
InTemp® System User's Guide

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Chapter 1

Getting Started

CX series loggers, mobile applications (InTemp® and InTempVerify™), and InTempConnect® web-based software work together to form the InTemp temperature monitoring solution. Using the InTemp app on your phone or tablet, you can configure CX series loggers and then download data from them to share and view logger reports, which include logged data, excursions, and alarm information. When you are logged in to the app as an InTempConnect user, downloaded logger data is also automatically uploaded to InTempConnect, where you can build custom reports and monitor trip information. In addition, the CX Gateway is available for configuring and downloading data from CX series loggers automatically on a regular basis. See Setting up a Gateway for details. In addition, the InTempVerify app lets you easily download data from loggers and does not require that you have an InTempConnect username. Reports are then automatically uploaded to the logger owner's InTempConnect cloud account. See Using the InTempVerify App for details.

I want to use my logger with mobile apps and InTempConnect.

1. Go to www.intempconnect.com and follow the prompts to set up an administrator account. You'll receive an email to activate the account.
2. Log into the account at www.intempconnect.com and click System Setup and then Roles to add roles for the account. Click Add Role and enter a description (i.e., shipper, receiver, etc.). Under Available Privileges, select the privileges for the role and click the right arrow button to add them to the Assigned Privileges list. Click Save. For more details, see Adding Roles and Assigning Privileges in the next chapter.
3. Click System Setup and then Users to add users to your InTemp account. Click Add User and enter the email address and first and last name of the user. Select the roles for the user and click the right arrow button to add them to the Assigned Roles list. Click Save. For more details, see Adding Users and Assigning Roles.
Note: If your organization is already using InTempConnect, contact your administrator to receive a username and password for the account.
4. New users receive an email to help them activate their accounts.
5. Download the InTemp app to your phone or tablet.
6. Open the app and log in with your InTempConnect user credentials. **Note:** Your mobile device must be able to connect to the internet if you are using a new account or if it has not connected within the last seven days.
7. Create a logger profile in InTempConnect. This is required for CX450 loggers or if you want to be able to download data from any logger model with the InTempVerify app. See Managing Profiles for details on creating a logger profile or see Using the InTempVerify App for details on InTempVerify.
8. Create any optional trip information fields (see Setting up Trip Information fields in the next chapter for details).
9. Connect to the logger and configure it with the InTemp app. See Connecting to a Logger with the InTemp App and Configuring a Logger with the InTemp App in this chapter for more details. Note that you cannot configure loggers with InTempVerify.

Note: Privileges are required for many of these steps.

Important: You can start the CX502, CX602, and CX702 loggers only once. Do not configure these loggers until you are ready to use them.

I want to use my logger with the InTemp app only.

Note: If you follow the steps in this section, data does not upload to InTempConnect and remains on your mobile device.

1. Download the InTemp app to your phone or tablet.
2. Open the app and create an account. Tap Save when done and log in to the account when prompted. Make sure the "I am an InTempConnect user" box is not checked when logging in.
3. Connect to the logger and configure it. See Connecting to a Logger with the InTemp App and Configuring a Logger with the InTemp App in this chapter for more details.

Important: You can start the CX502, CX602, and CX702 loggers only once. Do not configure these loggers until you are ready to use them.

Setting up a Gateway

The CX Gateway uses Bluetooth Low Energy to configure and download data from CX series loggers and upload the data to InTempConnect automatically using Ethernet or Wi-Fi.

To set up a gateway at your current location:

1. In InTempConnect, create or edit a role to ensure it has gateway privileges and assign a user to that role. Administrators automatically have gateway privileges. See Adding Roles and Assigning Privileges in the next chapter for details.
2. Set up a gateway profile in InTempConnect. See Managing Profiles in the next chapter for details.
3. Open the InTemp app and log in with your InTempConnect user credentials.
4. Power up the gateway.
 - a. Connect the AC adapter to the gateway and plug it in.
 - b. Plug in an Ethernet cable if the gateway is using Ethernet network settings.
 - c. Wait a couple of minutes for it to completely power up before continuing. The LED is yellow-amber while it powers up and then changes to a deep green once it is ready to set up.
5. Configure gateway network settings. **Note:** Ports 123 and 443 must be open for the gateway to work properly.
 - a. In the InTemp app, tap Devices if you are not already viewing the Devices screen. The gateway should appear in the list and can be identified by its serial number. (The serial number is located on the outside of the box or on the back of the gateway). Tap the gateway in the list to access gateway settings. If the gateway does not appear, make sure it is powered up and within range of your phone or tablet or press the button on the gateway.
 - b. If the gateway will be using Ethernet with DHCP, the network settings are automatically configured. A green cloud icon indicates that the gateway is connected to the network. Continue to step 7.
If you need to set up Ethernet for static IP addresses or Wi-Fi, tap Network Settings and tap Ethernet or Wi-Fi.
 - c. **For Ethernet using static IP addresses:** Disable DHCP. Tap IP Address, Subnet Mask, or Router to edit the addresses (consult your Network Administrator). Tap Add DNS Server and enter an address. Repeat if necessary (the app can store up to three DNS server addresses). Tap Save.
 - For Wi-Fi:** Select Use Current Wi-Fi Network or type the network name (SSID) and password. (Tap Reset Wi-Fi on Gateway to remove an existing Wi-Fi configuration and enter a different network name and password.) Tap Save.
 - d. The gateway automatically tests the network connection after it saves the settings. You can cancel the test if necessary. If the test is not successful, ensure that all your settings are correct and saved.
6. Configure the gateway.
 - a. In the InTemp app, tap Devices and then tap the gateway to connect to it.
 - b. Tap Configure.

- c. Select a gateway profile. Swipe left and right if there are multiple profiles.
- d. Type a name for the gateway configuration. The app uses the gateway serial number if you don't name it.
- e. Tap Start. The status of the gateway should change to Running in the app.

When a gateway contacts InTempConnect for the first time, it creates a user for the gateway in your InTempConnect account. Click System Setup and then Users to see the gateway in the list of users. The username is listed as CX5000/5001-<gateway serial number>. See Adding Users and Assigning Roles in Chapter 2 for more details.

The gateway connects to loggers within range and downloads their data on a regular schedule as defined in the gateway profile or whenever an alarm occurs. You can also use the gateway to download logger data on demand (see Downloading Loggers with a Gateway in the next chapter). The gateway uploads data to InTempConnect, where you can search logger configurations, run reports, or schedule regular delivery of logged data and other logger information via email. In addition, the gateway sends a signal to InTempConnect every 10 minutes to make sure the gateway is still active. Note that if a gateway is downloading data from a CX400 logger in an alarm state, the gateway downloads data every hour until the alarm is cleared. See Viewing Configurations and Downloads in the next chapter for details on monitoring gateways in InTempConnect. For details on gateway operation and mounting, see the gateway manual at www.onsetcomp.com/intemp/resources/documentation/21781-cx5000-gateway-manual.

If you are operating more than one gateway in close proximity, you can set up a group so that any gateway in the group does not overlap downloading or incorrectly affect logger function. See Working with Gateway Groups in Chapter 2 for more details.

To set up a gateway for another site:

Follow these instructions if you need to configure/start the gateway for use at another site or to set up network settings for the gateway for a different location from its current site (for example, you are an IT administrator who is setting up a gateway to be used at another office). Note that you must have an InTempConnect user account with Gateway Administrator privileges and the InTemp app to continue.

Note: If the gateway is to be deployed in a location that supports Ethernet with DHCP and you do not need to set up network settings in advance, follow the steps to set up the gateway in your current location instead.

1. **Power up the gateway.** Connect the AC adapter to the gateway and plug it in. Plug in an Ethernet cable if you are using Ethernet at your current location. Wait a couple of minutes for it to completely power up before continuing. The LED is yellow-amber while it powers up and then changes to a deep green once it is ready to set up.
2. If you aren't configuring the gateway and only specifying network settings for the different site, go to step 4. If you are configuring the gateway and have Ethernet with DHCP at your current location, go to step 3. If you are configuring the gateway and using Ethernet with static IP addresses or Wi-Fi at your current location, follow these steps to set up temporary network settings:
 - a. Tap the Devices icon, find the gateway in the list, and tap it to connect to it.
 - b. Tap Network Settings and tap Ethernet or Wi-Fi.
 - c. **To use Ethernet with static IP addresses at the current location:** Disable DHCP. Tap IP Address, Subnet Mask, or Router to edit the addresses. Tap Add DNS Server and enter an address. Repeat if necessary (the app can store up to three DNS server addresses). Tap Save.
 - d. **To use Wi-Fi at the current location:** Select Use Current Wi-Fi Network to use your phone or tablet's existing Wi-Fi SSID and then type your password. Tap Save.
3. Configure the gateway.
 - a. Connect to the gateway (tap Devices, find the gateway in the list, and tap it to connect to it).
 - b. Tap Configure.
 - c. Select a gateway profile; swipe left or right if there are multiple configurations. (Don't see a configuration? Ask your InTempConnect administrator to set one up as described in the first section. Log out of the InTemp app and back in to see any new configurations.)

- d. Type a name for the gateway configuration. The app uses the gateway serial number if you do not name it.
 - e. Tap Start. In the app, the status of the gateway changes to Running.
4. Set up network settings for the location where the gateway is to be located.
 - a. Connect to the gateway (tap the Devices icon, find the gateway in the list, and tap it to connect to it).
 - b. Tap Network Settings.
 - c. To use Ethernet with DHCP at the remote site: Tap Ethernet, enable DHCP, and tap Save.
To use Ethernet with static IP addresses at the remote site: Tap Ethernet and disable DHCP. Tap IP Address, Subnet Mask, or Router to edit the addresses for the location where the gateway is to be deployed. Tap Add DNS Server and enter an address. Repeat if necessary (the app can store up to three DNS server addresses). Tap Save.
To use Wi-Fi at the remote site: Tap Reset Wi-Fi on Gateway to remove any existing Wi-Fi configuration. Type the SSID and password for the location where the gateway is to be deployed, and tap Save. **Note:** If someone changes the Wi-Fi password at the site after you set it up, you must reconfigure the Wi-Fi settings. This requires a phone or tablet with the InTemp app.
 - d. Note that you will not be able to test the network connection for a different location. Pause any network test.
5. The gateway is ready to use at the other site. Remove the power and package it back up. To start using it at the site, plug in the gateway in and plug in the Ethernet cable if necessary.

Registering the CX100x Logger

Before you can use the CX100x logger, you must register it with InTempConnect as follows: Note: The CX100x is the only logger family that requires device registration before use. No other CX products require registration.

1. If you're using a mobile device, scan the QR code on the logger. (Refer to the illustration on page 1 of the CX1000 Quick Start Guide to locate the QR code, serial number, and UID. Your default browser opens to the intempconnect.com site. If you're using a computer, go to intempconnect.com/register.
2. Sign in to InTempConnect.
3. Choose an account from the Account dropdown.
4. Click Add/Remove Device.
5. If you scanned the serial number, the serial number field is completed automatically. If you used the above URL on a computer, complete the serial number field using the serial number on the front of the logger.
6. Enter the UID number from the side of your logger.
7. To add another device, click the plus sign and repeat this process.
8. Click Register Device.
9. If it doesn't happen automatically, click Download to save the NIST certificate that is generated while registering the device.

Connecting to a Logger with the InTemp App

Note for InTempConnect users: You must have the required privileges to connect to the logger. See Adding Roles and Assigning Privileges.

See Setting up a Gateway earlier in this chapter for details on connecting to loggers automatically with a gateway.

To connect to a logger with the InTemp app:

1. Tap the Devices icon in the InTemp app.
2. For a CX500, CX600, or CX700 logger, press the button on the logger to wake it up.
3. Find the logger you want the phone or tablet to connect to in the list. If you are working with multiple loggers, press the button on the logger again to bring the logger to the top of the list (CX450, CX500, CX600, and CX700 loggers only). You can also search for a specific logger with the Search field using the logger serial number or the label for the logger (if it is already configured).

4. Tap the logger to connect to it. See *Working with Loggers* in the InTemp App for details on the actions available while connected to a logger.

A logger must be within a 30.5 m (100 ft) range of the phone or tablet to connect to it. Tips for connecting to the logger with the InTemp app:

- Make sure Bluetooth is enabled on the phone or tablet.
- If you are working with a CX500, CX600, or CX700 logger, make sure you press the button on the logger to wake it up.
- Check the signal strength icon for the logger in the Loggers screen in the app to see if it is within range of the phone or tablet and move closer if necessary. Only one or two blue bars indicate the Bluetooth signal is weak; all gray bars indicate that a signal is not found.
- If your device connects to the logger only intermittently or loses its connection, move closer to the logger, within sight if possible.
- Change the orientation of your phone or tablet to ensure the antenna in your device is pointed toward the logger (refer to your device's manual for the antenna location). Obstacles between the antenna in the device and the logger may cause intermittent connections.
- If the logger appears in the list, but you cannot connect to it, close the app, power down the mobile device, and then turn it back on. This forces the previous Bluetooth connection to close.
- Make sure you have the required privileges to connect to the logger. Only InTempConnect users with privileges for connecting to the loggers in an InTempConnect account can connect to a logger once it is configured (configuring the logger also requires privileges). When an InTempConnect user first configures a logger, it is locked with an encrypted passkey that is automatically generated by the InTemp app. After the logger is configured, only active users associated with that account are able to connect to it. If a user belongs to a different account, that user is not be able to connect to the logger with the app, which displays an invalid passkey message. Administrators or users with the required privileges can obtain the passkey from the Logger Configuration page if necessary (see *Viewing Details about Logger Configurations*).

Configuring a Logger with the InTemp App

Note for InTempConnect users: You must have the required privileges to configure a logger. See *Adding Roles and Assigning Privileges* in the next chapter.

When your phone or tablet is connected to a logger, you can configure it by selecting a logger profile that contains the logging interval, information on when the logger will start, whether it is enabled for InTempVerify, and any alarm settings. CX450 loggers require that you set up a logger profile before configuring the logger. All other CX loggers have default preset logger profiles that you can choose from, or you can create your own profile. For steps to create a logger profile, see *Managing Profiles* in the next chapter if you are an InTempConnect user or *Changing InTemp App Settings* in Chapter 3 if you are using the InTemp app only. You can also set up custom trip information fields in InTempConnect to enter details about the trip in the app when configuring the logger (see *Setting up Trip Information Fields* in the next chapter).

See *Configuring Loggers with a Gateway* in the next chapter for details on using a gateway instead of the InTemp app to configure loggers.

To configure one logger at a time with the app:

1. Tap the Devices icon. Find the logger you want to configure and tap it to connect to it. **Note:** Set up CX450 logger profiles, any custom profiles for all other CX loggers, and any optional trip information fields before completing this step.
2. Once connected, tap Configure. **Note:** You cannot configure a logger that is currently logging or has data that has not been downloaded. Download logger data and then continue with the configuration (InTempConnect users require privileges to download).

Important: You can start the CX502, CX602, and CX702 loggers only once. Do not configure these loggers until you are ready to use them.

3. Swipe left or right to select a logger profile as in the following example.

Note: The default order of the appearance of the profiles can be changed. See Managing Profiles in the next chapter if you are an InTempConnect user or Changing App Settings in Chapter 3 if you are using the app only.

4. Type a label for the logger.
5. If the profile includes a start time option of "On date/time," select the date and time you want the logger to begin logging.
6. Tap Start. **InTempConnect users:** If trip information fields are set up for this account, then fill in the fields with the necessary details and tap Start in the upper right corner.
7. The selected profile is loaded to the logger. Logging begins as determined by the start option in the profile. If "On button push" or "On button push with fixed delay" is selected for the start option, press the Start button on the logger to begin logging. **Reminder: You cannot restart CX502, CX602, and CX702 loggers once logging begins. Note:** If the connection is lost between the logger and your phone or tablet before tapping Start, you must reconnect and reconfigure the logger. Configuration settings are not loaded onto the logger until you tap Start.

After logging begins, you can download the logger data and generate a report to view the logged data and other key information about the logger with the InTemp app (InTempConnect users require privileges for this). See Downloading a Logger with the InTemp App in this chapter for details. Or, if the logger was configured using a logger profile with InTempVerify enabled, then anyone can download the logger with the InTempVerify app and automatically upload a report to InTempConnect. See Using the InTempVerify App for details.

To configure multiple loggers of the same type at once or create a shipment with the InTemp app:

1. Tap the Devices icon.
2. Tap Bulk Configure in the upper right corner.
3. Select the loggers you want to configure. The selected loggers are checked. You can only select loggers of the same series type (i.e., only CX400 loggers or only CX500 loggers). Tap a checked logger to deselect it; the checkmark is removed, and the logger moves back into the list with all other unselected loggers.

Important: You can start the CX502, CX602, and CX702 loggers only once. Do not select these loggers for configuration until you are ready to use them.

4. Tap Configure (number) Loggers at the bottom left corner, where (number) is the number of loggers you selected.
5. Enable Create Shipment if you want the loggers to be part of a shipment.
 - a. Enter a shipment ID.
 - b. Select an origin for the shipment.

- c. Select a destination for the shipment.
6. Select the label to use for each logger: the current logger label (the label used when the logger was last configured), the serial number, or select Enter Manually and type a new label. The label you enter is used for all loggers.
7. Swipe left or right to select one of the preset logger profiles. The profile you select is used for all loggers.
Note: If the logger is already part of a shipment, you cannot change the profile already selected for it.
8. If the profile included a start time option of "On date/time," select the date and time you want the loggers to begin logging.
9. **InTempConnect users:** If trip information fields are set up for this account, complete the fields with the necessary details. The same information is used for all loggers. If the logger is already part of a shipment, you cannot change the trip information entered for it.
10. Tap Start. All the selected loggers are configured. If you created a shipment, the shipment details are uploaded to InTempConnect (select Loggers then Shipments in InTempConnect to view details). If the configuration failed for any of the selected loggers, a message appears along with an option to retry. If retrying is not successful, move closer to the logger and configure it individually.

Logging begins as determined by the start option in the configuration. If "On button push" or "On button push with fixed delay" was selected for the start option, then you can press the Start button on the logger to begin logging.

Reminder: CX502, CX602, and CX702 loggers cannot be restarted once logging begins.

See Downloading a Logger with the InTemp App for details on downloading each logger individually or see Downloading Loggers with a Gateway in the next chapter.

Downloading a Logger with the InTemp App

Note for InTempConnect users: You must have the required privileges to download logger data. See Adding Roles and Assigning Privileges in the next chapter.

You can download logger data and generate reports that include logged data, events, user activity, alarm information, and more. You can share reports immediately upon download or you can access them later in the InTemp app from the Reports icon (see Working with InTemp App Reports in Chapter 3) or in InTempConnect (see Viewing Details about Logger Configurations in the next chapter). Logger data is also automatically uploaded to InTempConnect if you are logged into the app as an InTempConnect user. You can then build and share custom reports in InTempConnect with the uploaded data (if you have the required privileges). See Building a Logger Report in the next chapter.

See Setting Up a Gateway or Using the InTempVerify App in this chapter for details on downloading logger data automatically with the gateway or InTempVerify.

To download logger data and produce a report with the InTemp app:

1. Tap the Devices icon and select a logger to connect to it.
2. Once connected, tap Download.
3. Choose a download option:
 - **Download & Continue.** The logger continues logging once the download is complete.
 - **Download & Restart (CX400, CX450 CX503, CX603, and CX703 models only).** The logger starts a new configuration using the same profile once the download is complete. You will be prompted to enter trip information again (if applicable). Note that if the logger profile is set up to start with a button push, you must push the button on the logger for logging to restart.
 - **Download & Stop.** The logger stops logging once the download is complete.

To download multiple loggers with the InTemp app:

1. Tap Devices, then Bulk Download.
2. The screen changes to Bulk Download mode. This changes the way the screen behaves when you tap a logger tile. Tap a tile to select it for bulk download. You can select up to 20 loggers. Each logger you select creates an individual report. For example, if you select five loggers, you get five reports. Text at the bottom of the page updates to indicate how many loggers are selected.
3. Tap Download X Loggers to begin the download.

- Download & Continue. The loggers continue logging once the download is complete.
 - Download & Restart (CX400, CX450, CX503, CX603, and CX703 models only). The logger starts a new configuration using the same profile once the download is complete. You will be prompted to enter trip information again (if applicable). Note that if the logger profile is set up to start with a button push, you must push the button on the logger for logging to restart.
 - Download & Stop. The logger stops logging once the download is complete. The downloads begin and run one after another. The screen displays the download queue.
4. Click Cancel to cancel the downloads and return to the Devices screen, not in Bulk Download mode.
 5. The screen displays Done when all the loggers are downloaded.

Note that each download option requires a specific privilege for InTempConnect users.

Important: CX502, CX602, and CX702 loggers cannot be restarted if they are already logging. If you want a CX502, CX602, or CX702 logger to continue logging after the download is complete, select Download & Continue.

A report is generated in the InTemp app using the default type (as selected in the InTemp app settings). If Report Sharing is set to Offer All Options in the InTemp app settings, select an option for sharing the report (the options vary based on your device). If Report Sharing is set to Automatically Email in the InTemp app settings, then an email opens for you to send. The report is also available in both formats for sharing at a later time. See Working with InTemp App Reports in Chapter 3 for more details.

