

InTemp[®] System User's Guide

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Contents

Chapter 1 Getting Started	3
I want to use my logger with both the InTemp app and InTempConnect.....	3
I want to use my logger with the InTemp app only.....	3
Setting up a Gateway	4
Connecting to a Logger with the App.....	6
Configuring a Logger with the App.....	7
Downloading a Logger with the App	9
Chapter 2 InTempConnect Basics	10
Managing Profiles	10
Working with Gateway Groups	14
Setting up Trip Information Fields.....	16
Importing Trip Information	17
Configuring Loggers with a Gateway.....	18
Managing Locations	20
Managing Shipments	21
Setting up Notifications.....	24
Viewing Configurations and Downloads	26
Searching Logger Configurations	29
Viewing Details about Logger Configurations	30
Building a Report.....	33
Downloading Reports.....	34
Scheduling Reports	34
InTempConnect Settings	35
Changing Account Profile Settings	36
Adding Roles and Assigning Privileges	36
Adding Users and Assigning Roles.....	38
Changing Security Settings.....	40
Chapter 3 InTemp App Basics.....	41
Working with Loggers in the App.....	42
Working with Gateways in the App.....	44
Working with App Reports.....	45
Changing App Settings	47
Working with Users in the App	51
Chapter 4 More Information	52
FAQs	52

Chapter 1

Getting Started

CX series loggers, the InTemp® app, 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 them to share and view logger reports, which include logged data, excursions, and alarm information. When you are logged into 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 CX5000 Gateway is available for configuring and downloading CX series loggers automatically on a regular basis.

I want to use my logger with both the InTemp app 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 Settings and then Roles to add roles for the users you will be adding to the account. Click Add Role and enter a description (i.e. shipper, receiver, etc.). Select the privileges the role should have and either click the right arrow button or drag them to the Assigned Privileges list. Click Save. For more details, see Adding Roles and Assigning Privileges in the next chapter.
3. Click Settings 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 either click the right arrow button or drag 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 user name and password for the account.
4. New users will receive an email to activate their user 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. Connect to the logger and configure it (see Connecting to a Logger with the App and Configuring a Logger with the App in this chapter for more details). You can also create custom profiles and add fields to enter trip information when configuring the logger (see Managing Profiles and Setting up Trip Information Fields in the next chapter for details). Note that you must have the required privileges for these tasks.

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

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

1. Download the InTemp app to your phone or tablet.
2. Open the app and create a local user account. Tap Save when done and log in to the account when prompted.

3. Connect to the logger and configure it. See [Connecting to a Logger with the App and Configuring a Logger with the App](#) in this chapter for more details.

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

Setting up a Gateway

The CX5000 Gateway is a device that uses Bluetooth Low Energy to configure and download CX series loggers and upload the data to InTempConnect automatically via Ethernet or WiFi.

To set up a gateway at your current location:

1. Create or edit a role to add gateway privileges and assign a user to the 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 will be using Ethernet network settings.
 - c. Wait a couple of minutes for it to completely power up before continuing. The LED will be yellow-green while it powers up and then change 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 the Devices icon and then tap Gateways at the top of the screen. (Don't see Gateways? You must have Gateway Administrator privileges.)
 - b. 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 anywhere in the row 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.
 - c. If the gateway will be using Ethernet with DHCP, the network settings should be 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 WiFi, tap Network Settings and tap Ethernet or WiFi.
 - d. **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 WiFi: Select Use Current WiFi Network or type the network name (SSID) and password. (Tap Reset WiFi on Gateway to remove an existing WiFi configuration and enter a different network name and password.) Tap Save.
 - e. The gateway will automatically test the network connection after saving the settings. You can cancel the test if necessary. If the test is not successful, make sure all your settings are entered correctly and saved.
6. Configure the gateway.
 - a. In the InTemp app, tap the Devices icon and then tap Gateways at the top of the screen.
 - b. Tap the gateway to connect to it.
 - c. Tap Configure.

- d. Select a gateway profile. Swipe left and right if there are multiple profiles.
- e. Type a name for the gateway configuration. The gateway serial number will be used if no name is entered.
- f. Tap Start. The status of the gateway should change to Running in the app.

Once a gateway has contacted InTempConnect for the first time, a user is created for the gateway in your InTempConnect account. Click Settings and then Users to see the gateway added to the list of users in your account. The user name is listed as CX5000-<gateway serial number>. See Adding Users and Assigning Roles in Chapter 2 for more details.

The gateway will connect to loggers within range and download them based on the settings in the profile. Data will be uploaded to InTempConnect, where you can search logger configurations, run reports, or schedule regular delivery of logged data and other logger information via email. A heartbeat will also be sent to InTempConnect every 10 minutes to make sure the gateway is still active. Note that if a CX400 logger being downloaded by a gateway is in an alarm state, then the logger will be downloaded 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 <http://www.onsetcomp.com/intemp/resources/cx5000-manual>.

If you are operating more than one gateway in close proximity, then you can set up a group so that any gateway in the group does not overlap downloading or incorrectly impact 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 than the current site (for example, you are an IT administrator who is setting up a gateway that will 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 will be deployed in a location that supports Ethernet with DHCP and you do not need to set up network settings in advance, then 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 will be using Ethernet at your current location. Wait a couple of minutes for it to completely power up before continuing. The LED will be yellow-green while it powers up and then change to a deep green once it is ready to set up.
2. **If you will not be configuring the gateway and only setting up network settings for the different site:** Go to step 4.
If you will be configuring the gateway and have Ethernet with DHCP at your current location: Go to step 3.
If you will be configuring the gateway and using Ethernet with static IP addresses or WiFi at your current location: Follow these steps to set up temporary network settings:
 - a. Tap the Devices icon and tap Gateways at the top of the screen. Find the gateway in the list and tap anywhere in the row to open it.
 - b. Tap Network Settings and tap Ethernet or WiFi.
 - 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 WiFi at the current location:** Select Use Current WiFi Network to use your phone or tablet's existing WiFi SSID and then type your password. Tap Save.
3. **Configure the gateway.**
 - a. Connect to the gateway (tap the Devices icon and then tap Gateways at the top of the screen and tap the gateway 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 gateway serial number will be used if no name is entered.
 - e. Tap Start. The status of the gateway should change to Running in the app.
4. **Set up network settings for the location where the gateway will be located.**
- a. Connect to the gateway (tap the Devices icon and then tap Gateways at the top of the screen and tap the gateway 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 will 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 WiFi at the remote site: Tap Reset WiFi on Gateway to remove any existing WiFi configuration. Type the SSID and password for the location where the gateway will be deployed and tap Save. **Note:** If a WiFi password is changed at the site after you set it up, the WiFi settings will need to be reconfigured. This will require 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 that is attempted.
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.

