025

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Read Me First

This document provides information necessary to install the IMPRES Battery Fleet Management application, the requirements and prerequisites for installation, and the configuration of the application. Some of the configurations are optional and may be skipped.

Notations Used in This Manual

Throughout the text in this publication, you may notice the use of warning, caution, and note notations. These notations are used to emphasize that safety hazards exist, and due care must be taken and observed.



WARNING: WARNING indicates a potentially hazardous situation, which, if not avoided, could result in death or injury.



CAUTION: CAUTION indicates a potentially hazardous situation, which, if not avoided, might result in equipment damage.



NOTE: NOTE indicates an operational procedure, practice, or condition that is essential to emphasize.

Related Publications

The following list contains part numbers and titles of related publications.

- MN007473A01, *IMPRES™ Battery Fleet Management Installation Manual*
- MN007495A01, *IMPRES™ Battery Fleet Management User Guide*
- MN007501A01, *IMPRES™ Battery Fleet Management Troubleshooting Guide and External Software and Component Configuration Guide*
- MN008435A01, *IMPRES™ Battery Fleet Management WEB Interface User Guide*
- 6880309T12, *MOTOTRBO System Planner*
- MN008144A01, *Intelligent Middleware Installation and Configuration Manual 5.2.4*
- MN005566A01, *Intelligent Middleware Installation and Configuration 5.2 and 5.2.2*
- MN008145A01, *Intelligent Middleware Feature Manual 5.2.4*
- MN005630A01, *MSI Charger Reprogrammer Installation Guide*

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Chapter 1

Installation of IMPRES Battery Fleet Management Application

This chapter describes the software installations for the IMPRES battery Fleet Management Application.



NOTE: You can download the IMPRES Battery Fleet Management Software at: https://www.motorolasolutions.com/content/dam/msi/Products/product-lines/impres/fleet_management.zip

1.1



System Installation Requirements

Installing the available IMPRES Battery Fleet Management (BFM) application in computers must meet the following minimum requirements.



NOTE: IMPRES Battery Fleet Management Web Services depend on Windows Internet Information Services (IIS). The machine to be installed on must not utilize some other web server or contain other web applications that are utilizing the same ports as IIS. The BFM Web Application or Node Services uses Port 8080. See *IMPRES™ Battery Fleet Management Troubleshooting Guide and External Software and Component Configuration Guide* for more information.

Table 1: Computer Systems Minimum Requirements

Requirements	Description
Operating system requirements  NOTE: IMPRES Battery Fleet Management is required to run on English language operating systems from the list. Running the application on a non-English operating system causes the application to malfunction.	Supported Microsoft® Windows® Operating System
	Personal Computer Versions
	Microsoft® Windows® 10 Enterprise
	Microsoft® windows® 10 Pro
	Microsoft® Windows® 11 Pro
	Server Versions
	Microsoft® Windows® Server 2012 Standard
	Microsoft® Windows® Server 2019 Standard
Hardware minimum requirements  NOTE: IMPRES Battery Fleet Management can either be installed on a client computer or a server computer. Although the installation package is the same for client and server computers, the hardware installation requirements are different.	Server Hardware Minimum Requirements <ul style="list-style-type: none"> • i5 generation 8 or equivalent processor • 10 GB of hard disk space • 2 GB RAM
	Client Hardware Minimum Requirements <ul style="list-style-type: none"> • i5 generation 8 or equivalent processor • 1 USB port • 10 GB of hard disk space • 1 GB RAM

Requirements	Description
Software minimum requirements	The latest version of Microsoft®Edge or Google Chrome.
Access rights	You must have Administrator rights on the target computer to proceed with the installation

Table 2: ASTRO System Minimum Requirements

Requirements	Description
Intelligent Middleware (IMW)	IMW version 5.2.1 with all outstanding patches applied
	IMW version 5.2.2
	IMW version 5.2.3
	IMW "presence" license - one per subscriber
	IMW "context" (sensor) license - one per subscriber
APX Portable Radio Software Version	7.18.5 or later Codeplug field change to enable sensor measurement reporting, Data wide field
ASTRO System Version	7.18.5 or later

Table 3: MotoTRBO System Minimum Requirements

Requirements	Description
Motorola Network Interface Service (MNIS) Deployments	<ul style="list-style-type: none"> ● Single Site ● IP Site Connect ● Capacity Plus (Single or Multi Site) ● Linked Capacity Plus ● Capacity Max
Control Station Configurations	<ul style="list-style-type: none"> ● Direct Mode ● Single Site ● IP Site Connect ● Capacity Plus (Single or Multi Site) ● Linked Capacity Plus ● Capacity Max

1.2

Pre-Installation Preparation

Prerequisites: Unplug any IMPRES devices that are connected to your computer and exit all the programs running on your computer.

Procedure:

Re-installation

1. If re-installation is needed, click **Start** → **Settings** → **Control Panel** → **Add or Remove Programs**.

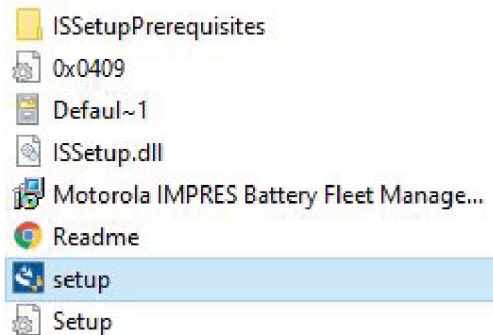


NOTE: If the installation fails, remove the previous installation.

2. Highlight **Motorola IMPRES Battery Fleet Management** from currently installed programs and click **Remove** to uninstall the outdated version of Fleet Management software.

Performing Installation

3. To install the application, download the application zip file from MOL or Motorola Solutions website to your local computer and unzip the file.
4. To start the application, double-click the **setup.exe** application file.



NOTE: There is prerequisite software that must be installed onto your computer before installing the Battery Fleet Management application. You will be prompted to install the Microsoft .Net Framework version 4.0, 4.5, and/or Microsoft SQL Server Express 2012 before installing IMPRES Battery Fleet Management application.

5. To install the prerequisites software, click **Install** when prompted during the installation.
Reboot is required after the .NET Framework installation.

1.3

Installing .NET Framework 4.0 and 4.5 (If Requested)

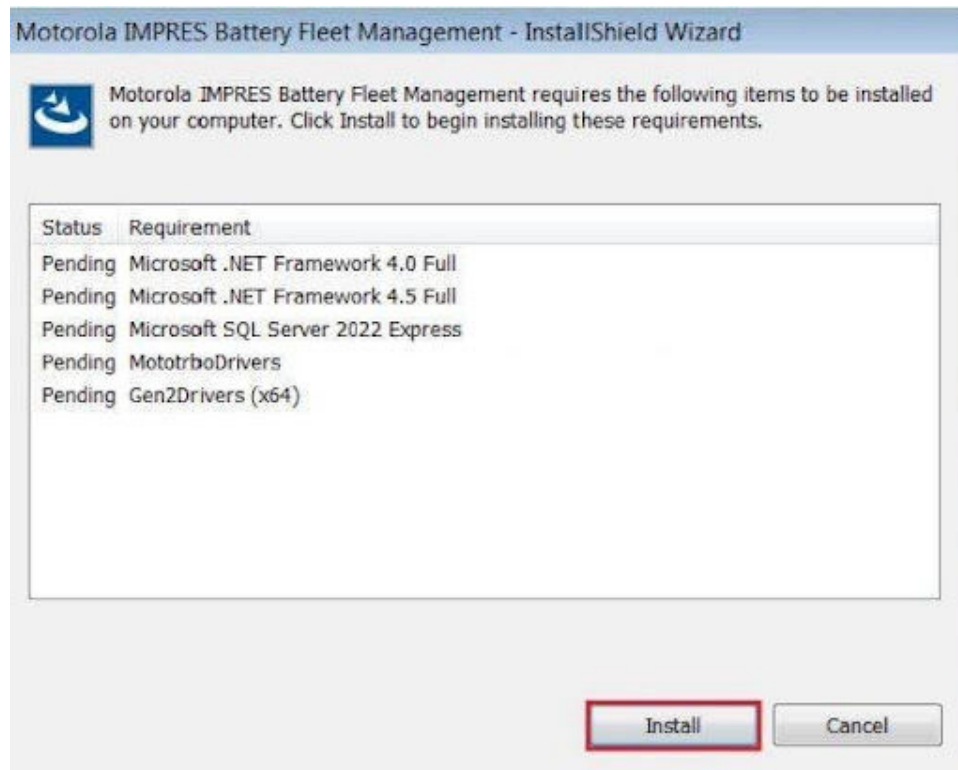
When and where to use:



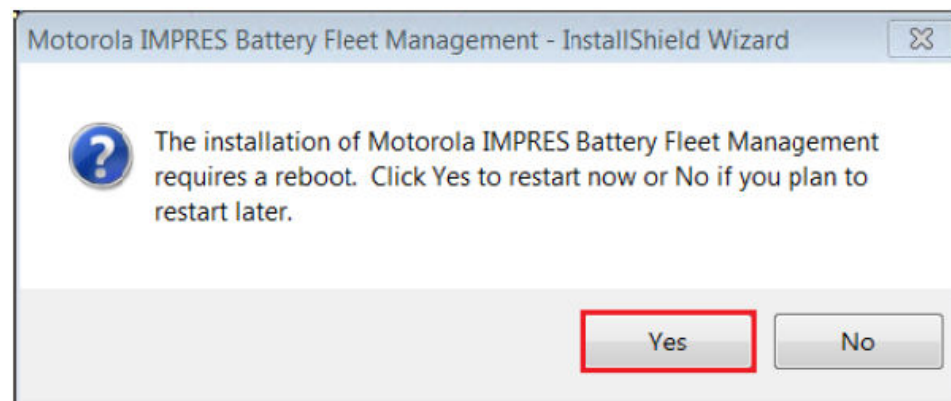
NOTE: This installation is only needed if your computer requests for it.

Procedure:

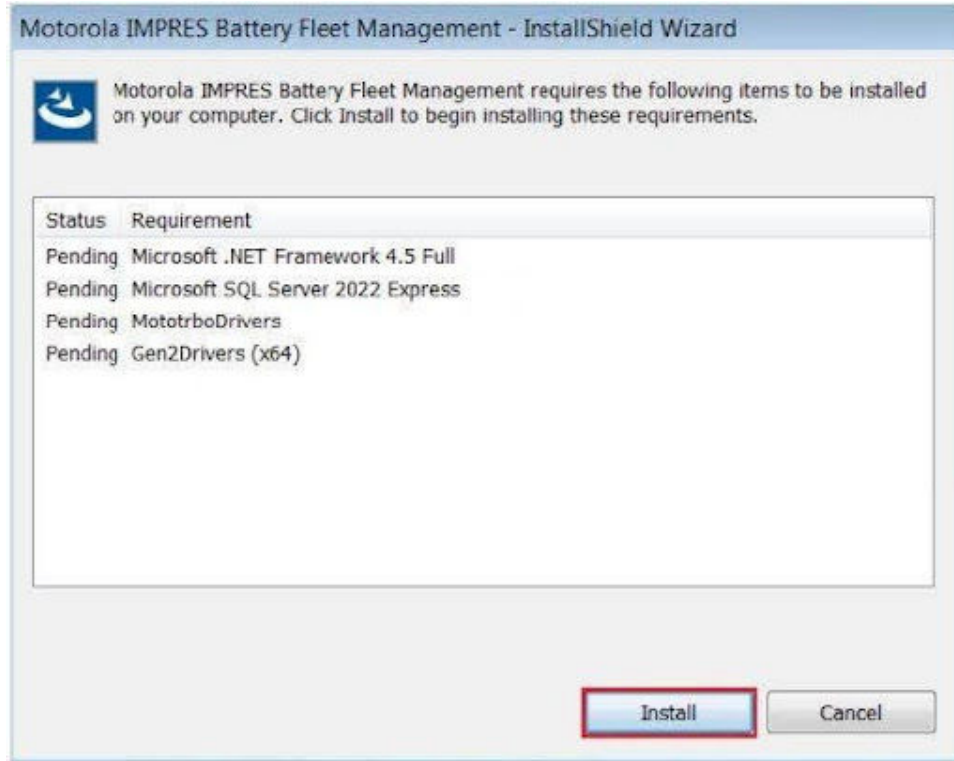
1. To install Microsoft .NET Framework 4.0, click **Install** to continue the installation.



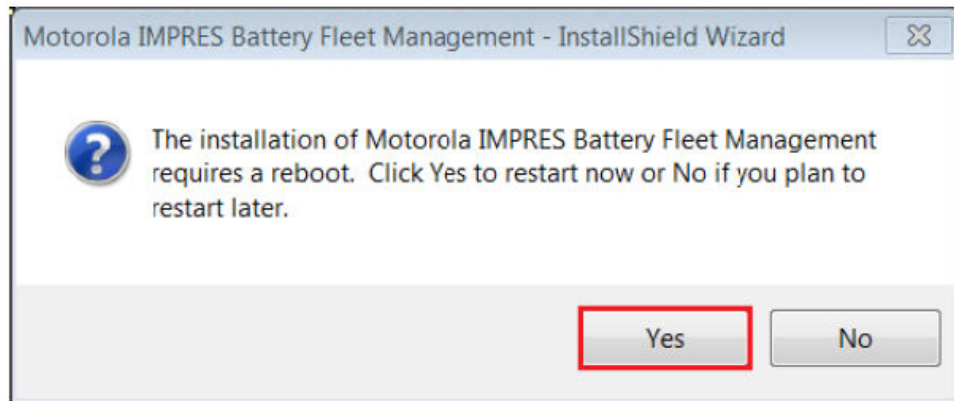
2. To reboot your computer, click **Yes** to restart after the .NET Framework 4.0 installation.



3. To install Microsoft .NET Framework 4.5, click **Install** to continue the installation.



4. To reboot your computer, click **Yes** to restart after the .NET Framework 4.5 installation.



1.4

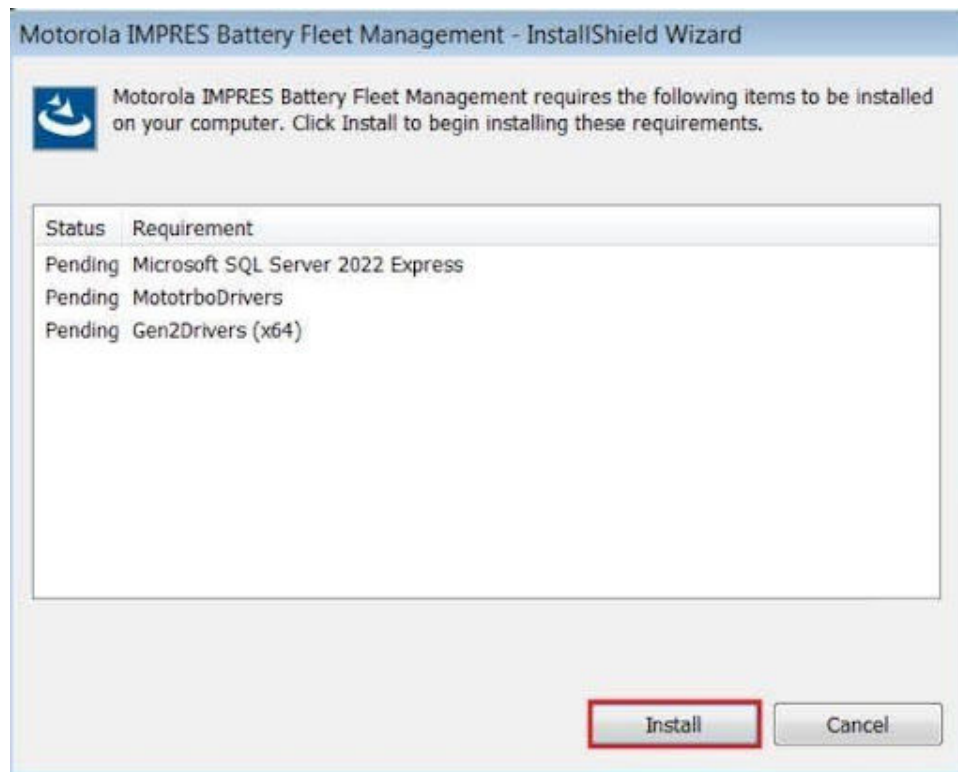
Installing SQL Server Express 2022 (If Requested)

Procedure:

1. To install the Microsoft SQL Server Express 2022, click **Install**.



NOTE: To complete the installation, refer to the steps in the following images.

