

Honeywell

Operational Intelligence

Check-In/Check-Out App

User Guide

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Customer Support

Technical Assistance

Go to 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. (See [Supported Devices](#) for specific OS requirements.)
- Check-In/Check-Out app Version 1.4.2 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 has been verified on the following Honeywell mobile devices with the Android versions noted.

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.*

- CT60: Android 8 through Android 11
- CK65, CN80, CT40: Android 8 through 10
- CT45 XP: Android 11
- CT40 XP: Android 9 and 10
- CT60 XP: Android 9 through 11
- RT10A: Android 10 and 11
- EDA51, EDA51K, EDA71G: Android 10
- EDA61K: Android 9
- EDA71: Android 8 and Android 10
- CW45: Android 12

Note: *The 8675i scanner was used for to qualify the CW45, CT60, and EDA51 mobile computers.*

Installation

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

Download apk Files

The current versions of installation files can be downloaded at honeywell.com/PSSsoftware-downloads. The Check-In/Check Out apk is located under **Software > Software and Tools > CICO - Operational Intelligence**.

- Installation files for Mobility Edge devices (i.e., CT40, CK65) are in the **Dubai Release** folder.
- Installation files for ScanPal devices (i.e., EDA51, EDA5S) are in the **EDA Release** folder.

Be sure that you are using the correct apk files for your device type.

Install Components

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-<xxx-xxx>.apk (where <xxx-xxx> represents the model type and version number).
4. Copy the RulesEngineMod.xml file to the following path on the mobile computer: **\\Internal shared storage\\honeywell\\persist.**
5. Install mobile application com.honeywell.oi.cico<x.x.x-xxx>.apk (where <xxx-xxx> represents the version number and model type).
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.

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 or email address.

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 by Email or ID:



1. Log into Operational Intelligence.
2. Click  **Admin** then  **User Management**.
3. Click  **Add Users**.
4. Select a tab based on how the user will be identified in the system: **By Email** or **By ID**.
5. Enter the new user's **First Name**, **Middle Name** (optional), **Last Name**, and **Login Email** address or **EmployeeID**.
6. Using the drop-down lists, select an **Organization** and a **Site**.
7. If the user is being entered By Email, select a user role.
8. Click **SUBMIT**.

To enter users By Email or By ID in bulk:

1. Click  **Admin** then  **User Management**.
2. Click  **Add Users**.
3. Select **By Email (Bulk)** or **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.
 - To add users by Email, enter the new user's **First Name**, **Middle Name** (optional), **Last Name**, **Login Email**, **Site**, and **Role**.
 - To add users by ID, 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 options for configuring 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 |
|--|---------------------------------|---|---------------|
| RulesEngine | | | |
| Rule Engine Integration Settings | IntegratedRuleEngine | 0 - Skip completely 1 - Enforce 2 - Skip in case of no response | 1 |
| BatterySwap | | | |
| BatterySwapInterval | BatterySwap Interval | Range in minutes: Min: 4 Max: 10 | 5 |
| OfflineMode | | | |
| Offline mode support | OfflineModeSupport | 0 - Inactive 1 - Active | 1 |
| Offline mode reattempt count | OfflineModeReattemptCount | Range in minutes: Min: 1 Max: 15 | 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 |

| Setting | Property Name | Range | Default Value |
|---|--------------------------|--|-----------------------|
| ConnectionSettings 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 |
| OnlineMode | | | |
| Online Mode Reattempt Count | OnlineModeReattemptCount | Count range: Min: 1 Max: 15 | 10 |
| External Scanner | | | |
| External Scanner Support | ExternalScannerSupport | 0 - False 1 - True | 1 |
| Scanner Priority This parameter indicates the priority and sequence for scanner selection. | ScannerPriority | Internal, External External, Internal | Internal, External |

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.

Sample CICO.XML

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

```
<ConfigDoc name="Cico">
  <Version>1.2</Version>
  <RulesEngine>
    <IntegratedRuleEngine>1</IntegratedRuleEngine>
  </RulesEngine>
  <BatterySwap>
    <BatterySwapInterval>5</BatterySwapInterval>
  </BatterySwap>
  <OfflineMode>
    <OfflineModeSupport>1</OfflineModeSupport>
    <OfflineModeReattemptCount>1</OfflineModeReattemptCount>
    <UserSyncFrequency>240</UserSyncFrequency>
    <OfflineTransactionSyncFrequency>60</OfflineTransactionSyncFrequency>
    <OfflineTransactionLimit>120</OfflineTransactionLimit>
    <SiteValidationQueryFrequency>120</SiteValidationQueryFrequency>
    <ConnectionSettings>
      <Ethernet>1</Ethernet>
      <Wifi>1</Wifi>
      <WWAN>0</WWAN>
    </ConnectionSettings>
  </OfflineMode>
  <OnlineMode>
    <OnlineModeReattemptCount>10</OnlineModeReattemptCount>
  </OnlineMode>
  <Scanner>
    <ExternalScannerSupport>1</ExternalScannerSupport>
    <ScannerPriority>Internal, External</ScannerPriority>
  </Scanner>
</ConfigDoc>
```

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

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.

Note: *The digital SCAN button will be disabled when using an external scanner because the barcode service SDK does not support that functionality for the ring scanner. For a CW45 mobile computer, the digital SCAN button will always be disabled.*

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 |
|-----------------|--|
| User not found | 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. |

| Alert | Cause |
|-----------------|--|
| 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. To learn more about Battery Maintenance for Portable Devices, go to 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 on the touch panel or press one of the scan buttons on either side of the device.

Note: *The digital SCAN button will be disabled when using an external scanner because the barcode service SDK does not support that functionality for the ring scanner. For a CW45 mobile computer, the digital SCAN button will always be disabled.*

5. 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.

6. 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 so that users can perform the check-in and check-out operations without having an Internet connection on the mobile device.

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.

When the device is in Offline mode, a banner will be displayed at the top of the screen indicating, "Application is working offline."

Notes:

- The 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.
- After all offline transactions are successfully synchronized within the configured time, the banner will no longer be visible.

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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