Smart Inventory Tracker Installation Qualification Document

Version 2025.5.0 | Revision 01

tracelink
NETWORK FOR GREATER GOOD

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Revision History

Revision Date	Revisions	Sections
09 Aug 2018	Original Version.	All
19 Nov 2018	Updates for 2018.6 and formatting.	All
03 Dec 2018	Updates for files and URLs.	All
18 Dec 2018	Added section for transferring files to device in one location.	8.1
06 Jan 2019	• Formatted to match Technical Communications Style Guide. • All content rewritten and reorganized for Technical Communications standards. • Added Appendix section.	All
24 Nov 2019	Updates for the Curie 6 release: • Updated Prerequisites and Installation to include new process for installing the app. • Added procedure for registering devices in the Web UI. • Removed Generating the Certificates.	• Getting Started – Prerequisites • Installation
23 Aug 2020	Updated for the Edison 3 release to include steps for enabling proxy communication on the device.	Install the APK and log in
27 Jan 2021	• Removed row for Step 4 in the TraceLink configuration Software Completion Checklist for Windows users. • Added rows for Step 10 and 11 in the Install the APK and log in Completion Checklist.	• TraceLink configuration • Install the APK and log in

21 Feb 2021	Updates for the Turing 1 release:
	• Added the following supported devices:
	  • Zebra MC9300
	  • Zebra TC77
	  • Handheld devices running the Android 10 operating system
	  • Smartphones running the Android 11 operation system
		Application Information

23 Nov 2022	Replaced the term Life Sciences Cloud with Track & Trace Services.	All
04 Feb 2023	• Removed references to download the Environment configuration file. • Removed Add Devices with Postman.	All

Revision Date	Revisions	Sections
	• Removed Generate the Certificates. • Added procedure to install the app from the Google Play Store.	

01 Sep 2023	• Updated TraceLink-validated devices to Android version 13 operating system.
	• Added the following supported devices:
	  • Honeywell CT60
	  • Google Pixel 7
	  • Samsung Galaxy Xcover
	• Added a note for devices running on Android 8, 8.1, and 9.0 operating system.
		Application Information

06 Mar 2024	Added Android 10 in the list of unsupported Android operating system after March 2024.	Application Information
18 Apr 2024	Added Zebra MC9400 to the list of supported devices.	Application Information
25 Oct 2024	Added Android 14 in the list of supported Android operating system and Android 11 in the list of unsupported Android operating system.	Application Information
05 Nov 2024	Added Zebra TC53 to the list of supported devices.	Application Information
02 Nov 2025	Added SIT network configuration.	Appendix

Getting Started

Document Purpose

This document defines the installation steps for the Smart Inventory Tracker (SIT) Android mobile application, which is one component of various TraceLink solutions.

After completing the installation, the Owner might need to configure the app further. See the *Functional Configuration Workbook* specific to the company, provided by the TraceLink Technical Consultant.

> The terms Smart Inventory Tracker and SIT are used interchangeably across this document.

How to Use this Document

Installer name and initials

The Installer is the person performing the installation that verifies the outcome of each step by signing this document.

This person must understand HTTP Post software, Android File Transfer software, and basic Mac, Linux, or Windows commands and functions.

Installer Printed Name:	
Installer Initials:	

Best practices

- Fill out this document by hand and write in ink.
- Draw a single line through any mistakes, and then initial and date the mistake.
- Sign or initial each field as indicated in the document.
- Fill in data during installation, not after completion.
- Fill in all table cells in the Completion Checklists.
- If a step does not apply to the system or cannot be completed, check N/A or No and write a brief explanation in the Notes column.
- If the Installer deviates from an instruction specified in this document, note the adjustment and the reason for doing so in the Completion Checklist.

- If the Installer encounters an error during the installation (assembly, testing, or system shutdown), describe the error in the Completion Checklist.