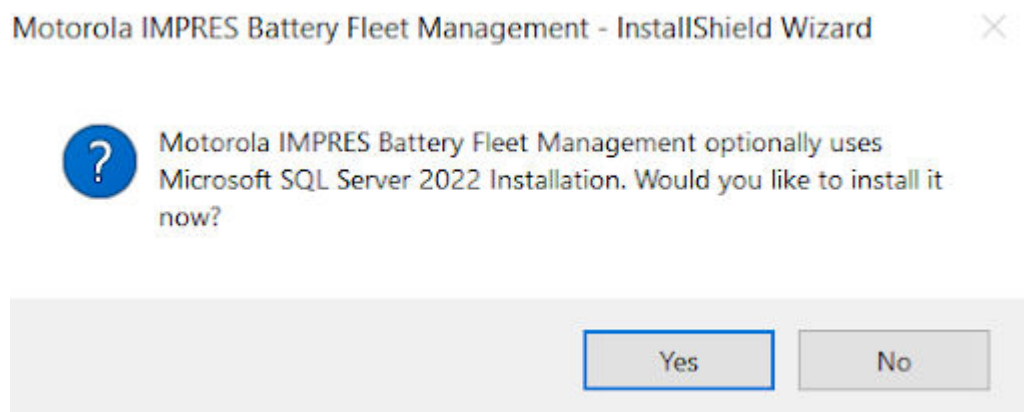


A separate window appears for the SQL installation.

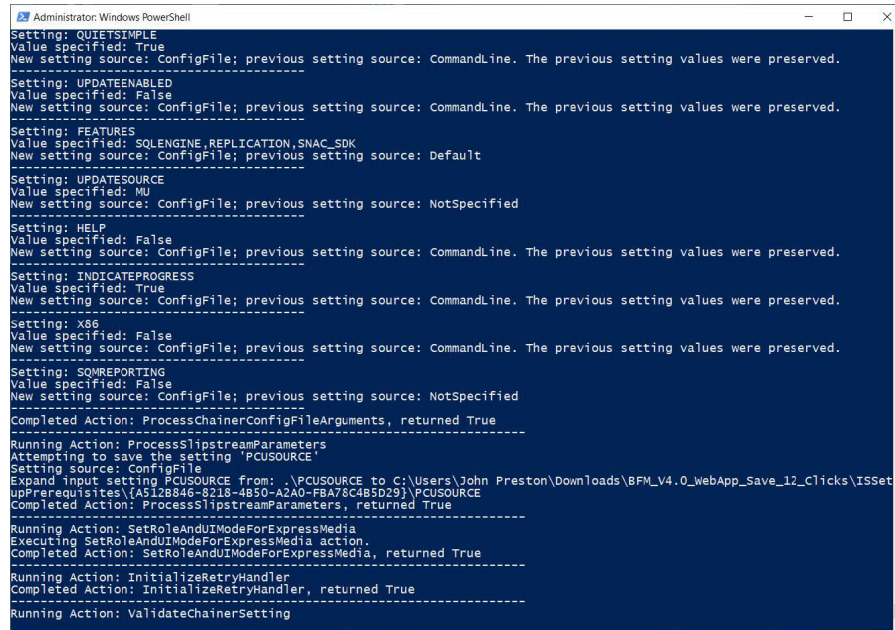


NOTE: Do not select **Cancel** on the Install Shield.

2. Click **Yes**, to install the Microsoft SQL Server Express 2022.



Administrator: Windows PowerShell window is displayed. The installation process begins automatically and completes within 5 minutes.



```

Administrator: Windows PowerShell
Setting: QUIETSIMPLE
Value specified: True
New setting source: ConfigFile; previous setting source: CommandLine. The previous setting values were preserved.
-----
Setting: UPDATEENABLED
Value specified: False
New setting source: ConfigFile; previous setting source: CommandLine. The previous setting values were preserved.
-----
Setting: FEATURES
Value specified: SQLENGINE, REPLICATION, SNAC_SDK
New setting source: ConfigFile; previous setting source: Default
-----
Setting: UPDATESOURCE
Value specified: MU
New setting source: ConfigFile; previous setting source: NotSpecified
-----
Setting: HELP
Value specified: False
New setting source: ConfigFile; previous setting source: CommandLine. The previous setting values were preserved.
-----
Setting: INDICATEPROGRESS
Value specified: True
New setting source: ConfigFile; previous setting source: CommandLine. The previous setting values were preserved.
-----
Setting: X86
Value specified: False
New setting source: ConfigFile; previous setting source: CommandLine. The previous setting values were preserved.
-----
Setting: SQWREPORTING
Value specified: False
New setting source: ConfigFile; previous setting source: NotSpecified
-----
Completed Action: ProcessChainerConfigFileArguments, returned True
-----
Running Action: ProcessSlipstreamParameters
Attempting to save the setting 'PCUSOURCE'
Setting source: ConfigFile
Expand input setting PCUSOURCE from: .\PCUSOURCE to C:\Users\John Preston\Downloads\BFM_V4.0_WebApp_Save_12_Clicks\ISSet
upPrerequisites\{A5128846-8218-4850-A2A0-FBA78C485D29}\PCUSOURCE
Completed Action: ProcessSlipstreamParameters, returned True
-----
Running Action: SetRoleAndUIModeForExpressMedia
Executing SetRoleAndUIModeForExpressMedia action.
Completed Action: SetRoleAndUIModeForExpressMedia, returned True
-----
Running Action: InitializeRetryHandler
Completed Action: InitializeRetryHandler, returned True
-----
Running Action: ValidateChainerSetting

```

1.5

Installing MOTOTRBO Radio Driver

When and where to use:

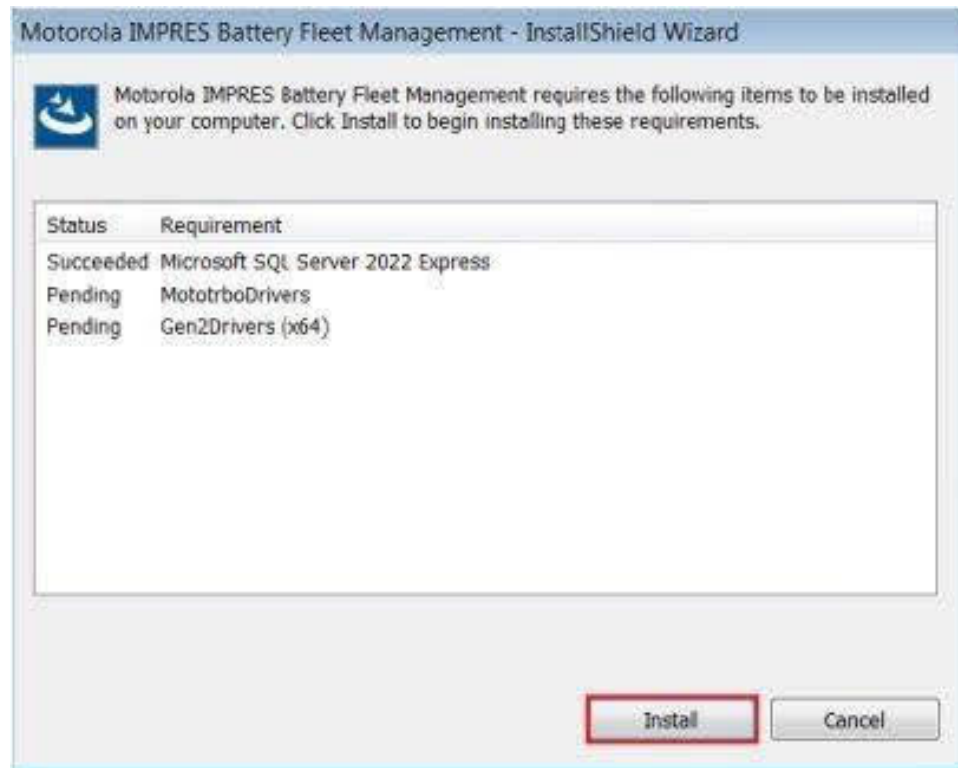
- This installation is only needed if your computer requests for it.
- All customers have to complete the MOTOTRBO Driver installation.

Procedure:

1. To install the MOTOTRBO radio driver, click **Install**.



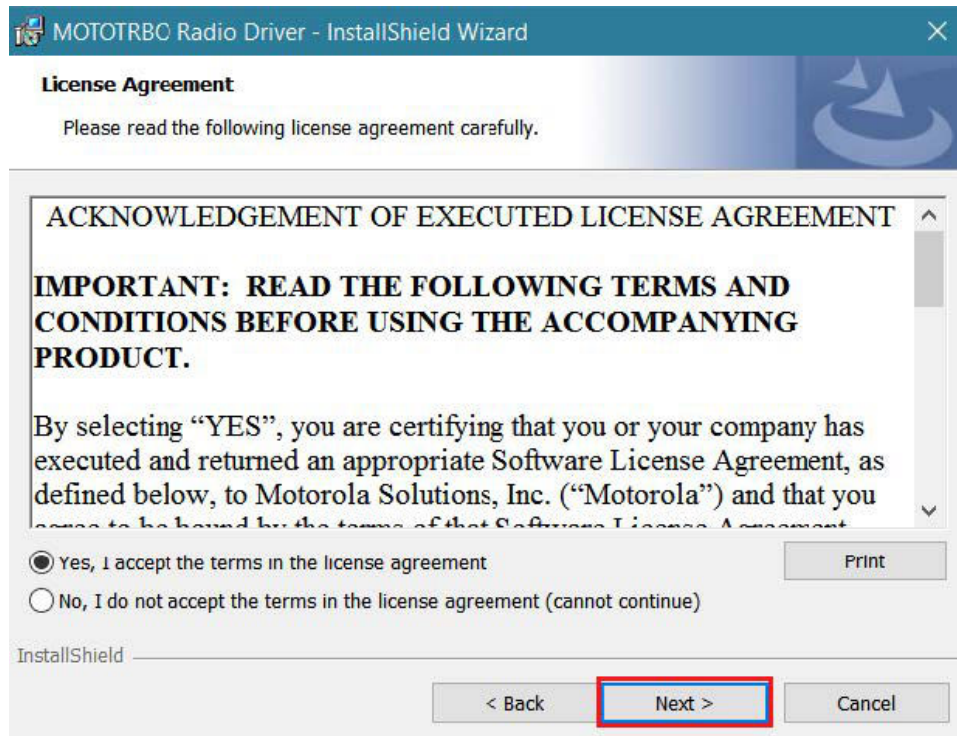
NOTE: To complete the installation, refer to the steps in the following images.



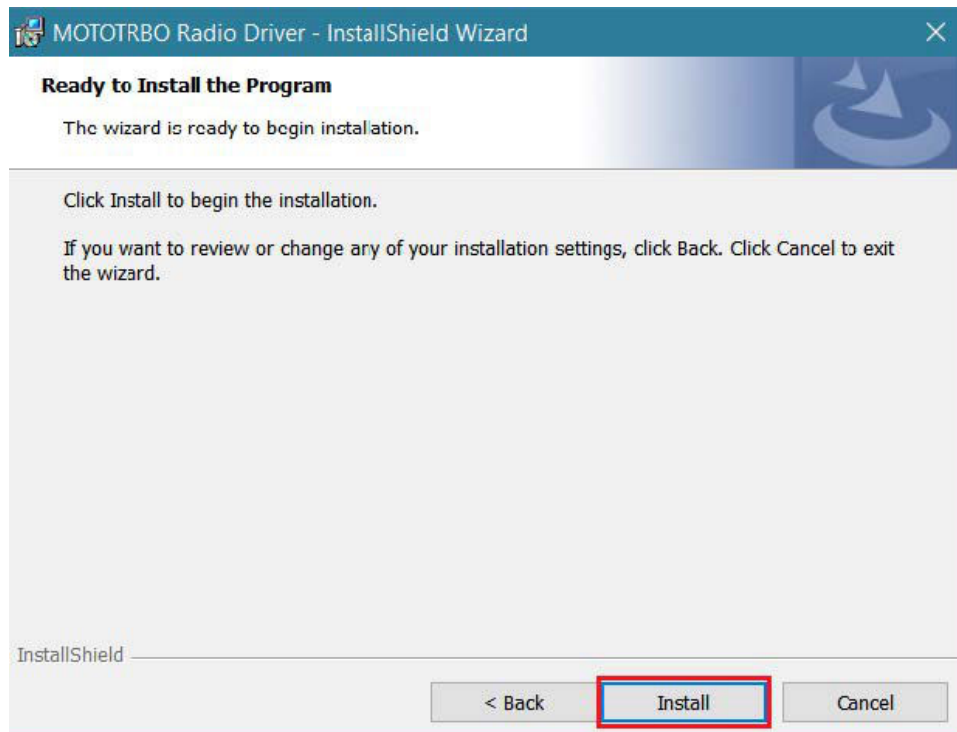
- Click **Next** when the screen displays **MOTOTRBO Radio Driver - InstallShield Wizard** window.

