Training Simulator Communications Hub Standard 420 (TSCH STANDARD 420)

User Guide

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About this Guide

Introduction

This user guide will familiarize you with the features and operation of the Training Simulator Communications Hub and it's App. Please read this document thoroughly before using it.

Table below shows the revision history of the document.

Version	Date	Description
1.0	July 2016	Final Release
0.2	July 2016	• Replaced Figure 3-2, 3-4, 3-5, 3-6, 3-7, 3-8 and 3-9 in chapter 3 • Updated Table 3-3 scenarios name in chapter 3
0.1	June 2016	Initial Draft

Typographic Conventions

The user guide uses the typographic conventions as shown below:

Visual Cue	Meaning
Bold Type with Initial Capital letters	All headings and Sub headings Titles in a document are displayed in bold type with initial capital letters; Example: **Features**
Bold Type with Italic Letters	All Definitions, Figure and Table Headings are displayed in Italics. Examples: *Figure-2.1 Training Simulator Communications Hub* *Table 2-1.* ***Homepage Options***
1., 2.	Numbered steps are used in a list of items, when the sequence of items is important. such as steps listed in procedure.
•	Bullets are used in a list of items when the sequence of items is not important.

Visual Cue	Meaning
	The hand points to special information that requires special attention
	The caution sign indicates required information that needs special consideration and understanding and should be read prior to starting or continuing with the procedure or process.
	The warning sign indicates information that should be read prior to starting or continuing the procedure or processes.
	The feet direct you to more information on a particular topic.

Abbreviation

Following is the list of abbreviation used in this document.

HFF	High Frequency Flash
MFF	Medium Frequency Flash
LFF	Low Frequency Flash
ICHIS	Intimate Communications Hub Interface Specification

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1. TSCH STANDARD 420 Hardware Overview

This section will familiarise you with the usage of TSCH STANDARD 420 hardware.

Introduction

Training Simulator Communications Hub Standard 420 (TSCH STANDARD 420) is a device which provides training to Communications Hub (CH) installers for on-field experience.

1. Standard 420 Training Simulator Communications Hub

Figure 1-1. Standard 420 Training Simulator Communications Hub

LEDs

The TSCH STANDARD 420 has two LEDs for indication as shown in Table 1-1.

Table 1-1. LEDs Description

Name	Description
WAN	Indicates status of connection to the SM WAN network
HAN	Indicates status of connection to the HAN

LED State Indicators

Table 1-2. details the LED State Indicators '**ON** and **OFF**' times for each of the three operating states – "**Normal**", "**Transitional**" and "**Error**". The corresponding flashing frequency is described as being **Low**, **Medium** or **High** frequency flashing.

Table 1-2. LED State Indicators - Frequency

Description	LED ON Time	LED OFF Time	Indication
HIGH FREQUENCY FLASH (HFF)	100ms	500ms	Indicates error operating state
MEDIUM FREQUENCY FLASH (MFF)	100ms	2000ms	Indicates transitional operating state
LOW FREQUENCY FLASH (LFF)	100ms	5000ms	Indicates normal operating state

Package Contents

Unpack the TSCH Standard 420 package. The package contains:

1. Standard 420 Training Simulator Communications Hub
2. Quick Start Guide
3. User Guide

2. Getting Started

Product Installation

This section guides you about the product and application installation.

There are two ways to powered on TSCH STANDARD 420 as follow.

1. **Using Battery Supply** - TSCH STANDARD 420 has a battery case provided to install 9 volts battery as shown in Figure 2-1.

Duracell 9 volts (MN1604 type) battery is recommended.

Figure 2-1. Powering On TSCH STANDARD 420 Using 9 Volts Battery Supply

2. **Using SLS Meter Emulator or SMETS2 Electricity Meter** - Connect TSCH STANDARD 420 on ICHIS connector of the meter.

Make sure when the power up using meter, the battery switch must be off.

Figure 2-2. Powering On TSCH STANDARD 420 using SLS Meter Emulator

After powering on TSCH STANDARD 420, board startup LED sequence will be flashed for 10 seconds, showing the TSCH STANDARD 420 is working.

TSCH STANDARD 420 App Installation

In order to use TSCH STANDARD 420 Android or iOS App, it needs to be installed on the smart phone/tablet or iPhone/iPad. Follow the steps below to install TSCH STANDARD 420 Android or iOS App and get started with the product:

TSCH STANDARD 420 App on Android Smart Phone/ Tablet

Before you proceed for the App installation, make sure following.

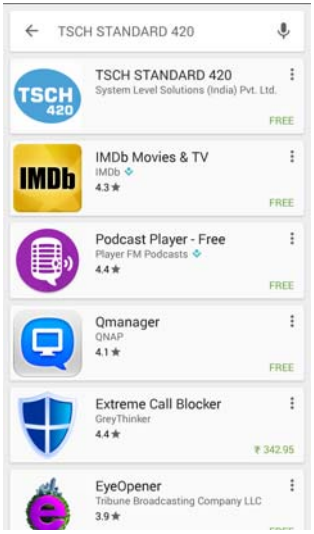
- Android smart phone/tablet must have Android v4.0 and above.
- Either cellular data connection or WiFi internet service is available on smart phone/tablet to access Google Play store.
- Google account must be added on smart phone/tablet.
- Google Play Store App must be installed.

1. Open **Google Play Store** App. See Figure 2-3.

Figure 2-3. Google Play Store

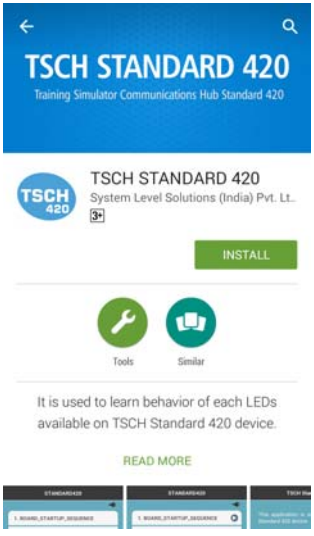
2. Type TSCH STANDARD 420 in search option and tap search icon. See Figure 2-4.

Figure 2-4. Search



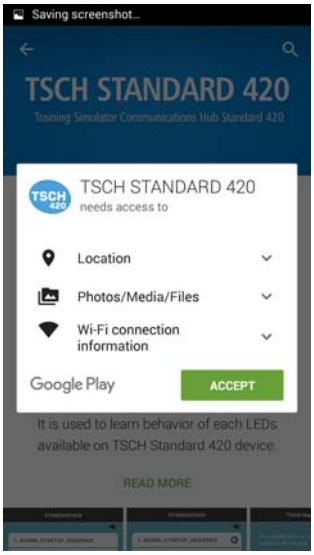
3. Tap **TSCH STANDARD 420** from the searched results. Make sure that publisher is **System Level Solutions (India) Pvt. Ltd**. See Figure 2-5.