Application Information

Item	Value
Application Name	Smart Inventory Tracker
Application Version	2025.5.0.0

Distribution Media	• Android Package Kits (APKs):
	  • For handheld devices
	  • For smartphones
	• Certificate Generation Script
	• Google Play Store

TraceLink-validated Devices	The following devices are currently supported by TraceLink:
	• Commercially available warehouse scanning devices leveraging an Android operating system (versions 12–14). Currently, the TraceLink-validated devices are:
	  • Zebra MC3300, MC3300x, MC9300, MC9400, TC70x, TC72, TC77, TC8300, TC51, TC52, and TC53.
	  • Honeywell CT60, CN80, and CK65.
	• Commercially available smartphones leveraging an Android operating system (versions 12–14). Currently, the TraceLink-validated devices are:
	  • Google Pixel 2 and Pixel 7
	  • Samsung Galaxy S9 and Galaxy Xcover
	Devices running on Android 8, 8.1, 9.0, 10, and 11 OS will no longer be supported with feature enhancements and bug fixes in the SIT app.
	To check for devices that may also be considered compatible with SIT app other than the currently supported devices, see the Additional Compatibility section.

Language	English

Additional Compatibility

Devices that match the following hardware specifications may also be considered compatible with SIT app.

Models	Display	CPU	Scanning Technology	Camera
Zebra MC Family	4.0 - 4.3 inch; WVGA (800 x 480); LED backlight; color display	• Qualcomm®APQ8056, 1.8GHz Hex-Core, 64-bit with power optimization • Qualcomm Snapdragon™660 octa-core, 2.2 GHz	• SE965 1D • SE4750SR 2D • SE4770 2D • SE4720 • SE4850 ERI • SE4750 • SE4850 • SE4770	• Front: 5 MP • Rear: 13 MP
Zebra TC Family	• 4.0 in. diagonal; transflective LCD display; 16.7 million (24-bit) color support; 400 NITS • 4.7 in. High Definition (1280 × 720) • 5.0 in. High Definition (1280 × 720); 600 NITS • 5.0 in. High Definition (1280 × 720) • 6.0 in. Full High Definition (1080 × 2160); LED backlight; 600 NITS	• Qualcomm 6490 octa-core, 2.7 GHz • Qualcomm Snapdragon™660 octa-core, 2.2 GHz • Snapdragon 650 64-bit hexa-core 1.8GHz ARM Cortex A72, power optimization • 1.8 GHz hexa-core 64-bit processor	• SE55 • SE4720 • SE4710 • SE4770 • SE4750 • SE4750 DPM • SE4850	• Front: 1.5 MP; 5MP; 8MP • Rear: 13 MP; 16 MP
Honeywell	• 106.7 mm (4.2 in) FWVGA (854 x 480) bright color LCD with backlight • 10.16 cm (4 in) 480 x 800 bright color LCD with backlight • 118 mm (4.7 in) High Definition (1280 x 720) bright color LCD with backlight	• Qualcomm Snapdragon™660 octa-core, 2.2 GHz • Qualcomm 64-bit Snapdragon octa-core 2.2 GHz	• N6603 • N6603ER • EX20 • N6703 • N6803 • S0703	• Rear: 13 MP
Google	• 5.0 inches,1080 x 1920 pixels, 16:9 ratio • 6.3 inches, 96.7 cm2, 1080 x 2400 pixels, 20:9 ratio	• Qualcomm MSM8998 Snapdragon 835 (10 nm), Octa-core (4x2.35 GHz Kryo & 4x1.9 GHz Kryo) • Octa-core (2x2.85 GHz Cortex-X1 & 2x2.35 GHz Cortex-A78 & 4x1.80 GHz Cortex-A55) GPU: Mali-G710 MP7	N/A	• Front: 8 MP; 10.8 MP • Rear: 12.2 MP; 50 MP (wide), 12 MP (ultra-wide)
Samsung	5.8 in - 6.3 in	• Exynos 9611-9810, Octa-core, 4x1.8 GHz - 4x2.3 GHz (EMEA and USA) • Qualcomm SDM845 Snapdragon 845 Octa-core	N/A	• Front: 8MP - 12 MP • Rear: 12MP - 25 MP

Prerequisites

TraceLink configuration

1. The company owns Smart Inventory Tracker, in addition to Serialized Operations Manager, Smart Event Manager, or both.
2. The company has configured internal locations. See the *Company Administration Online Help* for more information.
3. The internal locations are linked to Smart Inventory Tracker to configure location-specific options (optional). See the Management Online Help for more information.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
3	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