Connecting to a Logger with the 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 the gateway.

To connect to a logger with the app:

1. Tap the Devices icon in the 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 was already configured).
4. Tap the logger to connect to it. See **Working with Loggers in the App** for details on the actions available while connected to a logger.

A logger must be within range of the phone or tablet to connect to it. Tips for connecting to the logger:

- Make sure Bluetooth is enabled in 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 within range of the phone or tablet and move closer if necessary. Only one or two blue bars indicate the Bluetooth signal is weak while all gray bars indicate that a signal is not found.
- If your device can connect to the logger 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 result in 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 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 will be able to connect to it. If a user belongs to a different account, that user will not be able to connect to the logger with the app, which will display 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 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, 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 in an InTempConnect user or Changing App Settings in Chapter 3 if you are using the 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 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:** CX450 logger profiles, any custom profiles for all other CX loggers, and any optional trip information fields should be set up 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 the logger** and then continue with the configuration (InTempConnect users require privileges to download).

Important: CX502, CX602, and CX702 loggers cannot be restarted once logging begins. Do not configure these loggers until you are ready to use them.

3. Swipe left or right to select a logger profile like 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 included 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 were 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 will begin as determined by the start option in the profile. 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. Note:** If the connection is lost between the logger and your phone or tablet before tapping Start, you will need to reconnect and reconfigure the logger. Configure settings are not loaded onto the logger until you tap Start.

After logging begins, you can download the logger and generate a report to view the logged data and other key information about the logger (InTempConnect users require privileges for this). See **Downloading a Logger with the App** in this chapter for details.

To configure multiple loggers of the same type at once with the 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 move to the top of the list with a checkmark. 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: CX502, CX602, and CX702 loggers cannot be restarted once logging begins. 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. Select the label to use for each logger: the current logger label (which is 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 will be used for all loggers.
6. Swipe left or right to select one of the preset logger profiles. The profile you select will be used for all loggers.
7. If the profile included a start time option of "On date/time," select the date and time you want the loggers to begin logging.
8. **InTempConnect users:** If trip information fields were set up for this account, then fill in the fields with the necessary details. The same information will be used for all loggers.
9. Tap Start. All the selected loggers will be downloaded and then configured. 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 will begin 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 App** for details on downloading each logger individually.

Downloading a Logger with the App

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

You can download the logger and generate reports that included logged data, events, user activity, alarm information, and more. Reports can be shared immediately upon download or accessed later in the app from the Reports icon (see Working with 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 Report in the next chapter.

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

To download a report with the 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 will continue logging once the download is complete.
 - **Download & Restart (CX400, CX450 CX503, CX603, and CX703 models only).** The logger will start 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 was set up to start with a button push, you will need to push the button on the logger for logging to restart.
 - **Download & Stop.** The logger will stop logging once the download is complete.

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 app using the default type (as selected in the app settings). 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 Email Automatically in the 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 App Reports in Chapter 3 for more details.

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

Chapter 2

InTempConnect Basics

InTempConnect is cloud-based data warehousing software where you can search CX series logger configurations, build reports from data uploaded from the InTemp app, 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; this cannot be changed. Users have specific roles and privileges assigned to them by either an administrator or another user who has the appropriate privileges. The account name is listed at the top InTempConnect navigation bar to 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 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 the required 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 required 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, and alarm limits. 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.

A gateway profile contains the settings used to connect to and download loggers via 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 required privileges can manage profiles.

Logger Profiles

Click Loggers 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. Click Loggers and then Logger Profiles.
2. Click Add Logger Profile.
3. Type a name for the profile, up to 30 characters.
4. 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.
5. 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 will be saved and listed in the logger PDF reports and in any applicable data notifications. **Note:** Latitude/longitude will only be listed if location services are enabled on the phone or tablet with the InTemp app installed.
6. Select the logger family: CX400, CX450, CX500, CX600, or CX700.
7. Select the logging interval in hours, minutes, and seconds.
8. For Start, select how the logger will start logging:
 - **Now.** The logger will begin logging immediately.
 - **On Interval.** The logger will begin logging on the next even interval (such as 11:00 or 11:05).
 - **On Button Push.** The logger will begin logging when you press the Start button on the logger.
 - **After Elapsed Time.** The logger will begin logging after a certain period of time, such as five minutes or three hours. Select the elapsed time in hours, minutes, and seconds.
 - **On Date/Time.** The logger will begin logging on a specific date and time. Note that the specific date and time is not selected now. You will select the date and time when you configure the logger.
 - **On Button Push 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 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 in hours, minutes, and seconds.
9. **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.
10. **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 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.


- 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 periods and will reset every 24 hours. Otherwise, if Never is selected, the minimum and maximum values represent the entire logging period and only reset when the logger is downloaded and restarted or stopped and reconfigured (they will not reset if you download the logger and continue logging).
 - 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.
11. Under Logger Alarms, enable the High Alarm and Low Alarm if desired (these are the 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 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.
- For Trip Alarm After, select how many hours and 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. Also select whether the alarm will trip 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.
- Note:** 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.
12. **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.
13. 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 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).
 - 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  or delete a cloud alarm by clicking .
 - **Note:** Cloud alarms will not trip an alarm on the logger; they will only generate an email notification (this requires setting up a sensor alarm notification by clicking Data 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.
14. 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 Loggers and then Logger Profiles.
2. Click Enable/Disable toggle button  for the profile you want to enable or disable.

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

To copy a logger profile:

1. Click Loggers and then Logger 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 is copied.

To edit a logger profile:

1. Click Loggers 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: Preset logger profiles and cloud alarm settings cannot be edited. If you need to make a change to cloud alarms, copy the logger profile, make any edits in the copy, and then save the copy.

