# Gateway Service with Sensor Connect


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## Gateway Service overview and operating model

The Cisco Spaces: Gateway Service is an edge service that runs on Cisco Spaces: Connector 3. It connects Cisco wireless infrastructure, including access points and Cisco Catalyst 9800 Series Wireless Controllers, to the Cisco Spaces cloud.

Gateway Service receives telemetry from access points and wireless controllers. It forwards telemetry to Cisco Spaces and supports local telemetry distribution to partner applications. Gateway Service serves as the primary telemetry ingestion service for AP data on Connector 3.

**Note** This service works with Sensor Connect. For more information, refer to Connector Gateway with Sensor Connect and Cisco Sensor Connect for IoT Services.

Gateway Service supports the following telemetry and management workflows:

- Receives BLE, UWB ad GNSS telemetry from access points through gRPC streams.
- Receives TDL telemetry subscription data from Cisco Catalyst 9800 Series Wireless Controllers.
- Forwards telemetry to Cisco Spaces through WebSocket data channels.
- Sends telemetry locally to partner applications through Local Firehose.

## Gateway Service Operating Principles

Each supported access point establishes one gRPC session to the Gateway Service. The gRPC session uses bidirectional streaming and requires certificate validation and token-based authentication.

Cisco Catalyst 9800 Series Wireless Controllers are used to deliver gRPC configuration to access points and to send TDL telemetry to the Gateway Service. The connector uses NETCONF to onboard controllers and configure the required certificates and telemetry settings.

In high availability deployments, two Gateway Service instances share a virtual IP address. The active instance handles gRPC and cloud traffic. The backup instance monitors health and takes over if the active instance fails.

# Configure Gateway Service with Sensor Connect

Use this procedure to add the Gateway Service to Cisco Spaces: Connector 3 and to onboard a Cisco Catalyst 9800 Series Wireless Controller.

**Before you begin**

Ensure that these prerequisites are met.

- Cisco Spaces: Connector 3 July 2026 OVA and above is deployed.
- The connector has network reachability to Cisco Spaces.
- The connector can reach a DNS server.
- If you use an explicit proxy, Connector 3 can communicate through it.
- The Cisco Catalyst 9800 Series Wireless Controller has NETCONF enabled and the minimum required version for Controller is 26.1.2.
- The controller is reachable from the connector.
- Firewall rules allow the required Cisco Spaces endpoints and ports.

**Note** **service-manager** is selected by default. Existing IoT Wireless Customers need to remove IoT Service before adding Gateway Service.

**Procedure**

**Step 1** In the Cisco Spaces dashboard, click **Setup**, and choose **Wireless Networks**.

**Step 2** In the Connect your wireless network window, go to **Step 2**, and click **View Connectors**.

**Step 3** In the connector details window, click **Add Services**.

**Step 4** In the **Add Services** window, choose **Gateway**, and click **Add**.

**Step 5** After the **Gateway** service is installed and running, click **Add Controller** service.

**Step 6** Enter the Cisco Catalyst 9800 Series Wireless Controller details in the required fields:

- **Controller IP Address**
- **Username**
- **Password**

**Step 7** Submit the details to onboard the controller.

The connector onboards the controller through NETCONF.

**Step 8** Verify the onboarding status from the connector CLI:

For example,

```
connectorctl -s gateway onboarding list
  {
    "ctlrConnectId": "ee1e9eb9-b56d-40bf-825a-d5d6cf256eeb",
    "host": "172.19.32.20",
    "status": "SUCCESS",
    "currentStep": "COMPLETE",
    "attempts": 1,
    "otpStatus": "CONFIGURED",
    "otpMessage": "OTP installed successfully on controller",
    "netconfStatus": "SUCCESS",
    "netconfMessage": "Connection with eWLC is successful"
  }
```

```
connectorctl -s gateway onboarding status -i <ctlrConnectId>
{
  "ctlrConnectId": "ee1e9eb9-b56d-40bf-825a-d5d6cf256eeb",
  "host": "172.19.32.20",
  "status": "SUCCESS",
  "currentStep": "COMPLETE",
  "metrics": "OnboardingMetrics{host='172.19.32.20', ctlrConnectId='ee1e9eb9-...', attempts=1,
duration=15234ms, status=SUCCESS, failure='null'}"
}
```

# Gateway Service Components

***Table 1: Gateway Service Components***

| Component | Description |
|---|---|
| Access Points | Supported Cisco access points establish gRPC sessions with Gateway Service and send BLE and UWB. |
| Cisco Catalyst 9800 Series Wireless Controllers | Controllers provide AP gRPC configuration through CAPWAP and send TDL telemetry through gRPC Model-Driven Telemetry. |
| Cisco Spaces: Connector | Hosts Gateway Service as a Docker container and manages onboarding, telemetry forwarding, status reporting, and local data distribution. |
| Cisco Spaces Cloud | Receives telemetry from Gateway Service through WebSocket data channels. |

*Table 2: Supported Connector Versions*

| Component | Minimum Version |
|---|---|
| Cisco Spaces: Connector OVA | July2026 OVA and later |
| Cisco Spaces: Connector Docker | 3.3 and later |

### Supported Access Points

Gateway Service supports gRPC telemetry streams from all the access points that are currently supported by IoT Wireless.