

**Honeywell**

# Operational Intelligence

Check-In/Check-Out App

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**User Guide**

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# Customer Support

## Technical Assistance

Go to [sps.honeywell.com](https://sps.honeywell.com) and select Support to search our knowledge base for a solution or to log into the Technical Support portal.



# GETTING STARTED

The Check-In/Check-Out app (CICO) provides a way to track which users have checked out a device and when they check it back in. Users can quickly check the device in and out by scanning a barcode or entering their ID.

## Prerequisites

- Android 8 or higher
- Check-In/Check-Out app Version 1.4.0 or higher.
- Application settings need to be reviewed and customized as per customer needs. See [Check-In/Check-Out XML Configuration](#).
- Operational Intelligence Device Agent (also called SSClient) installed on the mobile computer and device onboarded to Operational Intelligence.
  - Mobility Edge devices: 5.12.03.0123\_SSClient or higher
  - EDA devices: 5.12.03.0123\_SSClient or higher
- Rules Engine app must be installed on the device if the Check-In/Check-Out app needs to check battery parameters as a precondition for check-out.
- RulesEngine.xml must be customized as required. For example, “Trigger alert when Battery cycle count > 500 or Battery Health < 50% or Battery charge level < 70%, etc.”

Within the XML configuration file in the Rules/Rules Triggers section, the intent name in Trigger by Intent/Intent Name section must be “com.honeywell.oi.rules”.

- Whitelist the following application packages if devices are running with MDM:
  - com.honeywell.oi.cico
  - com.honeywell.tools.ssclient
  - com.honeywell.tools.rulesengine

# Supported Devices

The Check-In/Check-Out app is supported on the following Honeywell mobile devices with the Android versions noted.

- CK65, CN80, CT40, CT60: Android 8 or higher
- CT45, CT45 XP, EDA52, EDA5S: Android 11 or higher
- CT40 XP, CT60 XP: Android 9 or higher
- RT10A: Android 10 or higher
- EDA51, EDA71G: Android 10
- EDA61K: Android 9 (supported with minor resolution issues)
- EDA51K: Android 10 (supported with minor resolution issues)

**Note:** *The Check-In/Check-Out app can be installed on other Op Intel compatible devices; however, it has only been qualified on the models and Android versions noted. If the app is installed on other mobile devices, you may see some screen resolution issues.*

## Installation

This section provides instructions on how to install the app on the mobile computer. See the device user guide for additional information on installing software on the mobile computer.

Follow these steps for component installation.

**Note:** *The installation steps must be performed in this order for the application to work correctly.*

1. Install the Operational Intelligence Device Agent (SS\_Client).
2. Copy the DeviceOpIntel.xml file to the following path on the mobile computer: **\Internal shared storage\honeywell\persist.**
3. Install mobile application OperationalIntelligenceRulesEngine-dubai\_81.apk.
4. Copy the RulesEngineMod.xml file to the following path on the mobile computer: **\Internal shared storage\honeywell\persist.**
5. Install mobile application Check Out/CheckIn.apk. Configure application settings as required in the CICO.xml file.
6. Restart the device.
7. Launch the application.



## Uninstalling the App

The app can be uninstalled using the standard procedure on an Android device. Before uninstalling the app, ensure the device is in a checked-out state; otherwise, the mobile computer will remain in a state with all hardware buttons deactivated, even after uninstalling.



## Configuration

The following configuration steps must be performed so that the Check-In/Check-Out app can be used with Operational Intelligence.

1. [Add Users to the System.](#)
2. [Configure the Standard Check-Out Time.](#)

**Note:** *The steps must be performed by a user with admin/device admin privileges in Operational Intelligence.*

For additional information on working with Operational Intelligence, refer to the Operational Intelligence User Guide, available for download at [sps.honeywell.com](https://sps.honeywell.com).

## Add Users to the System

The Check-In/Check-Out app allows users who do not have an email address, such as a factory or warehouse worker, truck driver, etc., to check out a device before starting their shift and check the device back in at the end of their shift.




To enable this, the user must be added to Op Intel using a unique identifier, such as an employee ID.

**Note:** *The user ID is critical information for checking out a device and assigning it to a user. Ensure this ID is unique for each user in the Organization. If an admin tries to add a user and the ID already exists for the site, Op Intel will display an error, and the user will not be added.*




When users are created, they will be assigned to a Site. For a user to check out a device with the Check-In/Check-Out app, both the user and the device must be associated with the same Site. For example, if a user from Site A is trying to check out a device that belongs to Site B, the user will not be recognized as valid because they do not belong to Site B, and they will not be able to check out the device.