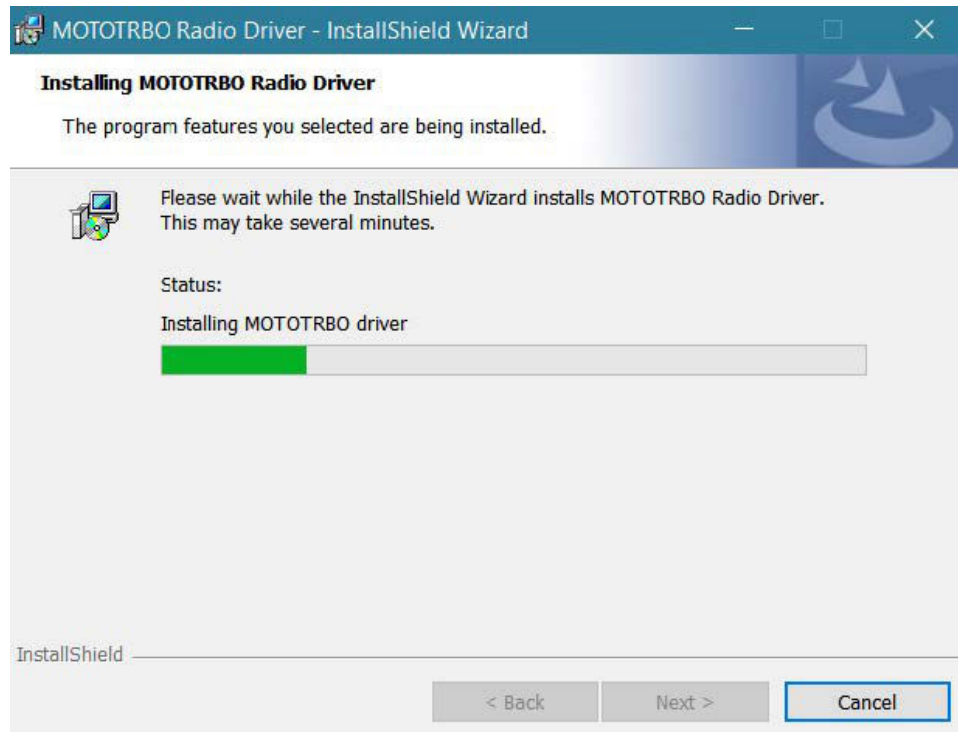


- Accept the license agreement and click **Next**

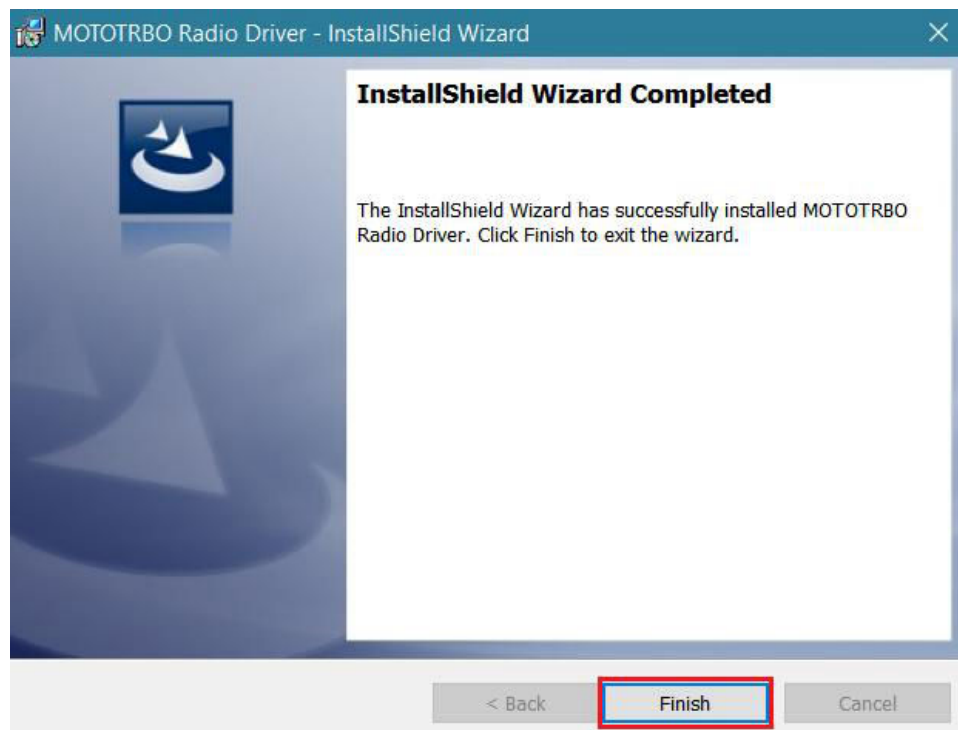


4. To install the MOTOTRBO Over-the-Air (OTA) drivers, click **Install**.





5. To exit the MOTOTRBO driver installation window, click **Finish**.



1.6

Installing IMPRES Gen 2 Drivers

When and where to use: This installation is only needed if your computer requests for it.

Procedure:

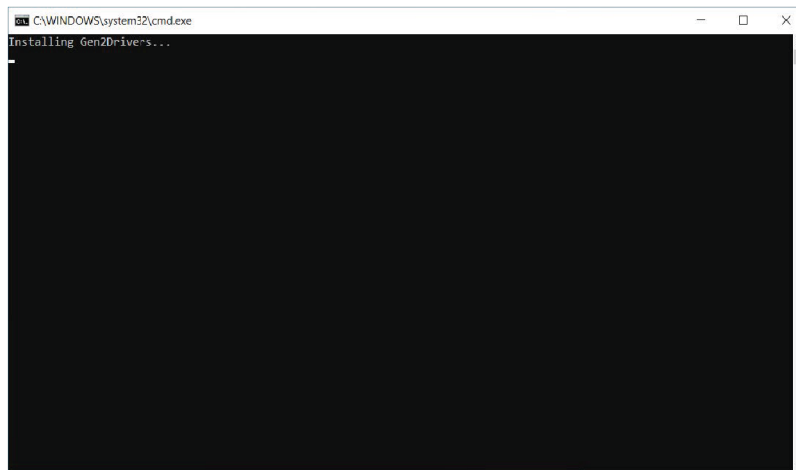
1. To install the IMPRES Gen 2 drivers, click **Install**.



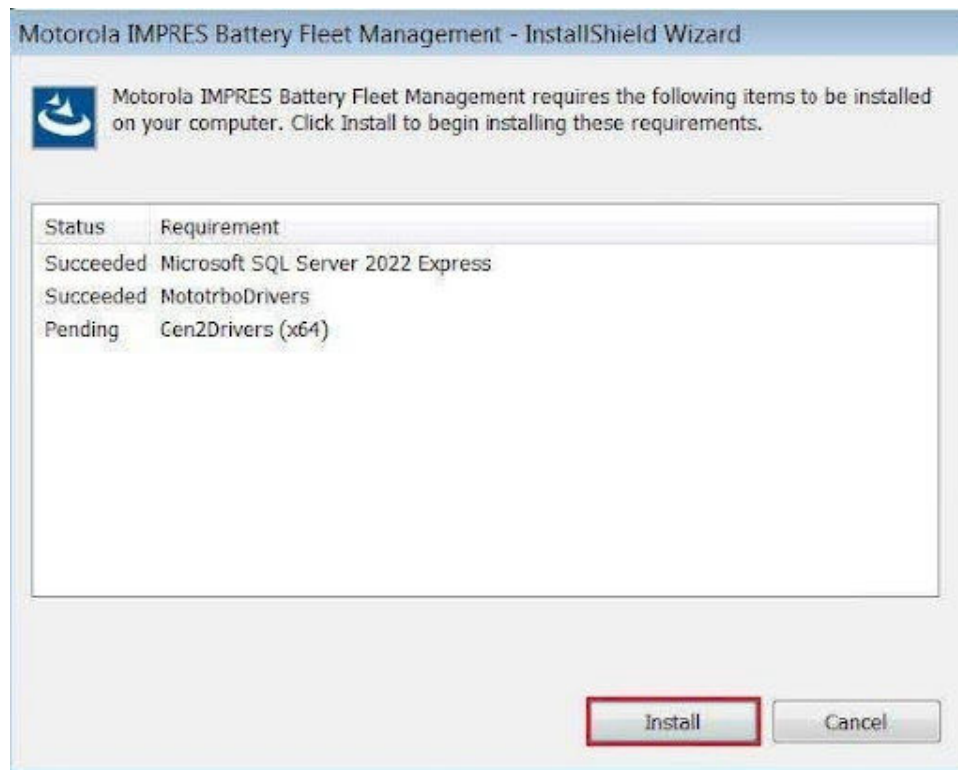
NOTE:

- To complete the installation, refer to the steps in the following images.
- The computer displays the prerequisite name as 'Gen2Drivers (x64)' for 64-bit computers and 'Gen2Drivers (x86)' for 32-bit computers..

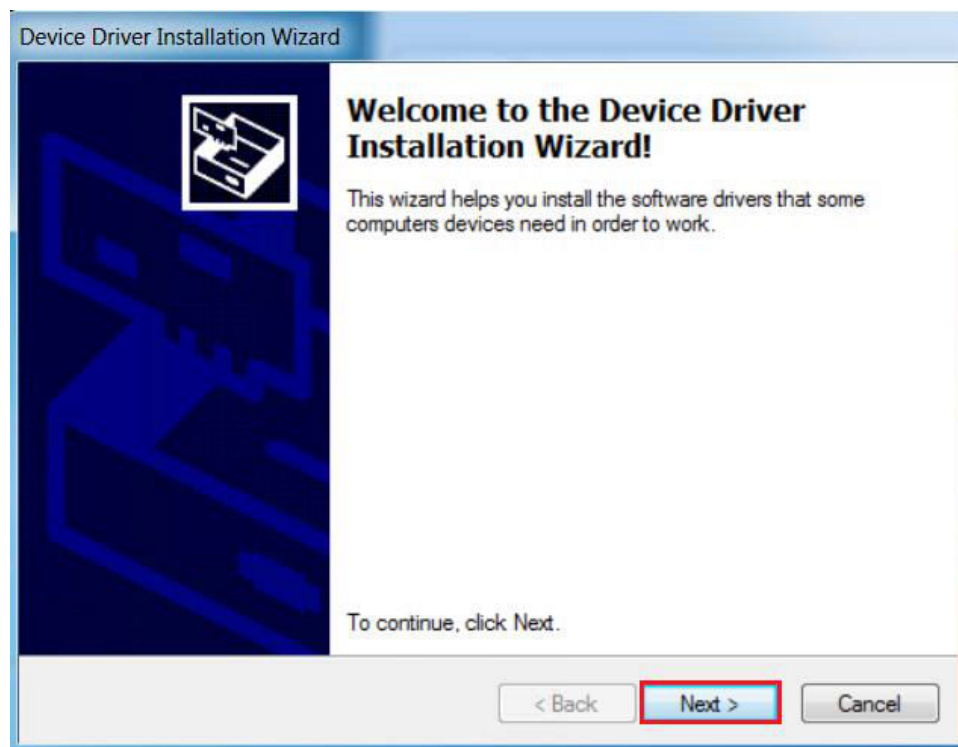
The below window appears if the previous version of IMPRES Gen 2 Drivers is installed.



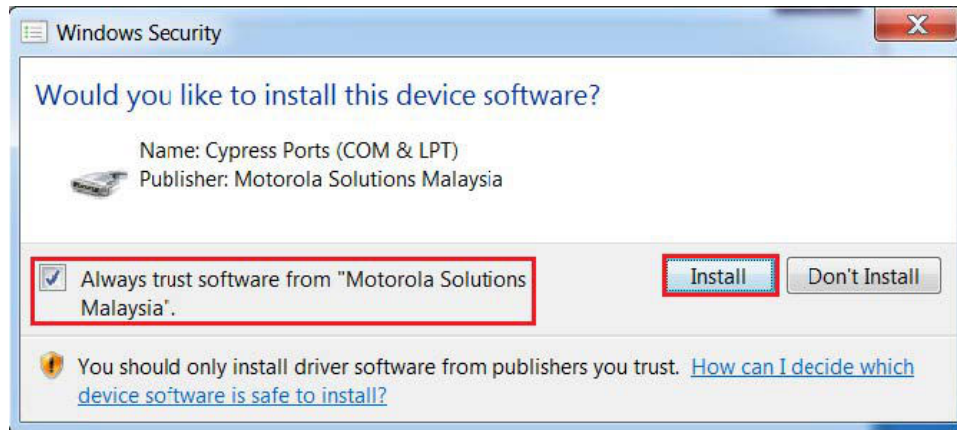
The **Motorola IMPRES Battery Fleet Management - InstallShield Wizard** window appears if this is your first-time installation.



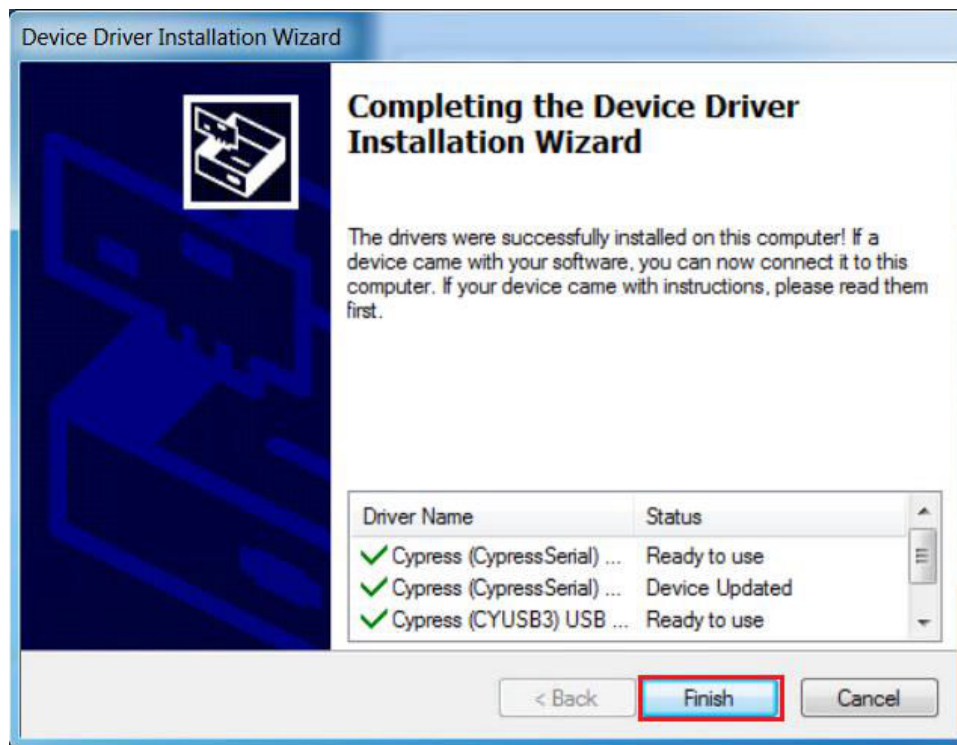
2. Click **Next** when the welcome window appears.