Software

For Mac / Linux users

1. Install Postman Software to register the device via REST API (optional). Download from `https://www.getpostman.com/apps`
2. Install Android File Transfer Software. Download from `https://www.android.com/filetransfer/`
3. Download the Smart Inventory Tracker Android Package Kits (APKs) from the *Devices* screen in the Company Administration Web UI. See the *Company Administration Online Help* for more information.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
3	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

For Windows users

1. Install Postman Software to register the device via REST API (optional). Download from `https://www.getpostman.com/apps`

2. Download the Smart Inventory Tracker Android Package Kits (APKs) from the *Devices* screen in the Company Administration Web UI. See the *Company Administration Online Help* for more information.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

Installation

Register Devices

Administrators, or users assigned a role with the Devices permission enabled, can register devices with TraceLink in the Company Administration Web UI.

Add devices with the Web UI

1. Go to **Company Administration** > **Devices**.
2. Select **Add Device**.
3. Fill in the fields with the information about the device. See the *Company Administration Online Help* for more information.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
3	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

Install the App

Install the Smart Inventory Tracker APK file from TraceLink or the SIT app from the Google Play Store on the device. After the SIT app or APK files are installed, appropriate Android settings are enabled, and the device's certificates are successfully retrieved, users can log in to Smart Inventory Tracker on the device.

Install the APK from TraceLink and log in

1. Connect the device to the computer with the USB cable and docking station.
2. *For devices communicating through proxy servers only:* Configure the proxy server for the device:
    a. Open **Settings** on the device.
    b. Select **Wi-Fi**.
    c. Select and hold the Wi-Fi network the device is connected to.
    d. Select **Modify network**.
    e. Expand **Advanced options**.
    f. Set **Proxy** to Manual.

    > Smart Inventory Tracker does not support Proxy Auto-Config.

    g. Enter the settings for the company's proxy server.
    h. Select **Save**.

3. Allow the device to download apps from unknown sources:
    a. Open **Settings**.
    b. Select **Security**.
    c. Under Device Administration, select **Unknown sources**.
4. *For Mac / Linux users:* Start the Android File Transfer program.

    or

    For Windows users: Enable the "Transfer File" feature on the device:
    a. Select **Tap for more options** in the notifications bar.
    b. Select **Transfer File**.
    c. On the computer, open the directory where the device certificates are saved.
    d. Open a separate Windows Explorer window and navigate to the device's **Download** folder.
5. Copy the APK file (e.g. `Zebra-1.22.0-72.apk`) into the device's **Download** folder.
6. On the device, navigate to the **Download** folder.
7. Double-tap the APK file to install it on the device.
8. Enable device storage for Smart Inventory Tracker:
    a. Open **Settings** on the device.
    b. Select **Apps**.
    c. Select **Smart Inventory Tracker**.
    d. Select **Permissions**.
    e. Select the **Storage** toggle to enable it.
    f. *For smartphone users only:* Select the **Camera** toggle to enable it.
9. Go to all **Apps** on the device.

10. Open the **TraceLink** app.

    When the app opens, the **Username** and **Password** fields, the **Environment** drop-down, the **Activation Code** field, as well as the **Retrieve Certificates** button, display.

11. Enter the **Username** and **Password**, select the **Environment** from the drop-down, and enter the 8-character **Activation Code** to retrieve the device's certificates from Track & Trace Services.

    If the retrieval of the device's certificates is successful, the standard login screen with only the **Username** and **Password** fields displays.

    Any warehouse operator can now log in to use the device.