If you were logged into the app as an InTempConnect user, then the downloaded data is also uploaded to InTempConnect. Users with report building privileges can then create custom reports in InTempConnect as needed. See Building a Logger Report or Viewing Details about Logger Configurations in the next chapter if you want to run the same report that was generated in the InTemp app.

Using the InTempVerify App

InTempVerify is an app that allows anyone—with or without an InTempConnect username—to download data from a CX logger if it was configured with a logger profile with InTempVerify enabled. When you download data from a logger using InTempVerify, the logged data is automatically uploaded to the configuring user's InTempConnect account and the logger continues logging (unless it already stopped). This offers greater accessibility to logger data and allows the loggers to be used similarly to USB loggers.

Important: Make sure loggers are configured with a logger profile in which the "InTempVerify (ITV) Enabled" option is selected. If that option is not enabled, the logger does not appear in the InTempVerify app.

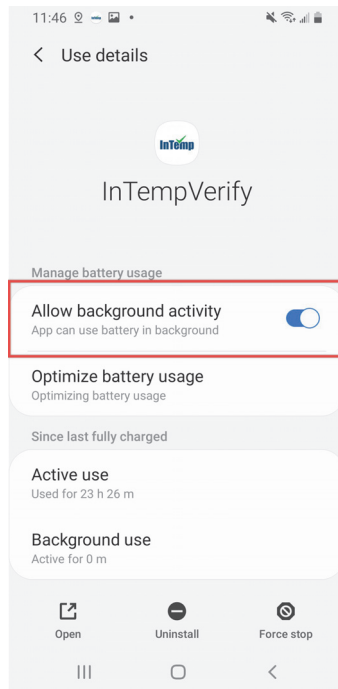
To download a logger with InTempVerify:

1. Download the InTempVerify app to your phone or tablet.
2. Open InTempVerify and follow the prompts to create an account or enter your username and password if you already have an account. You will remain logged in to the InTempVerify app indefinitely after logging in for the first time (you can use the Settings icon to log out if needed).
3. When the app opens, tap Devices to view all InTempVerify-enabled loggers within range or your device.
4. Find the logger you want to download. Use the Filter  and Sort icons  to refine the list of loggers if needed.
5. Tap Download. Status messages track the progress of connecting to the logger and downloading it. Once the download is complete, it will automatically be uploaded to the configuring user's InTempConnect account where authorized users can view details about the logger configuration, build reports, and receive any expected alarm notifications as necessary. If the logger was logging when the download started, then it will continue logging until it is full or stopped by the CX Gateway or InTemp app.

Tap Settings in InTempVerify to access the following:

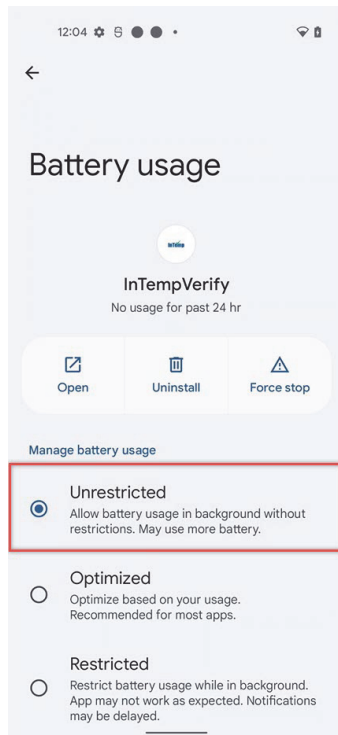
- **Log Out.** Tap this if you need to log out and switch to another user.

- **Wi-Fi Only.** Tap the toggle to enable or disable whether the app uses Wi-Fi only to upload data. If Wi-Fi only is enabled, then the app will only upload data when a Wi-Fi connection is available. If Wi-Fi only is disabled, then the app will use a cellular connection to upload data when a Wi-Fi connection is unavailable.
- **Readout Queue Status.** This displays whether any logger downloads are waiting to be uploaded to InTempConnect.
- **Units.** Select the units used to be displayed in InTempVerify. This will not affect the units used when the data is downloaded or on the logger LCD (if applicable).
- **Mobile Alarm Notifications (Android only).** Sends alarm notifications to your mobile phone when an in-range (~100ft) logger is in an alarm state. The logger sends you up to five notifications per one alarm instance unless you download data from the logger or the logger returns to normal temperature conditions.
 - Use the Settings area on your Android phone to allow location access all the time for the InTempVerify mobile app. Go to the Settings area on your phone and look for Location Permissions or Location Access or something similar to that. Select Allow Location Access All the Time. The setting may be named something slightly different on your phone.
 - Disable the battery optimization setting for the InTempVerify application and/or allow background activity. This setting is different from phone to phone, so you may have to look around a little. The following is an example of where to find the setting you need from a Samsung phone:
 - Settings>Apps>InTempVerify>Battery>Allow background activity

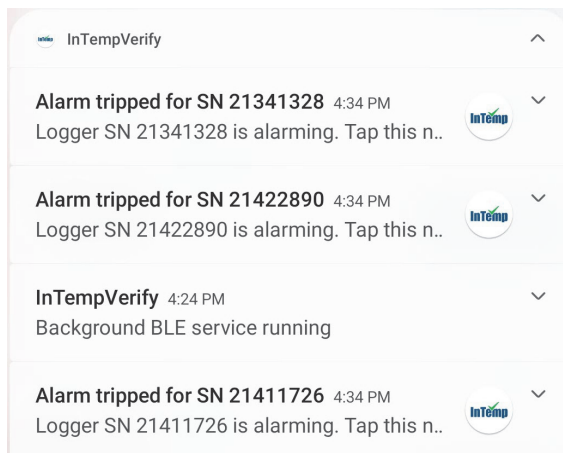


The following is an example of where to find the setting on a Google Pixel phone:

- Settings>Apps>See all apps>inTempVerify>Battery>Unrestricted



Alarm notifications appear on your phone when this feature is enabled and when one of your loggers is in an alarm state. In addition, you must be within range of a Bluetooth signal, your phone screen cannot be locked, but you do not have to be in the InTempVerify app to receive notifications. The following image shows some sample notifications.



- **Dark mode.** Tap the toggle to enable or disable Dark Mode, which changes the app color scheme. When Dark Mode is enabled, the app displays bright text on a black background. When Dark Mode is disabled, the app displays dark text on a white background.
- **Share Diagnostics with Onset.** Tap the toggle to enable or disable sharing of information about the software for troubleshooting and future enhancements.
- **Enable Logging.** This allows the app to run logs to help Onset assess potential issues with the app or loggers. When you enable this setting, the Share Logs with Onset option appears, which you can use if you need to send the logs to Onset.

Chapter 2

InTempConnect Basics

InTempConnect is cloud-based data warehousing software that allows you to search CX series logger configurations, build reports from data uploaded from the InTemp or InTempVerify apps, manage trip information, set up alarm notifications, and more. There are two types of InTempConnect accounts: Administrator accounts and user accounts. Administrators have all privileges in InTempConnect by default. You cannot change an Administrator's privileges. Users have specific roles and privileges assigned to them by either an Administrator or another user who has the sufficient privileges. The account name is listed at the top of the InTempConnect navigation bar that lets you switch between accounts if needed.

This is the recommended workflow for new Administrators:

1. Create an account as described in Getting Started in chapter 1 (click Settings > Profile if you need to edit an existing account profile).
2. Add roles to the account and assign privileges.
3. Add users and assign roles.

Administrators or users with sufficient privileges can then:

- Set up logger and gateway profiles.
- Manage gateway groups, locations, and shipments.
- Add trip information fields.
- Configure loggers with a gateway.
- Create shipments.
- Set up notifications.

Once all setup work is complete and loggers have been configured and downloaded, Administrators or users with the sufficient privileges can then:

- Search all logger configurations and downloads associated with the account.
- See details on individual logger configurations and downloads.
- Build reports to monitor trip information, alarm conditions, logged data, and more.
- Schedule reports with logged data, alarm details, and more to be delivered via email.

Managing Profiles

There are two types of profiles: logger and gateway profiles. A logger profile contains the settings used to set up and start the logger, such as the logging interval, start mode, alarm limits, and the option to use the logger with the InTempVerify app. Default preset profiles with commonly used settings are available for all CX series loggers except for CX450 loggers, which require that you create a profile. You can also create optional custom profiles for all other CX loggers as needed. All enabled profiles are available in the InTemp app when configuring any loggers associated with your account and can be selected when configuring the logger with the gateway or setting up shipments. **Note:** Preset profiles do not have the "InTempVerify (ITV) Enabled" option selected. If you want users to be able to download logger data with the InTempVerify app, you must create a new profile.

A gateway profile contains the settings used to connect to and download logger data using the gateway. This allows you to automatically download loggers within range of the gateway every 12 hours (CX500, CX600, or CX700 loggers only), day, week, or month.

Note: Only administrators and users with sufficient privileges can manage profiles.

Logger Profiles

Click System Setup and then Logger Profiles to view a list of profiles sorted by logger family with enabled preset profiles listed first followed by custom profiles. Any disabled profiles are listed last. Use the arrows next to a column heading to sort the list by that column in ascending or descending order. Use the fields below the column headings to refine the list to show only the profiles that match what was entered in the field. **Note:** Any changes to the sort order of the list does not affect the order in which the profiles appear in the InTemp app. Use the InTemp app settings to change the order of the profiles in the app.

To add a new logger profile:

1. Select Logger Profiles from the System Setup menu.
2. Click Add Logger Profile.
3. Type a name for the profile, up to 30 characters.
4. Select the logger family: CX400, CX450, CX500, CX600, CX700, CX1000.
5. Select the Enabled box if you want the profile to be available in the InTemp app. Deselect Enabled if you do not want it available for selection in the InTemp app.
6. Select the InTempVerify (ITV) Enabled box if you want users to download the logger using the InTempVerify app, which then automatically uploads data from the logger to your InTempConnect account regardless of who downloads the loggers (see Using the InTempVerify app for details on InTempVerify). Not available for the CX1000.
7. Select Include Location if you want to save the location (latitude/longitude) of the logger in events generated from the InTemp app. For example, when the logger is downloaded with the InTemp app, the location of the logger at the time of the download is saved and listed in the logger PDF reports and in any applicable data notifications. **Note:** Latitude/longitude are listed only if location services is enabled on the phone or tablet with the InTemp app installed. Not available for the CX1000.
8. Select the Logging Interval from the dropdowns available.
9. For the CX1000 only, select the Ping Interval from the dropdown, which specifies how often the logger uploads data to the cloud. The Ping Interval options are dependent on the Logging Interval you choose in step 8. The options may change depending on your Logging Interval selection.

Note: On the CX1000, Logging and Ping Intervals go into effect when you press the button for 3 seconds. If you do not press the button, the Logging and Ping Intervals go into effect after 1 hour (maximum) from the time you create the shipment.

10. From the Start dropdown, select how you want the logger to start logging:

- **Start Now.** The logger begins logging immediately.
- **Start On Interval.** The logger begins logging on the next even interval (such as 11:00 or 11:05).
- **Start On Button Push.** The logger begins logging when you press the Start button on the logger.
- **Start After Elapsed Time.** The logger begins logging after a certain period of time, such as five minutes or three hours. Select the elapsed time in hours, minutes, and seconds.
- **Start On Date/Time.** The logger begins logging on a specific date and time. Note that you cannot specify the specific date and time now. Select the date and time when you configure the logger.
- **On Button Push Delay (CX500, CX600, and CX700 loggers only).** The logger begins logging when you press the Start button after a specified delay (for example, if you choose a delay of one hour, you can press the button to start the logger one hour after the logger is configured). Choose the delay in hours, minutes, and seconds.

Note: This feature is not available for the CX1000. In addition, on the CX1000, Logger Profile settings go into effect when you press the button for 3 seconds. If you do not press the button, the Logging and Ping Intervals go into effect after 1 hour (maximum) from the time you create the shipment.

11. **For CX500, CX600, and CX700 loggers:** Enable Stop on Button Push if you want to be able to stop logging by pressing the button on the logger.
12. **For CX400 loggers:** Select whether you want to record daily logger checks. Choose Never, Once Daily, or Twice Daily.
- If you choose Twice Daily, a Perform Morning Check action appears in the Connected screen from 12:01 AM until 12:00 PM and then Perform Afternoon Check appears from 12:01 PM to 12:00 AM.
 - If you choose Once Daily, an action appears in the Connected screen to Perform Daily Check.
 - Once the action is completed, it is recorded as a logged user action available for view in an XLSX report and the action is listed as performed in the Connected screen. Missed are also recorded by the logger itself.
 - Changes to this setting take effect the next time the logger is configured.
 - When Once Daily or Twice Daily is selected, the minimum and maximum values displayed on the logger LCD represent the minimum and maximum readings within the current 24-hour period and reset every 24 hours (press the Mute/Next button for 3 seconds to reset the values sooner). When Never is selected, the minimum and maximum values represent the entire logging period. The values reset only when the logger is stopped or reconfigured, or when you press the Mute/Next button for 3 seconds.
 - When logger checks are set up, you can also set a reminder on your mobile device to perform the check with the InTemp app settings.
13. Enable the High Alarm and Low Alarm under Logger Alarms (sensor alarms set on the logger). For CX450 loggers, you can enable High and Low Alarms for both temperature and relative humidity (RH). Enter an alarm limit for each enabled alarm. For a high alarm, an alarm trips if the sensor reading rises above the value you enter in the High Alarm field. For a low alarm, an alarm trips if the sensor reading falls below the value you enter in the Low Alarm field.

For Trip Alarm After, select how many hours and minutes should elapse before the alarm trips. If you want an alarm to trip immediately on the first reading outside the limits, set Trip Alarm After to zero. Also select whether the alarm trips on cumulative or consecutive samples. If you select Cumulative, the alarm will trip when the time the sensor is out of range over the course of the logging period is equal to the selected duration. If you select Consecutive, the alarm will trip when the time the sensor is continuously out of range is equal to the selected duration. For example, if you select Cumulative and the high alarm is set to 45°F with a "Trip alarm after" time of 30 minutes, then an alarm will trip once the sensor reading has been at or above 45°F for a total of 30 minutes since logging started. This could be 15 minutes above 45°F in the morning and then 15 minutes above 45°F again in the afternoon. If Consecutive was selected instead, then the alarm would only trip if all sensor readings were at or above 45°F for a continuous 30-minute period.

Notes:

- For CX500, CX600, and CX700 loggers, you can select separate Trip Alarm After settings for both the high and low alarms.
 - For CX400 loggers, the Trip Alarm After settings are shared for both the high and low alarms.
 - For CX1000 loggers, there is no options for Trip Alarm After.
14. **For CX400 and CX450 loggers:**
- If you enabled High or Low Alarm (logger alarms, not cloud alarms set up in the next step), select Enable Audible Alarm if you want the logger to beep when a high or low alarm trips. **Note:** If you are using the CX400 or CX450 logger for shipping applications that may result in the logger being placed on an airline, this feature must be disabled.
 - Enable Low Battery Audible Alarm is selected by default so that an audible alarm will sound if the logger battery power drops to 15 percent or one bar on the logger LCD. Disable this setting if you do not want an audible alarm to sound for a low battery.
15. Configure any cloud alarms, which are monitored by InTempConnect as data is uploaded from the logger.
- Select High or Low and enter a value (the units are set from the account profile available from Settings). For all loggers except the CX1000: For Trip Alarm After, select how many hours and minutes to wait

before the cloud temperature alarm trips. Also select whether the alarm will trip on cumulative or consecutive samples.

- Select MKT High or MKT Low and enter a value (the units are set from the account profile available from Settings).
- For all loggers except the CX1000: Enable Total Trip Length if you want an alarm to trip when a logger arrives after a specific number of hours. Choose one of the default settings or select custom to enter your own number of hours.
- Add additional cloud alarms by clicking ; delete a cloud alarm by clicking .
- **Note:** Cloud alarms do not trip an alarm on the logger; they generate only an email notification (you must set up a sensor alarm notification by clicking System Setup and then Notifications). Enable the High or Low Alarm described in step 11 if you want to set up an alarm for the logger itself. In addition, cloud alarms cannot be modified once configured. If you need to revise a cloud alarm, make a copy of the logger profile and edit the cloud alarm settings in the copy.

16. Click Save. The new profile is added to the list of profiles, below any preset profiles for the appropriate logger family as applicable. Click the arrow at the beginning of the row to see a summary of the profile, including when it was created and last updated (if applicable).

To enable or disable a logger profile:

1. Click System Setup and then Logger Profiles.
2. Click Enable/Disable toggle button  for the profile you want to enable or disable.

Disabled logger profiles are dimmed and appear at the bottom of the list by default. "No" is listed in the Enabled column for a disabled profile, which means it is not available as a configuration option in the InTemp app.

To copy a logger profile:

1. Click System Setup and then Logger Profiles.
2. Click the Copy icon  for the profile you want to copy. The Logger Profile page opens for the copy.
3. Edit the settings in the copy and click Save. The new profile is added to the list below the profile you copied.

To edit a logger profile:

1. Click System Setup and then Logger Profiles.
2. Click the Edit icon  for the logger profile you want to modify.
3. Make changes to the settings as needed and click Save.

Note: You cannot edit preset logger profiles and cloud alarm settings. To edit cloud alarms, copy the logger profile, make any edits in the copy, and then save the copy.

To delete a logger profile:

1. Click System Setup and then Logger Profiles.
2. Click the Delete icon  for the profile you want to delete and confirm that you want to delete it. The profile is removed from the list.

Note: You cannot delete preset logger profiles.

Gateway Profiles

Select Gateway Profiles from the System Setup menu to view a list of profiles sorted by name. These profiles are available in the InTemp app and control how the gateway interacts with loggers within range.

To add a new gateway profile:

1. Click System Setup and then Gateway Profiles.
2. Click Add Gateway Profile.
3. Type a name for the profile, up to 30 characters.
4. Select the logger family you want to use with the gateway (you can select more than one).
5. Select what you want the gateway to do with each logger when connected:
 - Download and Restart
 - Download and Continue
 - Download and Stop

Important: Make sure you select either Download and Restart (CX400, CX450, CX503, CX603, and CX703 loggers) or Download and Continue if you want all loggers to continue logging once the gateway connects to them. Otherwise, if you select Download and Stop, all logging stops once the gateway connects to the loggers and you must restart them with the InTemp app or through the gateway with InTempConnect. In addition, Download and Restart is not available for CX502, CX602, and CX702 loggers. These loggers stop logging upon download if you select this option.

6. Select additional connection controls.
 - **Immediately connect to any <logger> with a new sensor alarm.** Select this if you want the gateway to connect to and download any CX logger (as applicable) any time a new sensor alarm trips on the logger. **Note:** This defaults to a Download and Continue setting instead of the previous selection made in step 5. You cannot change this default behavior.
 - **Immediately connect to any <logger> not seen by this gateway.** The gateway automatically connects to a new logger when it is first recognized. If this option is disabled, the logger continues logging, regardless of what you selected for the Download option in step 5. If this option is enabled, the gateway follows the download setting selected in step 5. This means if you selected Download and Restart or Download and Stop in step 5, the logger restarts or stops upon the first gateway connection.

Note: This feature is primarily meant for shipping applications; it is not ideal for storage applications.
 - **Immediately connect to any <CX400 or CX450 logger> with a new low battery.** Select this if you want the gateway to connect and download a CX400 or CX450 logger any time a new low battery alarm trips on the logger. **Note:** This defaults to a Download and Continue setting instead of the previous selection made in step 5. You cannot change this default behavior.
 - **Immediately connect to any recently stopped <logger>.** Select this if you want the gateway to connect to and download a CX500, CX600, or CX700 logger when it stops logging instead of waiting for the next scheduled connection. **Note:** This is a download only. It does not restart the logger.
 - **Enable reverse logistics for shipment loggers after <time>.** Select a time to activate this feature. When you select a time from the dropdown, you turn this feature on and tell the gateway to forget all logger serial numbers that have left the range of the gateway after the selected time. If a logger leaves the range of the gateway but returns before the specified time elapses, the gateway treats it as a previously seen logger and does not perform the download. For example, if the logger is set to purge serial numbers after 4 hours and leaves the range of the gateway but returns 3.5 hours later, the gateway does nothing with that logger because it returned before the gateway could purge that serial number from its memory. This allows you to monitor a shipment that goes from point A to point B and back to point B again, or to monitor a shipment in which point A is the origin and the destination.

Note: Use this option only with gateways that you use exclusively for shipment or logistics; do not use it for gateways you use for product storage monitoring.

7. Choose how frequently the gateway connects to and downloads a CX logger (as applicable): every 12 hours (CX500, CX600, and CX700 loggers only), day, week, or month.
8. Repeat steps 4 through 7 for the other logger family if desired.
9. Click Save. The new profile is added to the list of profiles. Use the arrows in the top row to sort the list by ascending or descending order. Click a CX logger series to show a summary of the settings for that logger family.

You cannot edit a gateway profile. You can enable/disable or copy them and modify them.

To enable or disable a gateway profile:

1. Click System Setup and then Gateway Profiles.
2. Click Enable/Disable toggle button  for the profile you want to enable or disable.