3. Select **Always trust software from "Motorola Solutions Malaysia"** and click **Install** to proceed if requested.



4. To close the installation wizard, click **Finish**.



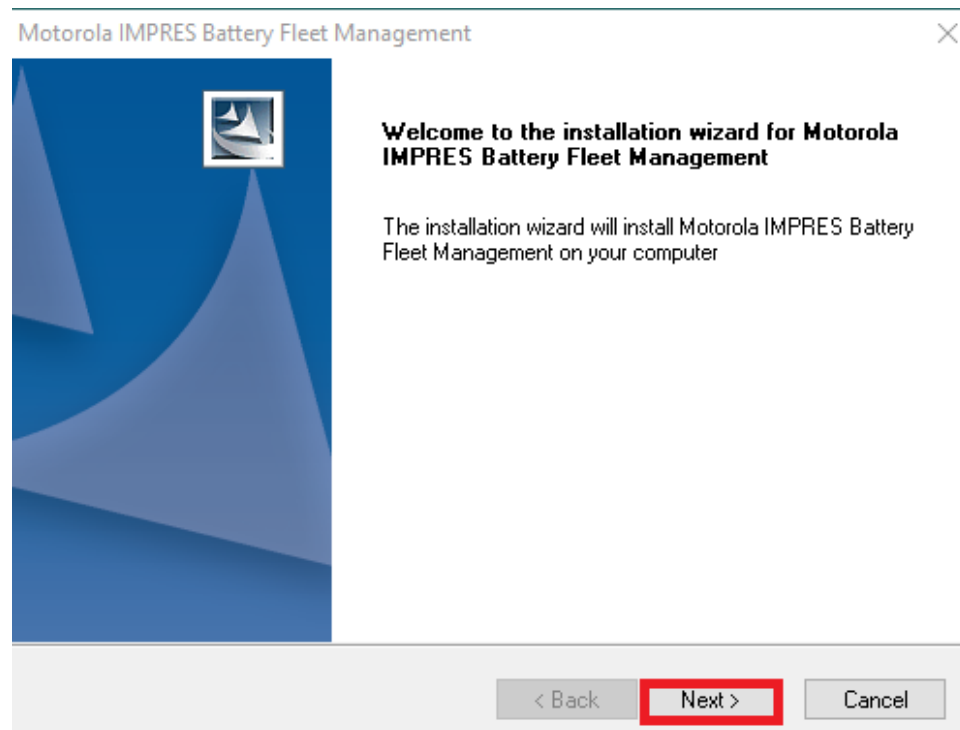
1.7

Installing IMPRES Battery Fleet Management

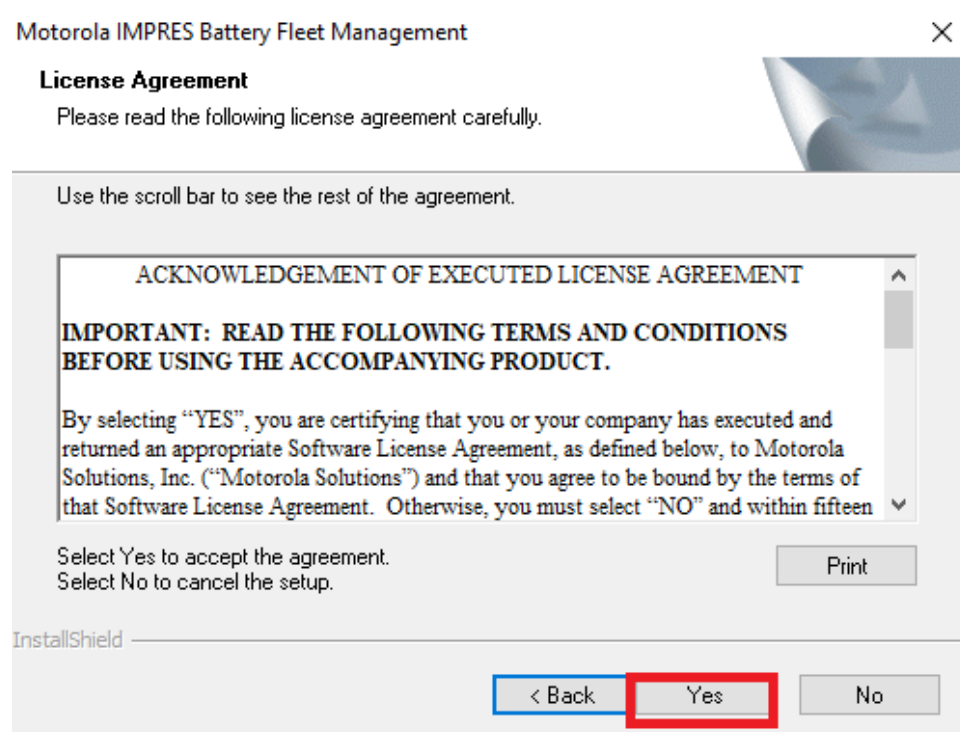
After installing the prerequisite software, the main installation of battery fleet management begins. The computer displays the IMPRES Battery Fleet Management welcome screen.

Procedure:

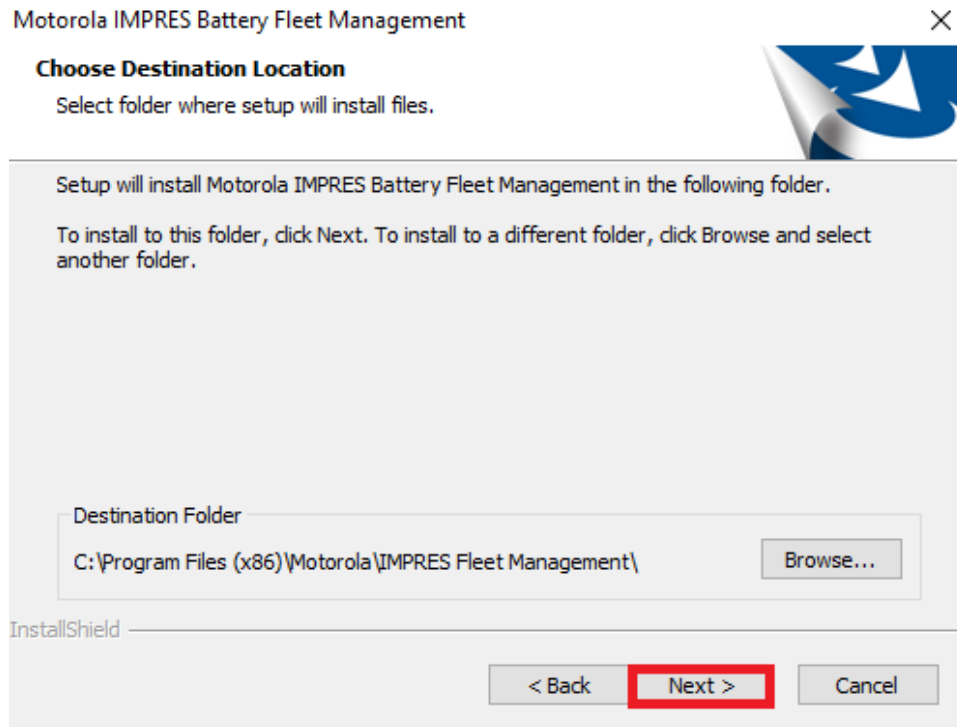
1. Click **Next** when the **Welcome** screen appears.



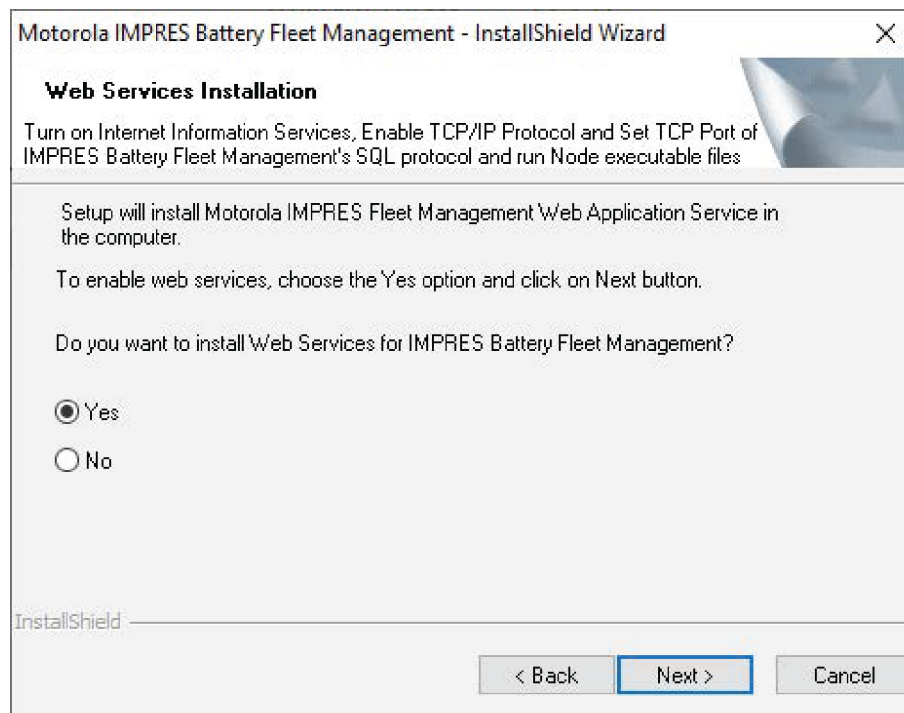
2. To accept the Software License agreement, select **Yes** after reading the agreement.



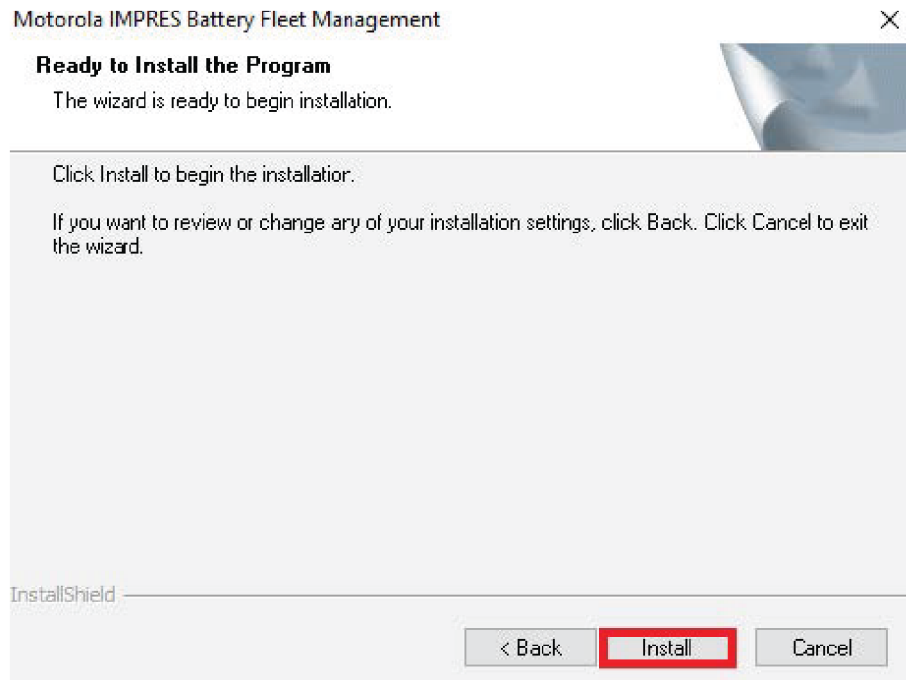
3. To continue the installation process, click **Next**.



4. If you choose the machine to be the fleet management server, click **Yes**. Click **No** if you choose the client machine as the fleet management server.



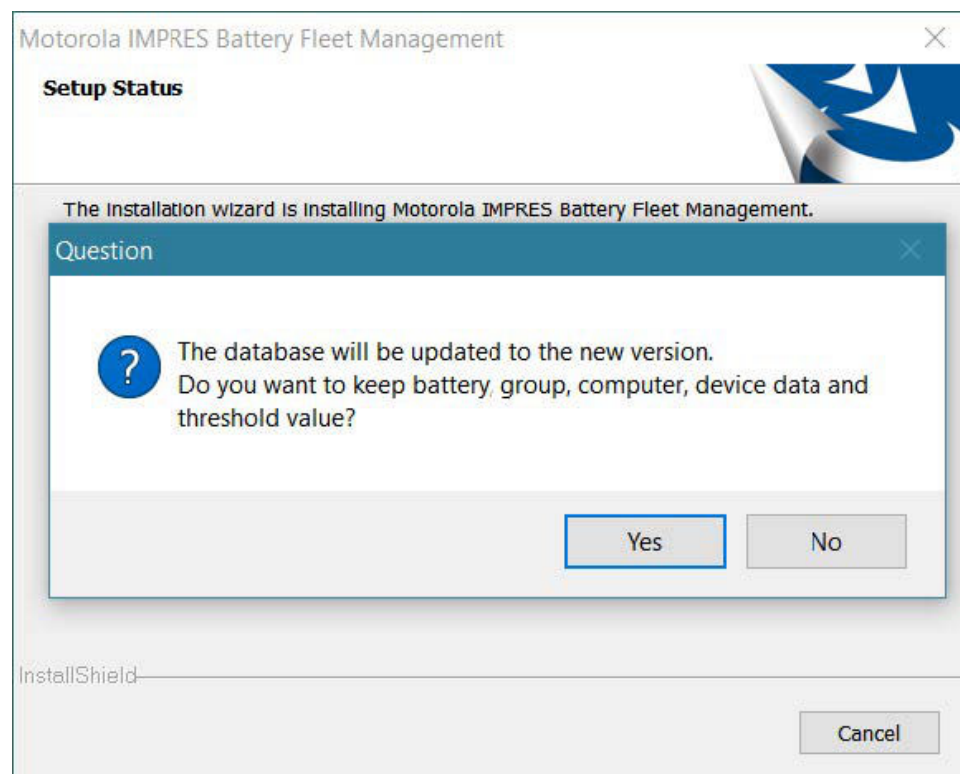
5. To start the installation, click **Install**.



6. To upgrade the previous version of IMPRES Battery Fleet Management application, click **Yes** to upgrade automatically and to retain the previous settings for the thresholds.



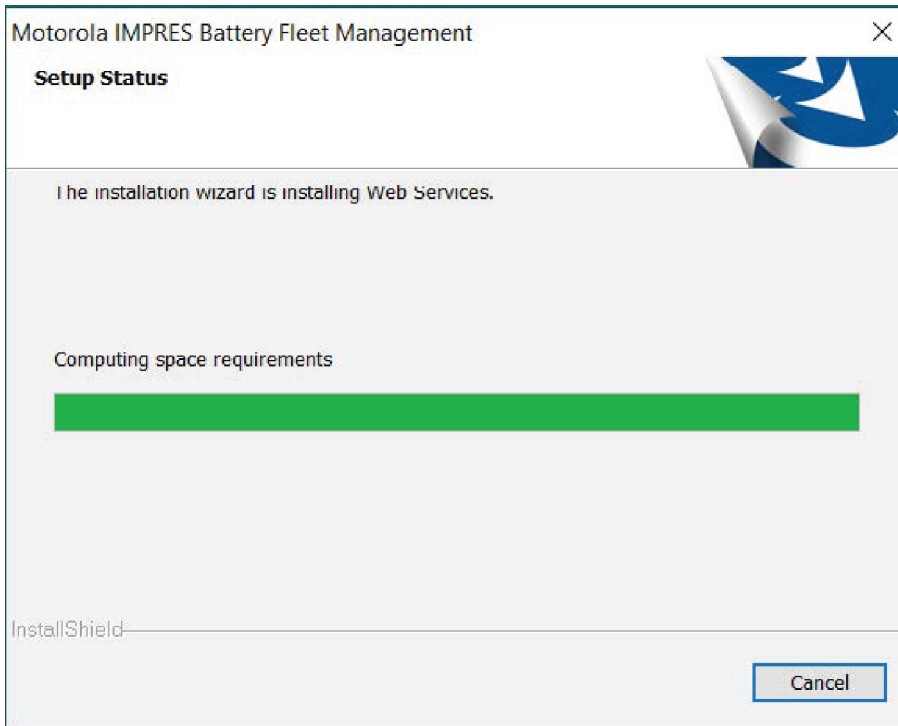
NOTE: If this is your first time installation, no upgrade messages are prompted.



- Once the IMPRES Battery Fleet Management installation is complete, install the IMPRES driver on the computer. For more details, see [Installation of IMPRES Devices on page 41](#).



NOTE: The installation process requires you to reboot your computer at some point.