> Administrator's login credentials are not required to retrieve the device's certificates or to log in to use the device. Users can contact their TraceLink Administrator to get the activation code of the device.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
3	Yes ☐	No ☐	N/A ☐	
4	Yes ☐	No ☐	N/A ☐	
5	Yes ☐	No ☐	N/A ☐	
6	Yes ☐	No ☐	N/A ☐	
7	Yes ☐	No ☐	N/A ☐	
8	Yes ☐	No ☐	N/A ☐	
9	Yes ☐	No ☐	N/A ☐	

Step	Completed?			Notes
10	Yes ☐	No ☐	N/A ☐	
11	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

Install the app from the Google Play Store and log in

1. On your device, open the Google Play Store.
2. Search for and install one of the following apps based on type of device and the environment:
   - SIT iTest: Zebra – For Zebra handheld devices that communicate with the Track & Trace Services iTest environment directly.
   - SIT iTest (Proxy): Zebra– For Zebra handheld devices that communicate with the Track & Trace Services iTest environment through a proxy server.
   - SIT Prod: Zebra – For Zebra handheld devices that communicate with the Track & Trace Services Production environment directly.
   - SIT Prod (Proxy): Zebra – For Zebra handheld devices that communicate with the Track & Trace Services Production environment through a proxy server.
   - SIT iTest: Honeywell – For Honeywell handheld devices that communicate with the Track & Trace Services iTest environment directly.
   - SIT iTest (Proxy): Honeywell – For Honeywell handheld devices that communicate with the Track & Trace Services iTest environment through a proxy server.
   - SIT Prod: Honeywell – For Honeywell handheld devices that communicate with the Track & Trace Services Production environment directly.

- SIT Prod (Proxy): Honeywell – For Honeywell handheld devices that communicate with the Track & Trace Services Production environment through a proxy server.
- SIT iTest: Smartphone – For smartphone devices that communicate with the Track & Trace Services iTest environment directly.
- SIT iTest (Proxy): Smartphone – For smartphone devices that communicate with the Track & Trace Services iTest environment through a proxy server.
- SIT Prod: Smartphone – For smartphone devices that communicate with the Track & Trace Services Production environment directly.
- SIT Prod (Proxy): Smartphone – For smartphone devices that communicate with the Track & Trace Services Production environment through a proxy server.

> Use double quotes at the beginning and end of the search string (e.g. "SIT iTest: Zebra", "SIT Prod: Smartphone").

3. Select the app to be installed.
4. Select **Install**.
5. After the app is installed on the device, open the **TraceLink** app.
6. Enter the **Username** and **Password**.

> Administrator's login credentials are not required.

7. Select the **Environment** from the drop-down:
   - For the SIT iTest app, select iTest - EU or iTest - US.
   - For the SIT Prod app, select Production - EU or Production - US.

> The **Environment** field displays the first time the user logs into the SIT app to retrieve the device's certificates. If the retrieval of the device's certificates is successful, the standard login screen with only the **Username** and **Password** fields displays.

8. Enter the 8-character **Activation Code**.

> Users can contact their TraceLink Administrator to get the activation code of the device. The **Activation Code** field displays the first time the user logs into the SIT app to retrieve the device's certificates. If the retrieval of the device's certificates is successful, the standard login screen with only the **Username** and **Password** fields displays.

9. Select **Retrieve Certificates**.

   If the retrieval of the certificates for the device is successful, a dialog box opens with a confirmation message. Then, the login screen with the **Username** and **Password** fields display.

10. Enter the **Username** and **Password**.

    Any warehouse operator can now log in to use the device.

Completion Checklist

Step	Completed?			Notes
1	Yes ☐	No ☐	N/A ☐	
2	Yes ☐	No ☐	N/A ☐	
3	Yes ☐	No ☐	N/A ☐	
4	Yes ☐	No ☐	N/A ☐	
5	Yes ☐	No ☐	N/A ☐	
6	Yes ☐	No ☐	N/A ☐	

Step	Completed?			Notes
7	Yes ☐	No ☐	N/A ☐	
8	Yes ☐	No ☐	N/A ☐	
9	Yes ☐	No ☐	N/A ☐	
10	Yes ☐	No ☐	N/A ☐	
Installer Initials:			Date:	

Troubleshooting the installation

If the **Retrieve Certificates** button does not display, check the following:

1. Confirm the internet connection:
    - The device must be connected to the internet.
    - There must be a route from the WiFi gateway to the internet connection.
    - The internet connection's firewalls must allow the device to connect to the desired TraceLink Track & Trace Services environment.
2. Confirm that the **Storage** permission is enabled on the device for Smart Inventory Tracker. See Install the Appfor more information.

