

使用IoT OD在IW AP上配置流动性

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简介

本文档介绍使用IoT操作控制面板中的模板在CURWB中运行的工业无线(IW) AP上配置流动性。

访问物联网设备

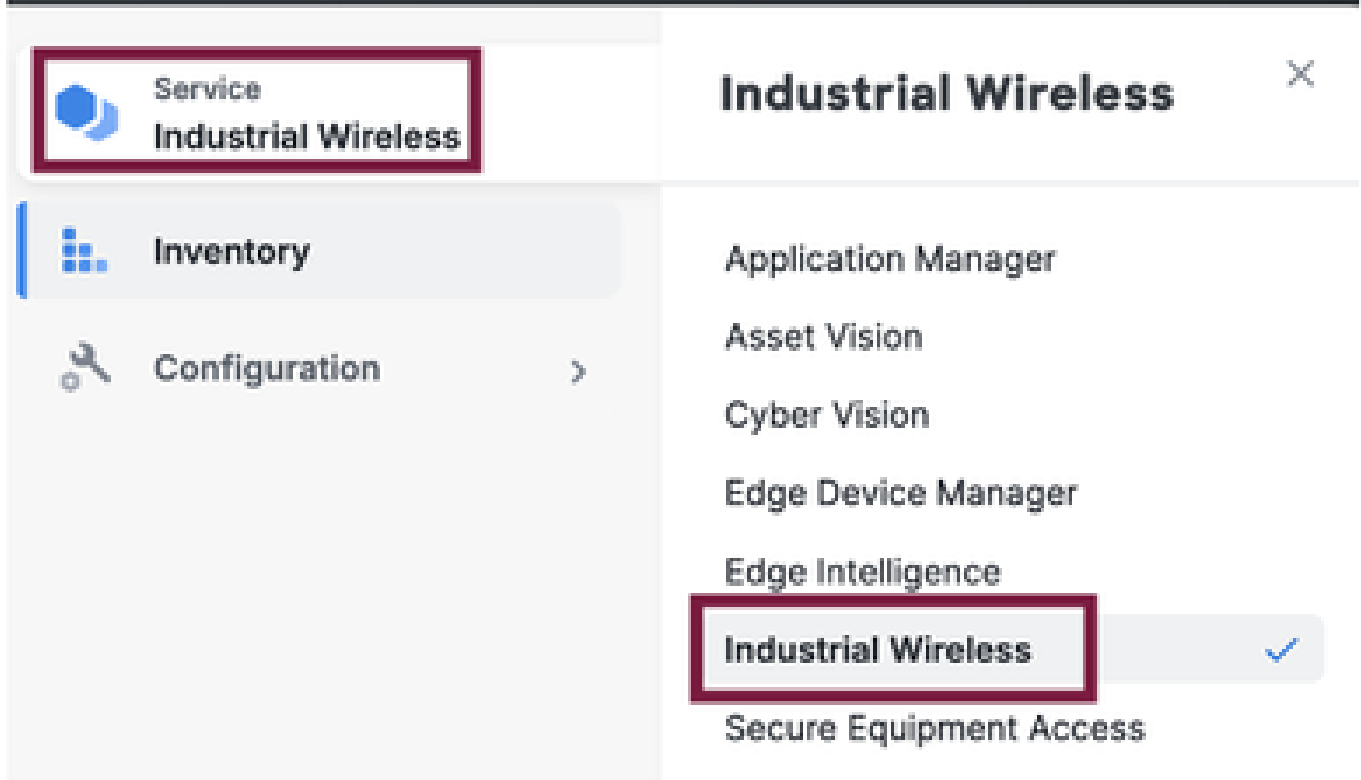
IW接入点(AP) (如IW9165和IW9167) 可以在CAPWAP或URWB模式下配置。

在URWB模式下配置这些接入点时，可以使用IoT操作控制面板进行配置，也可以在离线模式下本地进行配置。IoT操作控制面板可使用这些链接进行访问，具体取决于租户所在的位置。

