Honeywell

Operational Intelligence

Indoor Positioning Service for Mobile Computers

Implementation Guide

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Customer Support

Technical Assistance

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to www.hsmcontactsupport.com.

For our latest contact information, see www.honeywellaidc.com/locations.

CHAPTER

1 INTRODUCTION

Honeywell Operational Intelligence Performance Management offers an indoor positioning service (IPS) for mobile computers based on existing wi-fi infrastructure.

Operational Intelligence Performance Management employs the Site Survey application on a mobile computer to “fingerprint” zones so that devices can be tracked to a 10mx10m area.

Note: *Operational Intelligence Performance Management offers a second solution for locationing using Access Points. The Access Point solution requires less setup time but is also less precise than fingerprinting. For more information about the Access Point solution, see the Operational Intelligence Performance Management User Guide.*

Requirements

- Location services must be enabled on the mobile computer.
- The mobile computer must be connected to a network with internet access.
- Contact your local administrator for the following:
  - User access to Operational Intelligence Performance Management
  - Site Survey app installation file

CHAPTER

2 SETTING UP INDOOR POSITIONING

Implementing the IPS requires a combination of the Operational Intelligence Performance Management portal, the Site Survey app on the device, and Enterprise Provisioner.

Fingerprinting Tips

- A zone takes approximately one minute to fingerprint.
- A floor takes approximately 20-25minutes to fingerprint.
- Repeat the fingerprinting process whenever there are major changes to the store infrastructure or floor layout.

Steps for Setting Up Indoor Positioning

The following steps must be completed in the order shown below:

1. Create a Zone Map
2. Set Up Location
3. Install Site Survey
4. Fingerprint All Zones
5. Upload Fingerprints
6. Enable Tracking and Verify Zones
7. Enroll Device
8. Configure Background Tracking
9. Verify Location

Step 1: Create a Zone Map

Divide each floor into 10m x 10m zones.

Zones can be equidistant or functional (e.g., by department). A floor of a typical store can be broken into 16 zones.

Step 2: Set Up Location

Create sites, buildings, floors and zones in the Operational Intelligence Performance Management portal.

(See the *Operational Intelligence Performance Management User Guide*.)

Step 3: Install Site Survey

Install the app as per the "Software Update" instructions in the most recent version of the device's user guide. Because of the evolving nature of the operating system, the user guide will be the best source for installation instructions.

Software Installation Tips

- Device user guides are available at honeywellaidc.com
- Provisioning mode must be turned on
- Device must be connected to a computer via USB
- USB connection must be configured for transferring files or photos
- OTA version must be up to date

Step 4: Fingerprint All Zones

1. Swipe up from the bottom of the Home screen on the mobile computer to access all apps.
2. Tap **Site Survey** .
3. Tap **ALLOW** to give Site Survey access to the mobile computer's files.
4. Tap **ALLOW** to give Site Survey access to the mobile computer's location.
5. A series of help screens explaining the fingerprinting process will display. Tap **NEXT** to proceed through each screen or tap **SKIP**.
6. Tap **GET STARTED**.
7. If you have already enrolled in Operational Intelligence Performance Management, enter your email and password, then tap **SIGN IN**. Otherwise, tap **Create an account** and follow the prompts.
8. If you have trouble logging in or creating an account, tap **Contact support** or contact your local administrator.
9. Select a site by tapping the site name or using the Search field.
10. Tap **NEXT**.

11. Select at least one wi-fi network by tapping the corresponding check box. Be sure to select only known local networks.
12. Tap **SAVE**.

    The app will load the corresponding building, floor and zone information for the selected site (see Set Up Location on page 4).
13. Click **Select** below **Building** to list the available locations for that site.
14. Tap a building name.
15. Tap **Select** below **Floor**
16. Tap the floor where the mobile computer is located.