Figure 2-5. Install



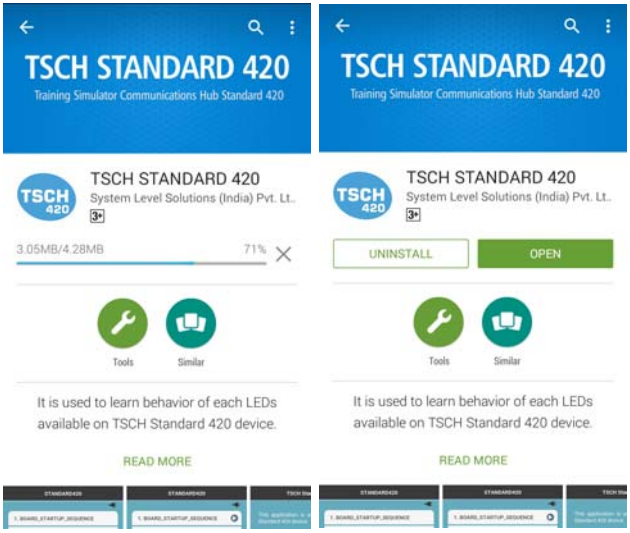
4. Tap **Install**. Follow the on-screen instructions. See Figure 2-6.

Figure 2-6. Accept



5. Once the App is downloaded and installed, tap **Open** to start the TSCH STANDARD 420 Android App. After installation, the shortcut is created on the dashboard of the smart phone/tablet. Touch TSCH STANDARD 420 App to open the App. See Figure 3-1.

Figure 2-7. Open



Set Up Automatic Updates

To set up automatic updates for TSCH STANDARD 420 App on your smart phone/tablet, follow the steps below:

1. Open the **Google Play Store** App .
2. Tap **Menu** icon > **Settings**.
3. Tap **Auto Update** apps.
4. Select an option:
   - 4.1 **Auto update apps at any time**: Updates apps at any time, using either WiFi or cellular data connection.
   - 4.2 **Auto update apps over WiFi only**: Updates only when you are connected to WiFi.

Update App Manually

To update TSCH STANDARD 420 App individually using Google Play Store App on smart phone/tablet, follow the steps below:

1. Open the **Google Play Store** app .

2. Tap the **Menu** icon ≡ > **My Apps**.
3. TSCH STANDARD 420 App with an update is available then TSCH STANDARD 420 App is labeled as **Update**.
4. To update TSCH STANDARD 420 App, tap **Update**.

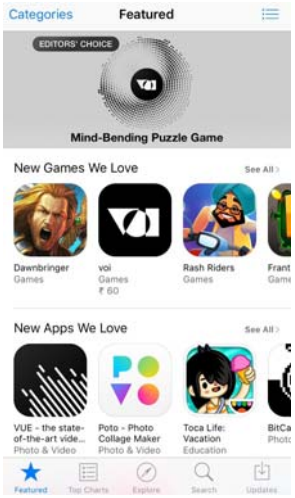
TSCH STANDARD 420 App on iPhone/iPad

Before proceeding for the installation of the App, make sure following:

- iPhone/iPad must have iOS v7.0 and above.
- Either cellular data connection or WiFi Internet service is available on iPhone/iPad to access App Store.
- An Apple ID must be added on iPhone/iPad.

1. Open **App Store** App. See Figure 2-8.

Figure 2-8. App Store

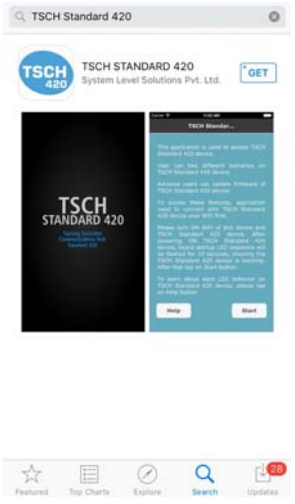


2. Type **TSCH STANDARD 420** in search option and tap **Search** button. See Figure 2-9.

Figure 2-9. Search

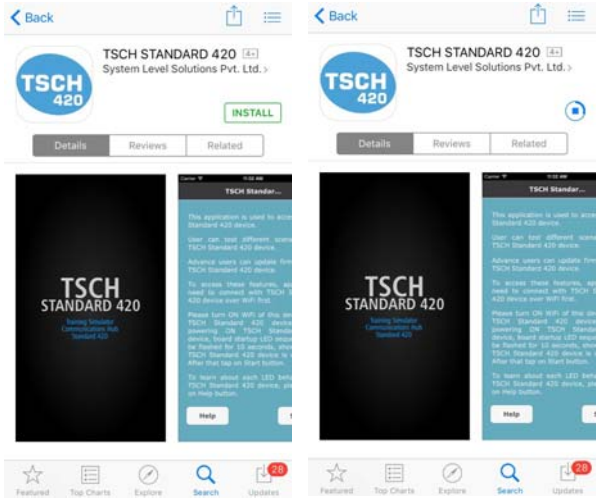
3. Tap **TSCH STANDARD 420** from the searched results. Make sure that publisher is **System Level Solutions Pvt. Ltd**. See Figure 2-10.

Figure 2-10. Search Result



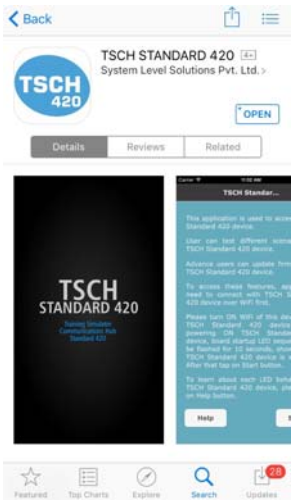
4. To get a **TSCH STANDARD 420** app, tap **Get** on the right side of the screen. The name changed to Install. Tap Install to start downloading and installing the app in iPhone/iPad. See Figure 2-11.

Figure 2-11. Get and Install



5. Once the app is downloaded and installed, tap **Open** to start TSCH STANDARD 420 app as shown in Figure 2-12.

Figure 2-12. Open

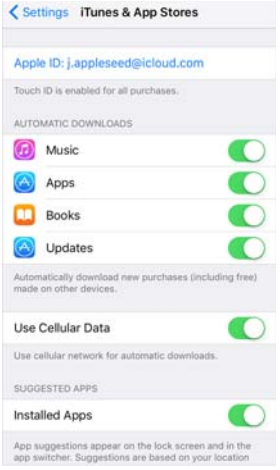


6. After installation, the shortcut is created on the dashboard of iPhone/ iPad. Touch TSCH STANDARD 420 App to open the App.

Set Up Automatic Updates

1. Tap **Settings > iTunes & App Store**.
2. If you are not already sign in, then sign in with your **Apple ID**.
3. Turn **ON** the content that you want to automatically download. See Figure 2-13.
4. You can turn Automatic Downloads on or off over your cellular data connection network on an iPhone or iPad WiFi + Cellular Data connection. Go to **Settings > iTunes & App Store** and turn Use cellular data connection on or off. Cellular data connection downloads are limited to a file size of 100 MB or smaller.

Figure 2-13. iTunes & App Stores



Update App Manually

Here's how you can manually update the TSCH STANDARD 420 App on your iPhone/iPad.

1. Tap on the **App Store** icon.
2. Tap on the **Updates** button on the bottom bar.
3. You will see a list of apps that have updates.
4. Find the TSCH STANDARD 420 App and tap on the **Update** button.

Working with TSCH STANDARD 420 App

After successful installation of TSCH STANDARD 420 Android or iOS App and powering on TSCH STANDARD 420, run the App to test various scenarios. In order to do that follow the steps below.