To delete a logger profile:

1. Click Loggers 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: Preset logger profiles cannot be deleted.

Gateway Profiles

Click Gateways and then Gateway Profiles to view a list of profiles sorted by name. These profiles are available in the app and control how the gateway interacts with loggers within range.

To add a new gateway profile:

1. Click Gateways 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 that will be used 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, or 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 will stop once the gateway connects to the loggers and they will need to be restarted 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 will 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 alarm trips on the logger.
 - **Immediately connect to any <logger> not seen by this gateway.*** The gateway will automatically connect to a new logger when it is first recognized. If this option is disabled, the logger will continue logging, regardless of what you selected for the Download option in step 5. If this option is enabled, the gateway will follow the download setting selected in step 5. This means if you selected Download and Restart or Download and Stop in step 5, the logger will restart or stop upon the first gateway connection.
- *Note:** Primarily used for shipping applications. Not ideal for storage applications.
- **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.
7. Choose how frequently the gateway will connect to and download 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.


Note that gateway profiles cannot be edited. They can be enabled/disabled or copied and then modified.

To enable or disable a gateway profile:

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

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

To copy a gateway profile:

1. Click Gateways 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, then 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. A group is beneficial because if one gateway has a poor connection to a logger, then 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.

Note: If loggers are in range of more than one gateway, then 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), then the gateways should be grouped to reduce the risk of issues.

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 if you need 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 if you need 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 will be shown in the Available Gateways list. See Working with Gateways in the 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. You can set up custom trip information fields that will appear in the InTemp app when a logger is configured, or are available when setting up shipments or configuring loggers with the gateway. For example, you can create Origin and Destination fields that will require the person configuring the logger to select the cities where the trip will start and end. 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 will affect all loggers associated with the account, including past configurations. Therefore, 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 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. Click Loggers and then click Trip Information.
2. Click Add Trip Info Field.
3. Type the name of the field as you want it to appear. Some field name examples: Origin, Destination, Shipment Mode, Product, Shipper, Trip ID, Packaging Type, Shipment Date, etc. The names should represent the information you want to be able to track about the shipment being monitored by the logger.
Note: For shipping or production environments, these fields should correspond to existing SOPs or fields within existing ERP systems to reduce errors in handling.
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 (an asterisk will appear 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, then the fields will only appear 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 will enter 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 amount of possible entries (for example, a trip ID number that will be unique to every shipment). Select the maximum amount 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 will be 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 is added to the Trip Info Fields list. The order in the list is also the order the fields will appear in the app and in InTempConnect. If you want to change the order, drag and drop the rows in the list.


To enable or disable an existing field:

1. Click Loggers and then click Trip Information.
2. Click the Enable/Disable toggle button  for the field you want to enable or disable. Enabled fields appear in the 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 Loggers and then click 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 will also be listed last in the app and in InTempConnect. Drag and drop the row if you want to change the order it appears.

To edit an existing field:

1. Click Loggers and then click 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, then 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 Settings > 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-2017 or 11-NOV-2016).
 - 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-2017 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 what will be 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 and then Logger Configurations.
2. Click the "Import trip info" link at the top right corner of the Configurations table.
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-2017 in the spreadsheet, but the logger could have been started anywhere from June 2 to June 9, then enter a search tolerance of ± 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, 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 will not be changed.
 - **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 will be 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 configure loggers automatically 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 Loggers 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 will be 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 listed.

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 Loggers and then Configure.
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 Loggers and then Configure.
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 Loggers and then Configure.
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 Loggers and then Configure.

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 Loggers and then Configure.
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 will be 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 will only be available 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 that 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 and then Logger Configurations to access the table).
- For any status other than Planned or Released, the configuration will be deleted from the Logger Configurations table seven days past the Last Updated Date listed.
- Once a gateway configures a logger, it will download it 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, then the gateway will not reconfigure it when it connects to it.

Managing Locations

If you are using a gateway, then 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 Gateways 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 will not be 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, then 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. This location will be available to select when setting 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 Gateways 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 will be 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 Gateways 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 Gateways and then Locations.
2. Click the Enable/Disable toggle button  for the location you want to enable or disable.
3. Disabled locations are grayed and appear at the bottom of the list by default. "No" is listed in the Enabled column for a disabled location, which means it will not be 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 will not be able to 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. **Note:** You must have the required privileges to manage shipments. See Adding Roles and Assigning Privileges later in this chapter.




To create a shipment:

1. Click Loggers and then click Shipments.
2. Click Create Shipment.
3. Enter a shipment ID.
4. Select an origin for the shipment. **Note:** This requires locations to be set up. See Managing Locations earlier in this chapter.
5. Select a destination for the shipment. **Note:** This requires locations to be set up. See Managing Locations earlier in this chapter.

6. Enter a configuration name to be used for all loggers in the shipment, which requires the Apply to All Loggers checkbox to be selected. If you do not enter a name, then the Shipment ID will be used as the default name. If you want to select a different name for each individual logger in the shipment, deselect the Apply to All Loggers checkbox.
7. Under Logger Families, select the logger family you want to include in the shipment. 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 selected the CX400 family, select the display units to use. By default, the Apply to All Loggers checkbox will be selected for each logger family. Deselect the checkbox if you want to select a different profile for each logger within a family.
8. 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 the shipment. Note that trip information fields with an asterisk are required fields that must be used for the shipment. See Setting up Trip Information Fields for details on adding or editing fields. By default, the Apply to All Loggers checkbox will be 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.
9. Click Add Logger to add a logger to this shipment.
10. Enter the serial number for the logger and tab out of this field for the serial number to be verified and populate the logger family column. Next 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.
11. Repeat steps 9 and 10 for all other loggers you want to include in this shipment.
12. 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.

To import a shipment:


1. Click Loggers and then click Shipments.
2. Click Import Shipments.
3. Click  to create a file using the template.
4. Fill in 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 Loggers 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 Loggers 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 Loggers 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 Loggers and then Shipments.
2. Under Search Criteria, enter or select the applicable 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 Configuration Name, type the partial or complete name selected for the logger configuration.
3. Click Search. The Shipments table will be 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 current 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, then the logger will be downloaded and continue logging, even if the gateway has been configured to "Download and Stop" or "Download and Restart" loggers of that family.
- Shipments will be saved indefinitely in the Shipments table. Shipments can only be deleted 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 (click Data and then Logger Configurations to see the table).