<https://us.ciscoiot.com>

<https://eu.ciscoiot.com>

登录并选择合适的租户后，在Service下选择Industrial Wireless (工业无线) 以访问思科超可靠无线回程(CURWB)无线电的功能集。



手动注册

可以从资产页面将设备手动注册到IoT OD。

选择Add Devices (添加设备) ，选择已添加设备的PID。上传一个CSV文件时可以同时显示其上设备的序列号和MAC地址；每行都有一个条目。

示例：SN001234 ， 00 : f1 : ca : 00:00:01

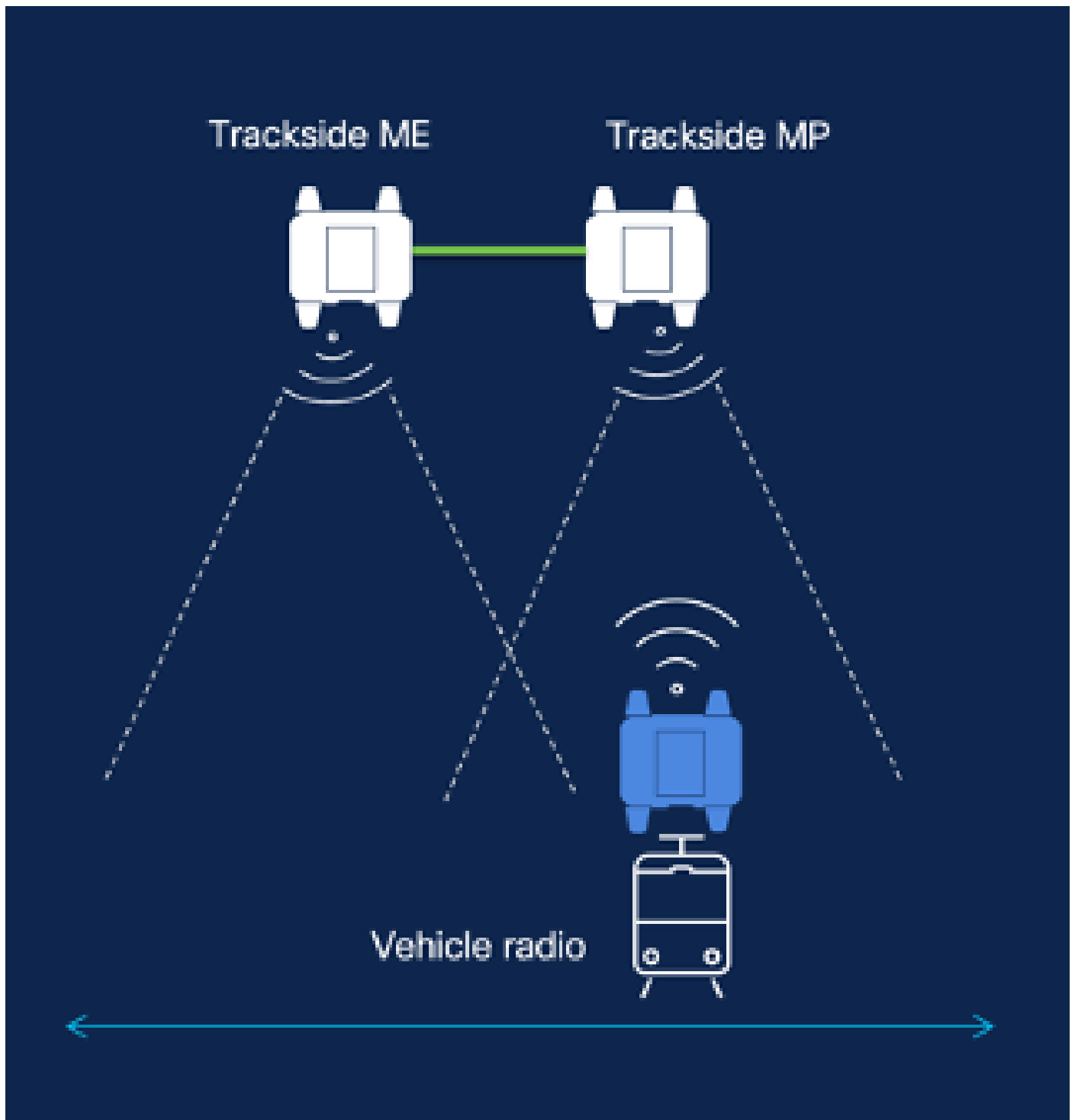
SN003457 ， 00 : f1 : ca : 00:00:02

上传后，点击底部的Add devices手动将设备导入控制面板。然后，它们会显示在Inventory (资产) 选项卡下。

流动性配置

使用IW916x无线接入点的基本流动性设置可以使用此程序通过IoT OD配置。

考虑三个AP：Radio A (无线电A) 充当轨旁网状终端，Radio B (无线电B) 充当轨旁网状点，Radio C (无线电C) 充当车辆无线电。



1. 设备添加到IoT OD且状态为“联机”后，可以通过选择所需的设备编辑配置。点击设备并转至“配置”选项卡，选择“编辑”按钮以更新配置。

Device Configuration [Edit](#) [Push IoT OB Configuration](#)

IoT OB Configuration

ID 0

Saved - 2024-06-24 10:49:38 am

Last heard configuration

ID -

Last heard - 2024-06-26 23:08:22 pm

 Last heard and IoT OB Configuration do not match.