Activate WiFi on Android Smart Phone/Tablet

Follow the steps below.

1. Go to **Settings** in Android smart phone/tablet. Turn on **WLAN/WiFi**.
2. It will list available WiFi network connections. If the smart phone/tablet is in the range of TSCH STANDARD 420 WiFi network, the SSID e.g. TSCH_5ECF7F0FFE69 will be listed under WiFi network. See Figure 2-15.

☞ The SSID appear on search action is displayed with TSCH_[CHF ID] except first 4 digits of CHF ID where CHF ID is provided on TSCH STANDARD 420. See Figure 2-14.

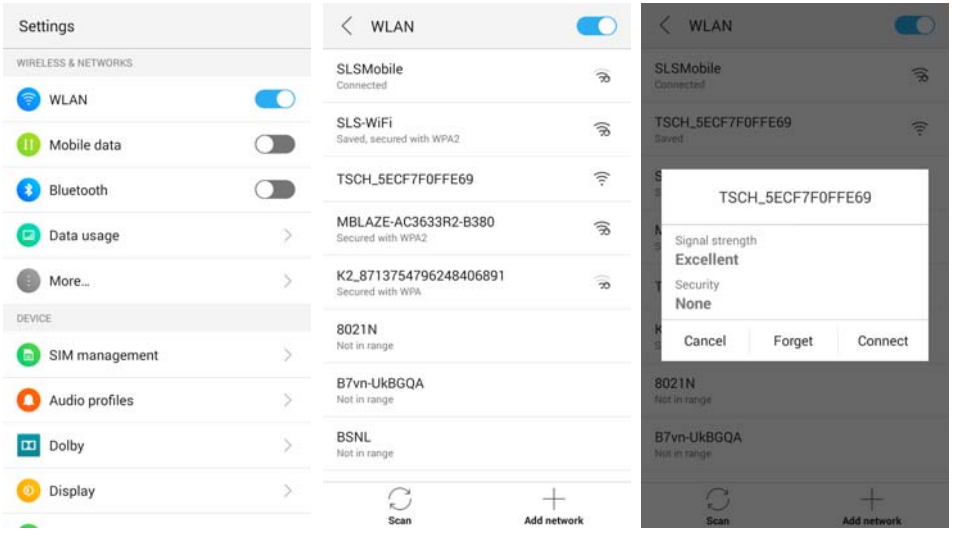
Figure 2-14. SSID On TSCH STANDARD 420

☞ If TSCH STANDARD 420 SSID is not found in WiFi list, then there are two possible reasons:

- The TSCH STANDARD 420 is not powered ON.
- The TSCH STANDARD 420 is out of WiFi range of 10 meter.

3. Tap SSID to connect the TSCH STANDARD 420. Tap **Connect**. See Figure 2-15.

Figure 2-15.Android App Connecting to TSCH STANDARD 420 Through WiFi



4. It will automatically connected as shown in Figure 2-16.

Figure 2-16. Successful Connection with SSID

5. After successful connecting to the TSCH STANDARD 420, exit the WiFi settings.

Activate WiFi on iPhone/iPad

Follow the steps below.

1. From your Home screen, go to **Settings** > **WiFi**.
2. Turn on WiFi.
   It will search for available WiFi networks. If the iPhone/iPad is in the range of TSCH STANDARD 420 WiFi network, the SSID e.g. TSCH_5ECF7F0FFE69 will be listed under WiFi network. See Figure 2-18.

☞ The SSID appear on search action is displayed with TSCH_[CHF ID] except first 4 digits of CHF ID where CHF ID is provided on TSCH STANDARD 420. See Figure 2-17.

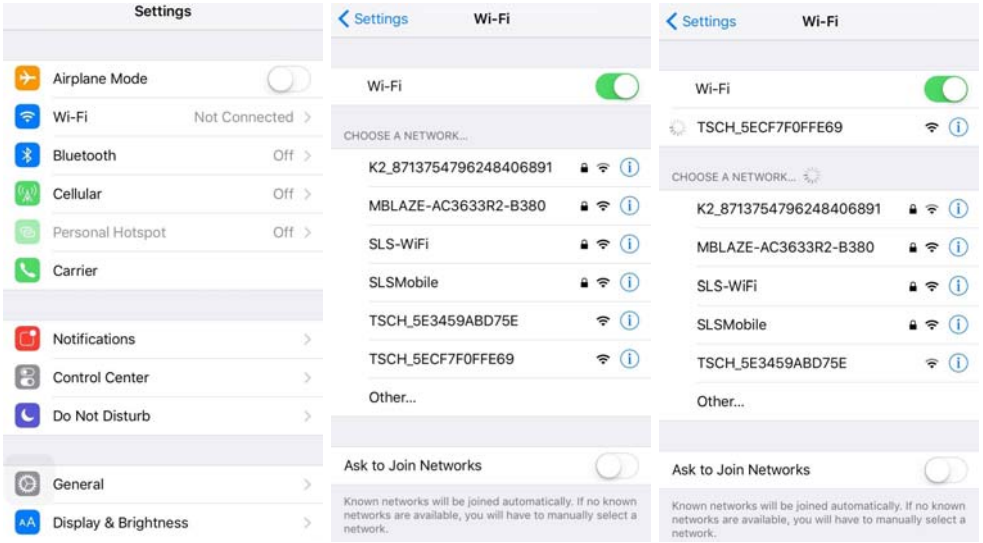
Figure 2-17. SSID On TSCH STANDARD 420

☞ If TSCH STANDARD 420 SSID is not found in WiFi list, then there are two possible reasons:

- The TSCH STANDARD 420 is not powered ON.
- The TSCH STANDARD 420 is out of WiFi range of 10 meter.

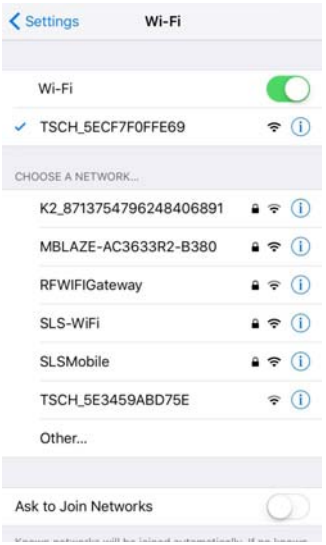
3. Tap SSID to connect the TSCH STANDARD 420. See Figure 2-18.

Figure 2-18.iOS App Connecting to TSCH STANDARD 420 Through WiFi



4. It will automatically connected as shown in Figure 2-19.

Figure 2-19. Successful Connection with SSID



5. After successful connecting to the TSCH STANDARD 420, exit the WiFi settings.

3. Application Overview

Starting the App

Tap on

icon, it displays splash screen of the TSCH STANDARD 420 App as shown in Figure 3-1.

Figure 3-1. TSCH STANDARD 420 Splash Screen

On invoking the TSCH STANDARD 420 App, it displays the **TSCH STANDARD 420 App Information** as shown in Figure 3-2.

Figure 3-2. TSCH STANDARD 420 App Information

Table 3-1 describes the options on the TSCH STANDARD 420 App information screen.