## Creating Users

### To enter an individual user:



1. Log into Operational Intelligence.
2. Click  **Admin** then  **User Management**.
3. Click  **Add Users**.
4. Select the **By ID** tab.
5. Enter the new user's **First Name**, **Middle Name** (optional), **Last Name**, and **EmployeeID**.
6. Using the drop-down lists, select an **Organization** and a **Site**.
7. Click **SUBMIT**.

### To enter users By ID in bulk:

1. Click  **Admin** then  **User Management**.
2. Click  **Add Users**.
3. Select **By ID (Bulk)**.
4. Click **Download a CSV template** to get a copy of the spreadsheet you can use to upload users.
5. Create a row in the table for each user. Enter the new user's **First Name**, **Middle Name** (optional), **Last Name**, **EmployeeID**, and **Site**. When all records are entered, save the spreadsheet.
6. Drag the spreadsheet into the Add Users window or click **BROWSE FILES** to search and select the file.
7. The list of users that will be imported is displayed. To delete a user before uploading, click the trash can icon. To remove all users, click **RESET**.
8. To upload the new user records, click **SUBMIT**.

## Configure the Standard Check-Out Time

Configure the standard check-out time to define the number of hours a user is expected to have a device before checking it back in. Generally, this is seen as standard shift hours.



1. Log into Operational Intelligence.
2. Click  **Admin** then  **Site Management**.
3. Select a site.
4. Click the **Check in - Check out** tab.

5. Select the **Standard checkout time** from the drop-down list to indicate how long a user would be expected to have the device checked out. The Standard checkout time is used when generating the “Late Returns” report from Op Intel on devices that are due for check-in.

**Note:** *This change will be effective for new check-ins only and is not applicable for devices that are already checked out.*

## Create Check-In Bar Code

Create a barcode that can be scanned by users to check-out and check-in a device.

1. Log into Operational Intelligence.
2. Click  **Admin** then  **Site Management**.
3. Select a site.
4. Click the **Check in - Check out** tab.
5. Click **Create new barcode**.

A new barcode is generated, and the system displays a message indicating that the barcode was created successfully.

6. After the barcode is created you can either download the .png file or send it by email.
  - Click **Download** to save the file in your default downloads folder.
  - To send a copy of the .png file by email, either leave the **Me** radio button selected to send it to the email address associated with your login or select **Another email** and enter the recipient’s address. Click the **SEND** button.

## Check-In/Check-Out XML Configuration

This section describes how to configure application settings through the CICO.xml configuration file.

**Note:** *This file must be placed in **Internal shared storage\honeywell\persist\** with the file name "CICO.xml". The application runs with the default values shown in the following table unless the file is updated.*

Setting	Property Name	Range	Default Value
<b>Rules Engine</b>			
Rule Engine Integration Settings	IntegratedRuleEngine	0 - Skip completely 1 - Enforce 2 - Skip in case of no response	1
<b>Battery Swap</b>			
BatterySwapInterval	BatterySwap Interval	Range in minutes:  Min: 4 Max: 10	5
<b>Offline Mode</b>			
Offline mode support	OfflineModeSupport	0 - Inactive 1 - Active	1
Non-OpIntel user data synchronization frequency	UserSyncFrequency	Range in minutes:  Min: 60 Max: 1440	240
Offline transactions synchronization frequency	OfflineTransactionSyncFrequency	Range in minutes:  Min: 15 Max: 240	60
Offline transactions limit	OfflineTransactionLimit	Count range:  Min: 60 Max: 240	120
Barcode site validation data synchronization frequency	SiteValidationQueryFrequency	Range in minutes:  Min: 30 Max: 360	120
<b>ConnectionSettings</b> Default: Use ETHERNET/WIFI only			
Ethernet connection setting	Ethernet	0 - False 1 - True	1
Wifi connection setting	Wifi	0 - False 1 - True	1
WWAN connection setting	WWAN	0 - False 1 - True	0

**Note:**

- Values outside specified ranges will be replaced by default values.
- If the CICO configuration file is not installed, setting values will be taken as default.

- For the data to be synced to the cloud in the back-end, ensure that the application is not closed. Once the Check-out/Check-in is completed in offline mode, for the data to sync to cloud in the background, use app switch to move onto the required LOB app. Closing the application would stop the sync, and the next sync would happen only on app launch.
- CICO file settings need to be specified and installed through the Web Op Intel platform by the Org/Site admin.