Disabled profiles are dimmed and appear at the bottom of the profiles list by default.

To copy a gateway profile:

1. Click System Setup and then Gateway Profiles.
2. Click the Copy icon  for the profile you want to copy.
3. Edit the settings in the copy and click Save. The new profile is added to the list below the old profile from which it was copied.

Working with Gateway Groups

If you have more than one gateway using the same profile, you can combine those gateways into a single group. This allows any gateway in that group to configure or download a logger as defined by the shared gateway profile settings. Groups are useful because if one gateway has a poor connection to a logger, another gateway in the group with a better connection can download the logger instead, thereby expanding the coverage area and reducing the risk of multiple gateways incorrectly affecting a logger.

Notes:

- If loggers are in range of more than one gateway, those gateways **should be grouped** to ensure the system works correctly. If there is any risk of the Bluetooth range between devices overlapping within a facility (including gateways in different rooms, areas, or floors), the gateways should be grouped to reduce the risk of issues.
- A gateway must be a member of a group in order to be assigned to a location. A group can be made up of one gateway. In addition, the gateway must be assigned to a location to be part of a shipment.

To create a gateway group:

1. Click Gateways and then Groups.
2. Click Add Group.
3. Select a gateway profile. **Note:** See Managing Profiles earlier in this chapter to set up a gateway profile. Only administrators and users with required privileges can manage profiles.
4. Select a location (if applicable). See Managing Locations in this chapter to set up locations.
5. Under Description, type a name for the group.
6. Select the gateways you want to assign to this group from the Available Gateways list. **Note:** Only the gateways that have been configured with the profile selected in step 3 are shown in the Available Gateways list. See Working with Gateways in the InTemp App in the next chapter if you need to reconfigure a gateway to use a different profile.

7. Click the right arrow  to move the selected gateways to the Assigned Gateways list for the group. Click the add all right arrow  to move all gateways to the Assigned Gateways list for the group.
8. Click Save.

To edit a gateway group:

1. Click Gateways and then Groups.
2. Click the group name.
3. Make any changes to the location or description as needed.
4. Use the arrow buttons to add or remove gateways from the Assigned Gateways list.
5. Click Save.

To copy a gateway group:

1. Click Gateways and then Groups.
2. Click the group name and then click the Copy icon .
3. Make any changes to the location, description, and the assigned gateways as needed.
4. Click Save.

To delete a gateway group:

1. Click Gateways and then Groups.
2. Click the group name and then click the Delete icon . Confirm that you want to delete the group.

Notes about gateway groups:

- Only gateways with the same profile can be grouped together. For example, three gateways on one floor of an office are configured with "Profile A" so all three can be in the same group. However, if two gateways use "Profile A" and the third gateway uses "Profile B," then only the two gateways using "Profile A" can be assigned to the same group. The third "Profile B" gateway cannot join the group unless it is reconfigured to also use "Profile A" (see Working with Gateways in the App for details on configuring a gateway).
- If two groups are within range of a single logger, then issues can occur. Best practice is to use a single group in logging areas.
- Gateways in a group follow the settings selected in the profile. If you need to change the settings, create a new gateway profile with the settings that you want all the gateways to use. Reconfigure the gateways using the new profile and then set up a gateway group with the new profile.
- Only one gateway in a group can download a logger at a time based on the settings in the profile. Once a logger is downloaded, the other gateways in the group will not download the logger until the next regularly scheduled time or if one of the conditions in the settings are met (for example, a sensor alarm is tripped).
- A gateway can only belong to one group at a time; it cannot be part of multiple groups.
- If you change a gateway's profile and that gateway is in a group, then it will no longer be part of that group.

Setting up Trip Information Fields

Trip information fields are data tags that you can use to label, sort, and organize data as well as create more specific alarm and data notifications. You can set up custom trip information fields that appear in the InTemp app when a logger is configured or are available when setting up shipments or configuring loggers with the gateway. You can then run reports in InTempConnect using the information entered in these fields. **Note:** Only administrators and users with required privileges can manage trip information fields.

Note: Once you add a trip information field, you cannot delete it from InTempConnect. However, you can disable it if you do not want to use it anymore. It is also recommended that only minor edits, such as fixing a typo, should be made to an existing trip information field as any edits affect all loggers associated with the account, including past configurations. Take time to determine exactly the type of fields and information you want to gather from these fields before setting them up.

You can access trip information for a specific logger configuration by clicking the truck icon  in the Configurations table or in the reports list. You can then add or edit the user-entered information if necessary. See Viewing Configurations and Downloads or Building a Logger Report for details. You can also import trip information from a spreadsheet into InTempConnect. See Importing Trip Information for details.

To add a trip information field:

1. Select Trip Information from the System Setup menu.
2. Click Add Trip Info Field.
3. Type the name of the field as you want it to appear. Some field name examples: Shipment Mode, Product, Courier, Packaging Type, Department, Fridge ID, and so on. The names should represent the information you want to be able to track about the shipment being monitored by the logger.
4. Select Enabled if you want the field to appear in the InTemp app when configuring a logger and in InTempConnect when setting up shipments or configuring loggers with the gateway. If you do not want it to appear at this time, deselect Enabled (you can enable it later).
5. Select Required if you want the field to be a required field that the user must complete to configure a logger or shipment (an asterisk appears next to the field to indicate that it is required). Do not select Required if you want the field to appear, but you do not require it to be completed by the user.
6. For the Logger Family, select the logger families for which you want these fields to appear. For example, if you select CX600 and CX700, the fields appear only in the app for CX600 and CX700 loggers and not for the other CX logger families.
7. For Value Type, select the format in which the user enters information into the field.
 - Select Text if you want the user to type any characters into the field. This is recommended when the information being entered is unique or you cannot define a set number of possible entries (for example, a trip ID number that is unique to every shipment). Select the maximum number of characters you want the user to be able to enter in the field.
 - Select Date if you want the user to be able to select a date for the field.
 - Select List if you have a set number of choices you want to make available to the user, such as a list of cities or shipping modes. Click Add Value and type the name as you want it to appear in the list for the user (for example, Atlanta or FedEx). Repeat for as many items as you need to add to the list.

Note: If you are setting up a sensor alarm notification based on trip information, you must select List. Sensor alarm notifications cannot be configured based on trip information fields that use Text or Date.

8. Click Save. The details about the field are added to the Trip Info Fields list. The order in the list is also the order the fields appear in the InTemp app and in InTempConnect. To change the order, drag and drop the rows in the list.

To enable or disable an existing field:

1. Click System Setup and then Trip Information.
2. Click the Enable/Disable toggle button  for the field you want to enable or disable. Enabled fields appear in the InTemp app and in InTempConnect; disabled fields do not. In the Trip Info Fields list, disabled fields are grayed and appear at the bottom of the list by default.

To copy an existing field:

1. Click System Setup and then Trip Information.

2. Click the Copy icon  for the field you want to copy.
3. Edit the field settings as needed.
4. Click Save. The copy is added to the end of the list of enabled fields, which means it is also listed last in the InTemp app and in InTempConnect. Drag and drop the row if you want to change the order.

To edit an existing field:

1. Click System Setup and then Trip Information.
2. Click the Edit icon  for the field you want to change.
3. Edit the field settings as needed.

Important: Any changes you make affect both previous and future logger configurations. Do not edit the fields (other than for insignificant changes like typos) if you want to be able to run reports on older configurations using these fields. Instead, make a copy of the field with the changes you need and then disable the original field.

4. Click Save.

Importing Trip Information

You can import trip information from a Microsoft® Excel® spreadsheet into InTempConnect to automatically complete trip information fields in the Configurations table for multiple logger configurations. This can be helpful when you are working with numerous loggers and the trip information was not entered. If only a few loggers are missing trip information, consider adding trip information one logger at a time as described in Viewing Configurations and Downloads.

Before you can import trip information, you must create an .xlsx spreadsheet that is structured in a specific way.

- For the column A header, type Serial Number.
- For the column B header, type Configuration Date.
- For any additional column headers, enter the enabled trip information field names in the order they are listed in InTempConnect. Go to System Setup > Trip Information to view the Field Names. Each column heading must match the field name exactly.
- For each row in the spreadsheet, enter:
 - The logger serial number.
 - The logger start date in this format: DD-MON-YYYY (e.g., 06-JUN-2022 or 11-NOV-2021).
 - The values you want to display under each field name. These values can be any format (text, numerals, etc.), but dates must be listed as: dd-MMM-yyyy hh:mm:ss (e.g. 05-MAY-2022 12:15:32).

This is an example spreadsheet formatted for importing trip information fields. Note that the column headers C–F (numbered in the example) match the Field Names in InTempConnect (also numbered). The values entered in those columns are imported into the corresponding logger configuration in InTempConnect.

	A	B	C	D	E	F
1	Serial Number	Configuration Date	1 Origin	2 Shipment Mode	3 Destination	4 Expiration Date
2	10943309	06-JUN-2017	Atlanta	FEDEX	Boston	15-AUG-2019
3	10943310	06-JUN-2017	Atlanta	FEDEX	London	15-AUG-2019
4	10943311	06-JUN-2017	Atlanta	FEDEX	Paris	15-AUG-2019

Trip Info Fields				
Enabled	Field Name	Required	Logger Family	Value Type
Yes	1 Origin	Yes	All	Text (25 maximum characters)
Yes	2 Shipment Mode	No	All	Text (25 maximum characters)
Yes	3 Destination	Yes	All	Text (25 maximum characters)
Yes	4 Expiration Date	Yes	All	Date

To import the spreadsheet:

1. Click Data & Reporting and then Logger Data.
2. Click Import Trip Info at the bottom of the search fields.
3. Select the time zone to use for the import data.
4. Select the logger configuration start date search tolerance in $\pm$ number of days, up to 7. Use this setting when the actual logger start date may vary up to 7 days before or after the date you entered in the spreadsheet. For example, if you entered a start date of 06-JUN-2022 in the spreadsheet, but the logger could have been started anywhere from June 2 to June 9, then enter a search tolerance of $\pm$ 3 days.
5. There may be multiple configurations associated with the serial number entered in the spreadsheet because the logger was started and stopped and then reconfigured (CX400, CX450, CX503, CX603, and CX703 loggers only). Select how you want the import to handle it when multiple configurations are found for a single row:
 - **Treat as an error.** Select this if you want multiple configurations to be flagged as an error that you correct individually.
 - **Apply trip info to most recent logger configuration.** Select this if you want the information entered in the row to be added to the trip information fields associated with the most recent configuration of that logger only. Any other configurations associated with that logger serial number does not change.
 - **Apply trip info to all logger configurations.** Select this if you want the information entered in the row to be added to the trip information fields for any configuration associated with that logger serial number.
6. Click Select File and select the spreadsheet you want to use for the import.
7. Click Start Import. The trip information fields for each logger configuration are updated with the information from the spreadsheet. Click  in the Configurations table to view imported trip information. You may need to correct some fields in InTempConnect if multiple configurations were found for a single logger and you selected the option "Treat as an error."

Configuring Loggers with a Gateway

You can use a gateway to remotely configure loggers within range instead of using the InTemp app. **Note:** You must have the required privileges to configure loggers with a gateway. See Adding Roles and Assigning Privileges later in this chapter.

To create a logger configuration via a gateway:

1. Click Logger Controls and then click Configure Logger.
2. Click Create Logger Configuration.
3. Type the serial number for the logger and then click Find Logger. The logger type is listed so that you can verify it is the correct logger. **Note:** The selected logger cannot already be part of a scheduled configuration or shipment.
4. Enter a new configuration name or use the default.
5. Select a logger profile. The details for the selected profile are listed. **Note:** See Managing Profiles earlier in this chapter if you need to set up a logger profile. Only administrators and users with required privileges can manage profiles.
6. If trip information fields have been set up, enter the text, select a date, or choose an entry from the list as appropriate for each field you want to use for this logger configuration. Note that trip information fields with an asterisk are required fields that must be used for this configuration. See Setting up Trip Information Fields for details on adding or editing fields.
7. Click Save if you want to save the logger configuration, but are not ready to release it (i.e., not ready for the gateway to configure the logger). Click Save and Release if you are ready for the gateway to configure the logger.

To import logger configurations:

1. Click Logger Controls and then Configure Logger.
2. Click Import Logger Configurations.
3. Click  to create a file using the template.
4. Fill in all the fields for each logger that you want to be configured by the gateway. The template includes columns for any trip information fields you have created. **Note:** The selected logger cannot already be part of a scheduled configuration or shipment.
5. Save the file.
6. Click Choose to select the file. Click  if you need to remove that file and select another.
7. Click Upload.
8. Select the "Release on import" checkbox if you want the gateway to configure the loggers in the file as soon as the import is complete.
9. Click Start Import. If you did not select the "Release on import" checkbox, the loggers are added to the list with a status of Planned.

To edit a planned logger configuration:

1. Click Logger Controls and then Configure Logger.
2. Click the Edit icon  for the logger configuration you want to modify.
3. Make any changes as needed. Click Save or click Save and Release if you are ready for the gateway to configure the logger.

To release planned logger configurations:

1. Click Logger Controls and then Configure Logger.
2. To release one logger at a time, click the Release icon  at the end of the row in the Logger Configurations table for the logger you want the gateway to configure.

To release multiple loggers at a time, select the check box next to each logger in the Logger Configurations table (or select the checkbox next to the Serial Number column heading to select all the loggers). Click



above the table for the gateway to configure all the selected loggers.

Note: The gateway must be in range of all released loggers to configure them.

To delete a planned logger configuration:

1. Click Logger Controls and then Configure Logger.
2. Click the Delete icon  for the logger configuration you want to delete and confirm that you want to delete it.

To search for a logger configuration:

1. Click Logger Controls and then Configure Logger.
2. Under Search Criteria, select one or more entries from the Status list or enter a partial or complete logger serial number and/or configuration name.
3. Click Search. The Logger Configurations table is updated to show only those configurations that meet the search criteria. To return to the original table, click Clear to clear the search criteria fields and then click Search again.

Note: Configurations with a status of Configured, Canceled, or Error are available only in the Logger Configurations table for seven days past the Last Updated Date.

Notes about logger configurations:

- You can only cancel (not delete) a released logger configuration, but if the gateway had already connected to the logger, it may be too late to cancel the configuration.
- Once a gateway configures a logger, the status changes from Released to Configured. A new logger configuration is then added to the Configurations table (click Data & Reporting and then Logger Data to access the table).
- For any status other than Planned or Released, the configuration is deleted from the Logger Data table seven days past the Last Updated Date listed.
- Once a gateway configures a logger, the gateway downloads the logger data according to the settings in the gateway profile. See Managing Profiles earlier in this chapter for details on gateway profiles.
- If the logger has already been configured by the InTemp app, the gateway does not reconfigure it when it connects to it.

Downloading Loggers with a Gateway

You can use a gateway to download in-range loggers on demand instead of waiting for the regular download schedule defined by the gateway profile or going onsite to download them manually with the mobile app. **Note:** You must have the required privileges to download loggers with a gateway. See Adding Roles and Assigning Privileges later in this chapter. You cannot download loggers on demand with a gateway if they are already part of a shipment. The gateway must have connected to the logger at least once in order for it to show up in the list. This typically occurs automatically as soon as the logger is configured and in range of the gateway.

To download loggers with a gateway:

1. Click Logger Controls and then Download Loggers.
2. Select the gateway you want to use to download loggers. This displays loggers within range of that gateway.
3. Select the loggers you want the gateway to download. Use the arrows next to a column heading to change the sort order of the column to help you locate the loggers you want to include.

4. Choose a download option for all loggers you have selected:
 - **Download & Continue.** The logger continues logging once the download is complete.
 - **Download & Restart (CX400, CX450 CX503, CX603, and CX703 models only).** The logger starts a new configuration using the same profile once the download is complete. Note that if the logger profile is set up to start with a button push, you must push the button on the logger for logging to restart.
 - **Download & Stop.** The logger stops logging once the download is complete.
5. Click Download. The status of the download is displayed under Download Requests, where you can also cancel the download if necessary. The download occurs the next time the gateway sends a signal to InTempConnect (every 10 minutes). Once the download is complete, the Configurations table is updated with the latest logger configuration information (see Viewing Configurations and Downloads). Any applicable notifications are sent once the download is complete (see Setting up Notifications).

Managing Locations

If you are using a gateway, you can add locations in InTempConnect that can be used when setting up groups and selecting shipment origins and destinations. Locations are optional for gateway groups, but required for creating shipments. **Note:** You must have the required privileges to work with gateways. See Adding Roles and Assigning Privileges later in this chapter.

To add a location:

1. Click System Setup and then Locations.
2. Click Add Location.
3. Type a location (for example the name of a hospital) or address.
4. Type an area or room if applicable, such as shipping dock or a room number.
5. Click Confirm Location. Check the map populated by Google Maps™ to make sure the Confirmed Address that displays is the correct address. If not, make edits to the location or address and click Confirm Location again. **Note:** If you do not confirm a location before saving, a formatted address and latitude/longitude for the location is not saved.
6. Click Save.

The location is added to the table at the bottom of the page. If you confirmed the location prior to saving, the formatted address and latitude/longitude is listed for the location as well as the default label (what you entered in the Location field in step 3) and any area/room information entered. You can select this location when you set up groups and shipments.

Use the arrows next to a column heading in the Locations table to change the sort order of the column. Use the page numbers or left and right arrow buttons to view all pages of the Locations table. Change the default number of entries with the drop-down arrow.

To search for a location:

1. Click System Setup and then Locations.
2. Under Search Criteria, enter the location label or formatted address you want to find and/or select the enabled or disabled status.
3. Click Search. The Locations table is updated to show only those locations that meet the search criteria. To return to the original table, click Clear to clear the search criteria fields and then click Search again.

To edit a location:

1. Click System Setup and then Locations.
2. Click the Edit icon  for the location you want to modify.
3. Make any changes to the location as needed.
4. Click Save.

To enable or disable a location:

1. Click System Setup and then Locations.
2. Click the Enable/Disable toggle button  for the location you want to enable or disable.
3. Disabled locations are dimmed and appear at the bottom of the list by default. "No" is listed in the Enabled column for a disabled location, which means it is not available as an option when setting up groups or for origins or destinations in shipments.

To delete a location:

1. Click Gateways and then Locations.
2. Click the Delete icon  for the location you want to delete. The location is removed from the table.
Note: You cannot delete a location that is associated with an existing gateway group or shipment.

Managing Shipments

You can combine multiple loggers into a single shipment so that the specified gateways can configure and download the selected loggers within range automatically when the shipment is released. You must set up locations, any trip information fields you want to use, and gateway groups before setting up shipments. **Notes:** You must have the required privileges to manage shipments. See Adding Roles and Assigning Privileges later in this chapter.

To create a shipment with a gateway:

1. Select Shipments from the Logger Controls menu.
2. Click Create Shipment.
3. In the Logger Families area of the page, select the checkbox in the Enabled column for the logger family you want to include in the shipment.
4. From the Logger Profile Name dropdown, select a profile from the list. See Managing Profiles at the beginning of this chapter if you need to set up a logger profile. If you select the CX400 family, select the display units to use.
5. By default, the Apply to All Loggers checkbox is selected for each logger family. Deselect the checkbox if you want to select a different profile for each logger within a family.
6. In the Shipment Details area of the page, enter a shipment ID.
7. Select an origin for the shipment. **Note:** You must have set up locations for them to appear on the dropdown. See Managing Locations earlier in this chapter.
8. Select a destination for the shipment. **Note:** You must have set up locations for them to appear on the dropdown. See Managing Locations earlier in this chapter.
9. Enter a Logger Label to use for all loggers in the shipment; the Apply to All Loggers checkbox is required and selected automatically. If you do not enter a name, the Shipment ID is used as the default name. To select a different name for each logger in the shipment, deselect the Apply to All Loggers checkbox.
10. If trip information fields have been set up, enter the text, select a date, or choose an entry from the list as required for each field you want to use for the shipment. Note that trip information fields with an asterisk

are fields that you must complete for the shipment. See Setting up Trip Information Fields for details on adding or editing fields. By default, the Apply to All Loggers checkbox is selected for each logger trip information field. Deselect the checkbox if you want to enter different trip information details for each logger in the shipment.

11. **For all loggers except the CX1000:** Click Add Logger to add a logger to the shipment and enter the serial number of that logger.

For the CX1000 logger: In the Registered Loggers section of the page, type a logger ID to search for that logger in the list. Click and drag a logger ID to the Shipment Loggers section of the page to add the logger to the shipment.

12. Enter and any fields that you chose to edit for individual loggers (anything where the Apply to All Loggers checkbox was *not* selected). **Note:** The selected logger cannot already be part of a scheduled configuration or shipment.

13. Repeat steps 11 and 12 for all other loggers you want to include in this shipment.

14. **For all loggers except the CX1000:** Click Save if you want to save the shipment but are not ready to release it. The shipment is added to the Shipments table with a status of Planned. Click the Release icon  when you are ready to release the shipment to the specified gateways.

Click Save and Release if you are ready to release the shipment. Make sure a gateway is in range of the loggers. The shipment is added to the Shipments table with a status of Released.

For the CX1000 logger: Click Save & Configure.