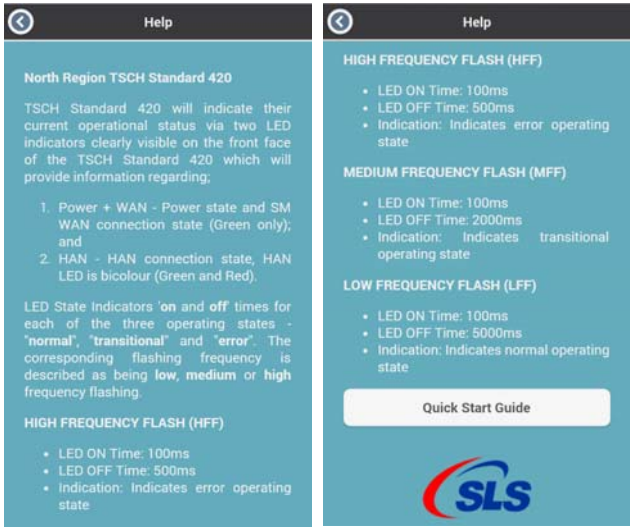
Table 3-1. TSCH STANDARD 420 App Information Options Description

Option	Option Name	Description
Help	Help	Displays TSCH STANDARD 420 help Information
Start	Start	Allows to start communication with connected TSCH STANDARD 420 SSID e.g. TSCH_5ECF7F0FFE69

Tap **Help** Help option on TSCH STANDARD 420 App information screen, it displays TSCH STANDARD 420 help information screen as shown in Figure 3-3.

Tap **Back** button on TSCH STANDARD 420 Help Information screen, to go back on **TSCH STANDARD 420 App Information** as shown in Figure 3-2.

Figure 3-3. TSCH STANDARD 420 Help Information

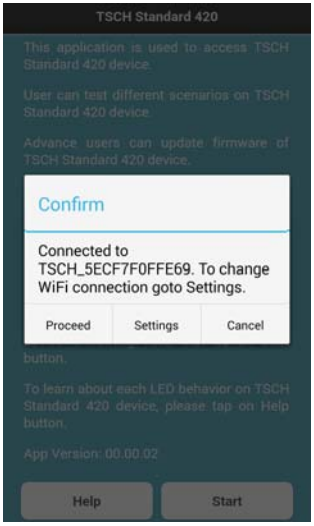


☞ Before connecting to TSCH STANDARD 420, make sure that the Mobile data (mobile internet connection) is turned off.

Tap **Start**

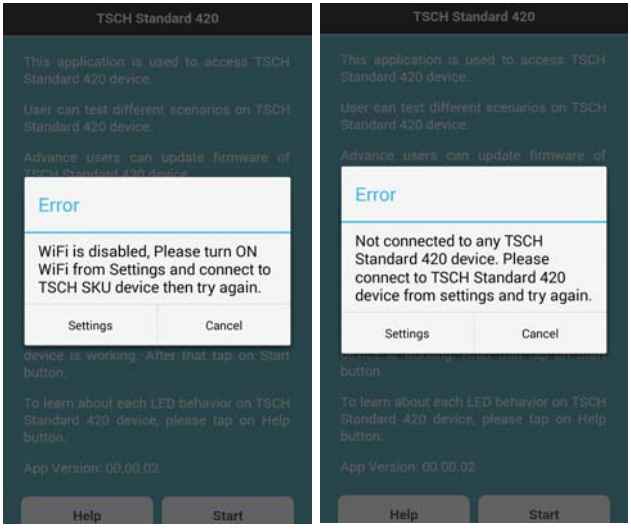
option, the "**Confirm**" dialog box pops up and allows to start communication with connected TSCH STANDARD 420 SSID as shown in Figure 3-4.

Figure 3-4. Confirm Messages



☞ If the "**Error**" dialog box pops up as shown in Figure 3-5. then activate WiFi and/or connect to TSCH STANDARD 420 by following the steps mentioned in "Activate WiFi on Android Smart Phone/Tablet" on page 13. or "Activate WiFi on iPhone/iPad" on page 15. by tapping **Settings**.

Figure 3-5. Error Messages



Tap **Settings** button to change the WiFi settings. To continue testing, tap **Proceed** button. The scenarios sync starts. Wait till the scenarios sync process is completed. After the sync process completes, the scenario list screen appears as shown in Figure 3-6.

Figure 3-6. Home Page

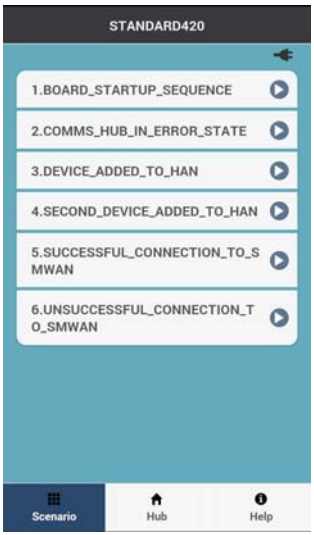
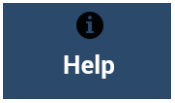


Table 3-2 describes the icons, buttons and options on the home page.

Table 3-2. Home Page Icons, Buttons and Options Description

Icon/ Button/ Option	Icon/ Button/ Option Name	Description
	Plug	Indicates external supply through Meter from ICHIS connector
	Battery	Indicates battery supply
	Low Battery Status	Indicates low battery status
	Start	Starts the scenario
	Stop	Stops the scenario

Table 3-2. Home Page Icons, Buttons and Options Description

Icon/ Button/ Option	Icon/ Button/ Option Name	Description
	Back	Returns to the previous screen
	Scenario	Displays various scenarios
	Hub	Displays TSCH STANDARD 420 details
	Help	Displays TSCH STANDARD 420 App help information

Scenario

On tapping this option, it lists various scenario available for connected TSCH STANDARD 420.

Tap Start button, to start running the scenario from the list. See Figure 3-7.

Figure 3-7. Start Scenario

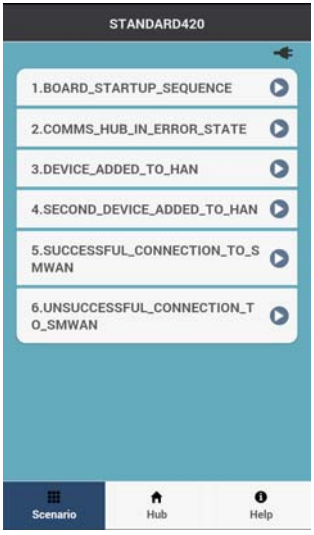


Table 3-3 shows TSCH STANDARD 420 scenario status LED description.

