AP as a Gateway

Access Point as a BLE Gateway

Depending on the type of Cisco access points (AP), you can configure an AP as one of the following types of Bluetooth Low Energy (BLE) gateways:

- **Base BLE Gateway**: The Base BLE gateway is a type of AP that you can configure in different modes (Transmit, Scan, or Dual).
- **Advanced BLE Gateway:** The advanced BLE gateway is an AP that is installed with an IoX Application. Using the installed IoX Application, you can configure floor beacons on the Cisco-partnered Device Manager website.

You can configure this AP (which is now a base or advanced gateway) in **Scan** mode, **Transmit** mode, or **Dual** mode. In the **Transmit** mode or **Dual**, mode the AP can broadcast iBeacon, Eddystone URL, and Eddystone UID profiles.

In the **Scan** mode, the AP can scan the vicinity for other BLE devices. Using gRPC on the AP, the AP sends the scanned data to Cisco Spaces: Connector. The AP can also receive telemetry data from floor beacons. The IoT Service dashboard decodes and displays this information.

Configure an AP as a Bluetooth Low Energy (BLE) Gateway

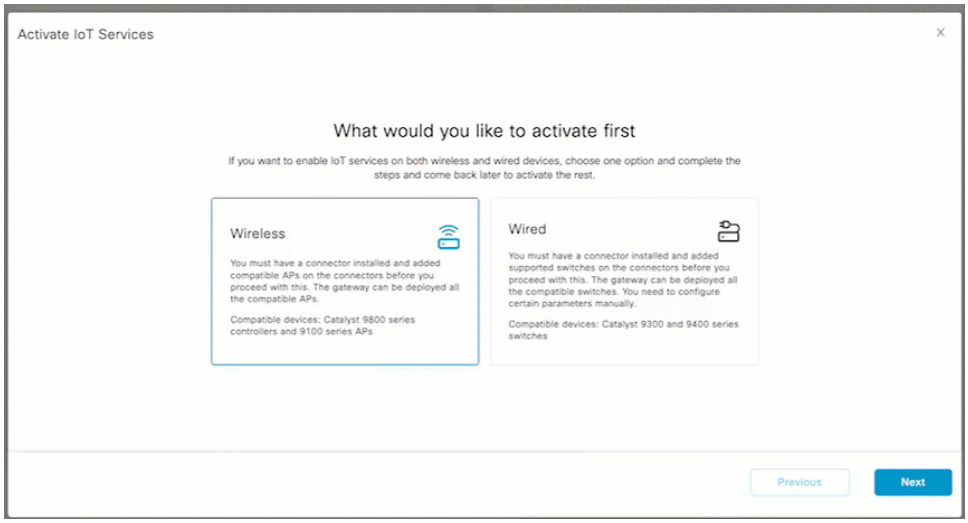
This task enables an access point (AP) to act as a BLE gateway. For more information, see Access Point as a Gateway.

Step 1 From the Cisco Spaces dashboard, navigate to **IoT Service > IoT Gateways > AP Gateway**.

Step 2 Click **Add New Gateways**.

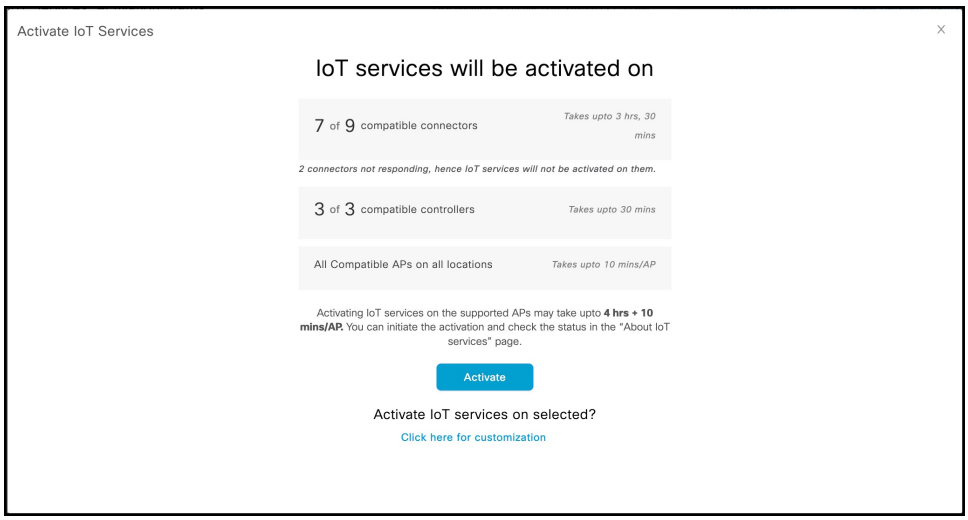
Step 3 In the **Activate IoT Services** window that is displayed, choose **Wireless**.