The following example shows a typical CICO settings configuration using default values:

```
<ConfigDoc name="Cico">
  <Version>1.0</Version>
  <RulesEngine>
    <IntegratedRuleEngine>1</IntegratedRuleEngine>
  </RulesEngine>
  <BatterySwap>
    <BatterySwapInterval>5</BatterySwapInterval>
  </BatterySwap>
  <OfflineMode>
    <OfflineModeSupport>1</OfflineModeSupport>
    <UserSyncFrequency>240</UserSyncFrequency>
    <OfflineTransactionSyncFrequency>60</OfflineTransactionSyncFrequency>
    <OfflineTransactionLimit>120</OfflineTransactionLimit>
    <SiteValidationQueryFrequency>120</SiteValidationQueryFrequency>
    <ConnectionSettings>
      <Ethernet>1</Ethernet>
      <Wifi>1</Wifi>
      <WWAN>0</WWAN>
    </ConnectionSettings>
  </OfflineMode>
</ConfigDoc>
```

**Note:** This file must be placed in the **Internal shared storage\honeywell\persist\** folder on the mobile device with the name "CICO.xml".





# USING THE APP

This section describes how to use the Check-In/Check-Out app after it has been installed on a mobile computer.

After a user launches the app, two operations can be performed:

- Check Out - Allows the user to register who is using the device, report if the device was damaged when it was received, and check if the battery is charged or if it is working correctly.
- Check In - Allows the user to return the device, verify that the device is returned to the correct site, and report if it suffered any damage while it was checked out.

## Check Out a Device

When a user gets a mobile computer, they will be restricted from using the device until it is checked out. A user can check out a device either by scanning a barcode or by entering their ID manually.

## Check Out a Device Using a Barcode

Follow these steps to check out a mobile computer by scanning a barcode.

1. Turn on the device. The Check-In/Check-Out app will launch automatically.

**Note:** *When the application first opens, the scanner can only be used to read the barcode to let the user complete the checkout process. Other functionalities like scanning a barcode to open a web page, etc., are blocked temporarily until checkout is complete. On successful completion of check out, the application can be exited, and the user can continue with their job.*

2. Point the scanner at the barcode and tap the **SCAN** button on the touch panel or press one of the scan buttons on either side of the device.
3. If you notice any issues with the device, such as some damage, you can enter a note. Tap the text box and use the virtual keyboard to enter a description of the

issue. The maximum number of characters that can be entered is 32. After the description is entered, tap the **CONTINUE** button.

If there are no issues to report, tap the **SKIP** button.

4. The app indicates that check-out is successful by displaying the user's name.

## Check Out a Device by Signing in Manually

If a barcode is not available, follow these steps to check out a mobile computer by signing in manually.

1. Turn on the device. The Check-In/Check-Out app will launch automatically.
2. On the app home screen, tap **Sign in manually**.
3. Tap the **Enter your employee ID** field and enter the assigned ID.
4. If you notice any issues with the device, such as some damage, tap the text box and use the virtual keyboard to enter a description of the issue. The maximum number of characters that can be entered is 32. After the description is entered, tap the **CONTINUE** button.
5. Tap the **SUBMIT** button.
6. The app indicates that check-out is successful by displaying the user's name.

## Troubleshooting the Check-Out Operation

If any of the following issues occur, the user will be prevented from checking out the device until the issue is resolved.

Alert	Cause
Employee ID Error	Occurs if the worker is not registered or is not assigned to the correct Org/Site. The alert asks the user to retry the Check Out process. If the employee ID is entered again and the same error is shown, contact the Org/Site admin to verify if the user is assigned to the correct Org/Site or is not registered.
Session Warning	Occurs if the worker currently has another device checked out. The other device must be checked back in before the user can check out another unit. If the user does not have another device checked out, contact the administrator.
Low Battery	Occurs if the battery charge level is lower than a designated amount. Replace or charge the battery before checking it out.
Battery Damaged	Occurs if there is an issue with the battery health. Replace the battery before checking it out.

To resolve a battery issue, the user can perform one of the following actions to swap the battery without turning off and restarting the device.

Refer to the device user guide for more information on which Battery Swap Mode is supported by your device and for instructions on working with the battery.