    A list of zones on that floor will display.
17. Optional: filter the list of zones by tapping below **Zone** at the top of the screen.
18. Tap on a zone in the list to select it.
19. Optional: Turn off wi-fi on the mobile computer to increase fingerprinting speed.
20. Follow the on-screen directions and scan for access points (APs) in four directions. It does not matter which direction you begin with, but each scan must be 90 degrees from the previous scan. Do not move the mobile computer during scanning. To begin a scan, tap **START**. To clear a scan, tap 🗑.
21. Once all four scans are complete, tap **SUBMIT**.
22. Repeat fingerprinting actions 18-21 for all zones.
23. If you turned wi-fi off, re-enable it.

Step 5: Upload Fingerprints

1. Tap ≡ to access the menu.
2. Tap **Upload Fingerprints** > **UPLOAD FINGERPRINTS**.
3. A confirmation message will display once the upload is complete.
4. Tap ← to return to the main screen.

Step 6: Enable Tracking and Verify Zones

1. Tap ≡.
2. Tap **Track** > **START TRACKING**.
3. Tap ≡ then **Track Logs.**
4. Verify that all zones are sending data.
5. If a zone is not sending data, re-fingerprint that zone. (See Step 4: Fingerprint All Zones on page 4).

Step 7: Enroll Device

1. Access the Operational Intelligence Performance Management portal.
2. Add the mobile computer as per the *Operational Intelligence Performance Management User Guide*.

Step 8: Configure Background Tracking

Note: *Enterprise Provisioner (EP) is an application used to configure Honeywell Android devices.*

Web Version of EP

1. Access the Operational Intelligence Performance Management portal.
2. Click **Software Updates** on the navigation bar.
3. Click **Enterprise Provisioner**.
4. Select “indoorlocation” from the **Driver settings package** drop-down list.
5. Click the **TrackingEnabled** check box to select it.
6. Set a tracking interval.
7. Select the number of scans in each packet.
8. Enter your network’s name in the **SSID** field. (If the **SSID** field is hidden, click the plus sign next to **Network Entry**.)
9. Generate a bar code and scan it with the device.

   Or

   Export the configuration file as an .xml file and install it on the mobile computer as per the device’s user guide.

Desktop Version of EP

1. Downloaded the EP indoor location bundle from the Honeywell software website at hsmftp.honeywell.com.
2. Unzip the settings package.
3. Copy the unzipped folder to C:\Honeywell\EnterpriseProvisioner\package.nw\pkg\
4. Open EP and complete actions 4-9 as in the web version.

Click the **Help** tab in Enterprise Provisioner to access the user guide for more information about configuring devices.

Step 9: Verify Location

1. Access the Operational Intelligence Performance Management portal.
2. Click **Assets > Mobile Computers**.

   The device's building, floor and zone should now display.

Indoor positioning setup is now complete.

CHAPTER

3 SITE SURVEY SETTINGS

Use the Site Survey settings to customize Site Survey options and maintain site and wi-fi network assignment.

To access settings, open the Site Survey app and tap ≡.

General Settings

Tap ≡ then tap **Settings**.

Setting	Description
Records Per Track Request	How many wi-fi scan results will be sent in one tracking request. The default is 1.
Track Request Interval in Sec	The duration between successive tracking packets. The default is 3 seconds.
Directed Scan Api Availability Status	Whether or not the device's OS supports directed scan API. If the status displays "Not Available", please contact technical support.
App Version	Displays the Site Survey version installed on the device.
Export Application Logs	Device logs will be exported as a text file to storage/ips/fingerprint_logs on the mobile computer.

Changing Site

You can reassign a mobile computer to a new site in Site Survey.

Note: *All data for the previous site will be deleted for that device.*

1. Tap ≡.
2. Tap the arrow to the right of the current location name listed below **Site.**
3. If other sites are available, select a site by tapping the site name or using the Search field.
4. Tap **NEXT**.

5. A message will display asking you to confirm that you want to change sites. Tap **Yes**.
6. Repeat the fingerprinting process for the new site. (See "Steps for Setting Up Indoor Positioning" on page 3.)

Changing Wi-Fi Network

After fingerprinting a device, you can change which network(s) Site Survey uses by tapping ≡ then tapping the arrow to the right of the current network name displayed below **Wi-Fi Network.**

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