Figure 1: Activate IoT Service (Wireless)



You can see the list of all devices on which IoT service (wireless) can be activated, along with the activation time.

Figure 2: List of Supported Devices

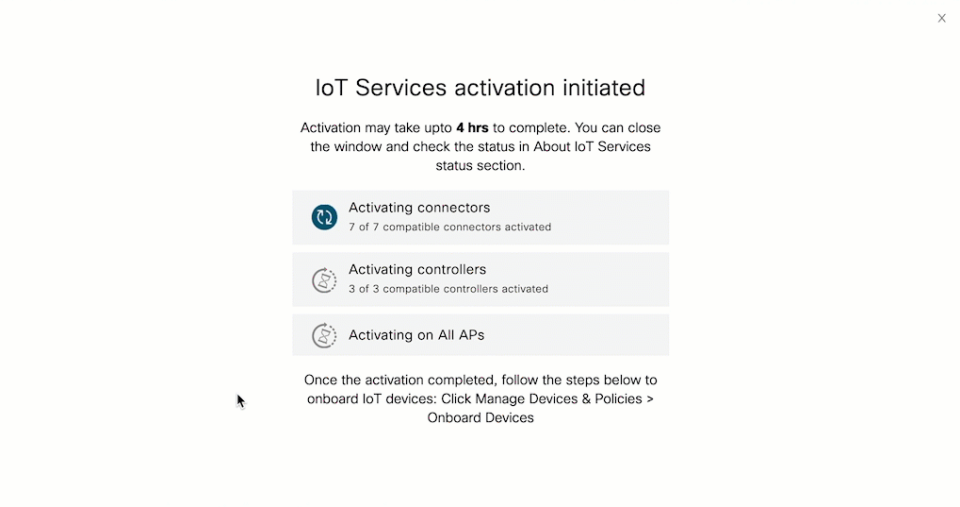


Step 4 To activate IoT service (wireless) on all devices on your network, in the **IoT services will be activated on** window, click **Activate**.

This activation of IoT service (wireless) automates the following tasks:

- Enables IoT streams on the connector
- Enables the wireless controller stream
- Configures APs as a Bluetooth Low Energy (BLE) gateway (this includes turning on the BLE radio, BLE scanning, and deploying the BLE gateway app)

Figure 3: Activate IoT Service (Wireless) on All Devices



Step 5 To activate IoT service (wireless) only on specific devices of your network, do the following:

a) Choose one or more connectors to activate IoT service (wireless).

b) To activate the wireless gateway, click **Activate Wireless**.

c) In the **Deploy Wireless Gateway** window, select the APs on which you want to activate IoT service (wireless).