**Warning:** Before you attempt to use, charge or replace the battery in the device, carefully read all labels, markings and product documentation provided in the box or online at [sps.honeywell.com](https://sps.honeywell.com). To learn more about Battery Maintenance for Portable Devices, go to [honeywell.com/PSS-BatteryMaintenance](https://honeywell.com/PSS-BatteryMaintenance).

The Battery Swap Time Interval is specified in minutes (Default = 5, Maximum = 10) by the Org/local admin in the CICO configuration file. (See [Check-In/Check-Out XML Configuration](#) for details.)

If the battery is replaced within the Battery Swap Time Interval, the Check-In/Check-Out app will proceed with the pending Check-Out task from the latest app status. If it is not replaced within that time, the user will be redirected to the Home screen and the Check-Out process flow will need to be performed from the beginning.

- Hot Battery Swap:
  - a. Remove the discharged/damaged battery.  
Once the battery is removed, the user will need to insert a new battery within the Battery Swap Time Interval to ensure that any current CICO Check-Out status gets lost.
  - b. Insert a fully charged battery.
  - c. If the new battery is healthy and fully charged, any pending CICO Check-Out tasks will be completed.
- Warm Battery Swap:
  - a. Press and hold the Power on/off button on the device until a menu displays on the screen.
  - b. Select the Swap Battery option.
  - c. An alert screen will be displayed on the device showing a guide to complete the Battery Swap process including the Battery Swap Time Interval during which the user will be able to remove and insert a new battery before the device turns off and current CICO Check-Out status gets lost.
  - d. Remove the discharged/damaged battery.
  - e. Insert a fully charged battery.
  - f. If the new battery is healthy and fully charged, any pending CICO Check-Out tasks will be completed.

## Check In a Device

Follow these steps to check in a device.

1. Open the Check-In/Check-Out app.
2. Tap **CHECK-IN DEVICE**.
3. If you notice any issues with the device, such as some damage, you can enter a note. Tap the text box and use the virtual keyboard to enter a description of the

issue. The maximum number of characters that can be entered is 32. After the description is entered, tap the **CONTINUE** button.

If there are no issues to report, tap the **SKIP** button.

4. To check the device in using a barcode, tap the **SCAN** button. When the barcode screen is displayed, point the device at the barcode and press **SCAN** on the touch panel or press one of the scan buttons on the side of the device.

To check the device in by manually entering a code, tap **ENTER MANUALLY**. Enter the code assigned to the Org/Site in the text field then tap the **SUBMIT** button.

5. The app indicates **Check-in successful**.

## Troubleshooting Check In

Alert	Cause
Wrong location	Occurs if the check-in code is incorrect for the site. The user will be prompted to perform the process again. If the user performs the operation again and the same alert appears on the screen, contact the Org/Site admin to verify if the barcode belongs to the Org/Site of the device.

## Offline Mode

The Check-In/Check-Out application provides offline support to ensure user operations are unaffected in case of temporary network fluctuations. This is achieved by syncing the user database check-in barcode information from the cloud to the device at regular intervals in the back-end and also syncing the check-in information from the device to the cloud at regular intervals when the network is stable.

Review the CICO application configuration to fine tune the data sync frequencies and network selection as per business needs.

Notes:

- CICO app will have to complete at least one "Check-Out" online operation with a network connection to ensure data sync with Web Op Intel.
- All data related to the user's site (like Site Barcode) will be updated onto the device with any CICO online operation. If the device has been used in Offline mode, the user will need to confirm with the local admin if any user's site data was updated since the last time the device was online to return to Online mode device operation.
- Once the user completes a Check-In or Check-Out online operation, all CICO operations that have been completed in Offline mode will be synced with Web Op Intel within the time frame specified in the CICO.xml configuration file.

# Viewing Reports

Op Intel generates event reports based on activities such as late check-ins or damaged returns. You can view reports in the Op Intel **Reports** menu.

To view reports, log into Operational Intelligence. Select the **Reports** menu then select **Event Reports**.

The following options are available:

- All Reports: Choose “Check in - Check out” as the **Report**, select a **Timespan**, then select “All” from the **Template** drop-down list.
- Late Returns Report: Choose “Check in - Check out” as the **Report**, select a **Timespan**, then select “Late Returns” from the **Template** drop-down list.
- Damaged Returns Report: Choose “Check in - Check out” as the **Report**, select a **Timespan**, then select “Damaged Returns” from the **Template** drop-down list.

The Reports window will display the details of each event in the selected Timespan, including Device Alias, Assigned User, Check out Time, Due Date, Check in Time, and any Notes entered when the device was checked in or out.





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