To create a shipment with the InTemp app:

1. In the InTemp app, tap the Devices icon.
2. Tap Bulk Configure in the upper right corner.
3. Select the loggers you want to include in the shipment.
4. Tap Configure (X) Loggers at the bottom left corner, where (X) is the number of loggers you have selected.
5. Tap Create Shipment to enable it.
6. Enter a Shipment ID.
7. Select an Origin for the shipment.
8. Select a Destination for the shipment.
9. Select a Name to use for each logger: Current Logger Name (which is the name used when the logger was last configured), the Serial Number, or Enter Manually and type a new name. The name you enter is used for all loggers.
10. Swipe left or right to select one of the preset logger profiles. The profile you select is used for all loggers.
Note: If the logger is already part of a shipment, you cannot change the profile already selected for it.
11. If the profile included a start time option of "On date/time," select the date and time you want the loggers to begin logging.
12. If trip information fields are set up for this account, complete the fields with the necessary details. The same information is used for all loggers.
13. Tap Start. All the selected loggers will be configured, and the shipment details will be uploaded to InTempConnect (select Logger Controls then Shipments in InTempConnect to view details).

To import a shipment using InTemp Connect:

1. Click Logger Controls and then click Shipments.
2. Click Import Shipments.

3. Click  to create a file using the template.
4. Complete all the fields for each logger that will be included in the shipment. Note that the template includes columns for any trip information fields you have created.
5. Save the file.
6. Click Choose to select the file. Click  if you need to remove that file and select another.
7. Click Upload.
8. Select the "Release on import" checkbox if you want to release the shipment as soon as the import is complete.
9. Click Start Import. If you did not select the "Release on import" checkbox, the shipment is added to the list with a status of Planned. Verify that there are no errors with the shipment and click the Release icon  when you are ready to release the shipment.

To edit a planned shipment:

1. Click Logger Controls and then Shipments.
2. Click the Edit icon  for the shipment you want to modify.
3. Make any changes as needed. To delete a logger from the shipment, click the Delete icon  in the row for that logger.
4. Click Save or click Save and Release if you are ready to release the shipment.

To release a planned shipment:

1. Click Logger Controls and then Shipments.
2. Click the Release icon  for the shipment you want to release. Make sure a gateway is in range of the loggers.

To delete a planned shipment:

1. Click Logger Controls and then Shipments.
2. Click the Delete icon  for the shipment you want to delete and confirm that you want to delete it.

To search for a shipment:

1. Click Logger Controls and then Shipments.
2. Under Search Criteria, enter search text in the following fields:
 - For Shipment ID, enter one or more characters.
 - For Origin and Destination, select the location for the list.
 - For Shipment Status, select the one or more entries from the list.
 - For Dates, select either when the shipment was created or last updated and a date range.
 - For Logger Serial Number, type partial or complete serial numbers.
 - For Logger Label, type part or all of the logger name.
3. Click Search. The Shipments table is updated to show only those shipments that meet the search criteria. To return to the original table, click Clear to clear the search criteria fields and then click Search again.

Notes about shipments

- You can cancel a released shipment, but any loggers that the gateway connected to before canceling the shipment may already be configured or downloaded.
- Click the arrow to the left of a Shipment ID in the Shipments table to show all the loggers within the shipment and their status.
- Once a gateway configures a logger in a shipment, the status for the logger changes from Released to Configured. If not all loggers in a shipment have been configured, the shipment status is listed as Partially Configured. If all loggers in a shipment have been configured, the shipment status is listed as Configuration Complete.
- Only gateways in a group with a location that matches the origin of the shipment can configure the logger using the settings in the selected profile.
- Once a gateway downloads a logger in a shipment, the status for the logger changes from Configured to Delivered. If not all loggers in a shipment have been downloaded, the shipment status is listed as Partially Delivered. If all loggers in a shipment have been downloaded, the shipment status is listed as Delivery Complete.
- Gateways in a group with a location that matches the destination of the shipment will download and stop the logger and report a status of delivered. If a gateway connects to a logger and is not part of the correct group with a matching destination, the logger is downloaded and continues logging, even if the gateway has been configured to "Download and Stop" or "Download and Restart" loggers of that family.
- Shipments are saved indefinitely in the Shipments table. Shipments can be deleted only if they are planned and not yet released.
- Use the arrows next to a column heading in the Shipments table to change the sort order of the column. Use the page numbers or left and right arrow buttons to view all pages of the Shipments table. Change the default number of entries with the drop-down arrow.
- Columns for shipments are included in the Configurations table (select Configure Logger from the Logger Controls menu to see the table).

Setting up Notifications

You can set up InTempConnect to send notifications for logger sensor (temperature excursion) and low battery alarms, missing gateway alarms, and data notifications. For sensor alarms and missing gateway alarms, you can receive an email or text when an alarm trips on one of the loggers associated with the account or with a missing gateway. For data notifications, you can receive an email or text when a logger is downloaded. You can also include the PDF report from the logger download with the email notification. In addition, if you need to set up numerous notifications, you can import a spreadsheet to quickly add several new notifications at once. **Note:** Only administrators and users with required privileges can manage notifications.

To select notification preferences:

1. Select Notifications from the System Setup menu.
2. Select the Unit System you want to use for the notification (this affects notifications only; it does not affect the overall account units set under Settings > Profile).
3. Select the time zone that to be used for the notification (this affects notifications only; it does not affect the overall account time set under Settings > Profile).
4. Select the amount of time to elapse before sending a missing gateway alarm (e.g., select 20 minutes if you want a notification to be sent after 20 minutes of gateway inactivity).
5. Click Save Preferences.

To set up a sensor alarm (including low battery) notification:

1. Select Notifications from the System Setup menu. Click Alarms.
2. Under Sensor Alarms, click Add.
3. Select which alarms you want notifications for: Temperature, Humidity (if applicable), Low Battery, Light, or Shock. Note: Light and Shock are available only for the CX1000 logger.
4. For Apply to:
 - Select All to receive alarm notifications for all loggers associated with the account.
 - Select Configuration and then a logger profile to receive alarm notifications for loggers using a specific profile.
 - Select Trip Info to receive alarm notifications for loggers with specific trip information. Select the Trip Info field name from the dropdown and the value under Trip Info Values. **Note:** This option is available only for trip information fields in which the user is selecting from a list of choices (the Value Type is set to List). This option is not available for trip information fields in which the user enters text or selects a date.
 - Select Configured By to receive alarm notifications for all loggers configured by the user. The person who configured the logger automatically receives all alarm notifications at the address used during configuration.
 - Select Downloaded By to receive alarm notifications for all loggers downloaded by the user. The person who downloaded the logger automatically receives all alarm notifications at the address used during the download.
5. For Type (if you selected All, Configuration, or Trip Info):
 - Select Email and type the email address(es) that should receive the notification (separate multiple addresses with commas).
 - Select Text Message. Select the country code and type the mobile phone number that should receive the notification by text.
6. Click Save.

Notes:

- For temperature and humidity alarms, the logged values are checked against the thresholds set in the profile for the logger as data is uploaded to InTempConnect. A notification is sent if a value is outside of the high or low alarm limits and includes the temperature reading that tripped the alarm, the date and time of the tripped reading, the logger name, the profile being used, and any trip information.
- For low battery alarms, a notification is sent when logger battery power drops to 15 percent or one bar on the logger LCD.
- Once an alarm notification is set up, it is sent for all loggers associated with that account. Alarm notifications cannot be selected on a per-logger basis.
- Alarm conditions are defined by the profile selected for the logger. See Managing Profiles earlier in this chapter for details on setting alarm thresholds.

To set up a missing gateway alarm:

Note: For new gateways, a missing gateway notification is automatically sent via email if the gateway has not connected to InTempConnect with a default time of 60 minutes or the time selected in notification preferences.

1. Click System Setup and then Notifications. Click Alarms.
2. Under Missing Gateway Alarms, click Add to set up a new missing gateway alarm.
3. Select the gateway.
4. For Type:

- Select Email and type the email address(es) you want to receive the notification (separate multiple addresses with commas).
- Select Text Message. Select the country code and type the mobile phone number that you want to receive the notification by text.

5. Click Save.

A notification is sent when a gateway is missing (i.e., no signal is sent from the gateway to InTempConnect) for more than the period selected in the notification preferences.

To set up a data notification:

1. Click System Setup and then Notifications. Click Data.
2. Under Data, click Add.
3. For Apply To:
 - Select All to receive a notification every time a logger associated with the account is downloaded.
 - Select Configuration and select a logger profile to receive a notification when a logger with a specific profile is downloaded.
 - Select Trip Info to receive a notification when a logger with specific trip information is downloaded. Select the Trip Info field name under Trip Info and the selection for that field under Trip Info Values.
Note: This option is only available for trip information fields in which the user is selecting from a list of choices (the Value Type was set to List). This option is not available for trip information fields in which the user enters text or selects a date.
 - Select Configured By to receive a notification when a logger configured by a specific user is downloaded. The person who configured the logger automatically receives an email at the address used during configuration every time the logger is downloaded.
 - Select Downloaded By to receive a notification when a logger is downloaded by a specific user. The person who downloaded the logger automatically receives an email at his or her address.
4. For Type (if you selected All, Configuration, or Trip Info):
 - Select Email and type the email address(es) you want to receive the notification (separate multiple addresses with commas).
 - Select Text Message. Select the country code and type the mobile phone number you want to receive the notification by text.
5. Select Attach CSV (VFC) to automatically include the CSV report from the downloaded logger with the email notification (not available for text messages). Note that CSV (VFC) reports are generated only if the "Enable VFC CSV Report" setting is turned on in the InTemp App. See Changing App Settings in Chapter 3 for details.
6. Select Attach PDF to automatically include the PDF report from the downloaded logger with the email notification (not available for text messages). Only PDFs can be attached; use the Reports feature in the InTemp app or InTempConnect to view data in Excel spreadsheets.
7. Select On Stop Only to receive a notification only if Download & Stop is selected when downloading the logger. When this option is enabled, a notification is not sent if Download & Continue or Download & Restart is selected when downloading the logger.
8. Click Save.

Notes:

- Location information (latitude/longitude) is included in applicable events if the Include Location feature is enabled in the InTempConnect profile used to start the logger.
- Once a data notification is set up for an account, it is sent for all loggers associated with that account. Data notifications cannot be selected on a per-logger basis.

To view notifications:

1. Click System Setup and then Notifications.
2. Click Alarms or Data to view the notification table you want to view.

Notes:

- Use the arrows next to a column heading to change the sort order of the column.
- Use the search fields under the column headings to refine the list to show only the notifications that match the characters typed in the field.
- Use the page numbers or left and right arrow buttons to view all pages of the table. Change the default number of entries included in the table with the drop-down arrow.

To edit a notification:

1. Click System Setup and then Notifications.
2. Click Alarms or Data to view the notification you want to edit.
3. Click the Edit icon  next to the notification you wish to edit.
4. Make changes to the notification and click Save.

To import multiple notifications:

1. Click System Setup and then Notifications.
2. Click Alarms or Data depending on the type of notifications you want to import.
3. Click Import under Sensor Alarms, Missing Gateway Alarms, or Data. **Note:** You can import only one type of notification at a time.
4. Click  to create a file using the template.
5. Fill in all the fields for each notification you want to add.
6. Save the file.
7. Click Choose to select the file. Click  if you need to remove that file and select another.
8. Click Upload.
9. Click Start Import. The notifications in the file will be added to the corresponding notifications table.

To stop a notification:

1. Click System Setup and then Notifications.
2. Click Alarms or Data to view the notification you want to delete.
3. Click the Delete icon  next to the notification you want to stop. To stop sending all notifications, click the Delete icon  next to all notifications.

Viewing Configurations and Downloads

You can view all logger and gateway configurations associated with the account.

Logger Data

Click Data & Reporting and then Logger Data to view the Configurations table. By default, a new configuration appears when a logger is configured in the app or by a gateway. CX502, CX602, and CX702 loggers have a single configuration per logger serial number. CX400 series, CX450, CX503, CX603, and CX703 loggers can be configured multiple times; a new configuration is added to the list each time the logger is configured. For details on searching, see Searching Logger Data later in this chapter. **Note:** Only users with required privileges can view logger configurations.

The Configurations table includes the following information:

- **Trip Info.** Click  to view the trip information that was entered for the configuration. Click Edit if you need to change the information. Click Add to enter information and then click Save. You can also import trip information from a spreadsheet if you need to complete fields for numerous configurations. See Importing Trip Information for details. See also Setting up Trip Information Fields if you need to set up new fields.
- **Logger Label.** This is the name that was entered for the configuration. Click a name in this column to see more detailed configuration information as described in Viewing Details about Logger Configurations later in this chapter.
- **User Name.** This is the email address for the user who configured the logger.
- **Type.** This is the logger model number.
- **Serial Number.** This is the serial number for the logger.
- **Config Date.** This is the date and time the logger was configured.
- **Stop Date.** This is the date and time of the last data point because the logger stopped logging or segmentation was set up (see Viewing Details about Logger Configurations in this chapter for details on segmentation).
- **Start Date.** This is the date and time of the first data point because the logger started logging or segmentation was set up (see Viewing Details about Logger Configurations for details on segmentation).
- **Last Download Date.** This is the date and time the logger was last downloaded (if applicable).
- **High Alarm/Low Alarm.** These columns show an alarm icon if a high or low alarm tripped for the logger.
- **Trip Info List.** This is the trip information that was entered for the configuration. If you need to change the information entered, click  under the Trip Info column.
- **Probe Alarm.** This column shows an alarm icon if a probe alarm tripped for a CX402 logger.
- **Shipment ID/Shipment Origin/Shipment Destination.** These are the details related to a logger that was part of a shipment.
- **Low Battery.** This column shows an alarm icon if an alarm tripped on a logger for a low battery.
- **Shipment Status.** This column displays the status of the shipment. The following are the statuses and their meanings:
 - Planned – Loggers have been setup but not configured.
 - Configuration Complete – Loggers have been configured.
 - Delivery Complete – All loggers have stopped and the shipment has ended.
 - Canceled – The logger has been stopped.
 - Error – There is an error on a logger.

You can customize the rows in this table by searching for specific configurations (see Searching Logger Configurations in this chapter). You can then save the search to use when building a report (see Building a Logger Report in this chapter).

Use the arrows next to a column heading to change the sort order of the column. Drag and drop a column heading to reorder the columns. Click Columns in the upper right corner of the table to enable or disable columns.

Use the page numbers or left and right arrow buttons to view all pages of the table. Change the default number of entries with the drop-down arrow.

Click Export Configurations to save the entries currently shown in the table to an Excel spreadsheet. The columns in the spreadsheet are listed in the same order as the columns in the Configurations table. A trip information column is also included in the spreadsheet if trip information fields have been created for the logger configurations.

For details on importing configurations, see Configuring Loggers with a Gateway earlier in this chapter. See Importing Trip Information and Building a Logger Report in this chapter for details on the other functions available from the Logger Configurations page.

To archive a configuration:

1. Click Archive on the top left of the table.
2. Click the checkbox(es) in the leftmost column next to the configuration(s) you want to archive.
3. Click Archive.
4. Click Yes. The configuration(s) are no longer visible in the Configurations table and are not available for reports.

To view archived configurations, click Show Archive on the top right of the Configurations table. Click the checkbox next to any configurations you want to remove from the archived list and then click Restore. The configuration is visible again in the Configurations table and is available for reports.

Gateway Configurations

Click Gateways and Gateway Configurations to view the Gateway Configurations table. After a gateway is started with the app, a signal is sent every 10 minutes to InTempConnect to indicate the gateway is active. The gateway then is added to the table. Gateways that are sending a signal at least once an hour are active. Gateways that have not sent a signal in an hour or more are listed as missing and are shaded red. Missing gateways always remain in the Gateway Configurations table.

The Gateway Configurations table includes the following information:

- The name of the configuration as entered in the app. If no name is listed, the gateway serial number will be used.
- The serial number of the gateway.
- The status of the gateway, which can be one of the following:
 - **Gateway OK.** The gateway is functioning without error.
 - **Missing.** The gateway has not sent a signal to InTempConnect within the last hour.
 - **Gateway stopped.** A user has manually stopped the gateway from the InTemp app. All gateway operations are paused.
 - **Invalid gateway date, check network connection.** The gateway clock time is invalid, i.e., the gateway cannot set the clock time because there is no internet connection.
 - **Logger error, relaunch logger(s) with InTemp App.** The logger internal file is corrupt, and data cannot be retrieved by the gateway. The logger must be relaunched with the InTemp app.
 - **Unable to update data to cloud.** Logger data cannot be uploaded to InTempConnect from the gateway.

- The date and time of the last successful upload of logger data via the gateway.
- The date and time of the last contact between the gateway and InTempConnect, whether a signal or data upload.
- The name of the profile selected in the app for the gateway (to create or modify a gateway profile, see Managing Profiles).
- Firmware update details (if applicable). If a firmware update is available and not yet applied to the gateway, a Schedule Firmware Updates button will appear. Click this button to schedule a firmware update for the gateway.

Use the arrows next to a column heading to change the sort order of the column. Use the search fields under the column headings to refine the list to show only the gateways that match the characters typed in the field. Use the page numbers or left and right arrow buttons to view all pages of the table. Change the default number of entries with the drop-down arrow.

To archive an entry in the table, click the Archive button at the end of the row. The row is removed from the table. To see archived configurations, Enable the Show Archived checkbox in the top left corner. Rows with archived configurations are gray. To restore an archived gateway, reconfigure the gateway via InTempConnect (see steps below) or the InTemp app. The gateway automatically restores itself upon the next connection to InTempConnect.

To view any data uploaded from loggers via a gateway and run a report, see Viewing Details about Logger Configurations or Building a Logger Report later in this chapter.

To reconfigure a gateway:

1. Click Gateways and then click Gateway Configurations. Click the Show Archived checkbox if you want to reconfigure an archived gateway.
2. Click the Edit icon  for the gateway you want to reconfigure.
3. Select the profile you want to use to reconfigure the gateway. **Note:** If you need to create a different profile, see Managing Profiles earlier in this chapter.
4. Click Save. The gateway begins using the new profile at the next signal transmission (the gateway sends a signal to InTempConnect every 10 minutes to make sure it is still active). The gateway then connects to and downloads loggers according to the settings in the new profile. **Note:** If you change a gateway's profile and that gateway is in a group, it is no longer part of that group.

Using the Dashboard

To open the Dashboard, select Dashboards from the Data & Reporting menu.

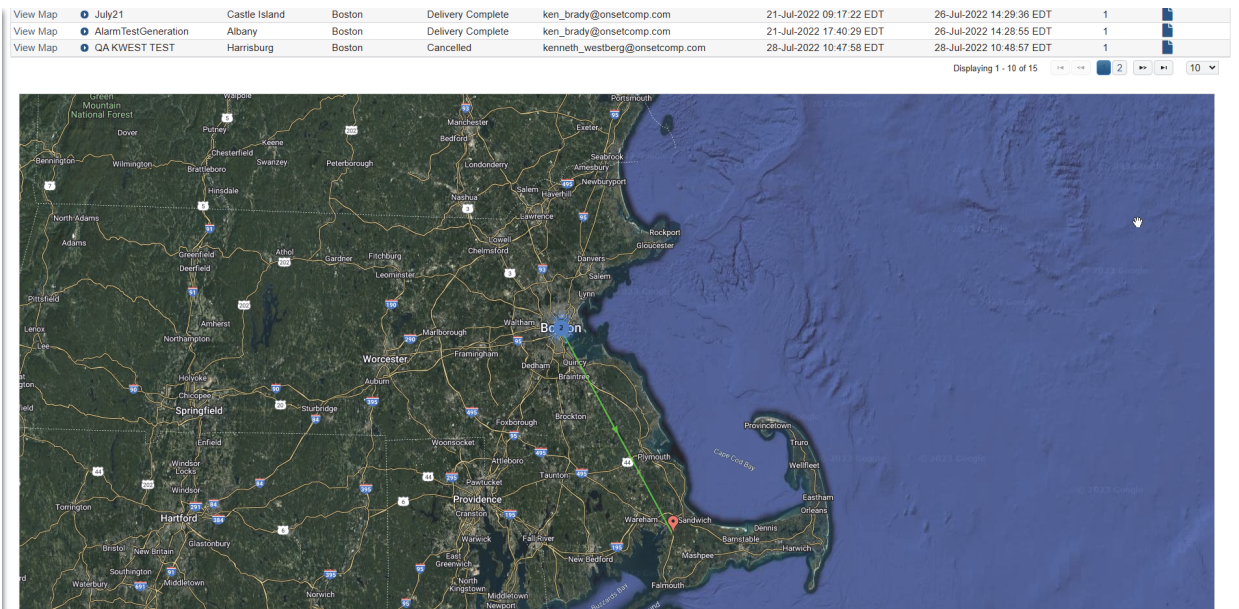
Note: The Dashboard is available only for the CX1000 logger at this time.

The Dashboard allows you to search for shipments using a collection of search fields. When you click Search, it filters all shipments by the specified criteria and displays the resulting list at the bottom of the page. With the resulting data, you can see:

- Near-real-time logger location, alarms, and temperature data.
- When you expand the logger table, you can see: how many logger alarms have occurred, including low battery, low temperature, high temperature, shock alarms, and light alarms. If a sensor has been triggered, it is highlighted in red.
- The logger's last upload date and current temperature is displayed as well.