Figure 4: Activate IoT Service (Wireless) on Preferred Devices

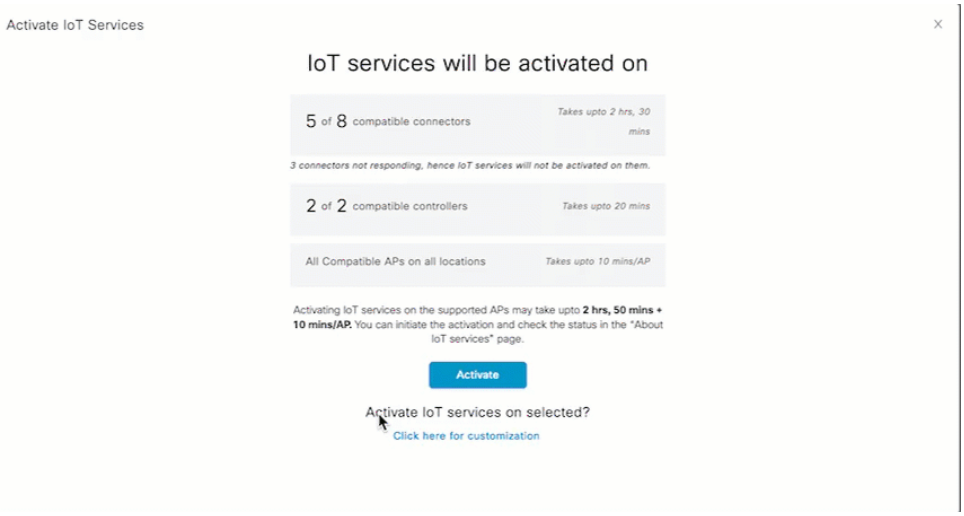
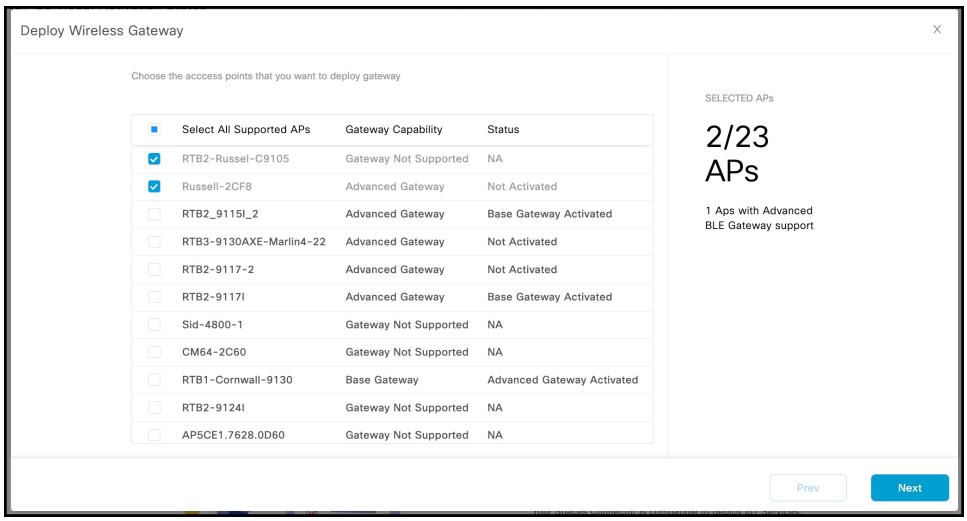


Figure 5: Activate IoT Service (Wireless) on Preferred Devices



What to do next

Once the activation completed, you can onboard the IoT Service (Wireless) devices. Click **Manage Devices & Policies > Onboard Devices**.

Uninstall or Upgrade an IOx Application on an Advanced Gateway

You can uninstall or upgrade IOx applications on advanced gateways. The Cisco Spaces: BLE Management is one such application.

Before you begin

Ensure that you have configured an access point (AP) as an advanced gateway.

Step 1 From the Cisco Spaces dashboard, navigate to **IoT Service > IoT Gateways > AP Gateways** and click **All APs.**

Step 2 Click the MAC address of the AP to open the detailed **AP** page.

Step 3 In the **App Management** section, you can see the applications available for un-installation or upgrade. Do one of the following:

- To uninstall, click the uninstall icon near Cisco Spaces: BLE Management.
- To upgrade, check if a version is available for upgrade near the Cisco Spaces: BLE Management and click it.
- To upload tech-support files to the connector, click the gear icon.

Figure 6: Uninstall or Upgrade Cisco Spaces: BLE Management

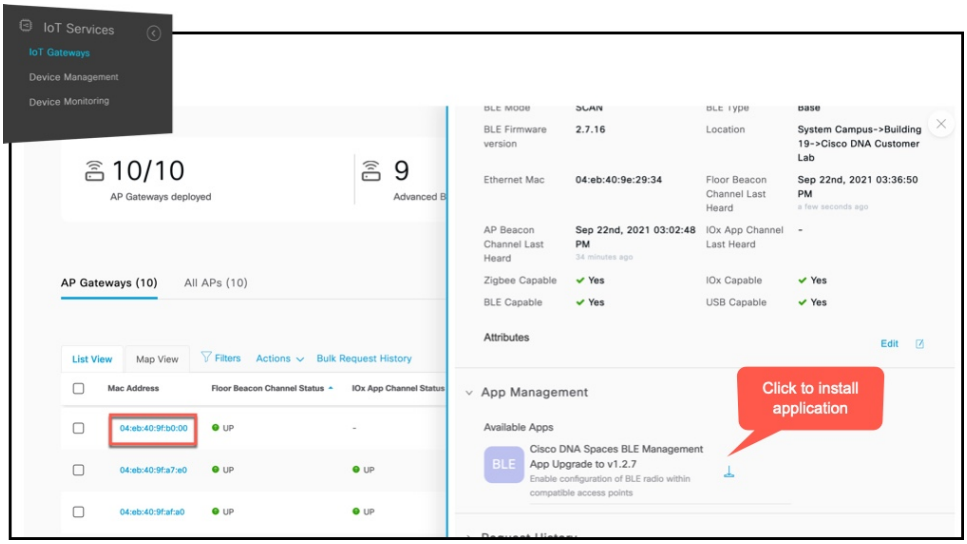


Figure 7: Uninstall Cisco Spaces: BLE Management

A gear icon appears beside the application that allows you to upload log files to connector. You can also download these files to assist a technical support team.