Setting up Notifications

You can set up sensor alarms, missing gateway alarms, and data notifications. For sensor alarms and missing gateway alarms, you can be notified by email or text when an alarm trips in one of the loggers associated with the account or with a missing gateway. For data notifications, you can be notified by email or text when a logger is downloaded. You also have the option to include the PDF report from the logger download with the email notification. **Note:** Only administrators and users with required privileges can manage notifications.

To set up a sensor alarm:

1. Click Data or Gateways and then Notifications.
2. Select the unit of measurement that will be used 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 will be used for the notification (this affects notifications only; it does not affect the overall account time set under Settings > Profile).
4. Click Alarms.
5. Under Sensor Alarms, click Add.
6. Under Apply To:
 - Select Temperature, RH, or both.
 - 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 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 alarm notifications for all loggers configured by the user. The person who configured the logger will automatically receive 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 will automatically receive all alarm notifications at the address used during the download.
7. Under Type (if you selected All, Configuration, or Trip Info):
 - Select Email and type the email address that should receive the notification.

- Select Text Message. Select the country code and type the mobile phone number that should receive the notification by text.
- 8. Repeat steps 5–7 for any additional sensor alarms.
- 9. Click Save.

Notes:

- 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.
- Once a sensor alarm is set up, it will be 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:

A missing gateway email notification is automatically added for new gateways. To set up another alarm:

1. Click Data or Gateways and then Notifications.
2. Select the units that will be used 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 will be used for the notification (this affects notifications only; it does not affect the overall account time set under Settings > Profile).
4. Click Alarms.
5. Under Missing Gateway Alarms, click Add and select a gateway. Under Type, select Email and type the email address that should receive the notification. Or, select Text Message then select the country code and type the mobile phone number that should receive the notification by text.
6. Repeat steps 4 and 5 for any additional gateway notifications.
7. Click Save.

A notification is sent when a gateway is missing for more than an hour (i.e. no heartbeat is sent from the gateway to InTempConnect).

To set up a data notification:

1. Click Data or Gateways and then Notifications.
2. Select the units that will be used 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 will be used for the notification (this affects notifications only; it does not affect the overall account time set under Settings > Profile).
4. Click Data.
5. Under Data, click Add.
6. Under Apply To:
 - Select All to receive a notification every time a logger associated with the account is downloaded.
 - Select Configuration and then 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 will automatically receive 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 will automatically receive an email at his or her address.
7. Under Type (if you selected All, Configuration, or Trip Info):
 - Select Email and type the email address that should receive the notification.
 - Select Text Message. Select the country code and type the mobile phone number that should receive the notification by text.
 8. 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 only generated if the "Enable VFC CSV Report" setting is turned on in the InTemp App. See Changing App Settings in Chapter 3 for details.
 9. 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.
 10. 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 will not be sent if Download & Continue or Download & Restart is selected when downloading the logger.
 11. Repeat steps 5–10 to add additional data notifications.
 12. Click Save.

Notes:

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

To stop a notification:

1. Click Data or Gateways 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 wish 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 Configurations

Click Data and then Logger Configurations 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 Configurations 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 entered 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.
- **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 data 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.
- **Shipment ID/Shipment Origin/Shipment Destination.** These are the details related to a logger that was part of a shipment.
- **Probe Alarm.** This column shows an alarm icon if a probe alarm tripped for a CX402 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 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 will also be included in the spreadsheet if trip information fields have been created for the logger configurations.

To archive a configuration:

1. Click Archive.
2. Click the checkbox(es) in the leftmost column next to the configuration(s) you want to remove from the table.
3. Click Archive.

4. Click Yes. The configuration(s) will no longer be visible in the table and will not be available for reports.

To view archived configurations, click Archive and page through the table to see the configurations with checkmarks in the leftmost column. Click the checkbox to remove the checkmark next to any configurations that you want to remove from archival. Click Archive and click Yes. The configuration will be visible again in the table and will be 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 heartbeat 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 heartbeat at least once an hour are active. Gateways that have not sent a heartbeat in an hour or more are listed as missing and are shaded red. Missing gateways will 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.
- 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 heartbeat 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 will be 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 view any data uploaded from loggers via a gateway and run a report, see Viewing Details about Logger Configurations or Building a Report later in this chapter.

To reconfigure a gateway:

1. Click Gateways and then click Gateway Configurations.
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 will begin using the new profile at the next heartbeat (the gateway sends a heartbeat to InTempConnect every 10 minutes to make sure it is still active). The gateway will then connect to and download loggers according to the settings in the new profile. **Note:** If you change a gateway's profile and that gateway is in a group, then it will no longer be part of that group.


Searching Logger Configurations

Click Data and then Logger Configurations to see a table with logger configurations associated with your account. You can then use the Search functionality 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 only show the applicable configurations that meet the search criteria. As you make additional changes to the search fields, the table will continue to be updated automatically.
2. If you want 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. (If you were to click Data > Report Builder instead, all configurations associated with the account would be listed instead of only those found in the search.) See Building a Report for details on running the report.

You can also do the following:

- To use an existing search, select a saved search listed under Search. The table is refined to only show 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 Search. 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 Search and click the Delete icon .
- To clear the entries in the search fields and revert to the default Configurations table, 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 will be included in the spreadsheet.

If you want 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 you can use to refine the Configurations table.