Appendix

Approvals

Pre-installation approvals

TraceLink consultants and representatives of the Smart Inventory Tracker Owner approve the Installation Qualification Document below.

Name	Company	Position/Title	Initials	Date	Signature
Reviewed by:					
	TraceLink	Technical Consultant			
	TraceLink	Functional Consultant			
		SME Serialization			
Approved by:					
		IT Lead			
Authorized by:					
		QA Lead			

Post-installation approvals

The person who performed the installation verifies that the installation is complete.

Installer					
Printed Name:		Signature:		Date:	
Accepted ☐		Accepted with deviations ☐		Re-test required ☐	

Installation Qualification (IQ) record approval

Representatives of the Smart Inventory Tracker Owner verifies that the installation is complete.

System Owner / Manager					
Printed Name:		Signature:		Date:	

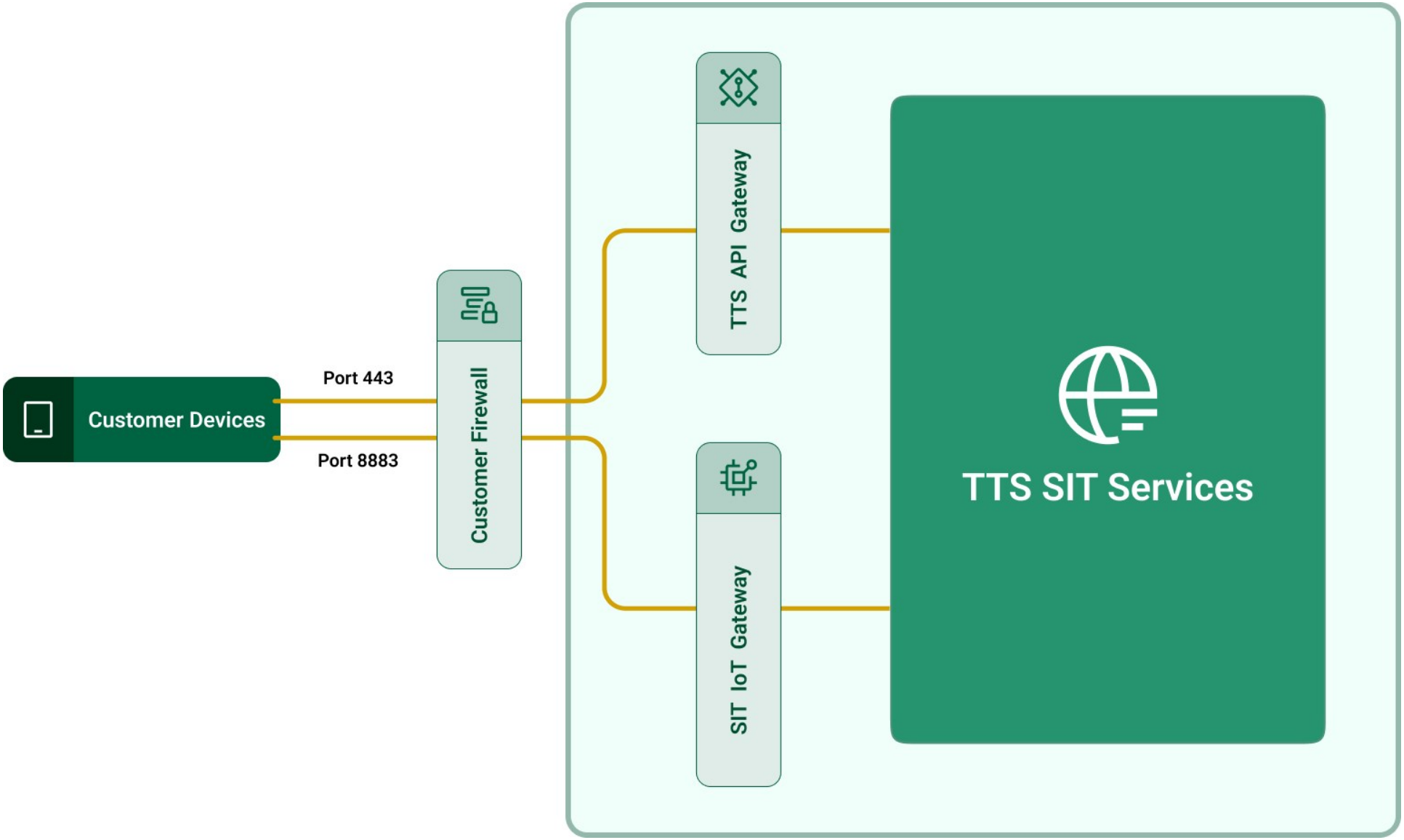
Quality Review					
Printed Name:		Signature:		Date:	