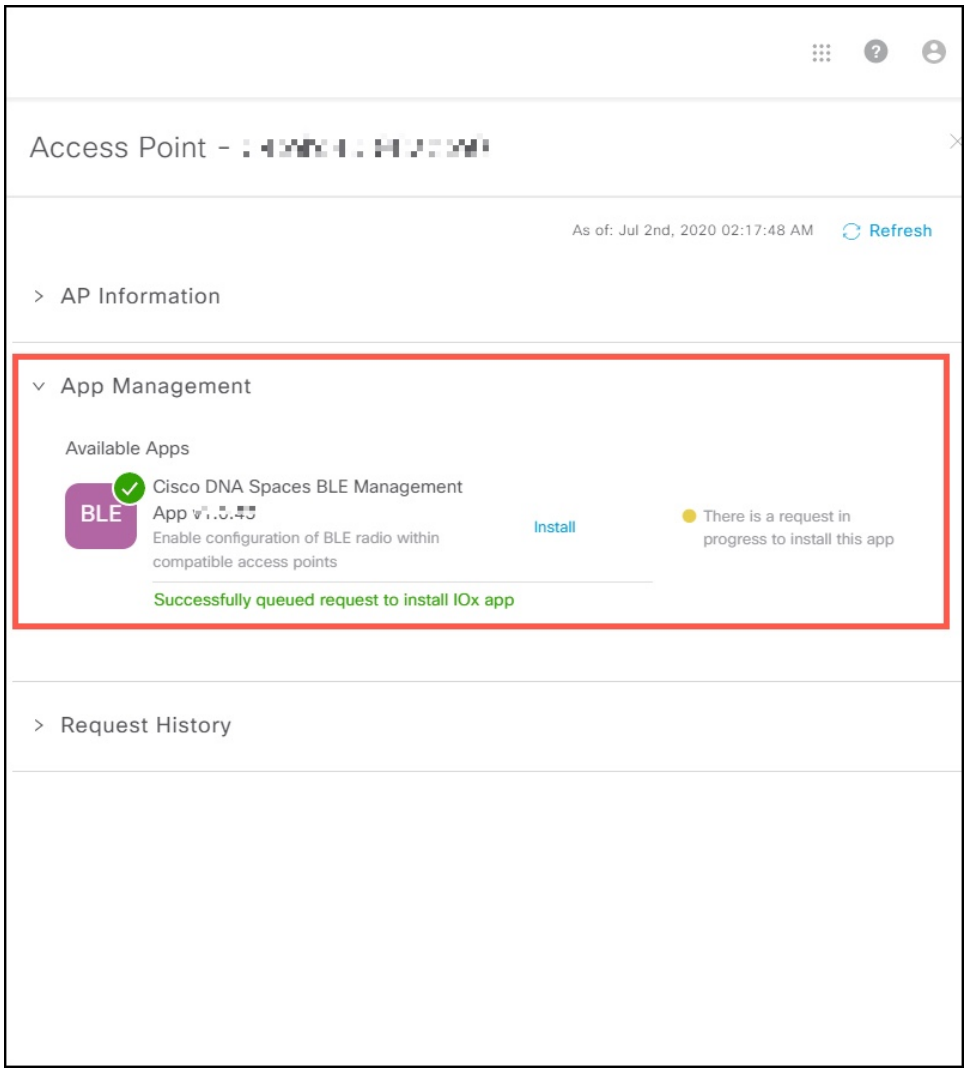
Figure 8: Technical Support Log Files

Step 4 Enter the credentials needed for authentication on the AP.

Note The authentication request to the APs includes these credentials, after which IoT Service does not retain these credentials.