View Map	CX1000-CloudTest	Boston	Castle Island	Configuration Complete	ken_brady@onsetcomp.com	19-Jul-2022 17:01:30 EDT	19-Jul-2022 17:01:30 EDT	1	  
Loggers									
Serial Number	Type	Logger Label	Logger Profile Name	Status	Last Upload Date	Current Temp			
KB0175	CX1003	CX1000-CloudTest	CX1000_ProfileTest	 0  0  0  0  0					
View Map	July26-ProfileTest	Boston	Onset Computer	Delivery Complete	ken_brady@onsetcomp.com	26-Jul-2022 08:50:51 EDT	26-Jul-2022 12:36:48 EDT	1	
View Map	ShipmentNotification_Check	Boston	Columbus	Delivery Complete	ken_brady@onsetcomp.com	27-Jul-2022 16:51:49 EDT	27-Jul-2022 17:39:27 EDT	2	
Loggers									
Serial Number	Type	Logger Label	Logger Profile Name	Status	Last Upload Date	Current Temp			
KB0075	CX1003	ShipmentNotification_Check	CX1000 - IntS-Ping30	 0  0  0  0  0					
KB0127	CX1003	ShipmentNotification_Check	CX1000-CloudAlarms80to70	 0  0  0  0  4	27-Jul-2022 17:31:03 EDT	84.49°F			

The Dashboard also allows you to view the shipment on a map. Click View Map at the beginning of the row to open the map.



The data is displayed in real time. Click on any of the upload points to see the data for that specific point. The points are color-coded as follows:

- Green shows the for origin of the shipment
- Red shows the destination of the shipment.
- Blue shows for past uploads.
- Orange shows the last/current upload.

Searching Logger Configurations

Click Data & Reporting and then Logger Data to see a table with logger configurations associated with your account. You can then use the Search fields to refine the table and save the search to use when building reports.

To search for specific configurations:

1. Make selections in any of the search fields. The table is refined to show only the configurations that meet the search criteria. Make additional changes and click Search to update the table.
2. To save the criteria for future searches or reports, type a search name and click Save Search As. Note that searches are saved with the account and accessible to all users associated with that account.
3. Click Build Report to run a report on the configurations in the refined table. See Building a Logger Report for details on running the report.

You can also do the following:

- To use an existing search, select a saved search listed under Saved Search Name or type the name of the saved search. The table is refined to show only the applicable configurations that meet the criteria in the saved search that you selected.
- To edit an existing search, select a saved search listed under Saved Search Name or type the name of the saved search and click Edit. Make any changes to the search field and then click Save. The table is updated with the latest changes from the search.
- To delete an existing search, select a saved search listed under Saved Search Name or type the name of the saved search. Click the Delete icon in the row for the saved search you want to delete.
- To revert to the default Configurations table before it was filtered to meet the search criteria, click Clear.

- Click Export Configurations to save the table to an Excel spreadsheet. Only the entries that meet the search criteria and are displayed in the table are included in the spreadsheet.

To automatically email data relating to the logger configurations in a saved search, see Scheduling Reports.

Using Search Fields

The following table explains the available search field options that help you refine the Configurations table.

Note: All configurations with segmented data are included in the search. A configuration is not excluded by segmentation. For example, if you segment a configuration to exclude the only high alarm recorded for that configuration and then you search for all configurations with high alarms, that configuration actually **does** appear in the search results, even though you removed it using segmentation. Keep in mind that segmentation is only for reporting purposes.

Search Fields	Description
Basic Search	
Users	Select a user by user name or by role. - Select User and type the email address for the user. Only the configurations created by the user with that email address are listed. - Select Role and then choose the type of role to include in the search, as defined by the roles you are assigned to. Only the configurations created by the users in that role are listed.
Dates	1. Select a logger event. - Configured (when the logger was configured) - Started (when logging started) - Stopped (when logging stopped) - Last Downloaded (when the logger was last downloaded). Only the configurations that include the selected event are listed. 2. Select a date range for the selected event. - Over the past day or 7, 30, or 365 days. - Before a specific date. - Since a specific date. - Between two specific dates. Only the configurations for the selected event and date range are listed. Note: See Building a Logger Report later in this chapter for a detailed description of each data range option.
Logger Search	
Serial Number	Type the serial number (or a partial serial number) for the logger. Only configurations associated with that number are listed.
Logger Label	Type the name entered for the logger. Only loggers with that name are listed.
Device Type	Select the type of devices to show in the table. Select all to show all device types in the table or select a logger family to show only configurations from that family in the table.
Trip Information	From the first dropdown, select a trip information field if available (as created in InTempConnect with associated privileges). Then select the available corresponding trip information comments from the second dropdown as entered in the InTemp app or in InTempConnect.
Alarms	Select configurations with high or low temperature or humidity alarms, probe disconnect (probe disconnect is for CX40x loggers only) alarms, or low battery alarms (CX400 and CX450 loggers only). The list includes only configurations in which a high, low, disconnected probe, or low battery alarm was tripped respectively.
Shipment Search	
Shipment Origin	Select the origin from the dropdown.
Shipment Destination	Select the destination from the dropdown.
Shipment ID	Enter the ID of the shipment.
Shipment Status	Select from among the available options: All, Cancelled, Partially Configured, Configuration Complete, Partially Delivered, Delivery Complete, Error

Adding or Deleting Multiple Search Fields

You can add multiple entries for most search fields. Click  (if available) to add an entry for a search field. For example, if you want to include configurations associated with two different user email addresses, click  after the first email address that you entered:

Users:

Type:	Name:	Action:
User	jsmith@onsetcomp.com	 

To add another field where you can enter a second email address as in this example.

Users:

Type:	Name:	Action:
User	jsmith@onsetcomp.com	
User	tjones@onsetcomp.com	 

Click  to delete an added search field.

Viewing Details about Logger Configurations

Each logger configuration has its own page with details, including statistics, settings, graphs, and more. To view these additional details:

1. Click Data & Reporting and then Logger Data.
2. Scroll through the table or enter search criteria to find a specific configuration.
3. Click the link in the Logger Label column to view the Configuration Info page.

The Configuration Info section includes:

- Logger model type.
- Configured by, listing the name of the user who configured it.
- Logger serial number.
- The passkey automatically assigned to the logger. Only administrators or those with the required privileges can view this information.
- The name or label entered for the logger.
- Trip information. Click Edit to change the information in the trip information fields or click Add to enter information and then click Save. You can also import trip information from a spreadsheet to complete fields for numerous configurations. See Importing Trip Information for details. See also Setting up Trip Information Fields to set up new fields.
- The date and time when the logger was configured, started, stopped, and downloaded. **Note:** The start and stop date and time can change when segmentation is enabled (see more details in the Segmentation section).
- A link to export the device report that was created when the logger was downloaded. This is the same report that is available in the InTemp app (see Working with InTemp App Reports), unless segmentation has been set up and enabled (see more details in the Segmentation section). Click Export and then choose the time zone and file format for the report and whether you want to include alarm information or logged data. You can also create your own custom report to further refine the content of this device report (see Building a Logger Report). Note that when you click Export, you can run a PDF, Excel, or VFC (CSV) report (the VFC option is only available when clicking Export). To return to the detailed configuration page, click Data & Reporting and then Logger Data, find the configuration in the table, and click the link in the Logger Label column.

- A link to download the NIST certificate associated with the logger (if available). A NIST certificate becomes available after a logger has been configured for the first time.

The Summary Statistics section shows the average/mean, standard deviation, minimum, maximum, and mean kinetic temperature. It also shows the total logged data points for the configuration. This data is available only after the logger has been downloaded. **Note:** The statistics can change when segmentation is enabled (see more details in the Segmentation section).

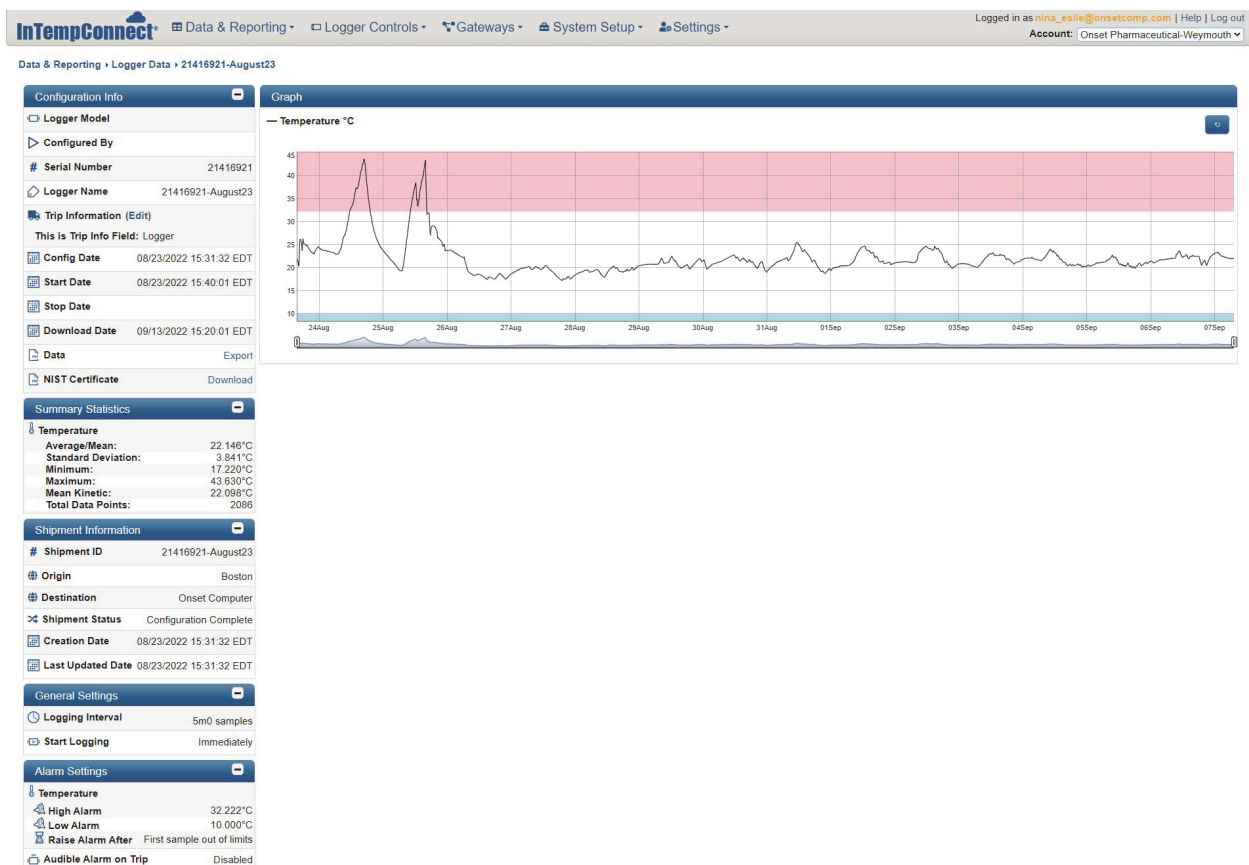
The Shipment Information section of the page appears only for loggers that are associated with a shipment. If you have configured a logger for storage monitoring, this section does not show. It shows Shipment ID, Origin, Destination, Shipment Status, Creation Date, and Last Updated Date.

The General Settings section shows the logging interval and start logging settings used for the configuration.

The Alarm Settings section shows the high alarm, low alarm, MKT, and trip length alarm settings, including how many samples are required to trip the alarm (if applicable). This section is available only if alarms are configured.

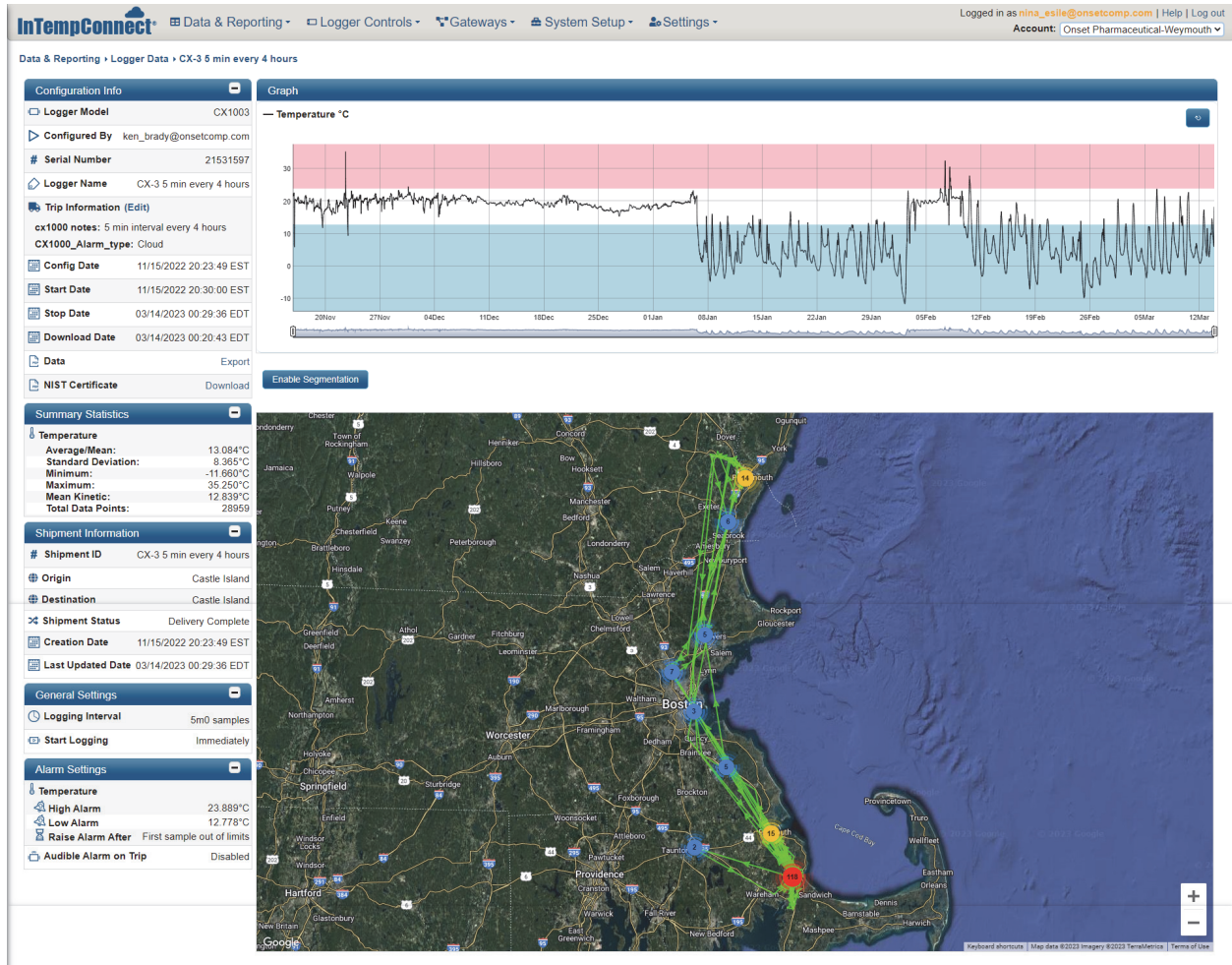
The Graph section shows a plot of the logged data, including shading to indicate alarm limits (red for high limits and blue for low limits). Hover over the plot line to see individual data point values with the date and time they were logged. You can also zoom in and out using the zoom control bar at the bottom of the graph. To return to the

default view, click the Refresh Graph  button. **Note:** When segmentation is enabled, gray shading and notes may appear on the graph (see more details in the Segmentation section). The Refresh Graph button returns to the default view of the segmented graph.



CX1000 Logger Map

When you review the CX1000 logger data page for a selected logger, the page also displays a map showing you the route for the logger, as shown in the following image.



The data points are color-coded as follows:

- Green shows the for origin of the shipment
- Red shows the destination of the shipment.
- Blue shows for past uploads.
- Orange shows the last/current upload.

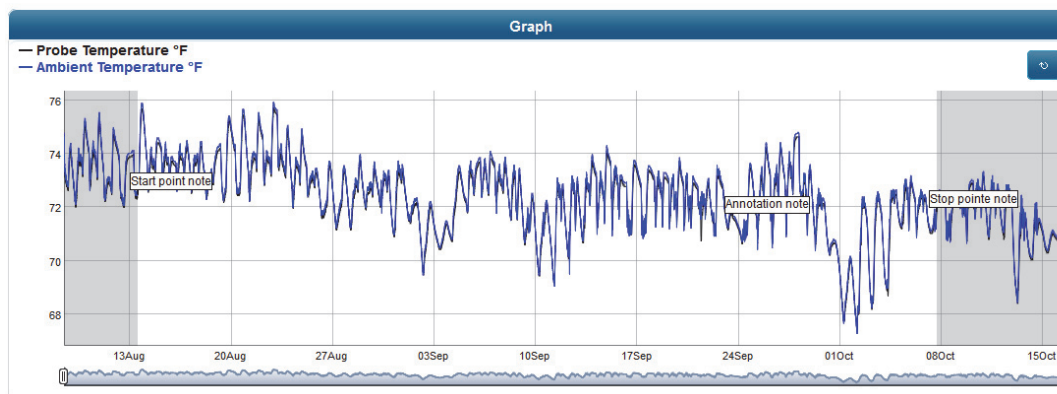
Segmentation

Use segmentation for CX500, CX600, or CX700 series loggers to isolate a portion of the data for the download in the graph and the exported report. For example, if a logger started logging before a shipment was sent and continued to run after the shipment was received, you can use segmentation to include only the data that falls within the time frame when the shipment was in transit. This segmented time frame is then used in the detailed configuration page for that logger as well as in the Configurations table, searches, and reports. An annotation feature is also available to mark one or more points in the download for CX400, CX450, CX500, CX600, or CX700 loggers as needed (for example to add notes to a shipment). **Note:** Only administrators and users with required privileges can set up segmentation.

Important: If an alarm event for a CX500, CX600, or CX700 logger occurs outside the segmented time frame and the alarm either clears within the segmented time frame or never clears, the details of that event are available in the Configurations table, searches, and reports. However, if an alarm event for a CX500, CX600, or CX700 logger both trips and clears outside the segmented time frame, the alarm event is not available in the Configurations table, searches, and reports. In addition, if an alarm event for a CX500, CX600, or CX700 had tripped within the segmented time frame and then cleared outside that time frame, the alarm cleared event is not in the Configurations table, searches, or reports. It appears as though the alarm never cleared.

To set up segmentation and annotations:

1. Click Enable Segmentation. **Note:** Segmentation is available only for CX500, CX600, and CX700 loggers that have stopped logging. Segmentation is not available for CX400 and CX450 loggers: click Enable Annotation and skip to step 4 if you want to add an annotation.
2. Click Start Point and then click the point on the graph where you want segmentation to begin or enter a specific date and time for the start point. Type a note related to the start point.
3. Click Stop Point and then click the point on the graph where you want segmentation to end or enter a specific date and time for the end point. Type a note related to the end point.
4. Click Annotation and then click a point on the graph where you want to mark an event or enter a specific date and time for the annotation. Type a note related to the annotation. Click  to add additional annotations.
5. Click Save. The portions of the graph before the start point date/time and after the stop point date/time are shaded gray on the graph. Any notes associated with the start and end points and annotations are marked on the graph as shown in the following example.



The start and stop dates listed in the Configuration Info section change to those selected in the Segmentation Settings, as applicable. The statistics are also recalculated based on the revised total data points remaining in the segmented data.

If you click Export, the generated report is based on the segmented data instead of all data logged. In single logger PDF and Excel reports, the segmentation start, segmentation stop, and any annotations are reported in the Audit Report Table. The data points listed begin at the segmentation start and stop times as applicable. Any annotations are listed as an event with the corresponding data point. In multi-device reports, a note appears at the top of the PDF or Excel report to indicate the report includes segmented data.

To edit segmentation settings, repeat the steps above, making changes as necessary before clicking Save. To remove segmentation, click  for Start Point and Stop Point and click Save.

To show or hide segmentation settings, click Enable or Disable Segmentation.

Creating an Audit Report

You can generate a report to track key activity with InTempConnect for auditing purposes. This also allows you to see the activity history for one or all users for up to one week. The report includes:

- The time and date when a user logged in or out of InTempConnect
- The date and time a user has been locked out of an account due to too many failed password attempts
- Any new users who have been added, including their email, role, and the date and time they were added
- Logger configuration and downloading details
- Shipment creation and cancellation details

Note: Only administrators and users with required privileges can run audit reports. Audits reports are not available for automatic scheduling and delivery.

To create an audit report:

1. Click Data & Reporting and then Audit Report.
2. Select a specific user name (optional). Do not select a name if you want the report to include all users.
3. Select the time zone.
4. Select the data range for the report, from one to seven days.
5. Type the email address(es) to receive the report (separate multiple addresses with commas). Enable "Compress email attachments" to minimize the file size of the email attachments.
6. Click Submit Report.
7. Click Data & Reporting and then My Reports to view the status of the report and to download it. Reports are available for two weeks after submitted. See Downloading Reports for more details.