Table 3-3. TSCH STANDARD 420 Scenario Status LED Description

Scenario			LED Behavior		Duration in ms
DCC Training Scenario	Name	Step	SM WAN / POWER	HAN	
	BOARD_STARTUP_SEQUENCE		Solid Green	Off	200
			Off	Solid Green	200
			Off	Solid Red	200
			Solid Red	Off	200
			Solid Green	Off	200
			Off	Solid Green	200
			Off	Solid Red	200
			Solid Red	Off	200
			Solid Green	Off	200
			Off	Solid Green	200
			Off	Solid Red	200
			Solid Red	Off	200
			Solid Green	Off	200
			Off	Solid Green	200
			Off	Solid Red	200
			Solid Red	Off	200
			Solid Green	Off	200

Table 3-3. TSCH STANDARD 420 Scenario Status LED Description

Scenario			LED Behavior		Duration in ms
DCC Training Scenario	Name	Step	SM WAN / POWER	HAN	
			Off	Solid Green	200
			Off	Solid Red	200
			Solid Red	Off	Continue
Comms Hub in error state	COMMS_HUB_IN_ERROR_STATE	Power Off	Off	Off	1000
		Power on, device initializing	Solid Green	Off	1000
		Device in error state	HFF Green	HFF Green	5000
		Watchdog Reset	Off	Off	Continue
Device Added to HAN	DEVICE_ADDED_TO_HAN	Wait for Whitelist	LFF Green	Solid Green	300000
		HAN in 'permit join' mode	LFF Green	MFF Green	10000
		HAN Device join success	LFF Green	Solid Red	5000
		HAN in 'permit join' mode	LFF Green	MFF Green	10000
		HAN initialized, one or more HAN devices in CHF Device Log	LFF Green	LFF Green	Continue
Second device added to HAN	SECOND_DEVICE_ADDED_TO_HAN	HAN in normal operation	LFF Green	LFF Green	10000
		HAN in ‘permit join’ mode	LFF Green	MFF Green	10000
		HAN Device join success	LFF Green	Solid Red	5000
		HAN in ‘permit join’ mode	LFF Green	MFF Green	10000
		HAN initialized one or more HAN device in CHF Device log	LFF Green	LFF Green	Continue

Table 3-3. TSCH STANDARD 420 Scenario Status LED Description

Scenario			LED Behavior		Duration in ms
DCC Training Scenario	Name	Step	SM WAN / POWER	HAN	
Normal Installation (successful connection to SM WAN)	SUCCESSFUL_CONNECTION_TO_SMWAN	Power Off	Off	Off	1000
		Power on, device initializing	Solid Green	Off	25000
		Attempting to connect to the SMWAN (HAN Initializing)	MFF Green	MFF Red	15000
		Attempting to connect to the SMWAN (HAN Initialized)	MFF Green	Solid Green	45000
		SM WAN connected*	LFF Green	Solid Green	Continue
failed installation (unsuccessful connection to SMWAN)	UNSUCCESSFUL_CONNECTION_TO_SMWAN	Power Off	Off	Off	1000
		Power on, device initializing	Solid Green	Off	25000
		Attempting to connect to the SMWAN (HAN initializing)	MFF Green	MFF Red	15000
		Attempting to connect to the SMWAN (HAN initialized)	MFF Green	Solid Green	Continue

Tap **Stop** button, to stop the running scenario as shown in Figure 3-8.

Figure 3-8. Stop Scenario

Only one scenario can be run at a time and will keep running on TSCH STANDARD 420 until it is not stopped.

Hub

It displays the details of connected TSCH STANDARD 420 as shown in Figure 3-9.

Figure 3-9. Hub Details

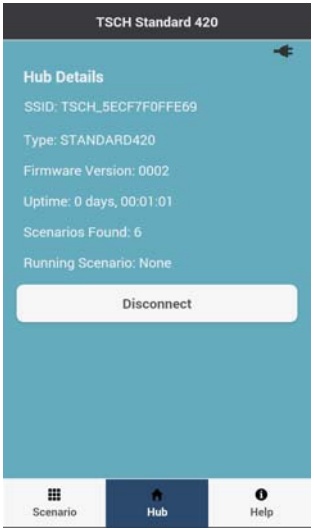


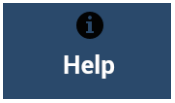
Table 3-4 gives the detail of the information displayed on Hub Details screen.

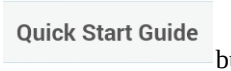
Table 3-4. Information and Buttons of Hub Details Screen

Title	Description
SSID	Displays SSID of connected TSCH STANDARD 420
Type	Displays the type of TSCH STANDARD 420
Firmware Version	Displays current firmware version of TSCH STANDARD 420
Uptime	Displays the time duration from start of TSCH STANDARD 420
Scenarios Found	Displays total number of scenarios
Running Scenario	Displays name of running scenario
Disconnect	Disconnects the connected TSCH STANDARD 420

Tap **Disconnect**

option, it redirects to TSCH STANDARD 420 App Information screen as shown in Figure 3-2.

Help 

It displays TSCH STANDARD 420 help information screen as shown in Figure 3-10. At the end of the information, **Quick Start Guide** 

button displays which provides information to get started with TSCH and it's app.

Figure 3-10. TSCH STANDARD 420 Help Information

Advance User Mode

In advance user mode, you can access certain features like **Download Firmware, Update Firmware** and **App Logs**.

There are two advance user mode.

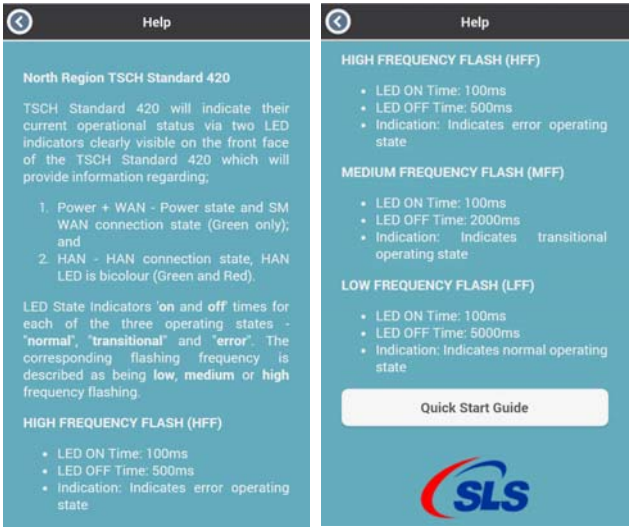
1. User can access advance user mode before connection with TSCH STANDARD 420
2. User can access advance user mode after connecting to TSCH STANDARD 420

Advance User Mode Before Connection With TSCH STANDARD 420

Tap **Help**

option on TSCH STANDARD 420 App information screen, it displays TSCH STANDARD 420 Help information screen as shown in Figure 3-11.

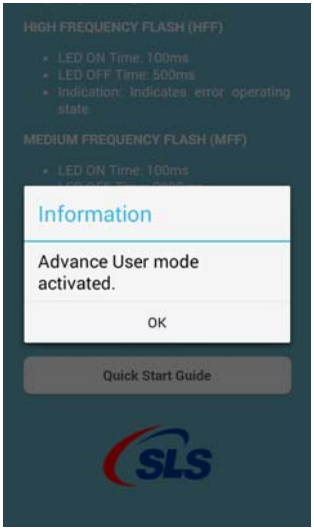
Figure 3-11. TSCH STANDARD 420 Help Information



Activate Advance User Mode

To activate the advance user mode, tap fifteen times on **SLS** logo on TSCH STANDARD 420 Help information screen. It displays the message as shown in Figure 3-12.

Figure 3-12. Advance User Mode Activated



Tap **OK** button, it displays the **Advance User Sign In** screen as shown in Figure 3-13.