Search Fields	Description
Users	<p>Select a user by user name or by role.</p> <ul style="list-style-type: none"> • Select User and type the email address for the user. Only the configurations that were completed by users with that email address will be listed. • Select Role and then choose the type of role to include in the search, as defined by the roles available in your account. Only the configurations that were completed by users in that role will be listed.
Alarms	<p>Select configurations with high or low temperature or humidity alarms, or probe disconnect (probe disconnect is for CX40x loggers only) alarms. The list will include only configurations in which a high, low, or disconnected probe alarm was tripped respectively.</p>
Dates	<ol style="list-style-type: none"> 1. Select a logger event. <ul style="list-style-type: none"> • Configured (when the logger was configured) • Started (when logging started) • Stopped (when logging stopped) • Last Downloaded (when the logger was last downloaded). <p>Only the configurations that include the selected event will be listed.</p> 2. Select a date range for the selected event. <ul style="list-style-type: none"> • Over the past day or 7, 30, or 365 days. • Before a specific date. • Since a specific date. • Between two specific dates. <p>Only the configurations for the selected event and date range will be listed.</p>
Trip Information	<p>From the first drop-down list, select a trip information field if available (as created in InTempConnect with associated privileges) and then select the available corresponding trip information comments from the second</p>

Search Fields	Description
	drop-down list as entered in the InTemp app or in InTempConnect.
Serial Number	Type the serial number (or a partial serial number) for the logger. Only configurations associated with that number will be listed.
Logger Label	Type the name entered for the logger. Only loggers with that name will be 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.

Adding or Deleting Multiple Search Fields




You also have the option to 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.

Frequently Used Searches

To search for late shipments:

1. Use the Dates fields to search for late shipments (for example, a week late). Under Event, select Configured.
2. Under Range, select Before.
3. Under Date, select a day from the calendar (for example, to show shipments that are week late, select the date from a week ago).
4. Click  to the right of the date field to add another set of fields.
5. Under Event, select Last Downloaded.
6. Under Range, select Never.

Dates:

Event:	Range:	Date:	Action:
Configured	Before	November 10, 2016	
Last Downloaded	Never		 

The table is updated to show the applicable configurations. Save the search for future use if needed. Click Build Report to run a report on these configurations.

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 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.


The Configuration Info section includes:

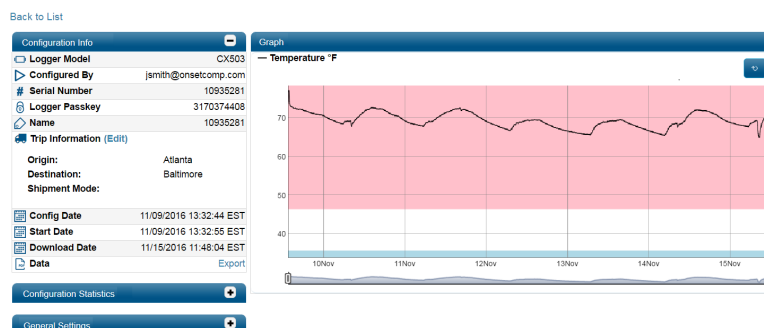
- Logger model type.
- User who configured it.
- Logger serial number.
- The passkey automatically assigned to the logger. Only administrators or those with the required privileges can view this information.
- The name or label entered for the logger.
- Trip information. Click Edit if you need to change 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.
- The date and time when the logger was configured, started, downloaded, and stopped (as applicable).
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 app (see Working with 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 if you need to further refine the content of this device report (see Building a 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 and then Logger Configurations, 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).

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

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 only available if alarms were set up.

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 will return to the default view of the segmented graph.




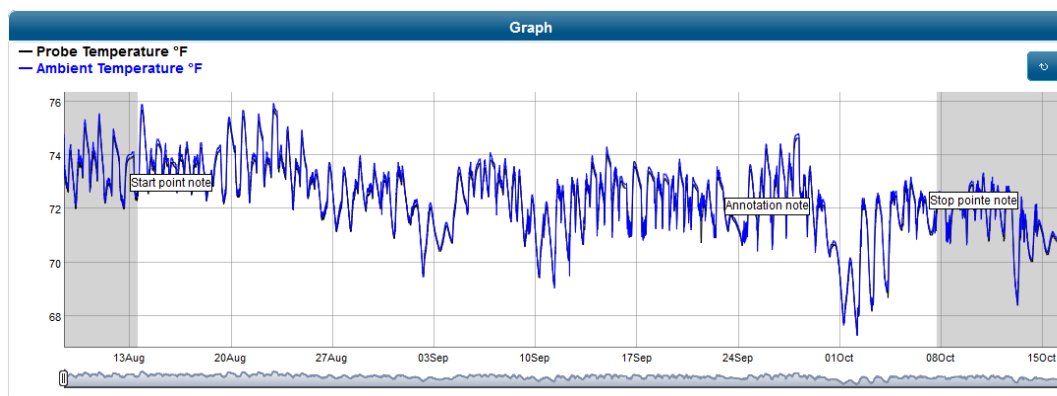
Segmentation

Use segmentation for CX500, CX600, or CX700 series loggers if you need 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 the data only within the time frame when the shipment was actually 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 then the alarm either clears within the segmented time frame or never clears, then the details of that event will be 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, then the alarm event will not be 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 will not be in the Configurations table, searches, or reports. It will appear as though the alarm never cleared.

To set up segmentation and annotations:


1. Click Enable Segmentation. **Note:** Segmentation is only available for CX500, CX600, and CX700 loggers that have stopped logging. Segmentation is not available for CX400 and CX450 loggers, but 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 will be marked on the graph as shown in the following example.



The start and stop date 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 will be 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 will 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 will appear 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.

Building a 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 report:

1. Click Data and then Report Builder.
2. Select a saved search to use if applicable. This will update the Configurations in Report table to include only those configurations that met the criteria of the saved search.
3. If you will be 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:
 - All data, which includes all available data on all dates.
 - Over the past number of days that you enter (for example, type 7 if you want data from the past week).


- Before a specific date that you select.
 - Since a specific date that you select.
 - Between two specific dates that you select.
11. Select or deselect the checkboxes next to individual downloads as needed. At least one download must be selected 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>" if you want the report to be emailed to the account holder's email address when it is finished processing.
 13. Click Data 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 that was entered for the configuration. Click Edit if you need 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 and click My Reports.
2. Find the name of the report you wish to download. Only reports with a status of "Complete" can be downloaded.
3. Click  to download and save the report to a location determined by your browser.

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

To set up a scheduled report:

1. Click Data 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 receive delivery: every day, week, or month. Select the day (if applicable) and hour you wish to receive the data. Enable "Email on delivery failure" if you want 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. 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, type 7 if you want data from the past week).
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.
- **Account Preferences.** Change the default units used in InTempConnect and click Save.
- **Report Export Preferences.** 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, type 7 if you want data from the past week).
 4. Enable "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. Enable "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 will be 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; this cannot be changed.