Building a Logger Report

You can build a custom report for one or more logger downloads in PDF or XSLX format to analyze logged data, trip length, statistics, tripped alarms, and more. **Note:** If you want to schedule a regular email delivery instead of running a single report, see Scheduling Delivery of Data and Logger Information later in this chapter. If you want to run a VFC (CSV) report, click Export from the detailed logger page (see Viewing Details about Logger Configurations earlier in this chapter).

To build a logger report:

1. Click Data & Reporting and then Report Builder.
2. Select a saved search if there are any. This updates the Configurations in Report table to include only those configurations that meet the criteria in the saved search.
3. If you are creating an XLSX report, select Raw Data to include all logged sensor data in the report. Select how you want the data listed in the report:
 - **Data by Point Sync.** Data is organized by a common interval across all selected downloads. The first column of the spreadsheet is the time interval, which is based on a common divisor of the logging intervals across all downloads. The subsequent columns list any logged data points for each selected download that occurred within that interval.
 - **Data by Date and Time.** Data is listed in order by the date and time stamp of each logged reading. The first column of the spreadsheet is the date and time and subsequent columns list sensor readings for each selected download, oldest to newest.
4. Select Alarms to include details on any tripped alarms in the report. **Note:** Alarm data is not available for reports on configurations that started in 2016.

5. Select Summary Stats to include the combined statistics based on how the downloads are grouped for the report (as selected in Group By). This may include the number of loggers involved, the average, maximum, and minimum length of the trip (defined by the start and stopping of logging), and statistics for the temperature readings (mean, standard deviation, minimum, maximum, and mean kinetic temperature).
Note: Trip information fields must be created before you can group the summary statistics by a particular qualifier.
6. Select Multi-Graph to include all logger downloads plotted on a single graph in the report (available for PDFs only).
7. Select Tabular Data to include details on each individual download in the report, including the trip information entered (if applicable), the length of the trip (defined by the start and stopping of logging), and the statistics for the temperature readings (mean, standard deviation, minimum, maximum, and mean kinetic temperature).
8. Select a time zone or use the default time zone listed.
9. Select PDF or Excel XLSX for the file format.
10. Select the Data Range for the report. **Note:** This does not filter out configurations from the report. It behaves as a bulk data segmentation tool and filters the selected data range from *all* the selected configurations. To filter out entire configurations, edit the saved search used to create the report on the Logger Configurations page.
 - All data includes all available data on all dates.
 - Selected Dates and Times – the following settings allow you to specify dates and times.
 - Over the past number of days that you enter (for example, select 7 days if you want data from the past week). **Note:** This is a snapshot report. The end date of the report is the day and local specified time when you run the report. The start date is the selected number of days in the past and the local specified time.

For example, if you run a report on January 20 at 9:35 AM and choose over the past 7 days, then the start date will be January 13 at 9:00 AM (because the start time always rounds down to the hour) and the end date will be January 20 at 9:35 AM.
 - Before a specific date and time you specify. **Note:** If you do not specify a time, the report provides all data before the selected date. For example, if you run a report to get data before January 20, the report provides all data before 12 AM on January 20.
 - Since a specific date and time you specify. **Note:** If you do not specify a time, the report provides all data after the specified date. For example, if you choose since January 1 and today is January 20, the report start date is January 1 at 12 AM and the end date is January 21 at 12 AM (to include any possible new data).
 - Between two specific dates and times you specify. **Note:** If you do not specify a start and end time, the report provides all data between the two selected dates. For example, if you select January 1 and January 20, the start date is January 1 at 12 AM and the end date is January 21 at 11:59 PM.

Note: The Data Range you choose in the Report Builder supersedes the data range in the individual logger configuration. Logger configurations with segmented data will be reset to remove that segmented data.
11. Select or deselect the checkboxes next to individual downloads as needed. You must select at least one download to run a report.
12. Click Submit Report to add the report to the queue for processing. Click the checkbox next to “Email Report to <email address>” to email the report to the account holder’s email address when it is finished processing.
13. Click Data & Reporting and then My Reports to view the status of the report and to download it. Reports are available for two weeks after submitted. See Downloading Reports for more details.

Notes:

- Before clicking Submit Report, click  to view the trip information for the configuration. Click Edit to change the information entered in the trip information fields or click Add to enter information and then click Save. You can also import trip information from a spreadsheet if you need to fill in fields for numerous configurations. See Importing Trip Information for details. See also Setting up Trip Information Fields if you need to set up new fields.
- Before clicking Submit Report, use the arrows next to a column heading to change the sort order of the column. Drag and drop a column heading to reorder the columns. Click Columns in the upper right corner of the list to enable or disable columns.

Downloading Reports

To download a report created in InTempConnect:

1. Click Data & Reporting and click My Reports.
2. Find the name of the report you want to download. You can download only reports with a status of Complete.
3. Click  to download and save the report to a location determined by your browser.

Click  to permanently delete the report. Reports are deleted automatically after two weeks. You can build a logger report again with the same criteria if a report you needed is deleted; see Building a Logger Report.

When viewing the list of reports, use the up and down arrows next to a column heading to change the sort order of the column. Use the fields below the column headings to search for specific reports by name, date submitted, status, or status details.

Scheduling Reports

You can configure InTempConnect to automatically deliver logged data, alarm information, and other details from the logger configuration to an email address on a schedule that you specify. **Note:** This requires a saved logger configurations search. See Searching Logger Configurations earlier in this chapter for details on saving a search. Audit reports cannot be scheduled.

To set up a scheduled report:

1. Click Data & Reporting and then Report Scheduling.
2. If you already have a saved schedule, click Add Schedule.
3. Type a name for the new schedule.
4. Under Schedule, select how frequently you want to receive delivery: every day, week, or month. Select the day (if applicable) and hour to receive the data. Enable Email on Delivery Failure to receive an email when a delivery does not occur as scheduled.
5. Under Contents and Format, select the saved search that contains the logger downloads you want to include in the report. **Note:** Saved searches for the Report Scheduling tool require an Over the Past date range. Only saved searches that specifically include an Over the Past date field filter are shown in the Saved Search dropdown. You can modify and create new saved searches on the Logger Configurations page.
See Searching Logger Configurations for details on saving a search.
6. Select what you want the report to include:
 - Select Raw Data to include all logged sensor data in the report (available in XLSX format only). Select how you want the data listed in the report:
 - **Point Sync.** Data is organized by a common interval across all selected downloads. The first column of the spreadsheet is the time interval, which is based on a common divisor of the logging intervals across all downloads. The subsequent columns list any logged data points for each select download that occurred within that interval.

- **Time Sync.** Data is listed in order by the date and time stamp of each logged reading. The first column of the spreadsheet is the date and time and subsequent columns list sensor readings for each selected download, oldest to newest.
 - Select Alarms to include details on any tripped alarms in the report. **Note:** Alarm data is not available for reports on configurations that started in 2016.
 - Select Summary Stats to include the combined statistics based on how the downloads are grouped for the report (as selected in Group By). This may include the number of loggers involved, the average, maximum, and minimum length of the trip (defined by the start and stopping of logging), and statistics for the temperature readings (mean, standard deviation, minimum, maximum, and mean kinetic temperature). **Note:** Trip information fields must be created before you can group the summary statistics by a particular qualifier.
 - Select Multi-Graph to include all downloads plotted on a single graph in the report (available in PDF format only).
 - Select Tabular Data to include details on each individual download in the report, including the trip information entered (if applicable), the length of the trip (defined by the start and stopping of logging), and the statistics for the temperature readings (mean, standard deviation, minimum, maximum, and mean kinetic temperature).
7. Select a time zone or use the default time zone listed.
 8. Select either PDF or Excel XLSX for the file format. **Note:** VFC (CSV) files are not available for automatic delivery. You can export them by clicking Export from the detailed logger page (see Viewing Details about Logger Configurations earlier in this chapter).
 9. Select the data range:
 - All data, which includes all available data on all dates.
 - Over the past number of days that you select (for example, select 7 days if you want data from the past week). **Note:** This is a snapshot report. The end date of the report will be the day and local time when you run the report and the start date will be the selected number of days in the past at the same local time as the end date but rounded down to the hour. For example, if you run a report on January 20 at 9:35 AM and choose over the past 7 days, then the start date will be January 13 at 9:00 AM (because the start time always rounds down to the hour) and the end date will be January 20 at 9:35 AM.
 10. Type the email address(es) to receive the report (separate multiple addresses with commas). Enable Compress Email Attachments to minimize the file size of the email attachments.
 11. Click Save. The information you selected under Contents and Format will be delivered to the email addresses entered on the schedule that you chose.

To add a schedule, click Add Schedule and follow the steps above. To delete a schedule, click the Delete icon  next to the schedule you want to remove.

InTempConnect Settings

Click Settings to manage your account profile, users, roles, and security. Note that only administrators and those with the required privileges can manage users and roles. See the following sections for more details:

- Changing Account Profile Settings.
- See Adding Roles and Assigning Privileges.
- See Adding Users and Assigning Roles.
- See Changing Security Settings.

Changing Account Profile Settings

Click Settings and then Profile to change the following account profile settings:

- **Sign in & Security.** Change the account password and click Save.
- **Personal Info.** Change the first name and last name associated with the account and click Save. The account name and username cannot be changed. If your email address has changed or you need to change the account name, create a new account.
- **Measurement Settings.** Change the default units used in InTempConnect and click Save.
- **Saved Search Settings.** Select a Saved Search to use as the default. The Logger Configurations table on the Logger Data page defaults to empty when you first log in. If you want the table to default to the results of a saved search, specify that here.
- **Data Export Settings.** Choose the following:
 1. Select the default time zone to be used in reports.
 2. Select the default file format: PDF, Excel XLSX, or VFC (CSV).
 3. Select Include Alarm Report if you want the report to include all information related to alarms for the download (applies to exported device reports only; not available when VFC (CSV) is selected).
 4. Select Include Tabular Data if you want the report to include all logged data points for the download (applies to exported device reports only; not available when VFC (CSV) is selected). Note that running a report with a lot of data, such as from a logger with full memory, may take a few minutes.
- **Report Builder Settings.** To change the default report settings:
 1. Select the default time zone to be used in reports.
 2. Select the default file format: PDF, Excel XLSX, or VFC (CSV).
 3. Select the default data range:
 - All data, which includes all available data on all dates.
 - Over the past number of days that you select (for example, select 7 days if you want data from the past week). **Note:** This is a snapshot report. The end date of the report will be the day and local time when you run the report and the start date will be the selected number of days in the past at the same local time as the end date but rounded down to the hour. For example, if you run a report on January 20 at 9:35 AM and choose over the past 7 days, then the start date will be January 13 at 9:00 AM (because the start time always rounds down to the hour) and the end date will be January 20 at 9:35 AM.
 4. Select Include Alarm Report if you want the report to include all information related to alarms for the download (applies to exported device reports only; not available when VFC (CSV) is selected).
 5. Select Include Tabular Data if you want the report to include all logged data points for the download (applies to exported device reports only; not available when VFC (CSV) is selected). Note that running a report with a lot of data, such as from a logger with full memory, may take a few minutes.
 6. Click Save. These settings will be selected automatically when building custom reports or exporting device reports. You can also override the settings as needed when running an individual report.

Adding Roles and Assigning Privileges

InTempConnect administrators are initially responsible for adding roles to the account and determining what privileges are assigned to each role (administrators can also assign the privilege of managing users and roles to another user if desired). Administrators or those with the required privilege then add users to the account and assign roles to users as described in Adding Users and Assigning Roles. By default, administrators are automatically assigned all privileges within the system; you cannot change this.

Note: If you were using InTempConnect prior to 2017, a Basic User role was added for all existing non-administrator users. Administrators can modify the privileges for a Basic User, delete the Basic User role, and/or add roles as needed.

To add a role:

1. Click System Setup and then click Roles.
2. Click Add Role.
3. Type a description of the role, i.e., Shipper, Manager, Data Analyst, etc. **Note:** You cannot edit the name of a role after you create it; you can copy an existing role and change the description in the copy.
4. Select the privileges you want to assign to the role from the Available Privileges list.
5. Click the right arrow  to move the selected privileges to the Assigned Privileges list for the role. Click the add all right arrow  to move all privileges to the Assigned Privileges list for the role.
6. If users have already been added to the account, select the user from the Available Users list and click the right arrow  to move that user to the Assigned users list. Click the add all right arrow  to move all users to the Assigned Users list for the role. Note that a user can have more than one role.
If no users have been added to the account, you can add users and assign roles later as described in Adding Users and Assigning Roles.
7. Click Save.

To edit a role:

1. Click System Setup and then click Roles.
2. Click the role you want to edit. **Note:** You cannot edit the Administrator role.
3. Use the left and right arrow buttons to remove and add privileges from the Assigned Privileges list as needed.
4. Use the left and right arrow buttons to remove and add users from the role as needed.
5. Click Save.

Note: You cannot edit the description for the role. If you want to rename a role, make a copy of an existing role and then change the description of the copy. You can then delete the first role (if desired) and keep the renamed role. Or, you can add a new role with a new description.

To copy a role:

1. Click System Setup and then click Roles.
2. Click the role you want to copy and click .
3. Type a description of the role, i.e., Shipper, Manager, Data Analyst, etc.
4. Use the left and right arrow buttons to remove and add privileges from the Assigned Privileges list as needed.
5. Use the left and right arrow buttons to remove and add users from the role as needed.
6. Click Save.

To delete a role:

1. Click System Setup and then click Roles.
2. Click the role you want to delete. **Note:** You cannot delete the Administrator role.
3. Remove any assigned users from the role and click Save. You cannot delete a role if it has users assigned to it.
4. Click the role you want to delete and click . Confirm that you want to delete the role.

Details on available privileges

This table describes the privileges available to assign to users. Privileges related to InTempConnect are noted with a cloud icon  and privileges related to the InTemp app are noted with a mobile device icon .

 or 		This privilege:	Allows you to:
		Archive Logger Configs	Archive old configurations on the Logger Configurations page. See Viewing Configurations and Downloads .
		Audit Report	Run an audit report showing key InTempConnect activity. See Creating an Audit Report .
		Create Custom Reports	Run any custom report by selecting Report Builder from the Data & Reporting menu. See Building a Logger Report .
		Create CX1000 Shipment	Create a CX1000 shipment. Select Shipments from the Logger Controls menu and then click Create Shipment. Available only for the CX1000 logger.
		Create Device Reports	Run a report from the detailed logger configuration page by clicking the Export link. See Viewing Details about Logger Configurations .
		Create Bluetooth Shipment	Set up shipments of loggers via the gateway using InTempConnect. See Managing Shipments .
		Download Now and Continue	Download the logger with a gateway immediately and then continue logging. See Downloading Loggers with a Gateway .
		Download Now and Restart	Download the logger with a gateway immediately and then restart the logger (CX400, CX450, CX503, CX603, and CX703 loggers only). See Downloading Loggers with a Gateway .
		Download Now and Stop	Download the logger with a gateway immediately and then stop logging. See Downloading Loggers with a Gateway .
		Edit/Delete Bluetooth Shipment	Change or delete a planned shipment of loggers via the gateway using InTempConnect. See Managing Shipments .
		Edit/Delete CX1000 Shipment	Edit or delete an existing CX1000 shipment. To do so, select Shipments from the Logger Controls menu, locate the shipment you want to edit or delete and click the correct icon on the far right of the row. Available only for the CX1000 logger.
		Logger Segmentation	Set up segmentation for a logger configuration or add notes to a shipment. See Viewing Details about Logger Configurations .
		Login to InTempConnect	Log in at www.intempconnect.com with your username and password.
		Manage Gateways	View a list of gateway configurations associated with the account by clicking Gateways and then Gateway Configurations (see Viewing Configurations and Downloads). Configure loggers with the gateway by clicking Logger Controls and then Configure Loggers (see Configuring Loggers with a Gateway).
		Manage Logger/Gateway Profiles	Add or edit the profiles that are used to set up the logger or the gateway with the InTemp app. See Managing Profiles .
		Manage Notifications	Configure InTempConnect to send an email when an alarm trips on a logger, a gateway is missing, and when a logger is configured or downloaded. See Setting up Notifications .
		Manage Roles	Add roles as described in this section.
		Manage Trip Information Fields	Add or edit trip information fields that completed in the InTemp app when configuring the logger, used in shipments and groups, and also available in the Configurations table and for custom reports. See Setting up Trip Information Fields .
		Manage Users	Add users in InTempConnect. See Adding Users and Assigning Roles .
		Retrieve Device Passkeys	See the passkey for a logger on the detailed logger configuration page if a user needs to enter a passkey for a logger. See Viewing Details about Logger Configurations .

 or 		
 This privilege:	Allows you to:	
 Schedule Report Delivery	Use future functionality that will be added to InTempConnect for scheduling automatic delivery of custom reports.	
 View Logger Data	View the logger configuration page. See Viewing Configurations and Downloads.	
 Configure Loggers	Start a logger with the InTemp app, which includes selecting a profile. See Configuring a Logger with the InTemp App.	
 Connect to Loggers in Account	Select a logger in the InTemp app and connect to it with a mobile device. See Connecting to a Logger with the InTemp App.	
 Delete Reports	Delete reports that are stored in the InTemp app. See Working with InTemp App Reports.	
 Download and Continue	Download the logger with the InTemp app and then continue logging. See Downloading a Logger with the InTemp App.	
 Download and Restart	Download the logger with the InTemp app and then restart it (CX400, CX450, CX503, CX603, and CX703 loggers only). See Downloading a Logger with the InTemp App.	
 Download and Stop	Download the logger with the InTemp app and then stop logging. See Downloading a Logger with the InTemp App.	
 Gateway Administrator	Manage CX Gateway devices with the InTemp app. See Working with Gateways in the InTemp App.	
 Manage Shipments	Set up shipments of loggers with the InTemp app. See Managing Shipments.	
 Preview and Share Reports	Preview reports upon downloading the logger and share them others. See Working with InTemp App Reports.	
 Reset Logger Passkey	Enter a passkey for the logger if needed. See Working with Loggers in the InTemp App.	
 Update Logger Firmware	Update the logger firmware when connected to the logger (if the Update Firmware action appears). See Working with Loggers in the InTemp App.	

Adding Users and Assigning Roles

Click System Setup and then Users to view a list of all users, add new users to your account and assign them roles, and enable or disable existing users. **Note:** Only administrators and users with required privileges can change user settings.

When viewing the Users list, use the up and down arrows next to a column heading to change the sort order of the column. Use the fields below the column headings to search for specific users by username, first and last name, or roles.

A user is automatically added when a gateway first contacts InTempConnect (see Setting up a Gateway in Chapter 1). The user name is listed as CX5000/5001-<gateway serial number>. The role assigned to a gateway user is the same role as the user who set up the gateway. **Note:** If you have been using a gateway prior to December 2018, a gateway user will automatically be added for your gateway.

To add a new user:

1. Click System Setup and then click Users.
2. Click Add User.
3. Type the email address, first name, and last name.
4. Select one or more roles from the Available Roles list and click the right arrow to move the selected roles to the Assigned Roles list for the user. If no roles are available, you can create a role and assign it to the user later (see Adding Roles and Assigning Privileges).
5. Click Save. The user will then receive an InTempConnect email to activate the account or an email indicating they've been added to the account if the email address has already been registered with another InTempConnect account.

To edit an existing user:

1. Click System Setup and then click Users.
2. Click the username.
3. Change the first or last name or role. Use the left and right arrows to add or remove assigned roles. Note that CX Gateway users must have gateway privileges.
4. Click Save.

Note: User email addresses cannot be changed. Create a new account if a user has a new email.

To disable a user:

1. Click System Setup and then click Users.
2. Select the checkbox next to the user you want to disable.
3. Click the Enable/Disable toggle button  for that user and then click Yes.

Note: If you disable a CX Gateway user, the gateway will no longer download loggers or connect to InTempConnect.

To enable a user:

1. Click System Setup and then click Users.
2. Click the "Show disabled" checkbox.
3. Select the checkbox next to the user you want to enable.
4. Click the Enable/Disable toggle button  for that user and then click Yes. When you enable a user, an email is automatically sent to the user indicating his or her user account has been reactivated.

To import a list of users into the account:

1. Click System Setup and then click Users.
2. Click Import Users.
3. Click  to create a file using the template.
4. Fill in all the fields for each user you want to add to the account.
5. Save the file.
6. Click Choose to select the file. Click  if you need to remove that file and select another.
7. Click Upload.
8. Click Start Import. The users listed in the file will be added to the account.

To export a list of all users in the account:

1. Click System Setup and then click Users.
2. Click Export Users. An .xlsx file is automatically generated. Save it or open when prompted.

For each user associated with the account, the spreadsheet includes the username, the date the user was created in InTempConnect, the date the user was added to the account, the role(s) assigned to the user (if any), and the user status.