Figure 3-13. Advance User Sign In

Tap **Back** button, it displays **TSCH STANDARD 420 App Information** screen with **Configure** option as shown in Figure 3-14.

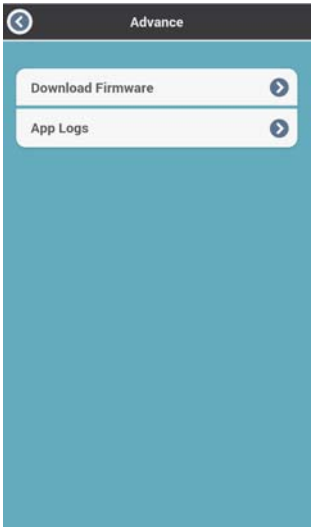
Figure 3-14. TSCH STANDARD 420 App Information

Configure or Sign In

Tap **Configure**

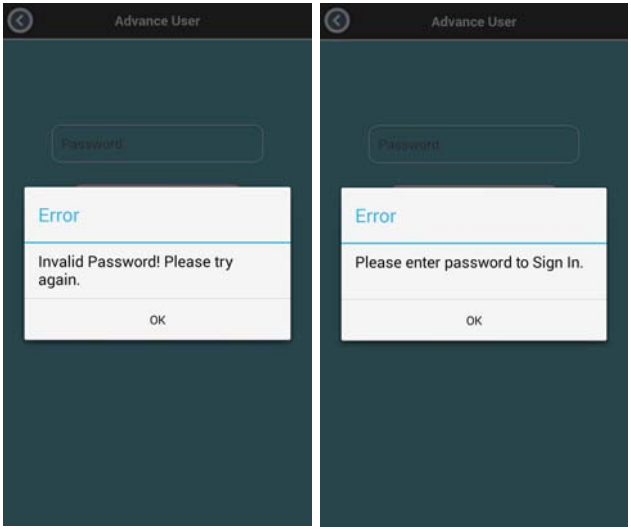
option, it displays **Advance User Sign In** screen as shown in Figure 3-13. Enter sign in password as "**admin**" to access an advance user options. Tap **Sign In** button. On successfully signing, it displays the advance screen with two options; **Download Firmware** and **App Logs** as shown in Figure 3-15.

Figure 3-15. Advance Options



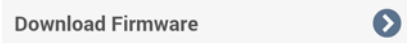
If the password is not entered or incorrect then the error dialog box pops up as shown in Figure 3-16.

Figure 3-16. Error Messages for Sign In



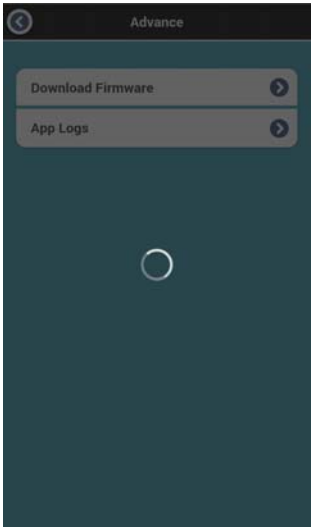
Tap **OK** to enter the password again. Tap **Back** button, to go back on previous screen.

Download Firmware

Tap the **Download Firmware** 

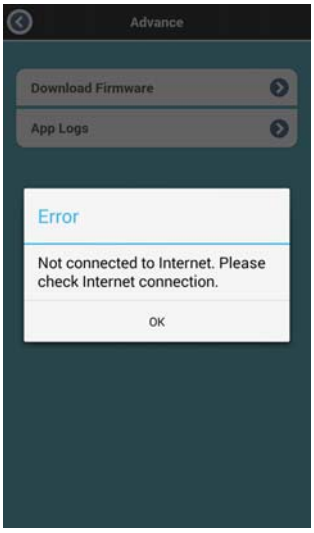
option, it starts downloading the firmware as shown Figure 3-17.

Figure 3-17. Download Firmware



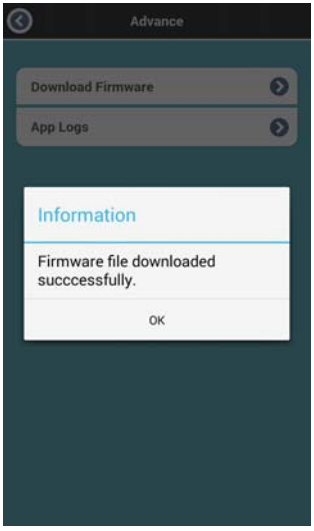
Before proceeding to download the firmware, make sure that the cellular data connection or WiFi Internet service is available. If there is no Internet connection, an error dialog appears as shown in Figure 3-18. Tap **OK**, to exit error dialog box and try again to download firmware.

Figure 3-18. Download Firmware Error Message



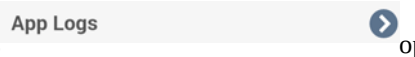
After download firmware process completes, dialog box pops up with the information as shown in Figure 3-19.

Figure 3-19. Successfully Download Firmware



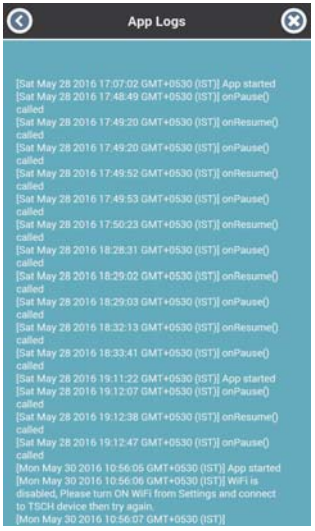
Tap **OK**, to exit the dialog box.

App Logs

Tap **App Logs** 

option, it displays the **App Logs** screen as shown in Figure 3-20. The logs are used to trace the issue when error in the App or issue in TSCH STANDARD 420 occurred.

Figure 3-20. App Logs

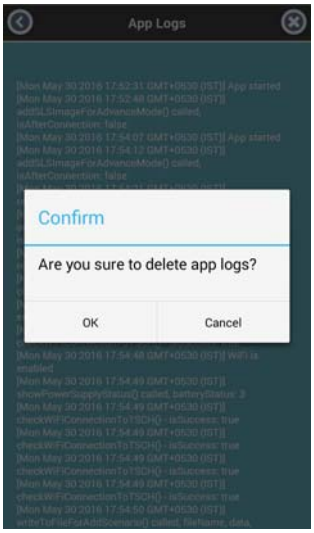


In order to copy **App Logs**, long-tap a word. From displayed options, tap **Select All** or icon . Tap **Paste** in a file or an E-Mail and send to DCC Service Desk.

Tap **Back** button on **App Logs** screen, to go back on previous screen as shown in Figure 3-15.

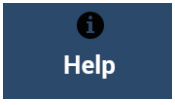
Tap **Delete** button, to delete all logs. It displays confirmation dialog box to delete the logs as shown in Figure 3-21.