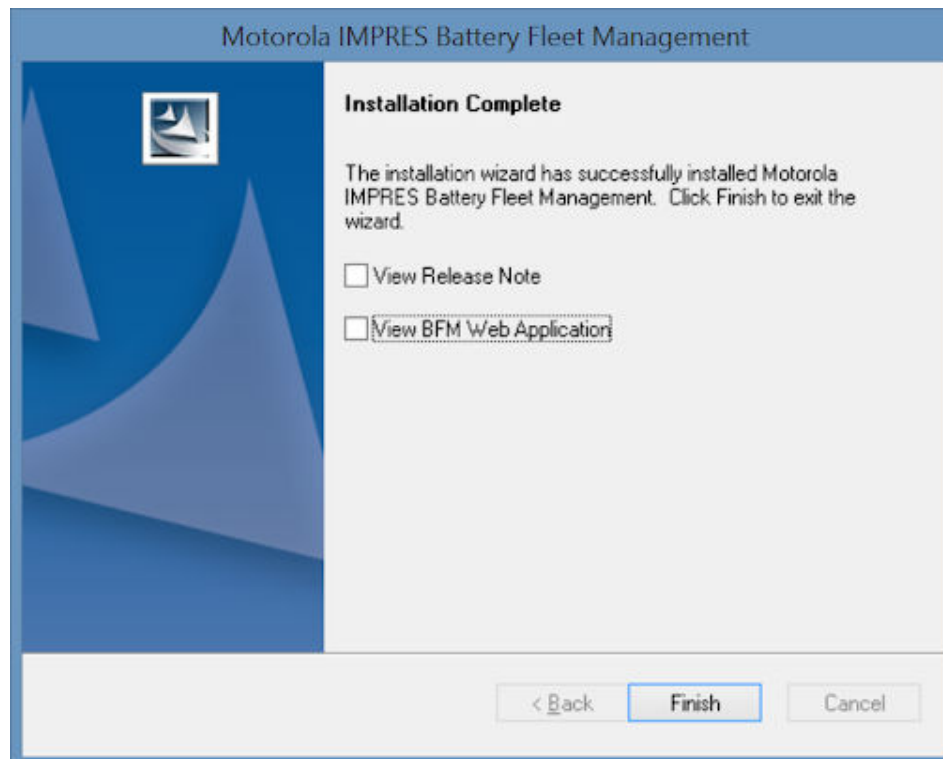


```

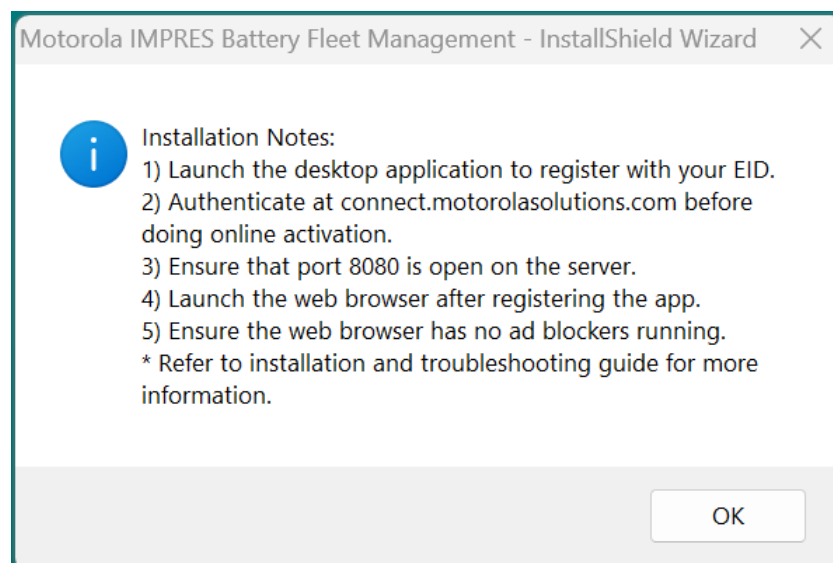
Administrator: Windows PowerShell
Before Appending Environment PSModulePath: C:\Program Files\WindowsPowerShell\Modules;C:\Users\cjp01\Documents\WindowsP
owerShell\Modules;C:\Program Files (x86)\WindowsPowerShell\Modules;C:\WINDOWS\system32\WindowsPowerShell\v1.0\Modules;c:
\Program Files (x86)\Microsoft SQL Server\110\Tools\PowerShell\Modules\
Import-Module sqlps
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: Could not obtain SQL Server Service information. An attempt to connect to WMI on
'Microsoft.WindowsAzure.Commands.SqlDatabase.Types.ps1xml' failed with the following error: The RPC server is
unavailable.
WARNING: The names of some imported commands from the module 'sqlps' include unapproved verbs that might make them less
discoverable. To find the commands with unapproved verbs, run the Import-Module command again with the Verbose
parameter. For a list of approved verbs, type Get-Verb.
Import-Module sqlps module attempts: 1

```

- To complete the installation, click **Finish**.



9. Pay attention to the installation notes upon completing the installation.



Chapter 2

Feature Configuration

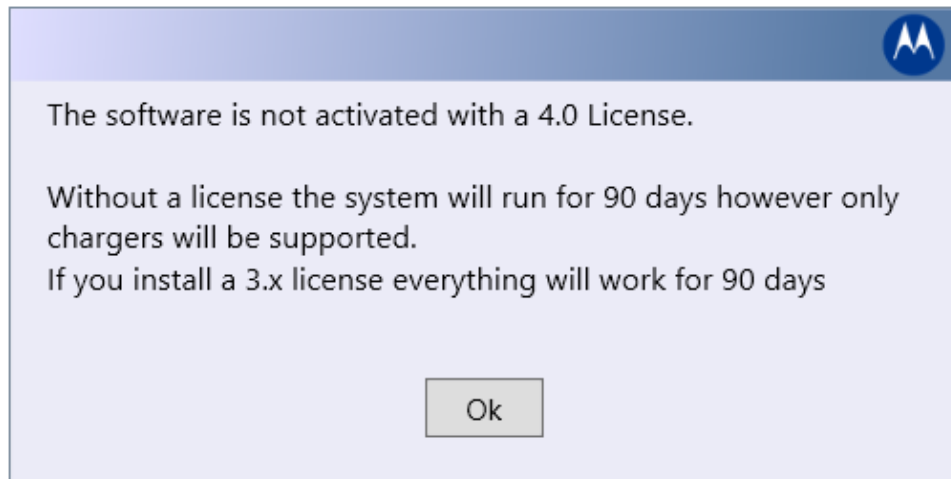
This chapter is about setting up your applications.

2.1

Activation of IMPRES Battery Fleet Management Application

Activate the IMPRES Battery Fleet Management application to enable full functionalities.

If the application is not activated, the following message box is displayed when launching the application.



NOTE:

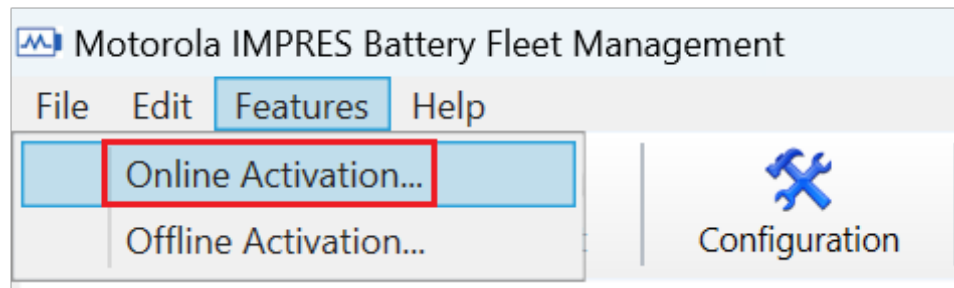
- Activation now requires user authentication. Visit <http://connect.motorolasolutions.com> and log in using your Partner Hub, Customer Hub, or MyView credentials before activation.
- Running the IMPRES Battery Fleet Management application on a Virtual Machine with a dynamic physical Media Access Control (MAC) address causes the application to lose activation. To run the IMPRES Battery Fleet Management application on a Virtual Machine, configure the Virtual Machine with a static or manual physical MAC address.
Running the IMPRES Battery Fleet Management application on a PC which has Wi-Fi as its primary Network Interface Controller (NIC) causes loss of activation if the WIFI is set to **RANDOMIZE** the MAC Address.

2.1.1

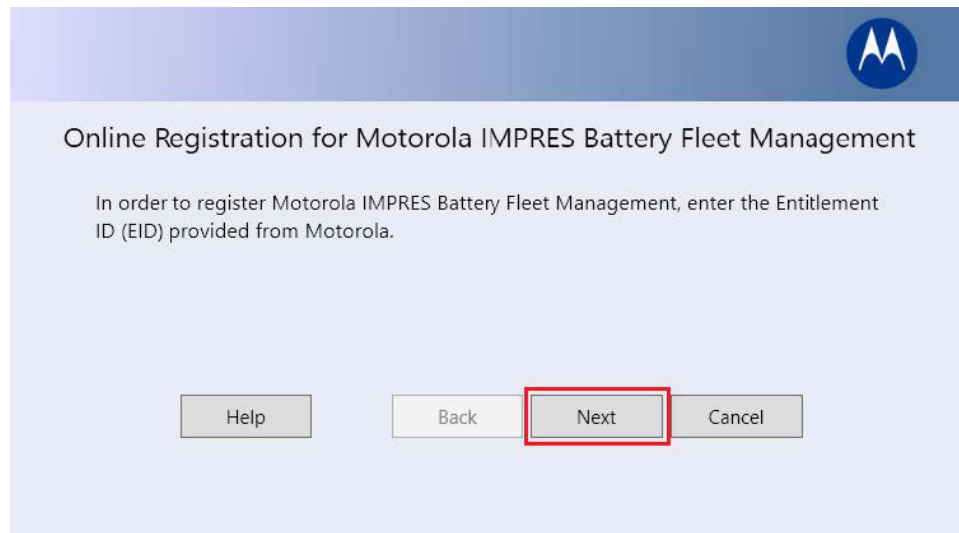
Online Activation

Procedure:

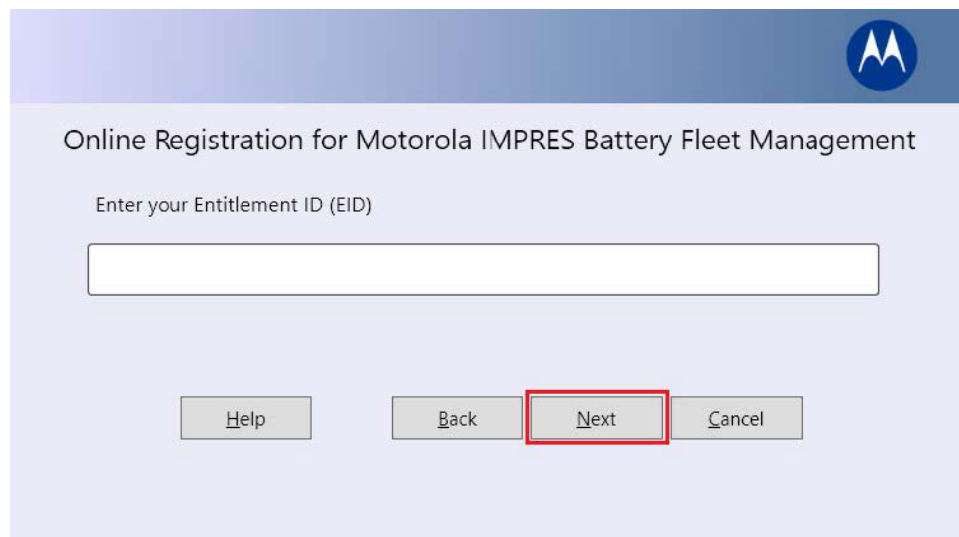
1. Open the application.
2. For online activation, go to **Features** → **Online Activation....**



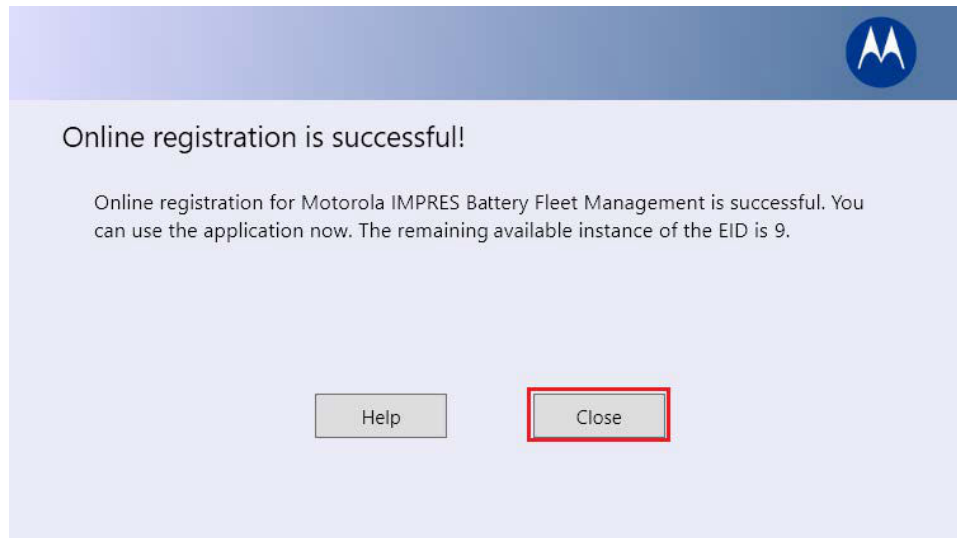
3. Click **Next**



4. Enter the provided **Entitlement ID (EID)** and click **Next** to proceed.



5. Once the registration is successful, you can see the remaining available instance of the EID left. Click **Close** to finish the registration.



2.1.2

Offline Activation

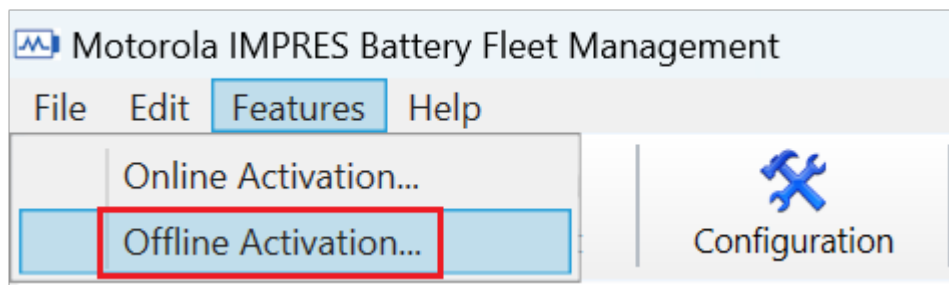
When and where to use:



NOTE: To perform an offline activation, refer to the Troubleshooting and External Configuration manual on how to create an account, activate your Entitlement ID (EID), add a device, and generate a license from the HOST ID that is saved in this process. The manual also provides information on how to save the license as a BIN file to be used in this section.