Changing Security Settings

Click Settings and then Security to change the following settings:

- **Password Change Frequency.** This allows you to require all users in the account to change their password after a specified number of days, weeks, or months. If you do not want to require your users to change their password, then select Never for the frequency. Otherwise, select Days, Weeks, or Months, and type in the number (e.g., if you want users to change their password every 3 months, select Months and then type 3 in the Frequency field). Click Save.
- **Available Past Password Use.** This allows you to restrict users from using a specific number of their most recent passwords when changing to a new password. Enter a number in the Past Limit field and click Save (e.g., if you type 5, then users cannot use any of their last 5 passwords when changing their password). Note that this requires the Password Change Frequency setting to be enabled (set to anything other than Never). If you do not want to place any restrictions on previous password use, then leave the Past Limit field blank.
- **Account Locking.** This allows you to require all users in the account to change their password after they have incurred a specific number of failed login attempts. If you do not want to limit the maximum failed login attempts for your users, leave the Max Failed Login Attempts field blank. Otherwise, type in a number in the Max Failed Login Attempts field and click Save (e.g., type 4 if you want to require users to change their password after 4 failed login attempts).

Chapter 3

InTemp App Basics

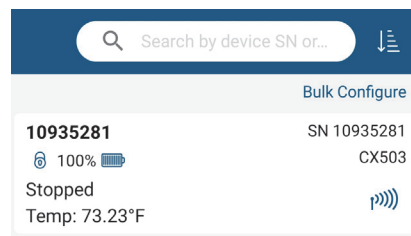
The InTemp app is software for mobile devices and designed for Bluetooth® Low Energy-enabled CX series loggers. Use the InTemp app to configure loggers, download them, and view and share reports (requires privileges if you are also using InTempConnect). When logged into the InTemp app with your InTempConnect account, reports are also automatically uploaded to InTempConnect. You can also use the app to set up and configure CX Gateways, which can automatically configure and download loggers and upload data to InTempConnect. See *Working with Gateways in the InTemp App*. The InTempVerify app is also available for downloading loggers and automatically uploading data to InTempConnect. See *Using the InTempVerify App* for details.

To begin using the InTemp app with a logger:

1. Download the InTemp app to your phone or tablet.
2. For CX400 and CX450 loggers, install the batteries. Insert the external probe (CX402 loggers).
3. Open the app and enable Bluetooth in your device settings if prompted.
4. **If you will be using both InTempConnect and the InTemp app:** Log in with your InTempConnect user credentials or create an InTempConnect user account and then log in. See *Getting Started* in the first chapter for details.

If you will be using the InTemp app only: Create a user account. Enter an email address, first and last name, password, company name (optional), and notes (optional). Tap Create Account and log in.

5. For CX450 loggers, create a logger profile under Settings if using the app only or in InTempConnect if using both. See *Managing Profiles* for details. Note that all other CX loggers have default preset logger profiles, but you can also create your own.
6. Tap the Devices icon. The logger should appear in the list like the example below. If it does not, make sure it is within range of your phone or tablet or press the button to wake up the logger (CX500, CX600, or CX700 series only). Tap the logger to connect to it. See *Connecting to a Logger with the InTemp App* in the first chapter for additional connection tips.



Important: CX502, CX602, and CX702 loggers can only be started once. Do not configure these loggers until you are ready to use them.

7. Once connected, tap Configure. Swipe left and right to select a logger profile. Type a name or label for the logger and tap Start to load the selected profile to the logger. If you have multiple loggers to configure with the app, you can select Bulk Configure to set them up. See *Configuring a Logger with the App* in the first chapter for details.

Important: Loggers configured by an InTempConnect user can then only be accessed by InTempConnect users associated with the same administrator account (and with required privileges).

All the features within the InTemp app are accessed through the icons at the bottom of the screen. Note that if you are also an InTempConnect user, some of those features require privileges.

Tap this icon:	To do this:
 Devices	View loggers or gateways within range of your phone or tablet. Connect to a device to configure it, perform a check (CX400 loggers only), download data from loggers, and more.
 Reports	Generate logger reports and share them with others.
 Settings	Add or edit logger profiles (if using the InTemp app only) and change report settings, units, time zone, and more. Get help with the app and view contact information if you have additional questions.
 User	Log out of the app. In addition, if you are not logged in as an InTempConnect user, edit your app user profile or add app users. If you are logged in as an InTempConnect user, check your user information and roles.

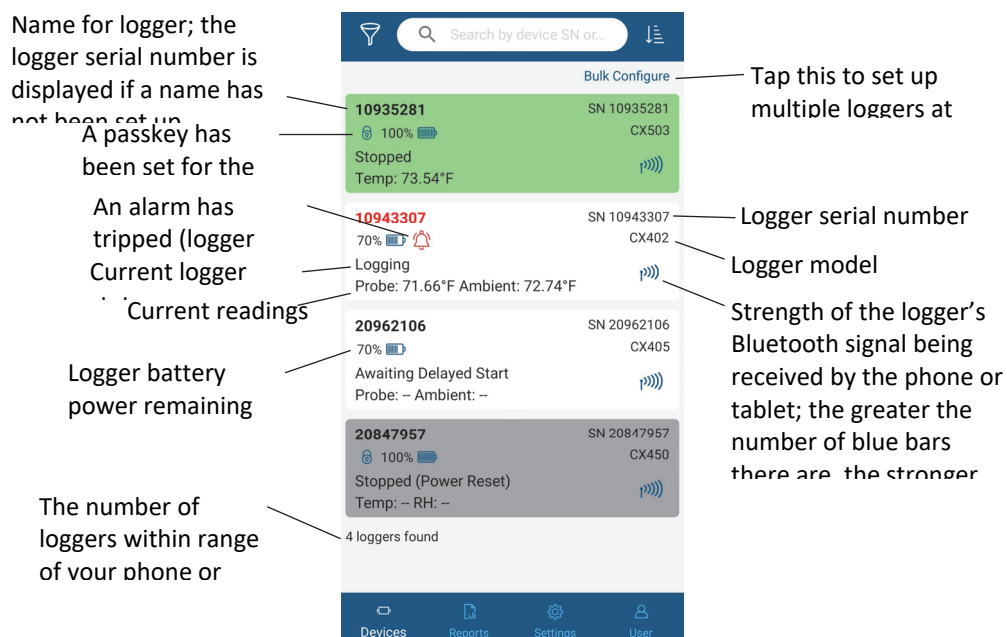
Working with Loggers in the InTemp App

Tap the Devices icon to view a list of the loggers currently in communication range of your phone or tablet. Connect to a logger within range to configure it, download data, and more. For information on gateways, see Working with Gateways in the InTemp App. **Note for InTempConnect users:** You must have the required privileges for working with loggers. See Adding Roles and Assigning Privileges.

Finding Loggers

The InTemp app uses Bluetooth Low Energy to communicate with all loggers within broadcast range of your phone or tablet. Key information about each logger is displayed in a tile, including the logger name, battery power, status, sensor readings, serial number, and signal strength. Green tiles indicate that a button was pressed on the logger to bring it to the top of the list (not available for all logger models). Gray tiles indicate the phone or tablet has not received a Bluetooth signal from a logger that was recently communicating with it (this color can vary when the Dark Mode setting is enabled). Swipe the screen up and down to view all loggers within range of your device or use the search tool to find a specific logger. Tap the Search field and type the serial number or name for the logger.

Tap the Sort icon  to change the order of the loggers listed. If you are logged in as an InTempConnect user, tap the Filter icon  to filter the list. Select Gateways to view all gateways only, select Loggers to view all loggers only, or select All to view all loggers and gateways together.



The screenshot shows the 'Devices' screen in the InTemp app. At the top, there is a search bar labeled 'Search by device SN or...' and a 'Bulk Configure' button. Below the search bar, a list of loggers is displayed. Each logger is represented by a tile with the following information:

- Name for logger;** the logger serial number is displayed if a name has not been set up.
- Battery power:** A passkey has been set for the logger.
- Status:** An alarm has tripped (logger status).
- Current readings:** Current logger readings.
- Logger battery power remaining:** 70%.
- Logger serial number:** SN 10935281, SN 10943307, SN 20962106, SN 20847957.
- Logger model:** CX503, CX402, CX405, CX450.
- Strength of the logger's Bluetooth signal being received by the phone or tablet;** the greater the number of blue bars there are, the stronger the signal.

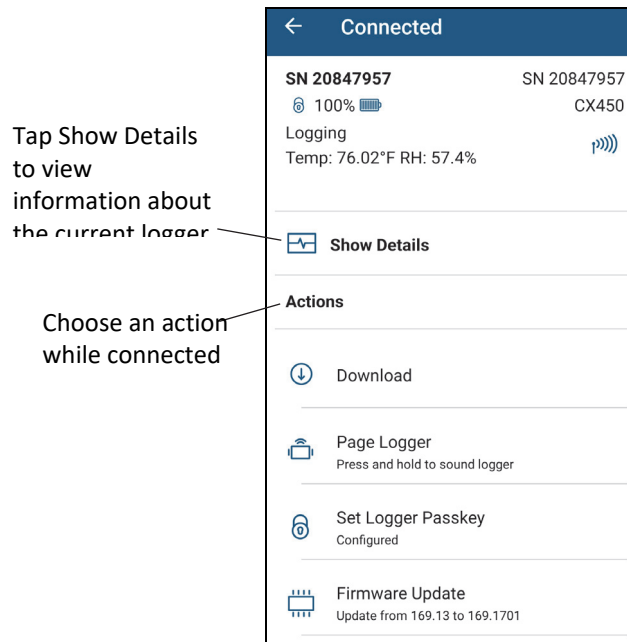
At the bottom of the screen, there is a navigation bar with four icons: Devices, Reports, Settings, and User. A status bar at the very bottom indicates '4 loggers found'.

Note for CX400 loggers: Probe and sensor readings are displayed as "--" when the logger is stopped. "Error" is displayed if the probe is disconnected from the logger. Probe and sensor readings are updated at a different rate than the logging interval and may not match what is currently displayed on the logger LCD.

Actions Available while Connected

After you find the logger that you want to connect to, tap the row in the list. See [Connecting to a Logger with the App](#) in the first chapter for tips on connecting.

Once connected, you can tap Show Details to see information about the current logger configuration, including start time, logging interval, alarm limits, and firmware version. Tap the back arrow to return to the list of loggers and close the Bluetooth connection to the logger.



You can perform the following actions while the logger is connected to your phone or tablet.

Icon	Action	Description
	Configure	Tap Configure to set up the logger and start logging. See Configuring a Logger with the InTemp App for details.
	Start Logging Now	This option is available when the logger is waiting for a delayed start, or a button push to start. Tap Start Logging Now to override the start settings currently in place and begin logging immediately.
	Perform Check (CX400 loggers only)	Tap Perform (Morning, Afternoon, or Daily) Check when you need to record a logger check on your CX400 logger as part of your daily routine. Your user information and the time the check is performed will be recorded with the logger data and a checkmark will illuminate on the logger LCD. This action appears if Record Logger Checks in the InTemp app settings is set to either Twice Daily or Once Daily. If it is set to Twice Daily, then Perform Morning Check will be listed from 12:01 AM until 12:00 PM and Perform Afternoon Check will be listed from 12:01 PM to 12:00 AM. If it is set to Once Daily, then Perform Daily Check will be listed. A message will also appear if you do not perform a check as expected (for example, it is afternoon, and a morning check was not performed). Once a check is completed, the action will change to "<Morning, Afternoon, Daily> Check Performed" as appropriate and will be grayed out. You can also set up a notification to display on your phone or tablet to remind you to perform a check. Use the Reminders option under the InTemp app settings. Also, when this setting is enabled, the minimum and maximum values displayed on the logger LCD represent the minimum and maximum readings within the current 24-hour periods and will reset every 24 hours or when you press the Mute/Next button for 3 seconds. Otherwise, if this setting is not enabled, the minimum

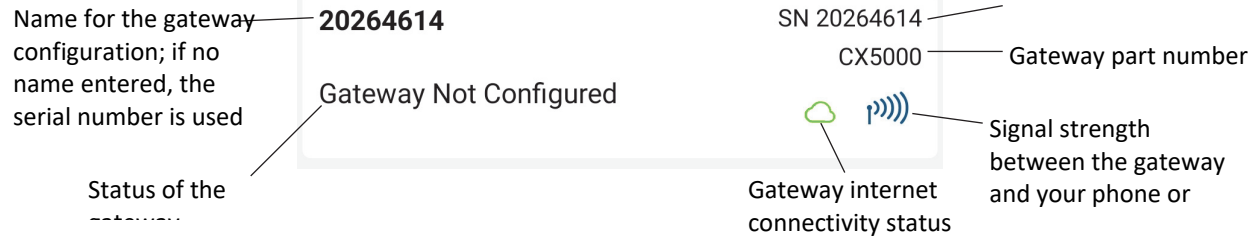
Icon	Action	Description
		and maximum values represent the entire logging period. The values will only reset when the logger is stopped or reconfigured, or when you press the Mute/Next button for 3 seconds.
	Download	Tap Download to offload data from the logger and generate a Secure PDF or XLSX report. If the logger is still logging, then you have the option to continue, restart (not available for CX502, CX602, and CX702 loggers), or stop the logger upon completion of the download. Once the download is complete, you can share the report immediately or access it later via the Reports icon (see Working with InTemp App Reports for more details). If you are an InTempConnect user, then the report will also be automatically uploaded to InTempConnect and available to export from the detailed logger configuration page (see Viewing Details about Logger Configurations). You can also build a custom report in InTempConnect with the downloaded data (see Building a Logger Report).
	Page Logger (CX400 or CX450 loggers) or Page Logger LED (CX500, CX600, and CX700 loggers)	CX400 or CX450 loggers: Use this feature to locate the logger. Tap Page Logger and the logger will beep one time. Press and hold Page and the logger will continue beeping. CX500, CX600, and CX700 loggers: Tap Page Logger LED and the two LEDs on the logger will be illuminated for 4 seconds.
	Set Logger Passkey	This option is only available when using the InTemp app only; it is not available if you are logged in as an InTempConnect user (passkeys are automatically generated for InTempConnect users). Tap Set Logger Passkey to create an encrypted passkey for the logger that will be required if another phone or tablet attempts to connect to it. This is recommended to ensure that a deployed logger is not mistakenly stopped or purposely altered by others. Type a passkey up to 10 characters and tap Set Passkey. Only the phone or tablet used to set the passkey can then connect to the logger without entering a passkey; all other mobile devices will be required to enter the passkey. For example, if you set the passkey for the logger with your tablet and then try to connect to the device later with your phone, you will be required to enter the passkey on the phone but not with your tablet. Similarly, if others attempt to connect to the logger with different devices, then they would also be required to enter the passkey. To reset a passkey, tap Reset Passkey to Factory Default on the Set Logger Passkey screen or simultaneously press both the top and bottom button on a CX400 or CX450 logger for 5 seconds. Note: A passkey set from this menu will override the default passkey listed in the InTemp app settings. If you would rather use a default passkey, enable Default Logger Passkey in the InTemp app settings and type a passkey there. You then do not need to set a passkey from this screen. The logger will automatically be configured with the default passkey.
	Reset Logger Passkey	This option is available only for InTempConnect users who have the Reset Logger Passkey privilege. Select this and then tap Reset Passkey to Factory Default to return to the original passkey assigned to the logger.
	Firmware Update	If new logger firmware is available for the logger, Firmware Update is added to the list of available actions. Tap Firmware Update and follow the onscreen instructions. Note that if there is a communication failure during the firmware update process, the logger will revert to the previous firmware. For CX500 loggers, a Firmware Update Pending status displays for the logger in the Loggers list if the connection is lost between the logger and the mobile device during a firmware update. Connect to the logger and select Restore Logger (or Firmware Update if that option is available) to continue updating the firmware. Important: Before updating the firmware on the logger, always download the logger first (CX400, CX450, CX503, CX603, and CX703 loggers). Check that the logger is showing at least two bars on the battery indicator. Make sure you have the time to complete the entire update, which requires that your device remains within range of the logger during the update process. The update will take a few minutes to complete. Do not switch to another app, turn off Bluetooth, or disturb the logger while the update is underway.

Working with Gateways in the InTemp App

If you have Gateway Administrator privileges in InTempConnect, then you will be able to view, connect to, and set up CX Gateways with the InTemp app. **Note:** To set up a CX Gateway for the first time, see Setting up a Gateway in Chapter 1.

To connect to the gateway with the InTemp app:

1. Tap the Devices icon.
2. Tap the gateway in the list to connect to it. If you want to filter the devices list to view only all gateways, tap the Filter icon  and choose Gateways.



If the gateway does not appear in the list or if it is having trouble connecting:

- Make sure you have Gateway Administrator privileges in InTempConnect.
- Press the button on the gateway and then check the list again.
- Make sure the gateway is within range of your phone or tablet when connecting to it. If your mobile device can connect to the gateway intermittently or loses its connection, move closer to the gateway, within sight if possible.
- Change the orientation of your phone or tablet to ensure the antenna in your device is pointed toward the gateway. Obstacles between the antenna in the device and the gateway may result in intermittent connections.

Note: Gateways are locked for a single account, where all users in the account can access it; press the button on the gateway 10 seconds to reset it.

Once your phone or tablet is connected to the gateway, you can check how many loggers are in range or click Show Details to see the last time the gateway connected to a logger and to InTempConnect. You can also select one of the following actions:

Icon	Action	Description
	Configure	Select a configuration for the gateway. You can create a new gateway profile in InTempConnect by clicking Gateways and then Gateway Profiles.
	Network Settings	Change the Ethernet or Wi-Fi settings. See Setting up a Gateway in Chapter 1 for details.
	Start Gateway	Start a gateway with the current configuration settings.
	Stop Gateway	Stop a running gateway. Loggers will no longer be downloaded until you configure the gateway again.

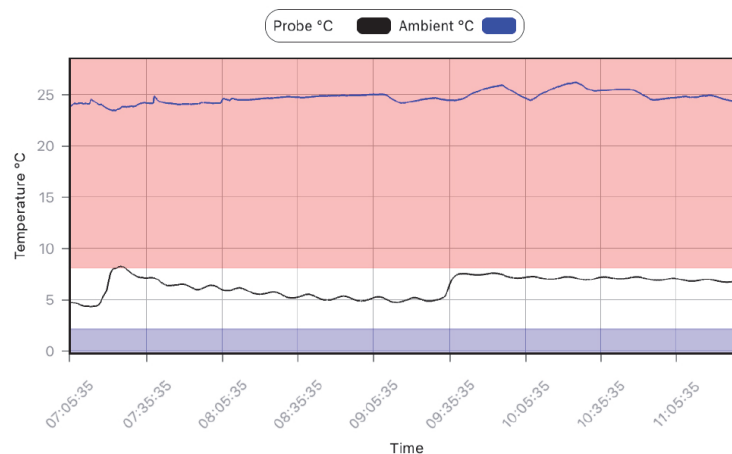
Working with InTemp App Reports

You can download a logger and generate a report in Secure PDF, XLSX, or VFC (CSV) (if enabled) format that includes logged data, user activity, alarm information, and more. Reports can be shared immediately upon download or accessed later in the InTemp app. If you are logged into the InTemp app as an InTempConnect user, then reports are also automatically uploaded to InTempConnect and available to export from the **detailed logger configuration** page (see Viewing Details about Logger Configurations). You can also build a custom report with the downloaded data in InTempConnect (see Building a Logger Report). To download a logger, connect to it and then select a download option. See [Downloading a Logger with the InTemp App](#) for more details.

Note for InTempConnect users: You must have the required privileges for downloading loggers with the InTemp app and previewing or sharing reports. See [Adding Roles and Assigning Privileges](#).

Secure PDF reports contain the following information:

- The name and email for the user who created the report and any notes associated with that app user profile (not available when logged in as an InTempConnect user).
- The time the report was generated and information about the logger configuration, including the name, logger model and serial number, start date, download date, logging interval, and total data points.
- Alarm details for the download, including the high and low alarm limits, number of tripped alarms, duration of alarms, number of probe disconnects (CX400 loggers only), elapsed time outside the alarm limits, and elapsed time the probe was disconnected (CX400 loggers only).
- A graph of the logged sensor data. Red shading shows the high alarm range and blue shading shows the low alarm range.



- A table with the logged data (if Include Table Data in PDF is enabled in the InTemp app settings). Readings outside the alarm limits are in red.
- Summary statistics, including minimum, maximum, and average temperature, standard deviation, and mean kinetic temperature.
- An audit report table listing user events, including the logger start, any downloads, and logger checks and missed checks (CX400 loggers only), and logger location (if the Include Location setting was enabled for the logger profile in InTempConnect).
- Daily statistics, including the daily minimum, maximum, and average temperature.
- An alarm report detailing the start and end time for each alarm and the maximum or minimum temperature during the alarm.

XLSX reports contain the following information:

- Logged probe and/or ambient sensor readings. Readings outside the alarm limits are in red.
- Events, including tripped and cleared alarms, probe disconnects and connects (CX400 loggers only), who started the logger, downloaded it, and performed checks or missed checks (CX400 loggers only).