Figure 3-21. Confirmation to Delete App Logs



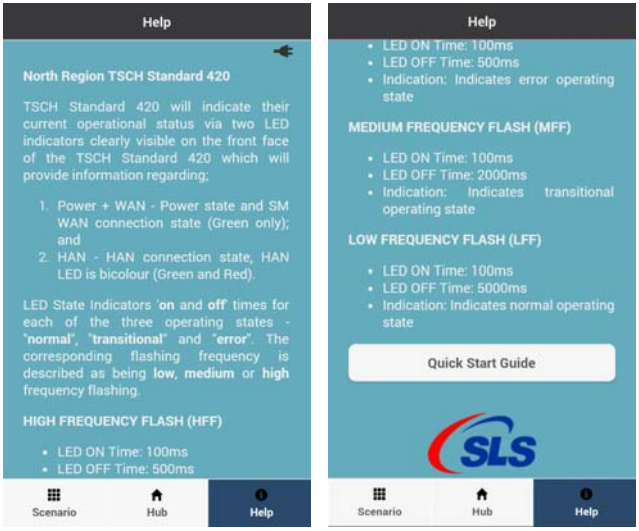
Tap **OK**, to delete **App Logs**. Tap **Cancel** to exit the dialog box.

Advance User Mode After Connection With TSCH STANDARD 420

Tap **Help** 

option, it displays TSCH STANDARD 420 help information screen as shown in Figure 3-22.

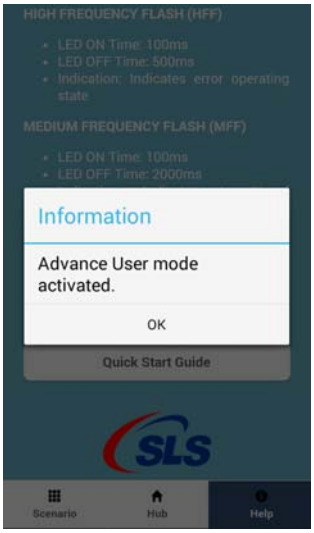
Figure 3-22. TSCH STANDARD 420 Help Information



Activate Advance User Mode

To activate the advance user mode, tap fifteen times on **SLS** logo on TSCH STANDARD 420 Help information screen. It displays the message as shown in Figure 3-23.

Figure 3-23. Advance User Mode Activate



Tap **OK** button, it displays the **Advance User Sign In** screen and **Configure** option in bottom bar as shown in Figure 3-24.

Configure and Sign In

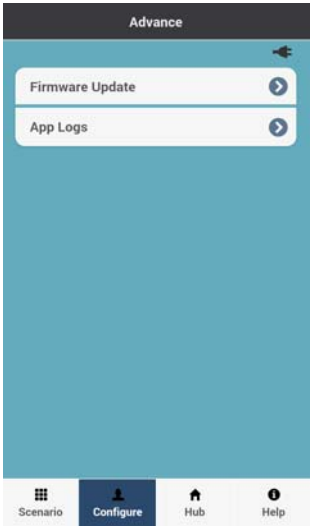
Tap **Configure**

option, it displays the **Advance User Sign In** screen as shown in Figure 3-24.

Figure 3-24. Sign In for Advanced User Mode

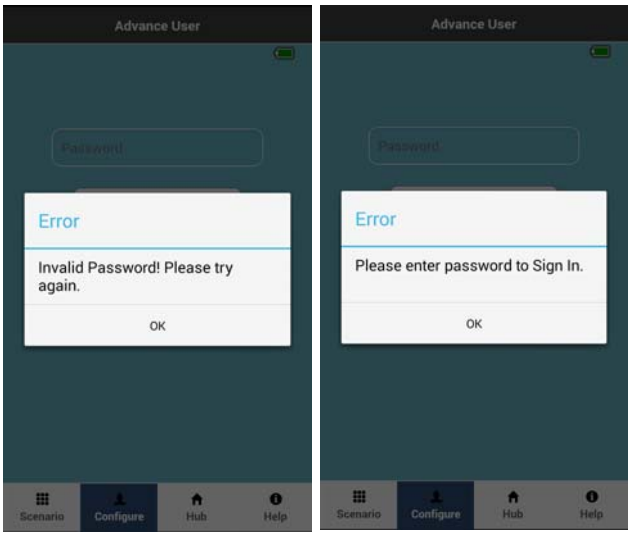
Enter sign in password as "**admit**" to access an advance user options. Tap **Sign In** button. On successfully signing, it displays the advance screen with two options; **Update Firmware** and **App Logs** as shown in Figure 3-26.

Figure 3-25. Advance Options



If the password is not entered or incorrect then the error dialog box pops up as shown in Figure 3-26.

Figure 3-26. Error Messages for Sign In



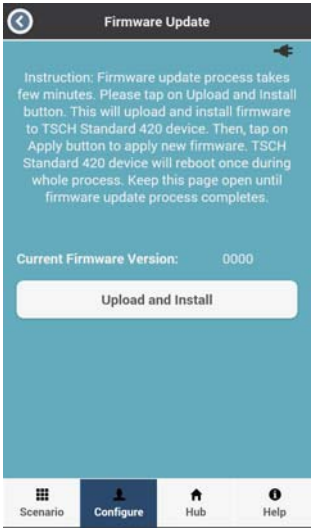
Firmware Update

Tap **Firmware Update** Firmware Update option, if valid firmware file found then it displays the firmware update information screen as shown in Figure 3-27.

Make sure following before tapping **Firmware Update** option.

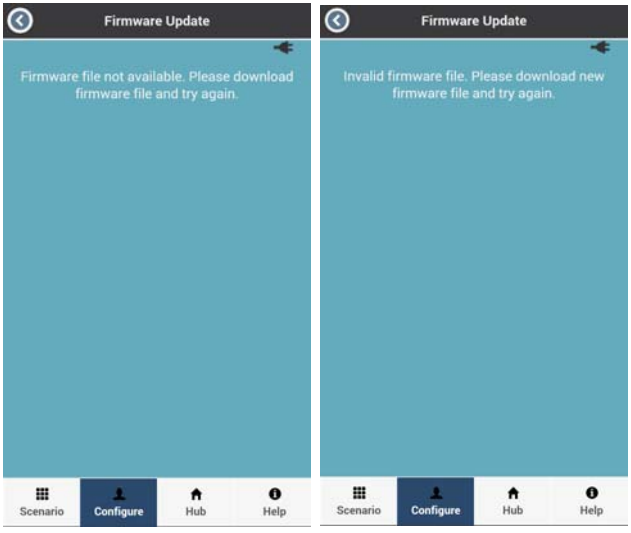
- The firmware must be downloaded. See “Download Firmware” on page 37.
- No scenario should be running. Stop the scenario if it is running.

Figure 3-27. Firmware Update Information



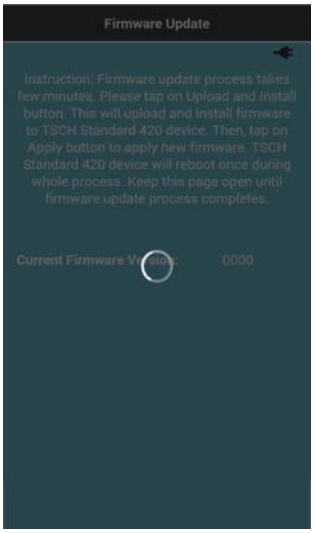
If the firmware file is not available or invalid firmware file found then it displays the screen as shown in Figure 3-28.