Procedure:

1. Open the application.
2. For offline activation, go to **Features** → **Offline Activation....**

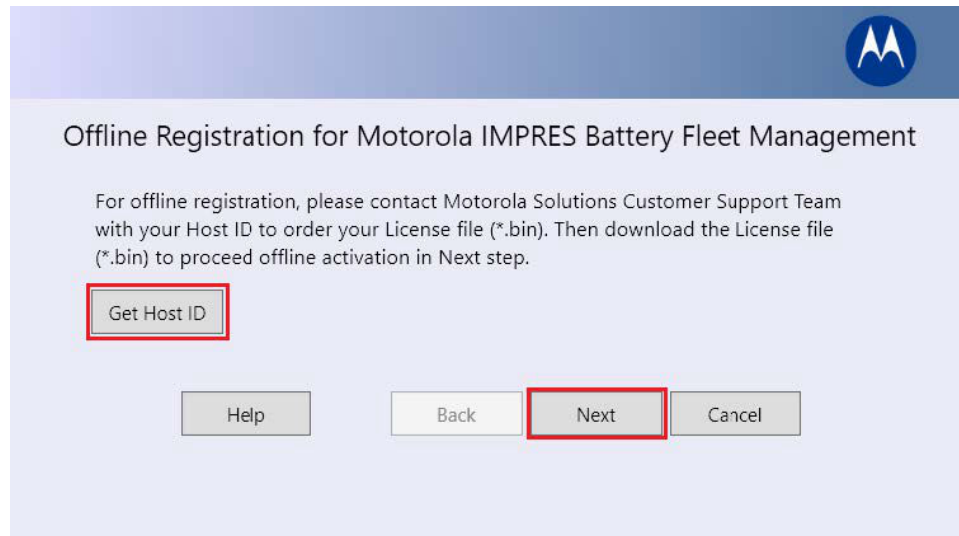


3. To save the Host ID file, click **Get Host ID**.

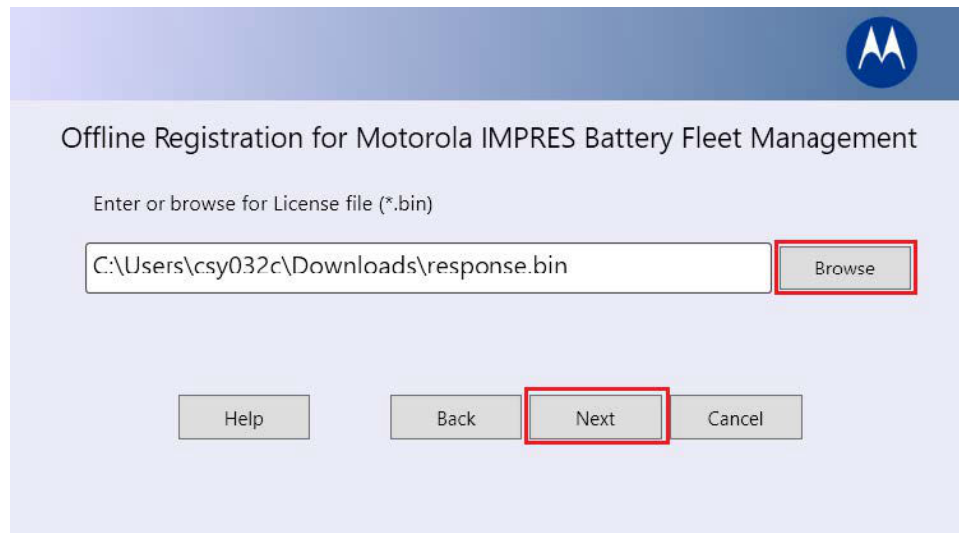


NOTE: To generate a license as a BIN file from the HOST ID, refer to the Troubleshooting and External Configuration manual.

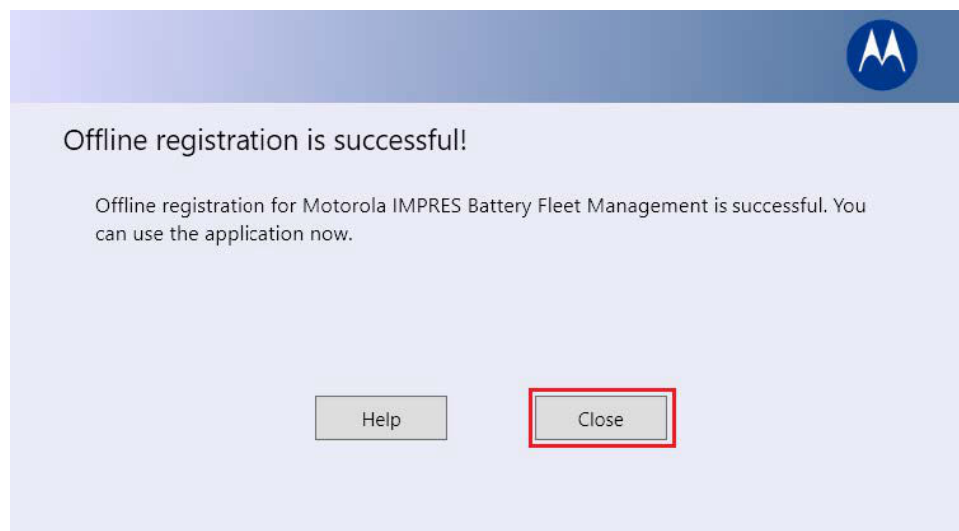
4. Once you have the License file, click **Next**.



5. To locate the provided License file (*.bin), click **Browse** and click **Next** to proceed.



6. Once the registration is successful, click **Close** to finish the registration.



2.2

Setting up Server/Client Environment

Procedure:

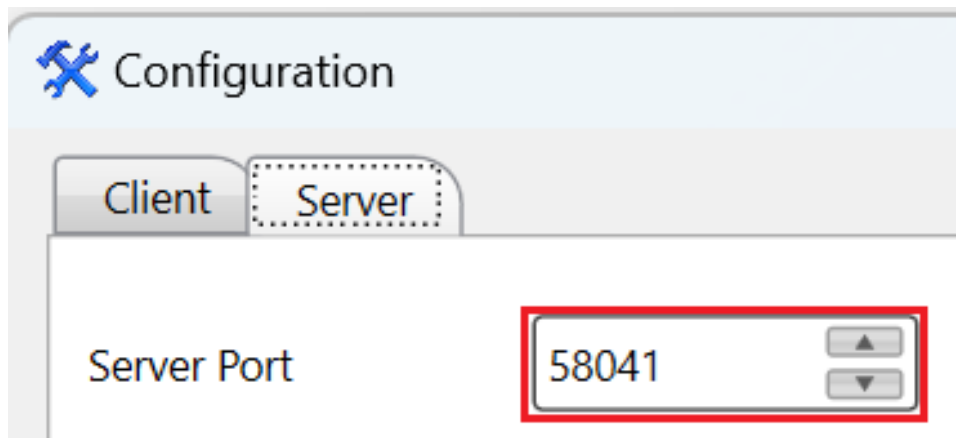
1. To setup IMPRES Battery Fleet Management in the Server/Client environment mode, start the Application as **Administrator**.
2. Click the **Configuration** icon.

2.2.1

Setting Up Server PC

Prerequisites:

In the Server tab, insert the port number on which the IMPRES Battery Fleet Management server communicates to clients. This port number must be the same on all computers running IMPRES Battery Fleet Management.



2.2.2

Setting Up Client PC

Procedure:

1. In the **Client** tab, insert the **Server Address** of the computer that is currently configured as the IMPRES Battery Fleet Management server.



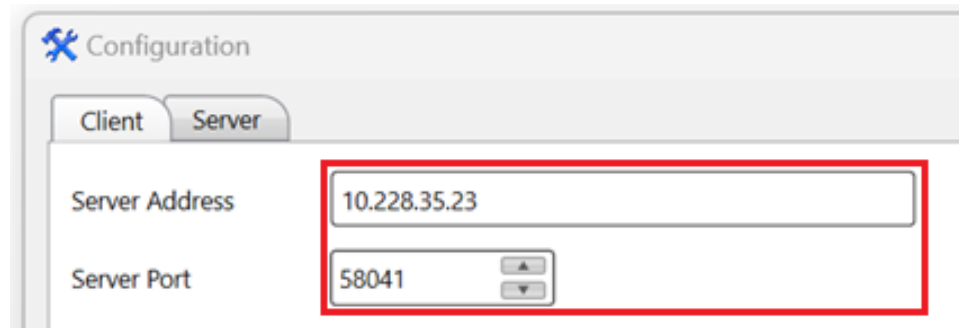
NOTE: If there is only one computer running IMPRES Battery Fleet Management in your organization, the value of the Server Address can be **localhost**.

2. Insert the **Server Port** number on which this client computer communicates with the IMPRES Battery Fleet Management server.



NOTE: The value in the textbox must match the value in the **Server Port** textbox on the **Server Tab** on all computers running IMPRES Battery Fleet Management.


Figure 1: Client PC



The screenshot shows a 'Configuration' window with two tabs: 'Client' and 'Server'. The 'Client' tab is selected. Inside the 'Client' tab, there are two fields: 'Server Address' and 'Server Port'. The 'Server Address' field contains the text '10.228.35.23'. The 'Server Port' field contains the text '58041' and has up and down arrow buttons next to it. A red rectangular box highlights both the 'Server Address' and 'Server Port' fields.

3. Fill in the following values in the **Client** tab:

- Server Address : This is the IP address of the Battery Management server
- Server Port : 58041

 **NOTE:** The server requires application permission if the firewall is enabled. For more information, see *IMPRES™ Battery Fleet Management Troubleshooting Guide and External Software and Component Configuration Guide*.

2.3

Enabling MOTOTRBO Radio Network Feature

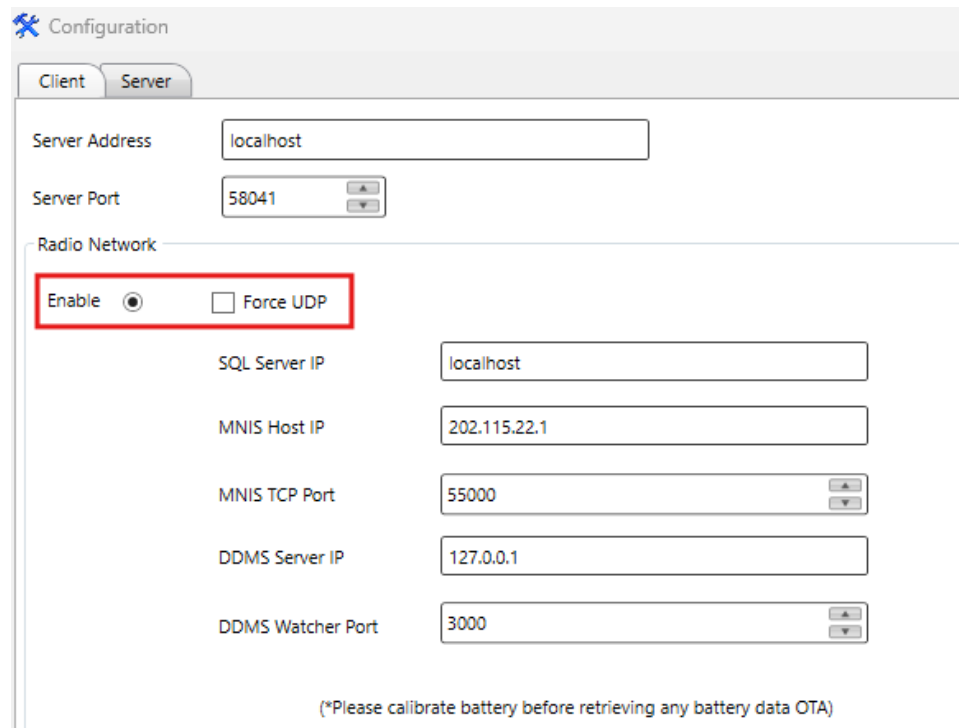
Prerequisites:

- This procedure is not applicable for the ASTRO system installations.
- The Radio Network is disabled by default. You need to enable the Radio Network when the computer is used as a radio data gateway by performing the following steps:

Procedure:

1. Right-click the application and run as **Administrator**.
2. Click the **Configuration** icon.

3. Turn on the **Enable**



The screenshot shows the 'Configuration' window with the 'Server' tab selected. The 'Radio Network' section is highlighted with a red box, showing the 'Enable' radio button selected and the 'Force UDP' checkbox unchecked. Below this, several fields are visible: SQL Server IP (localhost), MNIS Host IP (202.115.22.1), MNIS TCP Port (55000), DDMS Server IP (127.0.0.1), and DDMS Watcher Port (3000). A note at the bottom states: (*Please calibrate battery before retrieving any battery data OTA).

2.3.1

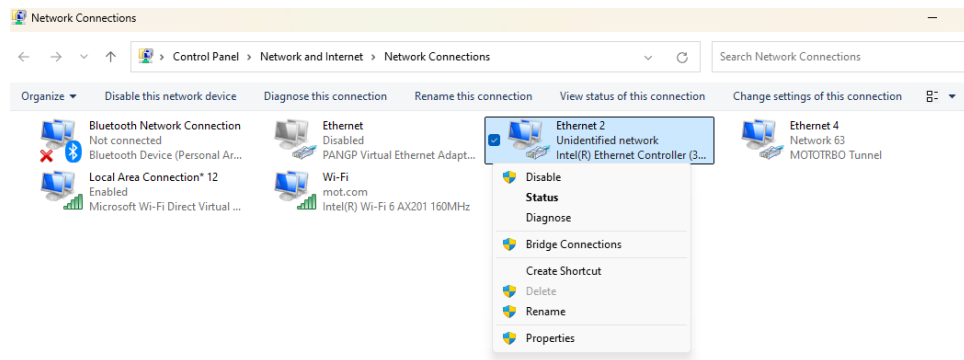
Enabling the TCP Mode

Change the IP address of the machine before enabling the radio network feature in TCP mode.

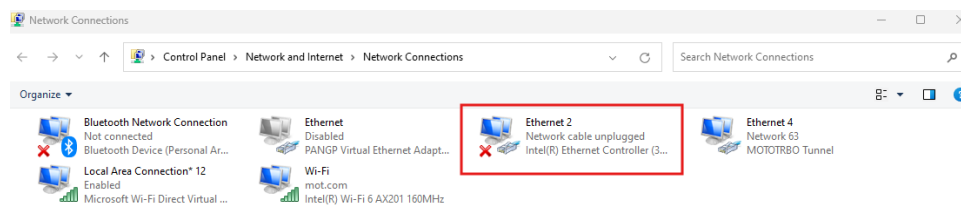
Prerequisites: Ensure the PC is connected to the repeater through the Ethernet cable.

Procedure:

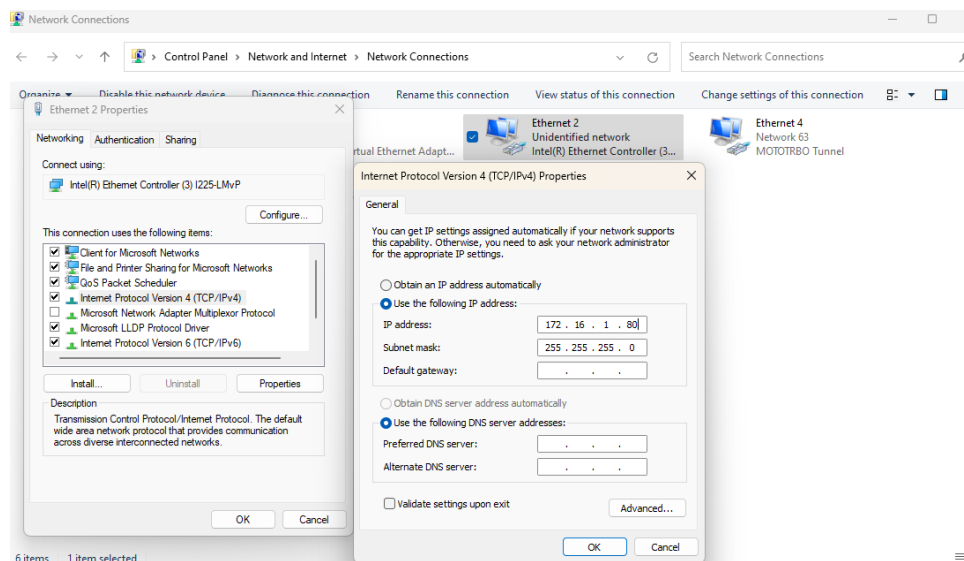
1. Open the **Control Panel** → **Network and Sharing Center** to identify and change the ethernet connection.
2. Click **Change adapter settings** on the left menu
3. Right-click the Ethernet connection connected to the repeater.
4. Select **Properties**.



To identify the correct Ethernet connection, unplug its Ethernet cable from the repeater and then plug it back in.