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 Settings 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 roles after you create them; 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.

- 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.


- Click Save.

To edit a role:


- Click Settings and then click Roles.
- Click the role you want to edit. **Note:** You cannot edit the Administrator role.
- Use the left and right arrow buttons to remove and add privileges from the Assigned Privileges list as needed.
- Use the left and right arrow buttons to remove and add users from the role as needed.
- 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:






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

























To delete a role:

- Click Settings and then click Roles.
- Click the role you want to delete. **Note:** You cannot delete the Administrator role.
- Remove any assigned users from the role and click Save. You cannot delete a role if it has users assigned to it.
- 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:
	Create Custom Reports	Run any custom report by clicking Data and then Report Builder. See Building a Report.
	Create Device Reports	Run a report from the detailed logger configuration page by clicking the Export link. See Viewing Details about Logger Configurations.
	Create Shipments	Set up shipments of loggers via the gateway. See Managing Shipments.

 or 		
	This privilege:	Allows you to:
	Edit/Delete Shipments	Change or delete a planned shipment of loggers via the gateway. See Managing Shipments .
	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 Loggers 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. 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 .
	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 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 App .
	Delete Reports	Delete reports that are stored in the app. See Working with App Reports .
	Download and Continue	Download the logger and continue logging. See Downloading a Logger with the App .
	Download and Restart	Download the logger and restart it (CX400, CX503, CX603, and CX703 loggers only). See Downloading a Logger with the App .
	Download and Stop	Download the logger and stop logging. See Downloading a Logger with the App .
	Gateway Administrator	Manage CX5000 Gateway devices with the InTemp app. See Working with Gateways in the App .
	Preview and Share Reports	Preview reports upon downloading the logger and share them others. See Working with App Reports .
	Reset Logger Passkey	Enter a passkey for the logger if needed. See Working with Loggers in the 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 App .

Adding Users and Assigning Roles

Click Settings 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-**<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 Settings 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 at a later time (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 Settings 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 CX5000 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 Settings 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 CX5000 gateway user, the gateway will no longer download loggers or connect to InTempConnect.

To enable a user:

1. Click Settings 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 Settings 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 Settings 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, and the role(s) assigned to the user (if any).

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.
- **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

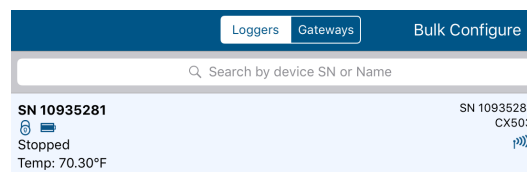
The InTemp app is software for mobile devices and designed for Bluetooth® Low Energy-enabled CX series loggers. Use the InTemp app to configure loggers, download them, and view and share reports (requires privileges if you are also using InTempConnect). When logged into the InTemp app with your InTempConnect account, reports are also automatically uploaded to InTempConnect. You can also use the app to set up and configure CX5000 Gateways, which can automatically configure and download loggers and upload data to InTempConnect. See [Working with Gateways in the App](#).

To begin using the InTemp app with a logger:

1. Download the 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 app only: Create a local user account. Enter an email address, first and last name, password, and the optional company name, notes, and profile photo (choose an existing photo or use the camera to take a new photo). Tap Save when done and then log in when prompted.

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. If you are working with both loggers and gateways, tap Loggers at the top of the screen. 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 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 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 logged in as a local user, edit your user profile or add users. If you are logged in as an InTempConnect user, check your user information and roles.

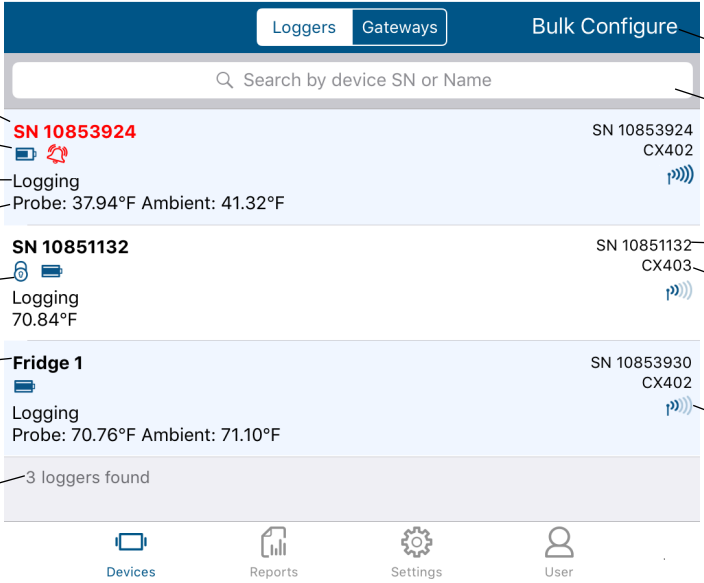
Working with Loggers in the App

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 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. These loggers are displayed in the list in the Loggers screen. Each row in the list represents a single logger, which displays key information such as the logger name, battery power, status, sensor readings, serial number, and signal strength. Swipe the screen up and down to view all loggers within range of your device; pull the screen down to refresh the list. You can also use the search tool to find a specific logger. Tap the Search field and type the serial number or name for the logger.



The screenshot shows the 'Loggers' screen in the InTemp app. At the top, there are tabs for 'Loggers', 'Gateways', and 'Bulk Configure'. Below the tabs is a search bar with the placeholder text 'Search by device SN or Name'. The main area displays a list of loggers. Each logger entry includes a name, a status icon, a battery indicator, a logging status, and current readings (Probe and Ambient temperature). The signal strength is indicated by blue bars on the right side of each entry. The bottom of the screen features a navigation bar with icons for 'Devices', 'Reports', 'Settings', and 'User'.