Figure 3-28. Firmware Update Error Message



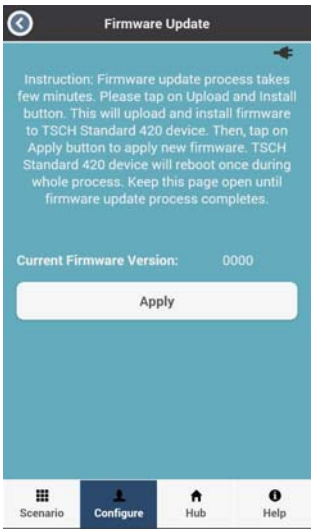
Go through the information and tap **Upload and Install** option. It start uploading and installing the firmware to TSCH STANDARD 420 as shown Figure 3-29.

Figure 3-29. Firmware Update Upload and Install Process



After the uploading and installing firmware, it displays the **Apply** option as shown in Figure 3-30.

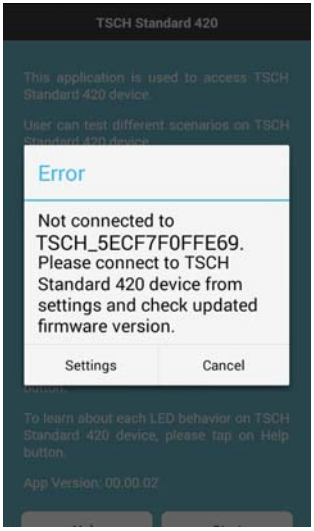
Figure 3-30. Firmware Update Apply



Tap **Apply** option to start updating the firmware. This will reboot TSCH STANDARD 420 and wait for process to complete. On successful update, firmware successfully done message appears as shown in Figure 3-32.

☞ During the Firmware update, the TSCH STANDARD 420 will be rebooted and WiFi connection may be lost with TSCH STANDARD 420. In that case "**Connection Error**" dialog box pops up as shown in Figure 3-31. To check updated firmware version, reconnect to TSCH STANDARD 420, go to WiFi under **Settings** and connect to TSCH STANDARD 420. Go to App and check the HUB details.

Figure 3-31. Firmware Update Apply Error Message



Tap **Back** button, to go back on previous screen.

Figure 3-32. Firmware Update Successfully Done

Tap **OK**, to exit the **Firmware Update** screen.

App Logs

Tap **App Logs**

option, it displays the **App Logs** screen as shown in Figure 3-33. The logs are used to trace the issue when error in the App or issue in TSCH STANDARD 420 occurred.

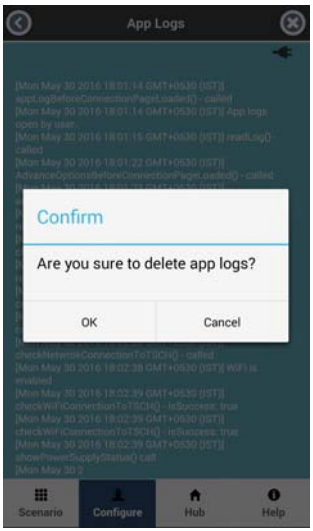
Figure 3-33. App Logs

In order to copy **App Logs**, long-tap a word. From displayed options, tap **Select All** or icon . Tap **Paste** in a file or an E-Mail and send to DCC Service Desk.

Tap **Back** button on **App Logs** screen, to go back on previous screen as shown in Figure 3-25.

Tap **Delete** button, to delete all logs. It displays confirmation dialog box to delete the logs as shown in Figure 3-34.

Figure 3-34. Confirmation to Delete App Logs



Tap **OK**, to delete **App Logs**. Tap **Cancel** to exit the dialog box.

Deactivating Advance User Mode

In order to deactivate the advance user mode, follow the steps below.

1. If advanced user mode activated after TSCH STANDARD 420 connection, deactivate the mode by disconnecting from Hub details option. See "Hub" on page 29.
2. Tap **Recent Apps** button in the smart phone/tablet and **Home** button twice in iPhone/iPad.
3. Swipe either side in smart phone/tablet and up in iPhone/iPad on TSCH STANDARD 420 App from the list to close.
4. Tap **Home** button. Tap TSCH STANDARD 420 App to open. It will deactivate the advance user mode.

4. Troubleshooting

1. **If TSCH STANDARD 420 SSID is not shown in TSCH STANDARD 420 Android and iOS App**.
   - **1.1** Verify WiFi connection and make sure the TSCH STANDARD 420 is in the range of 10 meter.
   - **1.2** Restart the TSCH STANDARD 420 again and verify.
   - **1.3** Restart the TSCH STANDARD 420 Android and iOS App and verify.
   - **1.4** Replace the batteries and try again.
2. **If TSCH STANDARD 420 communication is broken multiple times**.
   - **1.1** Replace the battery and try again if low battery status.
   - **1.2** Move closer to TSCH STANDARD 420 and try again.
   - **1.3** Confirm an Android version is 4.0 or above to use the application.
3. **If any issues with pre-loaded scenario**.
   - **1.1** Confirm the scenario is used for correct TSCH STANDARD 420 type.
   - **1.2** Contact your administrator to verify the scenario file.
4. **If the TSCH STANDARD 420 Android and iOS App is not responding or getting stuck during operations**.
   - **1.1** Confirm an Android version is 4.0 or above to use the application.
   - **1.2** Confirm an iOS version is 7.0 or above to use the application.
   - **1.3** Reinstall the App.
   - **1.4** Update an Android App from Google Play store.
   - **1.5** Update an iOS App from Apple App store.

Appendix A: Firmware and Application Release Report

Table A-1 and Table A-2 shows the TSCH Standard 420 Firmware and Application release report.

Table - A-1. TSCH Standard 420 Firmware Version Release Report

Release Date	Firmware Version	Compatible Application Version		Release Notes
		iOS	Android	
04-July-2016	0002	00.00.02 00.00.03	00.00.02 00.00.03	Changes led running scenario status command.
16-June-2016	0001	00.00.01	00.00.01	Changes in mac address functionality bug.
09-June-2016	0000	00.00.01	00.00.01	Created functionality of led scenario for arqiva. Only for 2 leds.

Table - A-2. TSCH Standard 420 Application Release Report				
Release Date	Compatible Firmware Version	Application Version		Release Notes
		iOS	Android	
30-July-2016	0002	00.00.03	00.00.03	• Added Quick Start Guide which is accessible from Help page. ***Note:*** This app version is compatible with TSCH Standard 420 device's firmware version 0002. Please update TSCH Standard 420 device's firmware to latest firmware version 0002, if device runs with older firmware.
06-July-2016		00.00.02	00.00.02	• GUI Improvements. • Updated scenarios: UNSUCCESSFUL_CONNECTION_TO_SMWAN, SUCCESSFUL_ CONNECTION_TO_SMWAN, DEVICE_ADDED_ TO_HAN, COMMSHUB_IN_ ERROR_STATE • Added SECOND_DEVICE_ADDED_ TO_HAN scenario as per Andrew's suggestion. ***Note:*** This app version is compatible with TSCH Standard 420 device's firmware version 0002. Please update TSCH Standard 420 device's firmware to latest firmware version 0002, if device runs with older firmware.
01-June-2016	0000 0001	00.00.01	00.00.01	Basic version with Instruction page, Scenario page, Hub Details page, Admin mode, Help page, etc.