5. In the **Properties** window, double-click **Internet Protocol Version 4 (TCP/IPv4)**.
6. Select **Use the following IP Address** with the following details:



7. Enter 172.16.1.80 as the IP Address.



NOTE:

- Verify the IP is unique.
- If the Master IP Address of the radio repeater is on a particular subnet, the Ethernet connection IP must be on the same subnet. For example, if the Master IP Address is <192.0.2.24>, the Ethernet connection IP should be in the <192.0.2.x> range, such as <192.0.2.80 >or <192.0.2.1>.

8. Enter 255.255.255.0 as the subnet mask.

LCP Domain 1

Master IP Address 172.16.1.24

Master UDP Port 50124

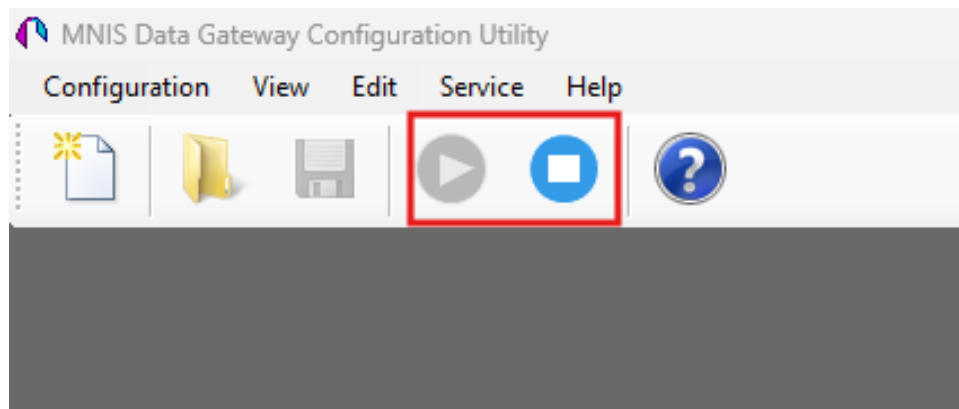
MNIS LE Port

☒ Automatically Assigned

☐ Manually Assigned None

9. Click **OK** to save these settings.

10. Confirm that the MNIS Data Gateway service is running on the PC.



11. Use Ping Command to verify connectivity to the radios by performing these steps:

- a. Open the **Command Prompt**.
- b. If the radio address is 12.0.0.12, enter `ping 12.0.0.12` in the Command Prompt.
A successful ping displays a response similar to the following output.

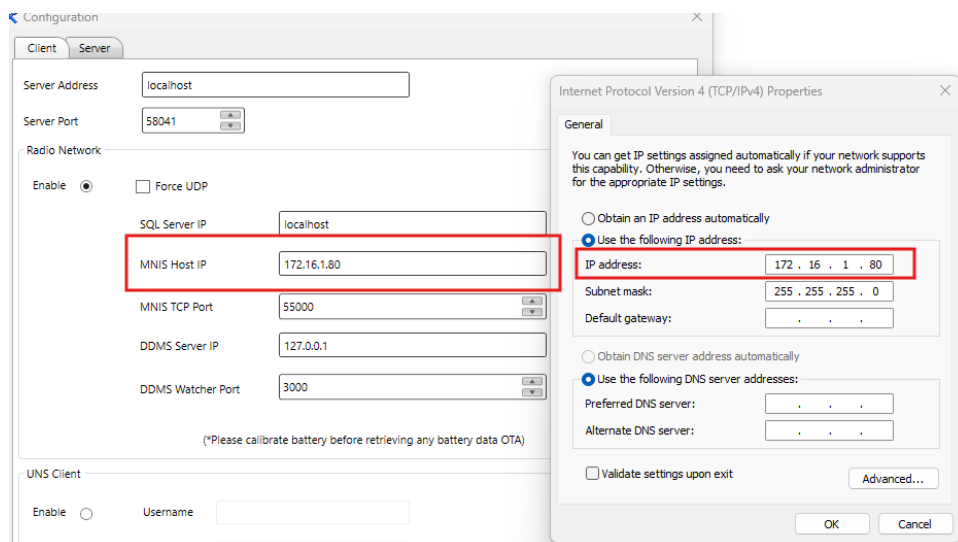
```
Command Prompt

C:\Users\NBXG47>ping 12.0.0.12

Pinging 12.0.0.12 with 32 bytes of data:
Reply from 12.0.0.12: bytes=32 time=1816ms TTL=64
Reply from 12.0.0.12: bytes=32 time=1677ms TTL=64
Reply from 12.0.0.12: bytes=32 time=1677ms TTL=64
Reply from 12.0.0.12: bytes=32 time=1674ms TTL=64

Ping statistics for 12.0.0.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1674ms, Maximum = 1816ms, Average = 1711ms
```

12. Update the **MNIS Host IP** in the Battery Fleet Management PC App by performing these steps: Enter the IP address of your machine that you have changed into the in BFM PC App:
 - a. Open the BFM PC App.
 - b. Navigate to Configuration settings.
 - c. Disable the **Force UDP** checkbox.
 - d. Enter the updated Ethernet connection IP (for example, **172.16.1.80**) into the MNIS Host IP field.



- e. Launch the **MNIS Data Gateway Configuration Utility** on your system.
- f. In the network tab, navigate to the **Device Discovery and Mobility Service** section and **MNIS Control Interface** section to find the respective fields for **DDMS Server IP**, **DDMS Watcher Port**, and **MNIS TCP Port**.

Device Discovery and Mobility Service	
Server Address	<input type="text" value="127.0.0.1"/>
Watcher Port	<input type="text" value="3000"/>

MNIS Control Interface	
MNIS Control Interface TCP Port	<input type="text" value="55000"/>

- g. Enter the values in the Configuration settings.
 - h. Click **OK** to save these settings.
13. When the following dialog box appears, click **OK** → **Yes**.



IMPRES Battery Fleet Management application restarts to begin MOTOTRBO Radio Network service.

2.3.2

Enabling the UDP Mode

Procedure:

1. Right-click the application and run as **Administrator**.
2. Click the **Configuration** icon.
3. Turn on the **Enable**

Configuration

Client Server

Server Address: localhost

Server Port: 58041

Radio Network

Enable ☒ Force UDP ☒

NOTE:

If you want to use the Server-Client connection, check the **Enable** button and the **Force UDP** checkbox on Radio Network on the client PC.

The Application requires the Motorola Network Interface Service (MNIS) or a mobile radio to route the data to the appropriate channel and site. A static IP route need to be manually entered in the computer that routes all radio data through the mobile radio network interface if the Multi-Channel Device Driver (MCDD) is not used.

For example, by the default radio network ID configuration such as **Subscriber Network ID=12**; **Subscriber Network Mask=255.0.0.0**. The following is the route table:

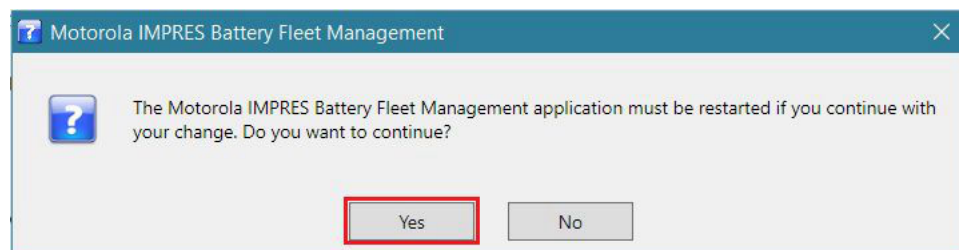
```
=====
Persistent Routes:
  Network Address      Netmask  Gateway Address  Metric
    169.254.0.0        255.255.0.0    192.168.1.6      1
    13.0.0.1           255.0.0.0     192.168.10.12    1
    12.0.0.0           255.0.0.0     192.168.10.1     1
=====
```

For example, the following is to add a route entry: **route add 12.0.0.0 mask 255.0.0.0 192.168.10.1 -p**

To validate the setup of the radio gateway, you are able to ping the individual radio IP. For example, the following command is to check a radio with radio =1: **ping 12.00.00.01**

4. When the following dialog box appears, click **OK** → **Yes**.

IMPRES Battery Fleet Management application restarts to begin MOTOTRBO Radio Network service.



2.4

Enabling APX IMW (UNS) Radio Network Configuration

IMPRES Battery Fleet Management requires the following values to find or create connection.

- Username and password
- IDM Address
- UNS Address
- Domain
- Presentity - Static Group



NOTE: These values come from the account setup in Intelligent Middleware (IMW). For more information about how to set the account up and add radios to the system refer to Enable ASTRO Over-The-Air Battery Management (OTABM) feature in *IMPRES™ Battery Fleet Management Troubleshooting Guide and External Software and Component Configuration Guide*.

Procedure:

Fill in the following values in the **UNS Client** section:

- Username: 12345
- Password: *****
- IDM Address: FQDN IS THE IDM OR THE IP ADDRESS OF IDM (IDM.UNS.CITY.GOV / 10.51.1.135)
- UNS Address: FQDN IS THE UNS OR THE IP ADDRESS OF UNS (CORE1.UNS.CITY.GOV / 10.51.1.132)
- Domain: MOT.SZ02C3
- Presentity: STATIC:IMPRES-STATIC@MOT.SZ02C3

2.4.1

Configuring APX IMW (UNS) Radio Network

Prerequisites: The requirements vary depending on your Intelligent Middleware (IMW) version.

Table 4: APX IMW (UNS) Configuration

Field	IMW 5.2.2 and Below	IMW 5.2.3 and above
Username/Password	IDM Configuration	Application Configuration
IDM Address	IDM FQDN or IP Address	IDM FQDN or IP Address
UNS Address	Core1 FQDN or IP Address	IDM FQDN or IP Address

Procedure:

1. The following procedure enables the Over-the-Air Battery Management (OTABM) feature:

- a. Start the Application as **Administrator** and then select the **Configuration** icon.
- b. To enable the feature, navigate to **UNS Client** → **Enable**.


The UNS Client is disabled by default.

2. Provide the following information to connect to the IMW/UNS System and click **OK**.

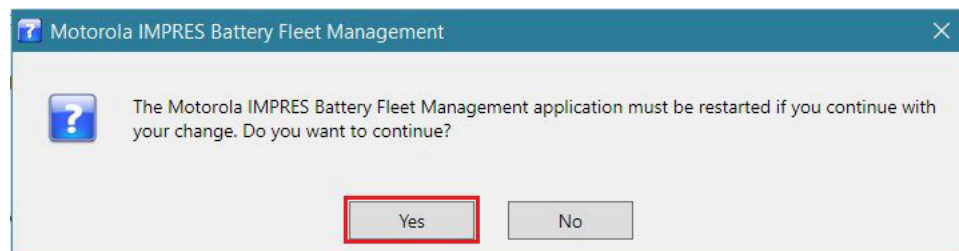
Table 5: Configuration

Field	Description
Username and Password	This is the login to the Identity Manager (IDM) server. Refer to Create an IMW client ID and Password for Battery Management on page 40 . Modify the PC host file to enter the host-name and IP address.
IDM Address	The host name of the IDM server that returns to token.
UNS Address	The host name of the UNS server.
Domain	IMW SIP Domain.
Presentity	Used to subscribe to a group of radios in the IMW.

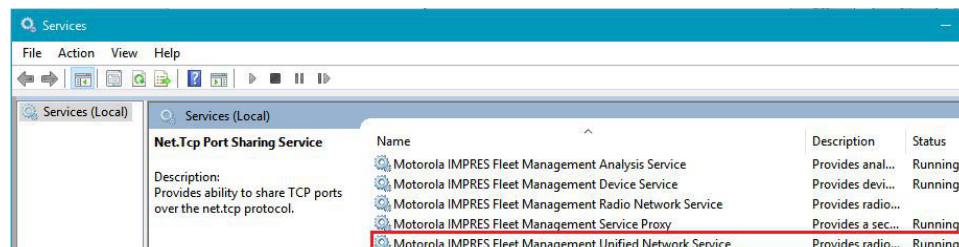
3. If the IDM login is correct, the following dialog box appears. Verify all entered values and select **Yes** to proceed. Click **Yes** to continue when the Warning Message appears.

 **NOTE:** Initial Connection attempt might fail. When that happens, click Cancel and close the Battery Fleet Management application. Restart the application as Administrator and recheck the configuration before trying again.

IMPRES Battery Fleet Management application restarts. A Green UNS Subscription Connected will appear for a good connection, or a RED UNS Subscription Disconnected will appear for a failure.



4. To verify that the ASTRO UNS Client service is running, navigate to **Services** → **Motorola IMPRES Fleet Management Unified Network Service**.



2.4.2

Create an IMW client ID and Password for Battery Management

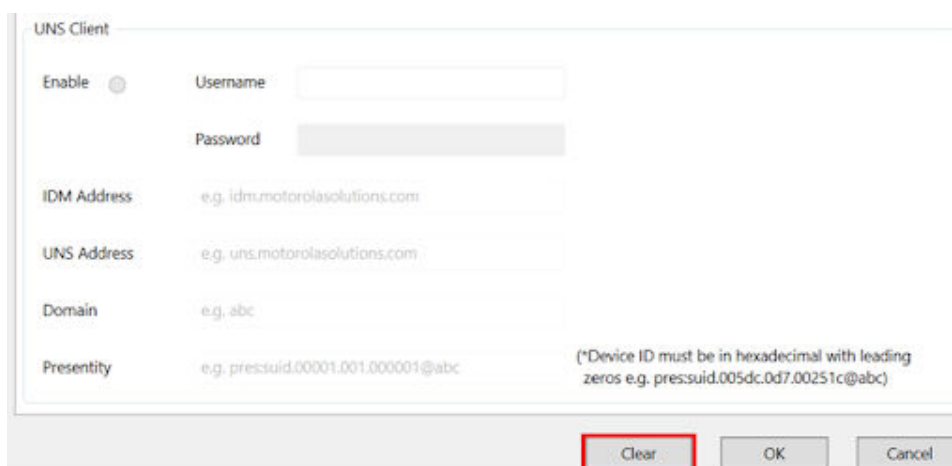
The client ID and password are the credentials used for the battery management application to connect to the Intelligent Middleware (IMW).

2.5

Disabling Radio Configuration

Procedure:

To disable both Mototrbo Radio Network and ASTRO UNS features, click **Clear** → **OK**.



The screenshot shows a dialog box titled "UNS Client". It contains several fields and controls:

- Enable:** A radio button that is currently selected.
- Username:** A text input field.
- Password:** A password input field with a masked character.
- IDM Address:** A text input field with the example value "e.g. idm.motorolasolutions.com".
- UNS Address:** A text input field with the example value "e.g. uns.motorolasolutions.com".
- Domain:** A text input field with the example value "e.g. abc".
- Presentity:** A text input field with the example value "e.g. pressuid.00001.001.000001@abc".

At the bottom right of the dialog box, there is a note: "(*Device ID must be in hexadecimal with leading zeros e.g. pressuid.005dc.0d7.00251c@abc)".

At the bottom of the dialog box, there are three buttons: **Clear**, **OK**, and **Cancel**. The **Clear** button is highlighted with a red border.

Chapter 3


Installation of IMPRES Devices

The IMPRES Battery Fleet Management application collects data from your IMPRES chargers when a battery is inserted into an IMPRES charger pocket.

To collect the battery data, the IMPRES chargers must be connected to a computer with IMPRES Battery Fleet Management application. You can connect up to 25 IMPRES chargers for every CIU unit to a single computer.

3.1

Installing a Mobile Radio as a Data Gateway

 **NOTE:** This procedure is only applicable to MOTOTRBO systems and does not apply to ASTRO Fleet Management usage.

If you need a Mobile Radio as a data gateway, you can have a front connection or a back connection on the mobile radio and then connect the other USB end to a computer which is used in IMPRES Battery Fleet Management.