Annotations on the left side of the screenshot:

- An alarm has tripped (logger name is in red)
- Logger battery indicator
- Current logger status
- Current readings
- A passkey has been set for the logger
- Name for logger; the logger serial number is displayed if a name has not been set up
- The number of loggers within range of your phone or tablet

Annotations on the right side of the screenshot:

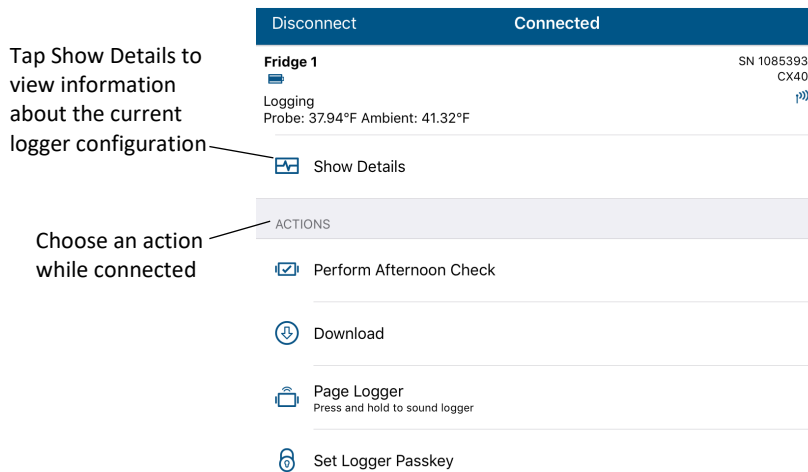
- Tap this to set up multiple loggers at once
- Tap the Search field to find a logger by its serial number or name
- Logger serial number
- Logger model number
- Strength of the logger's Bluetooth signal being received by the phone or tablet; the more blue bars there are, the stronger the signal

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 Disconnect to close the Bluetooth connection to the logger. **Note:** There can be up to a 15-second delay if the logger has moved out of range.



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 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 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 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. Otherwise, if this setting is not enabled, the minimum and maximum values represent the entire logging period and only reset when the logger is downloaded and restarted or stopped and reconfigured (they will not reset if you download the logger and continue logging).
	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 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

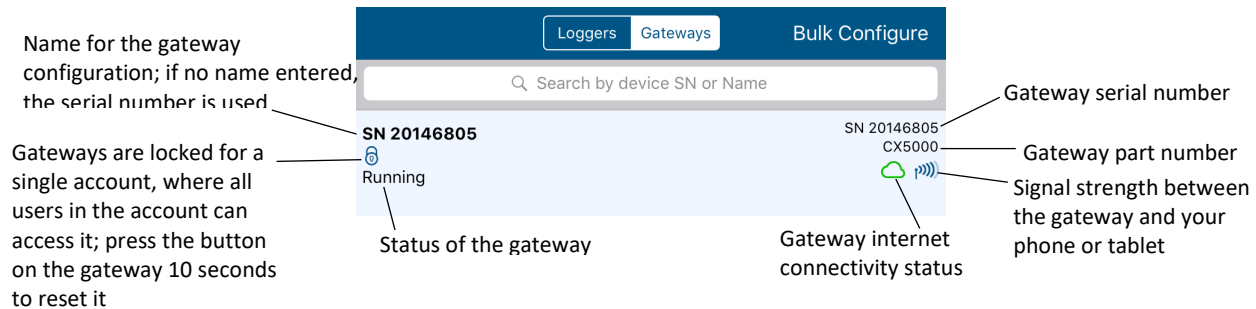
Icon	Action	Description
		Viewing Details about Logger Configurations). You can also build a custom report in InTempConnect with the downloaded data (see Building a Report).
	Page Logger (CX400 or CX450 loggers) or Page Logger LED (CX500, CX600, and CX700 loggers)	<p>CX400 or CX450 loggers: Use this 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.</p> <p>CX500, CX600, and CX700 loggers: Tap Page Logger LED and the two LEDs on the logger will be illuminated for 4 seconds.</p>
	Set Logger Passkey	<p>This option is only available when you are logged into the app as a local user; 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 Save. 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 to Factory Default on the Set Logger Passkey screen or simultaneously press both the top and bottom button on a CX400 logger for 3 seconds. Note: A passkey set from this menu will override the default passkey listed in the app settings. If you would rather use a default passkey, enable Default Logger Passkey in 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.</p>
	Reset Logger Passkey	<p>This option is available only for InTempConnect users who have the Reset Logger Passkey privilege. Select this and then tap Reset to Factory Default to return to the original passkey assigned to the logger.</p>
	Update Firmware	<p>If new logger firmware is available for the logger, Update Firmware is added to the list of available actions. Tap Update Firmware 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 Update Firmware if that option is available) to continue updating the firmware.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>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.</p> </div>
	Force Offload	<p>If there is a problem with the logger, Force Offload is added to the list of available actions. A message may also appear above the actions indicating that an error was found in the logger configuration. It is recommended that you tap Force Offload any time it appears in the list to ensure you have saved all data currently stored in the logger. To correct a logger that has encountered an error, configure the logger (CX400, CX503, CX603, and CX703 loggers only).</p>

Working with Gateways in the App

If you have Gateway Administrator privileges in InTempConnect, then you will be able to view, connect to, and set up CX5000 Gateways with the app. **Note:** To set up a CX5000 Gateway for the first time, see Setting up a Gateway in Chapter 1.

To connect to the gateway with the app:

1. Tap the Device icon and tap Gateways.
2. Tap the gateway in the list to connect to it.



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.

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 WiFi 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.

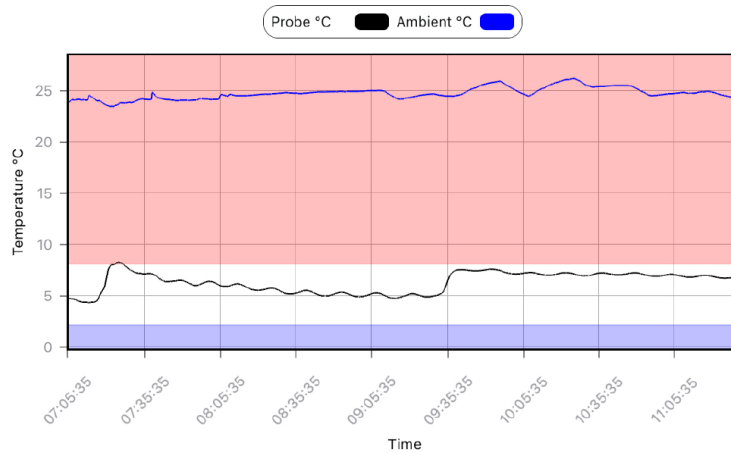
Working with App Reports

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 app. If you are logged into the 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 Report). To download a logger, connect to it and then select a download option. See [Downloading a Logger with the App](#) for more details.