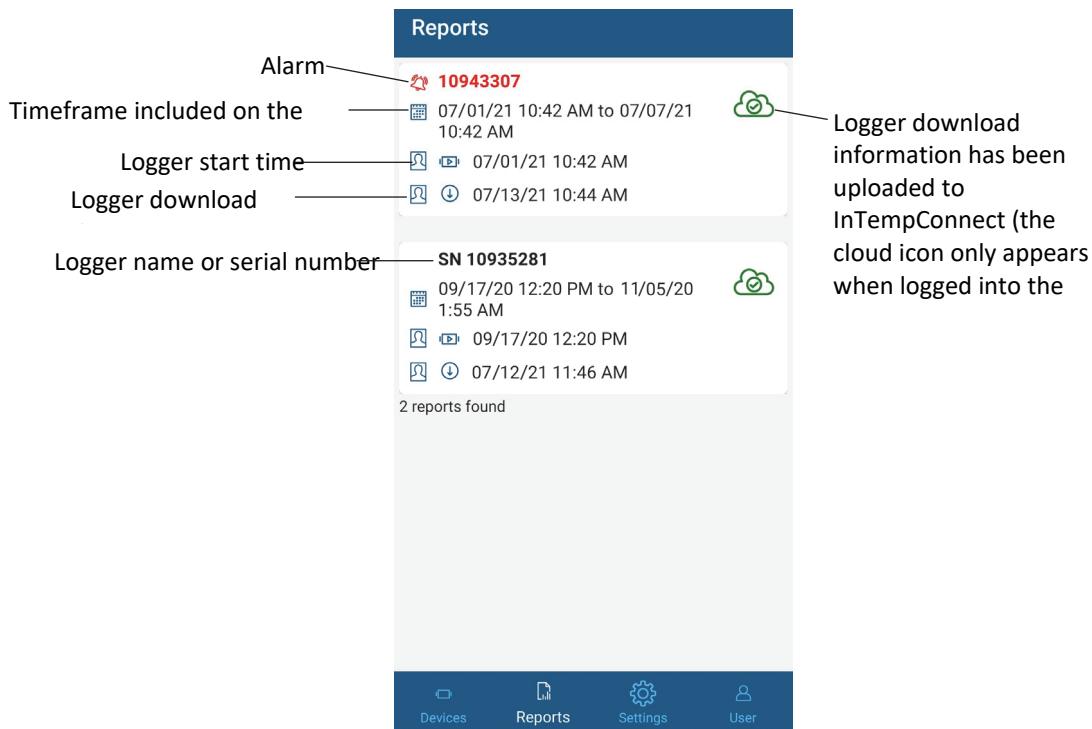
- Daily maximum and minimum readings (on the Daily tab).

VFC (CSV) reports contain the following information:

- User ID heading.
- Logger name (or serial number if no name was entered in the app).
- Date, time, and value of all logger readings.

Viewing, Sharing, and Deleting Reports in the InTemp App

The reports that are available to share are listed in the Reports screen. Each report listed includes the logger name or label, the timeframe represented on the report, and user actions such as logger start time and download time. User actions are listed with the user picture (if available for app only users).



To share a report from the InTemp app:

1. Tap the Reports icon.
2. Tap the report you want to share. The report will be generated in the default type.
3. If Report Sharing is set to Offer All Options in the app settings, then select an option for sharing the report (the options will vary based on your device). If Report Sharing is set to Automatically Email in the app settings, then an email opens for you to send.

To select the format of the report you wish to share:

1. Tap the Reports icon.
2. Swipe left on the report you want to share.
3. Tap the type of report you want to share.
4. If Report Sharing is set to Offer All Options in Settings, then select an option for sharing the report (the options vary based on your device). If Report Sharing is set to Automatically Email in Settings, an email opens for you to send.

To delete a report in the InTemp app:

1. Tap the Reports icon.
2. Swipe left on the report you want to delete.
3. Tap the X to delete the report.

Note: If you are logged in as an InTempConnect user, the report is still available in InTempConnect even if it is deleted from the app if the phone or tablet was connected to the internet at the time of the original download.

Changing InTemp App Settings

Tap the Settings icon to access the following InTemp app settings.

Profiles

A logger profile contains the settings used to set up and start a logger, such as the logging interval, start mode, and alarm limits. If you are using only the app with your logger (not logged in as an InTempConnect user), the InTemp app includes presets for common profiles used by the logger (except for the CX450 logger). You can also create or delete your own custom profile, copy or edit an existing profile, enable or disable profiles, and change the profile sort order. If you are using both the InTemp app and InTempConnect, custom profiles can be created in InTempConnect with the required privileges (see Managing Profiles).

InTempConnect users: A gateway profile contains the settings for how a CX Gateway interacts with loggers within range of the gateway. You can create, edit, and enable/disable gateway profiles in InTempConnect only (with the required privileges).

To create a new logger profile (app-only users):

1. Tap the Settings icon and select CX400, CX450, CX500, CX600, or CX700 Logger.
2. Tap the plus in the upper right corner.
3. Type a profile name.
4. Tap Logging Interval. Select a logging interval and tap Save.
5. Tap Start and select one of the following start options:
 - **Immediately.** The logger will begin logging immediately.
 - **On next even interval.** The logger will begin logging on the next even interval (such as 11:00 or 11:05).
 - **On date/time.** The logger will begin logging on a date and time you specify. Note that the specific date and time is not selected now. You will select the date and time when you configure the logger.
 - **After a fixed delay.** The logger will begin logging after a certain period of time, such as five minutes or three hours.
 - **On button push.** The logger will begin logging when you press the Start button on the logger.
 - **On button push after a fixed delay (CX500, CX600, and CX700 loggers only).** The logger will begin logging when you press the Start button after a delay that you select (for example, if you choose a fixed delay of one hour, then you will be able to press the button to start the logger one hour after the logger is configured). Choose the delay and then tap Save.
6. For CX500, CX600, and CX700 loggers: Enable "Stop on button push" if you want to be able to stop the logger by pressing the button.
7. Enable the High Alarm and Low Alarm if desired. (On CX450 loggers, you can set high and low alarms for both temperature and humidity.) Enter an alarm limit for each. For a high alarm, an alarm will trip if the sensor reading rises above the value you enter in the High Alarm field. For a low alarm, an alarm will trip if the sensor reading falls below the value you enter in the Low Alarm field.

If you set up an alarm, tap Trip Alarm After and select how many minutes should pass before the alarm trips. If you want an alarm to trip immediately on the first reading outside the limits, set Trip Alarm After to

zero. **Note:** For CX500, CX600, and CX700 loggers, you can select a different amount of time to pass before the alarm trips for both the high and low alarm. For CX400 and CX450 loggers, you can only select a set amount of time for both the high and low alarms.

Tap either Cumulative or Consecutive. If you select Cumulative, the alarm will trip when the time the sensor is out of range over the course of the logging period is equal to the selected duration. If you select Consecutive, the alarm will trip when the time the sensor is continuously out of range is equal to the selected duration. For example, if you select Cumulative and the high alarm is set to 45°F with a "Trip alarm after" time of 30 minutes, then an alarm will trip once the sensor reading has been at or above 45°F for a total of 30 minutes since logging started. This could be 15 minutes above 45°F in the morning and then 15 minutes above 45°F again in the afternoon. If Consecutive was selected instead, then the alarm would only trip if all sensor readings were at or above 45°F for a continuous 30-minute period. **Note:** For CX500, CX600, and CX700 loggers, you select Cumulative or Consecutive for the high and low alarms separately. For CX400 loggers, this setting is shared by the high and low alarms.

Tap Save in the Alarm Trip Settings screen.

8. For CX400 and CX450 loggers: If you set up a sensor alarm, enable Audible Alarm if you want the logger to beep when a high or low alarm trips. In addition, enable Battery Alarm if you want the logger to quickly beep three times when the battery is low.
9. Tap Save in the Create <Logger> Profile screen when done selecting all settings. The new custom configuration is added to the list of enabled configurations.

To enable or disable a logger profile (app-only users):

1. Tap the Settings icon and select CX400, CX450, CX500, CX600, and CX700 Logger.
2. Swipe left on the profile you want to enable or disable.
3. Tap Enable or Disable. The profile will then be moved to either the Enabled or Disabled Profiles list accordingly. Disabled profiles will not be shown when configuring connected loggers.

The order of enabled profiles from top to bottom will be displayed left to right when configuring the logger or gateway.

To change the order of configurations:

1. Tap the Settings icon and select CX400, CX450, CX500, CX600, and CX700 Logger or Gateway.
2. Tap  in the upper right corner.
3. Tap and hold  on a profile and drag it to the position you want it to appear. Repeat for any other profiles you want to reorder.
4. Tap Done.

To return to the default sort order, tap  and tap Default Sort at the bottom of the screen.

To copy a profile (app-only users):

1. Tap the Settings icon and select CX400, CX450, CX500, CX600, and CX700 Logger.
2. Swipe left on the profile you want to copy.
3. Tap Copy.
4. Type a name for the new profile.
5. Make any modifications to the existing settings and tap Save.

To delete a custom profile (app-only users; preset profiles cannot be deleted):

1. Tap the Settings icon and select CX400, CX450, CX500, CX600, or CX700 Logger.
2. To delete a single profile, swipe left on the profile you want to delete, and tap Delete.

Reports

You can change the following report settings for the InTemp app:

- **Default Report.** Switch between PDF, XLSX, and VFC (if enabled). When the logger is downloaded or if you tap a report in the Reports screen, a report is generated in the default report type. Note that regardless of the default report type selected, you can generate a report in either format by swiping the report in the Reports screen and selecting PDF, XLSX, or VFC (if enabled).
- **Enable VFC CSV Report.** Enable this option to add VFC CSV (if applicable) as a type of output for reports generated in the app. This report produces a CSV file that meets VFC program requirements. Note that if you want VFC CSV to be the default type used for all reports, select VFC as the Default Report setting.
- **Include Table Data in PDF.** Enable this option if you want to include all logged data and events in a table at the end of the PDF report (table data is always included in XLSX reports). Note that generating a PDF with large data tables (such as from a logger with full memory) may take a few minutes and may not be able to be emailed.
- **Report Sharing.** Select Offer All Options if you want to view all sharing options for your device each time a report is generated. Select Automatically Email if you want to email a report after it is generated (an email will open that you can edit if desired and send).
- **Default Email Settings.** This option is available when Automatically Email is selected for Report Sharing. Use this if you want the report email message to be pre-populated with a default email address and subject line. Enter one or more email addresses in the Recipients field. Use the plus icon to add addresses from your contact list. Type a default subject in the Subject field. If no subject is entered, the report filename will be listed in the subject line.
- **Use System Time Zone.** Enable this if you want the app to use the same time zone as your phone or tablet. If you want the app to use a different time zone than your phone or tablet, disable this setting and then select the desired time zone. Changes will not take effect with the logger until the next time it is configured. The times listed in the Reports screen will continue to show the time zone in place when the logger was configured. However, the new time zone will be used within an existing report when you share it.

Other Options

You can also change the following app options:

- **Units.** Switch between °F and °C units. The units displayed in the app and generated reports will automatically be updated when you change units. If a CX400 or CX450 logger is currently logging, the units displayed on the LCD will show the units that were selected at the time the logger was configured. Unit type on the LCD will not change until the logger is reconfigured.
- **Dark Mode.** Enable or disable this setting to change the app color scheme. When Dark Mode is enabled, the app displays bright text on a black background. When Dark Mode is disabled, the app displays dark text on a white background.
- **Record CX400 Logger Checks (app only users; InTempConnect users can access this setting when managing profiles).** Choose Twice Daily, Once Daily, or Never. If you choose Twice Daily, a Perform Morning Check action will be listed in the Connected screen from 12:01 AM until 12:00 PM and then Perform Afternoon Check will be listed from 12:01 PM to 12:00 AM. If you choose Once Daily, an action will be listed in the Connected screen to Perform Daily Check. Once the action is completed, it is recorded as a logged user action available for view in an XLSX report and the action is listed as performed in the Connected screen. Missed checks will also be recorded by the logger itself. Changes to this setting will take effect the next time the logger is configured. Also, when this setting is enabled, the minimum and maximum values displayed on the logger LCD represent the minimum and maximum readings within the current 24-hour periods and will reset every 24 hours or when you press the Mute/Next button for 3 seconds. Otherwise, if this setting is not enabled, the minimum and maximum values represent the entire

logging period. The values will only reset when the logger is stopped or reconfigured, or when you press the Mute/Next button for 3 seconds.

- **Reminders (CX400 loggers).** If you have set up logger checks or the profile for InTempConnect users have logger checks enabled, then you can also set up a notification to appear on your phone or tablet to remind you to perform the check. Tap Reminders and then select Enable Reminders (InTemp app only users) or Enable Morning Reminder or Enable Afternoon Reminder (InTempConnect users). Set the time for the reminder(s) and tap Save when done. Note that a reminder notification is a global setting for the mobile device that applies to all users. Reminders cannot be set for each individual user.
- **Default Logger Passkey (app only users; not available when logging into the app as an InTempConnect user).** Enable this if you want to automatically set a default encrypted passkey for each logger that you configure. Type the passkey you want to use (up to 10 characters). Only the phone or tablet used to configure the logger will be able to connect to the logger without entering the passkey; all other mobile devices will be required to enter it. Note that you can override this default passkey when configuring the logger by selecting Set Logger Passkey in the Connected screen. You can also reset a passkey by tapping Set Logger Passkey when connected to the logger and selecting Reset Passkey to Factory Default or by simultaneously pressing both the top and bottom button on a CX400 or CX450 series logger for 5 seconds. However, if Default Logger Passkey remains enabled, then the logger will be loaded with your default passkey the next time you configure it.

Diagnostics & Troubleshooting

- **Send Metrics to Onset.** Enable this to share information about the software for troubleshooting and future enhancements.
- **Diagnostics File Sharing and Capture App Diagnostics.** Enable these options only when directed by Onset Technical Support.

Working with Users in the InTemp App

InTempConnect Users

If you are logged into the InTemp app as an InTempConnect user, tap the User icon to view your user information and your assigned roles and privileges. To log out of the app, tap the User icon and then tap Logout. To make changes to your user account including changing roles or privileges, log into InTempConnect.

InTemp App-Only Users

If you are using the InTemp app only (not logged in as an InTempConnect user), you can edit your app user profile, add new app users, and enable or disable app users.

To edit your user profile:

1. Tap the User icon and then tap My User Profile.
2. Change any of the fields as needed.
3. Tap Save.

To add a new user:

1. Tap the User icon and then tap All Users.
2. Tap Add in the upper right corner.
3. Enter the email address, first and last name, password, company (optional), and notes (optional).
4. Tap Save. The new profile will be added to the list of users for the app. Log out of the app if you want to

switch to a different user. Tap  on the Login screen to select a different user. **Note:** You can also set up a new profile by tapping Create Account in the Login screen.

To enable or disable a user (if more than one exists):

1. Tap the User icon and then tap All Users.
2. Tap the user you wish to enable or disable.
3. Change the Enabled setting and tap Save. The profile will then be moved to either the Enabled or Disabled Users list accordingly. **Note:** You cannot disable a user currently logged into the app.

To log out of the InTemp app:

1. Tap the User icon.
2. Tap Logout.

Chapter 4

More Information

Additional information about all Onset products is available at www.onsetcomp.com.

For additional help with CX loggers, the CX Gateway, the InTemp or InTempVerify apps, or InTempConnect, contact Onset Technical Support at 1-800-LOGGERS or 508-759-9500 or visit www.onsetcomp.com/support/contact.

FAQs

Why isn't my logger appearing in the list on the Loggers screen in the InTemp app?

- The logger is not within range of the phone or tablet, or something is obstructing the communication. Move closer to the logger. The range for successful wireless communication is approximately 30.5 m (100 ft) with full line-of-sight.
- Bluetooth may not be enabled for your device. Make sure Bluetooth is enabled in your phone or tablet's settings.
- Press the button on a CX500, CX600, or CX700 logger to wake it up.
- The CX400 or CX450 logger may need new batteries. Symbols will appear on the logger LCD if the batteries have enough voltage remaining and are installed properly.

My logger is within range of the phone or tablet and Bluetooth is enabled. Why isn't it appearing in the InTempVerify app?

To be visible in the InTempVerify app, the logger must be configured with a logger profile in which the "InTempVerify (ITV) enabled" option was selected. If that option was not enabled, then the logger will not appear in the InTempVerify app even if it is within the range of the phone or tablet. See [Managing Profiles](#) for details.

I see my logger in the InTemp or InTempVerify app, but I can't connect to it. What can I do?

- Close the app and then reopen it.
- Power cycle the mobile device (turn the power off, wait a few seconds, and then turn it back on) and try connecting again.
- Change the orientation of your phone or tablet to ensure the antenna in your device is pointed toward the logger. Obstacles between the antenna in the device and the logger may result in intermittent connections.
- If you are an InTempConnect user and are using the InTemp app, make sure you have the required privileges. Contact your administrator for help.

I was setting up my logger with the InTemp app and then I lost the connection. Will my logger still start?

If you did not tap Start before the connection was lost, then the configuration settings will not be loaded to the logger, and it will not start logging. Connect to the logger again, finish choosing your configuration settings, and then tap Start.

How do I lock my logger so that no one else can configure it?

If you use the InTemp app only (not logged in as an InTempConnect user), you can set a passkey for the logger. Connect to the logger and tap Set Logger Passkey. Enter a password up to 10 characters. The passkey will then be required any time another mobile device attempts to connect to the logger with the InTemp app. The device that configured the logger, however, will automatically retain the passkey so you do not have to type in a passkey each time that device connects to the logger.

If you are an InTempConnect user, a passkey is automatically generated for each individual user associated with the same administrator account. Administrators or those who the required privileges can view the passkey associated with a logger on the detailed logger configuration page in InTempConnect if it is needed (see Viewing Details about Logger Configurations in chapter 2).

How do I reset the passkey on a logger?

If you are using the InTemp app only (not logged in as an InTempConnect user), tap Reset Passkey to Factory Default on the Set Logger Passkey screen or simultaneously press both the top and bottom buttons on the logger for 5 seconds (CX400 and CX450 loggers only).

If you are logged in to the InTemp app as an InTempConnect user and you see an invalid passkey message, it is because your user account is not associated with the administrator account used to configure the logger. Contact your InTempConnect administrator for help to retrieve the key. If you have Reset Logger Passkey privileges, then a Reset Logger Passkey option is available when connected to the logger.

How do I offload my logger with the InTemp app?

Connect to the logger and tap Download. Once the download is complete, a report is generated for sharing. InTempConnect users must have the required privileges.

It is taking more than a minute to download my logger with the InTemp or InTempVerify app. Is this normal?

A logger with a full memory should take a minute or less to download. If the download is taking longer than a minute, move the mobile device closer to the logger, within a few feet if possible. The further away the mobile device is from the logger, the longer the download can take.

I changed the units in the InTemp app settings. Why is my CX400 or CX450 logger still displaying the old units?

The units displayed on the CX400 or CX450 logger LCD can only be changed if the logger is reconfigured. To change the units on the logger LCD, select the desired units in Settings in the InTemp app, connect to the logger, tap Configure, choose a profile, and tap Start. The new units will be displayed on the LCD when logging restarts.

I switched to another app and when I returned to InTemp, the Loggers screen was blank. What should I do?

Switch to another screen in InTemp and then switch back. The screen should then appear again as normal.

I am logged into the InTemp app as an InTempConnect user and I'm seeing an invalid passkey message when I try to connect to the logger. What do I do?

Only active users associated with the same InTempConnect administrator account used to configure the logger can connect to it. Contact your InTempConnect administrator to retrieve the key to enter when prompted.

Can I log in as an InTempConnect user and a local user with the same logger on the InTemp app?

Only until the logger is configured. If you are logged into the app as an InTempConnect user and configure the logger, then you will only be able to connect to that logger in the future as an InTempConnect user.

When I log into the InTemp app and tap Devices, I don't see any gateways. Why?

You need to have Gateway Administrator rights to see gateways. Contact your InTempConnect administrator to add the privileges to your user role.

I can see the gateway in the InTemp app, but my mobile device won't connect to it. What can I do?

- Make sure the gateway is within range of your phone or tablet. Move closer to the gateway, within sight if possible. Check the gateway signal strength icon in the app to make sure there is a strong signal between the phone and the gateway. The greater the number of blue bars, the stronger the signal.
- Change the orientation of your phone or tablet to ensure the antenna in your device is pointed toward the gateway. Obstacles between the antenna in the device and the gateway may result in intermittent connections.

How can I tell if the gateway is finding all my loggers?

Connect to the gateway. The InTemp app will list how many loggers are in range. Reposition the loggers closer to the gateway if not all are found as expected.

How can I get a NIST certificate for my logger?

To download a NIST certificate (if available):

1. Click Data & Reporting and then Logger Configurations.
2. Scroll through the table or enter search criteria to find a specific configuration.
3. Click the link in the Logger Label column to view the configuration details page.
4. Under Configuration Info, scroll to NIST Certificate and click Download.

What are the min/max values on my logger LCD and how do I clear them?

On CX400 loggers configured with the daily or twice-daily logger check feature enabled, these values represent the minimum and maximum sensor readings with the current 24-hour period and will reset every 24 hours automatically.

On CX450 loggers and on CX400 loggers configured without the logger check feature enabled, these values represent the minimum and maximum sensor readings over the entire logging period for the current configuration. The values will reset when the logger is stopped or reconfigured.

You can also manually clear the values at any time. Press the Mute/Next button on CX400 loggers for 3 seconds or press both buttons on CX450 loggers for 3 seconds to clear the values. Dashes (--) will then appear on the LCD for the minimum and maximum values until the next logging interval. **Note:** This clears the data on the screen only. Actual logger and reporting data will not be cleared with this reset.