Procedure:

1. Connect the USB to the front or the back of the Mobile radio.

Figure 2: Front Connection




Figure 3: Back Connection



2. Connect the standard USB cable to the USB connector on the computer.



 **NOTE:** The computer is able to identify the connected mobile radio. A static IP route need to be manually entered in the computer that routes all radio data through the mobile radio network interface if the Multi-Channel Device Driver (MCDD) is not utilized.

3.2

Installing IMPRES 2 Charger


Prerequisites: To install an IMPRES 2 Charger, disconnect the power to the IMPRES 2 Charger and disconnect the charger from the computer.

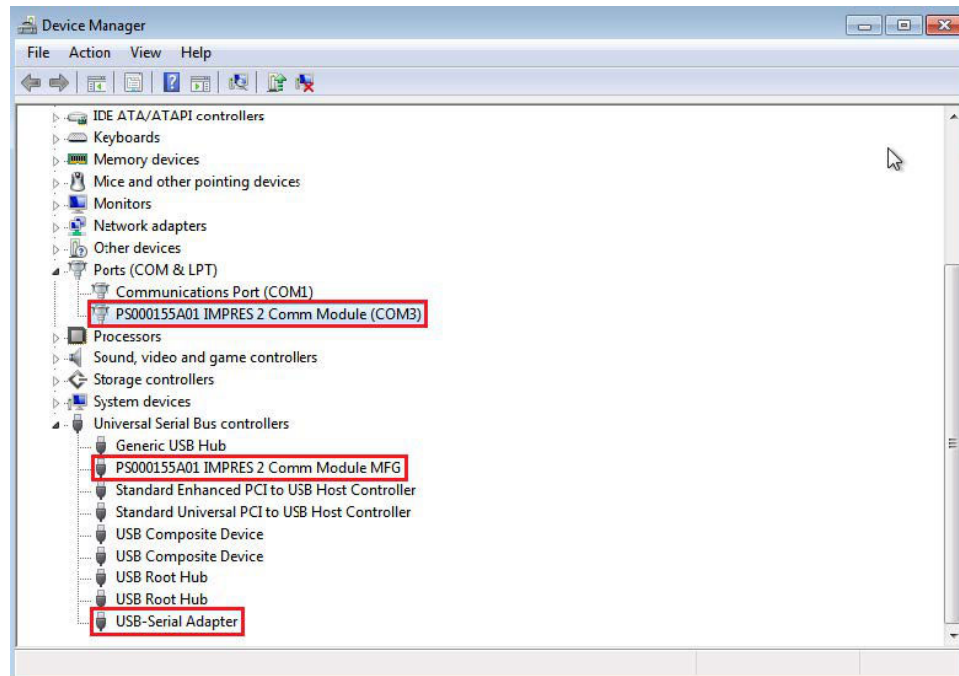
Procedure:


1. Connect a standard USB cable from charger to the USB port on the computer.
2. Apply power to the IMPRES 2 Charger.

The IMPRES 2 drivers are automatically installed for the first time.

After the drivers are successfully installed, three known devices are displayed under **Ports and Universal Serial Bus controllers**.

 **NOTE:** Different chargers for Multi-Unit Charger (MUC) have different names.



 **NOTE:** If IMPRES Gen 2 charger drivers are not properly installed and the hardware found for IMPRES 2 devices is not the same as in the above image, then it is required to perform a manual update to the drivers. For more details, see "Installing IMPRES Gen 2 Charger Drivers Manually (Method 2)" in the *IMPRES™ Battery Fleet Management Troubleshooting Guide and External Software and Component Configuration Guide*.

3.3

Installing IMPRES 2 Ethernet Charger

Prerequisites: Chargers such as the PMPN4633A requires a PC to connect to the charger settings.

Procedure:

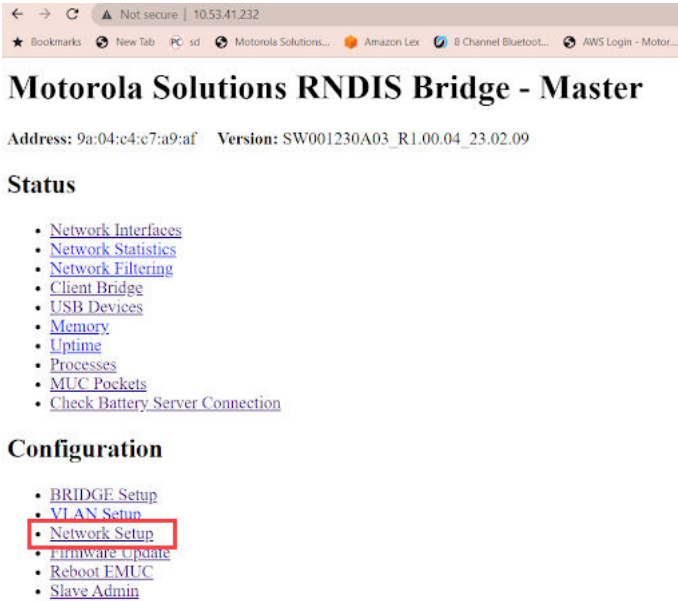
1. Turn on the charger and wait until the charger fully booted.
2. Connect a standard USB cable from charger to the USB port on the computer.

3. Open browser on the PC and type in the address **192.168.248.1**.



NOTE: Wait for the browser page to load. Refresh the page if it stops loading.

4. Click the **Network Setup**.



5. Click **Enable IP Fleet Management** checkbox to allow other setting changes.
6. For Fixed IP address, uncheck the **Enable DHCP** checkbox and fill in the following fields:
 - **Static IP** - The IP address that the Ethernet MUC uses on the network.
 - **Static Netmask** - The required netmask for the network.
 - **Static Default Gateway** - The IP of the gateway on the network.
 - **DNS Server** - The IP of the DNS server on the network.
7. For DHCP, manually enter the IP address of the **DNS server** before choosing **Enable DHCP** checkbox.
8. Perform one of the following actions to enter the BFM Server address:
 - Enter a Fixed IP address.

- Enter the full IP address in the URL section if BFM server does not have a domain name or the network does not support DNS.


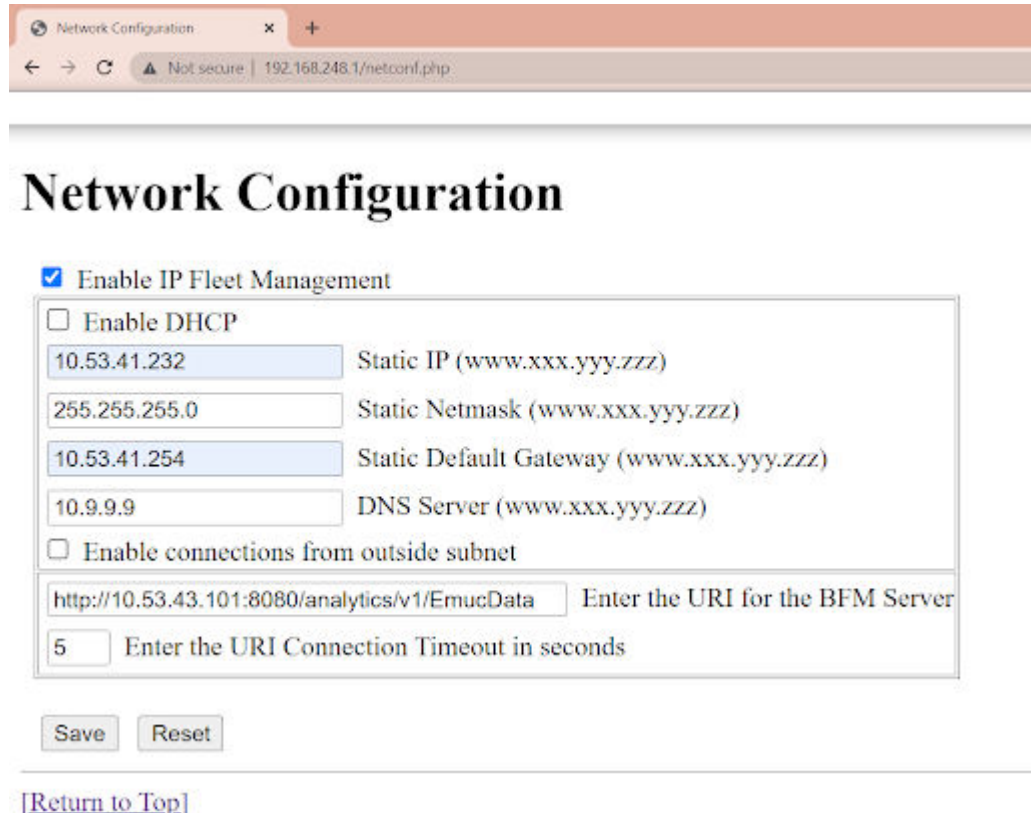
 **NOTE:** The URL format is *http://10.20.30.40:8080/analytics/v1/EmucData*. Replace *10.20.30.40* with the correct BFM server IP address.

Figure 4: Using Fixed IP Address



Network Configuration

☒ Enable IP Fleet Management

☐ Enable DHCP

10.53.41.232 Static IP (www.xxx.yyy.zzz)

255.255.255.0 Static Netmask (www.xxx.yyy.zzz)

10.53.41.254 Static Default Gateway (www.xxx.yyy.zzz)

10.9.9.9 DNS Server (www.xxx.yyy.zzz)

☐ Enable connections from outside subnet

http://10.53.43.101:8080/analytics/v1/EmucData Enter the URI for the BFM Server

5 Enter the URI Connection Timeout in seconds

Save Reset

[\[Return to Top\]](#)

- Enter a fully qualified domain name.

- Enter the full IP address in the URL section if your BFM Server has a fully qualified domain name and you have entered the DNS Server IP address correctly.


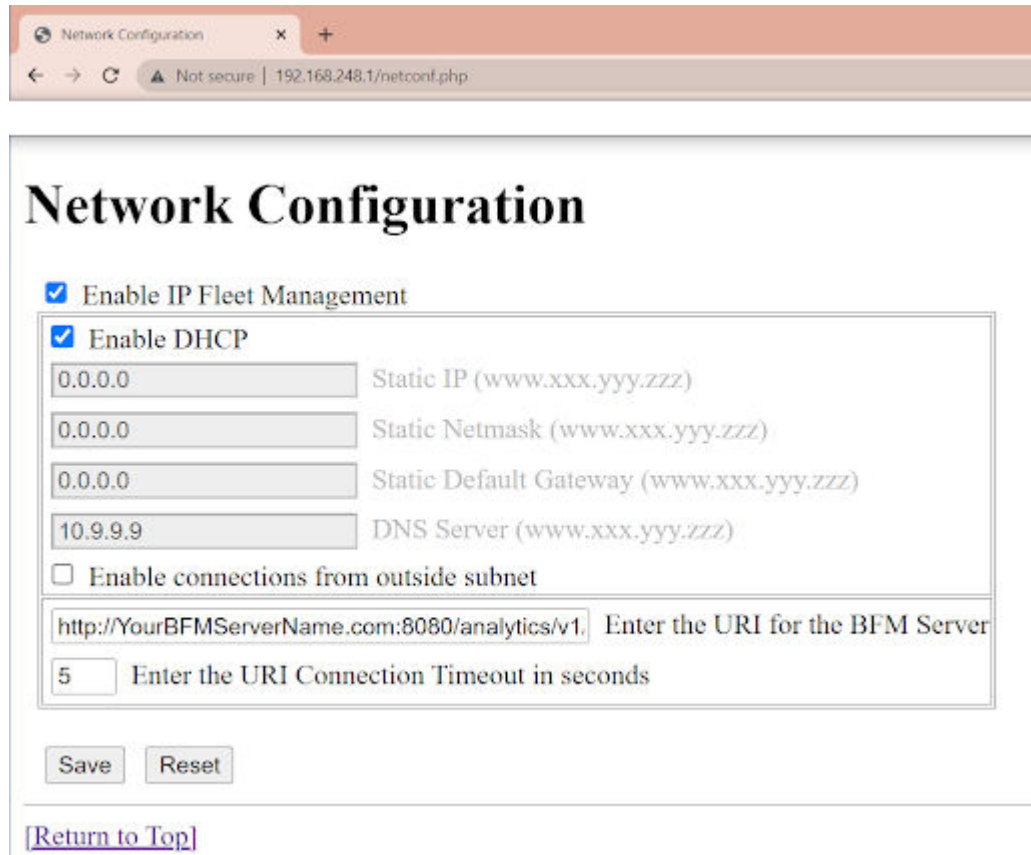

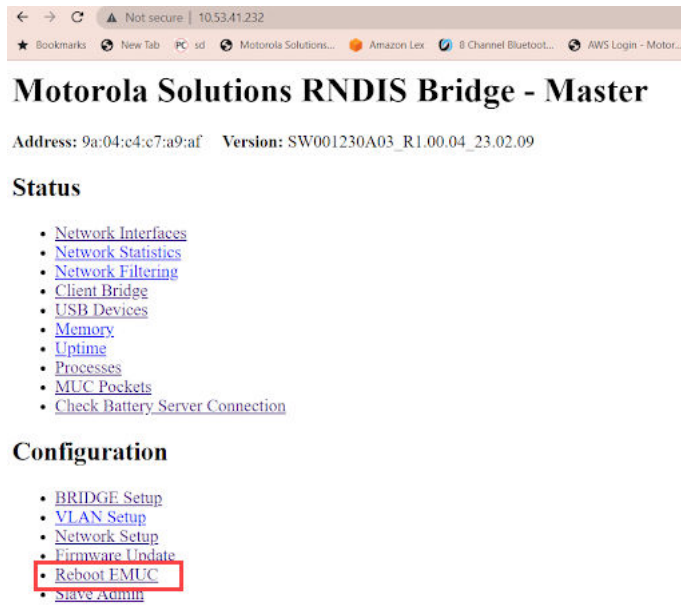
 **NOTE:** The URL format is *http://YourBFMServerName.com:8080/analytics/v1/EmucData*. Replace *YourBFMServerName.com* with the actual fully qualified domain name.

Figure 5: Using DHCP and DNS



 **NOTE:** The default URL in the Ethernet MUC can be different from the one that required to connect to BFM. For example, the default can be *http://X.X.X.X:5000/analytics/v1/EmucData*. This version of BFM uses port 8080 instead of 5000.

9. Click **Save**.
10. Click **[Return to Top]** to go back to the main page.
11. Click **Reboot EMUC** to reboot the EMUC.



Motorola Solutions RNDIS Bridge - Master

Address: 9a:04:e4:c7:a9:af Version: SW001230A03_R1.00.04_23.02.09

Status

- [Network Interfaces](#)
- [Network Statistics](#)
- [Network Filtering](#)
- [Client Bridge](#)
- [USB Devices](#)
- [Memory](#)
- [Uptime](#)
- [Processes](#)
- [MUC Pockets](#)
- [Check Battery Server Connection](#)

Configuration

- [BRIDGE Setup](#)
- [VLAN Setup](#)
- [Network Setup](#)
- [Firmware Update](#)
- [Reboot EMUC](#)
- [Slave Admin](#)

12. Click **Check Battery Management Server Connection** to test the connection.

The result displays `{"requestStatus": "CONNECTED"}` upon successful connection. Check the network settings if the connection fails.



STATUS REPORT

Connecting to 10.53.40.89:8080 (10.53.40.89:8080)
Request Completed Successfully
Returned data from POST:
`{"requestStatus": "CONNECTED"}`

[\[Return to Top\]](#)