Network Configuration

The SIT app operates on handheld devices connected to an organization's internal Wi-Fi network. In most cases, these networks must be configured to allow secure communication between the SIT application and the TraceLink Cloud environment.

Communications Protocols

The SIT app uses two secure communication protocols to connect to AWS services, that provides access to SIT services in the TraceLink cloud environment. The two protocol connections and their network configuration are described below:



HTTPS Connections

The SIT app uses the HTTPS protocol over port 443 to register devices and to download device certificates for authentication. If this connection is not already permitted within the organization's firewall configuration, then network administrator must open port 443 to enable secure HTTPS communication between the SIT app and the TraceLink Cloud environment.

MQTT Connections

The SIT app uses the MQTT protocol, a standard lightweight messaging protocol, over port 8883 for secure communication between the Internet of Things (IoT) devices and the backend processing services hosted on AWS services. If this connection is not already permitted within the organization's firewall configuration, then network administrator must open port 8883 to allow secure MQTT communication between the SIT devices and the TraceLink Cloud environment.

Some organizations do not allow outbound connections on port 8883 to the internet. Instead, they configure their firewalls to allow traffic only to specific IP addresses. In these cases, organizations can set up a proxy outside the firewall that forwards MQTT traffic to the AWS IoT Gateway. The proxy must allow outbound traffic without filtering. Devices connect to the proxy through a fixed IP address that the firewall allows on port 8883. To use this setup, configure each handheld device to use a proxy specific .apk file.

TraceLink does not provide or manage this proxy service. Organizations are responsible for its setup and maintenance.

The SIT service communicates with two AWS components:

- API Gateway (HTTPS, port 443) for device registration.
- IoT Gateway (MQTT, port 8883) for ongoing data exchange and operations.

Below are the endpoint hostnames for each of the services for each environment / region.

Environment	Region	Gateway	Endpoint	Port	Protocol
Prod	us-east-1	Registration	msapi.us1.tracelink.com	443	HTTPS
	us-east-1	IoT	a3v1nctjidcyav-ats.iot.us-east-1.amazonaws.com	8883	MQTT
iTest	us-east-1	Registration	itestmsapi.us1.tracelink.com	443	HTTPS
	us-east-1	IoT	a1xnsvc2vmp7g7-ats.iot.us-east-1.amazonaws.com	8883	MQTT
ProdFkt	eu-central-1	Registration	msapi.eu1.tracelink.com	443	HTTPS
	eu-central-1	IoT	a3v1nctjidcyav-ats.iot.eu-central-1.amazonaws.com	8883	MQTT

Environment	Region	Gateway	Endpoint	Port	Protocol
iTestFkt	eu-central-1	Registration	itestmsapi.eu1.tracelink.com	443	HTTPS
	eu-central-1	IoT	a1xnsvc2vmp7g7-ats.iot.eu-central-1.amazonaws.com	8883	MQTT
Prod / ProdFkt	us-east-1 eu-central-1	Registration	tracelink-software-dist.s3.amazonaws.com	443	HTTPS
iTest / iTestFkt	us-east-1 eu-central-1	Registration	tracelink-software-dist.s3.amazonaws.com	443	HTTPS

Reference Documents

The following documents are supplementary resources to this Installation Qualification Document:

- *Company Administration Online Help*
- *Device Manager API Guide*
- *Functional Configuration Workbook* (provided by the TraceLink Technical Consultant)
- *Management Online Help*