Note for InTempConnect users: You must have the required privileges for downloading loggers 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 local 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 **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:

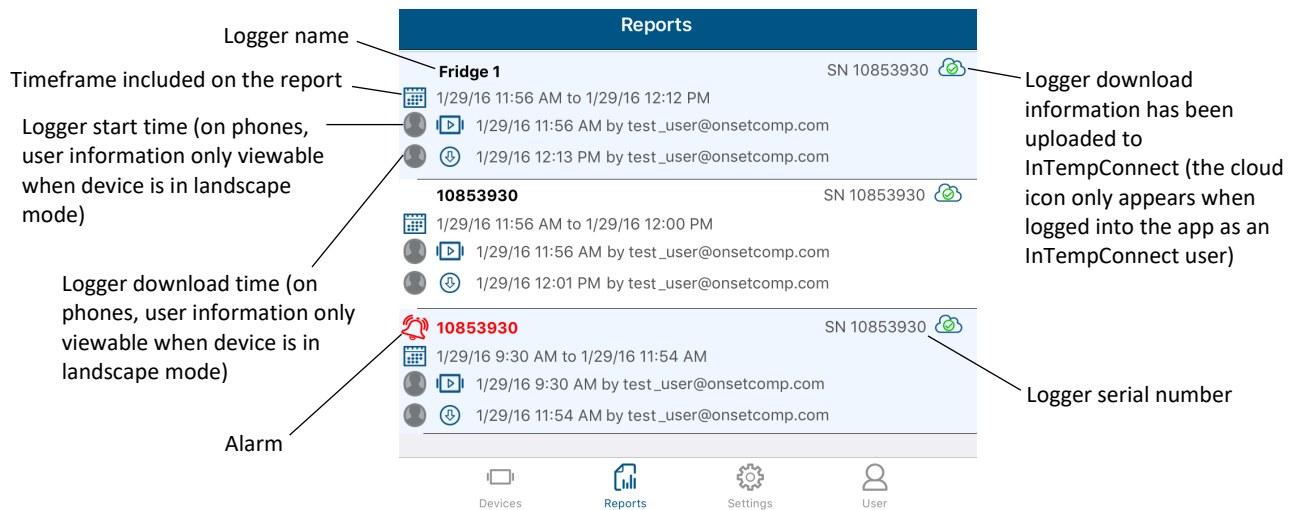
- Logged probe and/or ambient sensor readings. Readings outside the alarm limits are in red.
- Events, including tripped and cleared alarms, probe disconnects and connects (CX400 loggers only), who started the logger, downloaded it, and performed checks or missed checks (CX400 loggers only).
- Daily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



To share a report from the 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 Email Automatically 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 Share PDF, Share XLSX, or Share VFC (if enabled in Settings).
4. If Report Sharing is set to Offer All Options in Settings, then select an option for sharing the report (the options will vary based on your device). If Report Sharing is set to Email Automatically in Settings, then an email opens for you to send.

To delete a report in the app:

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

Note: If you are logged in as an InTempConnect user, the report will still be 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 App Settings

Tap the Settings icon to access the following 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 only using the app with your logger (not using InTempConnect) and logged in as a local user, the InTemp app includes presets for common profiles used by the 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 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 CX5000 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 (local users only):

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 an alarm, enable “Audible Alarm on Trip” if you want the logger to beep when a high or low alarm trips.
9. Tap Save in the Create Configuration 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 (local users only):

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 the pencil icon.
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 the pencil icon and tap Default Sort in the bottom right corner.

To copy a profile (local users only):

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 (local users only; 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.

To delete multiple profiles at a time, tap the pencil icon, tap each profile you want to delete, and then tap the trash can icon.

Reports

You can change the following report settings for the 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.
- **Record CX400 Logger Checks (local account users only; 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. Otherwise, if this setting is not enabled, the minimum and maximum values represent the entire logging period and only reset when the logger is downloaded and restarted or stopped and reconfigured (they will not reset if you download the logger and continue logging).
- **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 (local account 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 (local account users only; 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 to Factory Default or by simultaneously pressing both the top and bottom button on a CX400 series logger for three 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.
- **Capture App Diagnostics and View and Share Diagnostics.** Enable these options only when directed by Onset Technical Support.

Working with Users in the App

Tap the Users icon to log out of the app and check your user settings. If you are logged into the app with a local account, you can also add users and make changes.

Local Account Users

If you are logged into the app as a local user (not as an InTempConnect user), you can edit your local user profile, add new local users, and enable or disable local users.

To edit your user profile:

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

To add a new user:

1. Tap the Users icon and then tap All Users.
2. Tap Add User.
3. Enter the email address, first and last name, password, company (optional), notes (optional), and profile photo (optional, choose an existing photo or use the camera to take a new photo).
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 List Users on the Login screen to select a different user. **Note:** You can also set up a new profile by tapping Create User in the Login screen.

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

1. Tap the Users 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 app:

1. Tap the Users icon and then tap My User Profile.
2. Tap Logout.

InTempConnect Users

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

Chapter 4

More Information

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

For additional help with CX loggers, the CX5000 Gateway, the InTemp app, 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 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.

I see my logger in the Loggers screen in the 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, make sure you have the required privileges. Contact your administrator for help.

I was setting up my logger with the 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 are logged into the app as a local user (not using InTempConnect), 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. 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 have 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 logged in to the app as a local user (not using InTempConnect), tap Reset to Factory Default on the Set Logger Passkey screen or simultaneously press both the top and bottom buttons on the logger for three seconds (CX400 loggers only).

If you are logged in to the 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 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 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 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, 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 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?

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 Gateways at the top of the screen. Why?

You need to have Gateway Administrator rights to see Gateways at the top of the screen. Contact your InTempConnect administrator to add the privileges to your user role.

I can see the gateway in the 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 more 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 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 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.