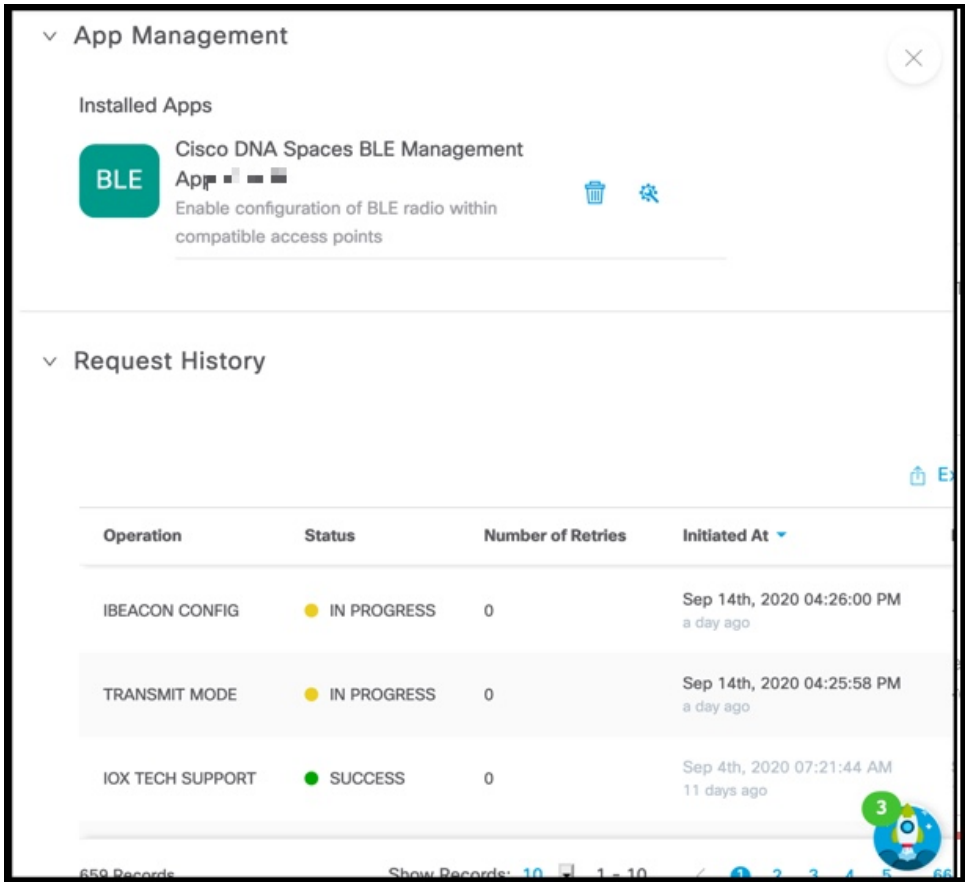
The AP which is the advanced gateway receives these change requests. You can observe the progress on the displayed page.

Figure 9: App Management: Progress of Uninstall or Upgrade



You can also check the status of deployment by clicking **Request History**.

Figure 10: Uninstall or Upgrade Status in the Request History Area



The **Status** column shows the status of Uninstall or Upgrade on each AP.

- SUCCESS: Uninstall or Upgrade of application on the AP was a success.
- FAILURE: Uninstall or Upgrade of application on the AP was a failure.
- IN PROGRESS: Uninstall or Upgrade of application on the AP is still in progress.

You can also check the status of AP gateway deployment by clicking the **Deployment status** icon in the top-right corner of the dashboard (in the **AP Gateways** page). Here you can see the deployment status of a base or advanced gateway at a more detailed level. You can see whether the gateway is enabled, whether it is in the scan or transmit mode, whether configurations are being pushed on to the gateway, or if the gateway is capable, or the status of IOX installation. Unlike bulk history, here you can view the details of an individual AP gateway. If the gateway deployment fails, the reasons are listed here.

Figure 11: Deployment Status

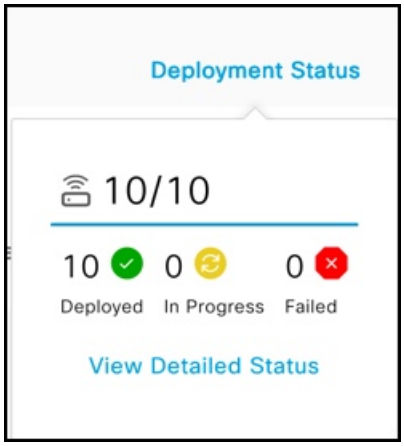


Figure 12: Deployment Status