[Review previous configurations](#)

Only show differences

- General
- Wireless Radio
- Advanced Radio Settings
- Key Control
- FastMAN
- Multicast
- SNMP
- Radios
- NTP

General

	IoT OB	Last Heard
Mode	Mesh Point	Mesh End
Radio off	Off	Off
Local IP Address	192.168.0.10	10.122.136.9
Local Netmask	255.255.255.0	255.255.255.192
Default Gateway		10.122.136.1
Local Dns 1		172.18.168.24
Local Dns 2		172.18.168.43

Edit Device Configuration

General
Wireless Radio
Advanced Radio Settings
Key Control
FluidMAX
Multicast
SNMP
Radius
NTP
L2TP
Vlan
Fluidity
Fluidity Advanced
Fluidity Pole Proximity

General

Mode
•

Mesh Point ▼

Radio off

Radio off mode

Select Value ▼

Local IP Address
•

192.168.0.10

Local Netmask
•

255.255.255.0

2. 对于“流动性”设置，在“常规”部分中，至少必须将一个轨旁无线电配置为网状终端。在此设置中，无线电A是轨道侧网状端，无线电B是轨道侧网状点。所有车辆无线电必须配置为网状点。在此设置中只有一个车辆无线电，即无线电C。所有无线电的无线电模式都设置为“流动性”。

Edit Device Configuration

Search

General

Wireless Radio

Advanced Radio Settings

Key Control

FieldMAX

Multicast

SNMP

Radius

NTP

L2TP

Vlan

Fieldity

Fieldity Advanced

Fieldity Pole Proximity

Fieldity Frequency Scan

Fieldity MPO

General

Mode

Mesh End

Radio off

Radio off mode

Fluidity

Local IP Address

192.168.0.10

Local Netmask

255.255.255.0

Default Gateway

无线电A配置

Edit Device Configuration

🔍 Search

- General
- Wireless Radio
- Advanced Radio Settings
- Key Control
- FluidMAX
 - Multicast
 - SNMP
 - Radius
 - NTP
 - L2TP
 - Vlan
- Fluidity
- Fluidity Advanced
 - Fluidity Pole Proximity
 - Fluidity Frequency Scan
- Fluidity MPO

General

Mode

-

Mesh Point



Radio off



Radio off mode

-

Fluidity



Local IP Address

-

192.168.0.10

Local Netmask

-

255.255.255.0

Default Gateway

无线电B配置

Edit Device Configuration

Search

General

Wireless Radio

Advanced Radio Settings

Key Control

FluidMAX

Multicast

SNMP

Radius

NTP

L2TP

Vlan

Fluidity

Fluidity Advanced

Fluidity Pole Proximity

Fluidity Frequency Scan

Fluidity MPO

General

Mode

-

Mesh Point



Radio off



Radio off mode

-

Fluidity



Local IP Address

-

192.168.0.10

Local Netmask

-

255.255.255.0

Default Gateway

Radio C配置

3. 在“无线电”部分下，确保三个无线电都具有相同的口令。对于此设置，我们仅对每个IW设备启用一个无线电。启用您选择的无线电（无线电1或无线电2），并确保所有无线电都配置了相同的频率和信道宽度。当连接天线时，请确保根据所选的无线电编号选择外部端口。此外，无线电模式配置

为全部三个无线电的“流动性”。

Edit Device Configuration

- General
- Wireless Radio**
- Advanced Radio Settings
- Key Control
- FluidMAX
- Multicast
- SNMP
- Radios
- MTP
- L2TP
- Wlan
- Fluidity
- Fluidity Advanced
- Fluidity Role Proximity
- Fluidity Frequency Scan
- Fluidity MPO

Wireless Radio

Passphrase
-
CiscoIWB

Radio 1 enabled Radio 2 enabled

Radio 1 role Radio 3 role

Fluidity

Radio 1 Frequency (MHz) Radio 2 Frequency (MHz)

5180 MHz

Radio 1 Channel width Radio 3 Channel width

80

4. 在“流动性”一节下，该股的作用被选为轨道旁无线电广播A和广播B的“基础设施”。

Edit Device Configuration

Search

- General
- Wireless Radio
- Advanced Radio Settings
- Key Control
- FluidMAX
- Multicast
- SNMP
- Radius
- NTP
- L2TP
- Vlan
- Fluidity**
- Fluidity Advanced
 - Fluidity Pole Proximity
 - Fluidity Frequency Scan
- Fluidity MPO

Fluidity

Unit Role

Infrastructure



Automatic Vehicle ID



Vehicle ID

Network Type

Flat



Handoff Logic

Select Value



Enable Primary Pseudowire Enforcement

5. 在“流动性”一节下，在C广播电台中，该股的角色被选为“车辆”。由于这是第2层流动性网络，因此网络类型应为“平面”。如果一台车辆上使用多个车辆无线电，则可以启用“自动车辆ID”，也可以分配手动车辆ID。

Edit Device Configuration

🔍 Search

- General
- Wireless Radio
- Advanced Radio Settings
- Key Control
- FluidMAX
- Multicast
- SNMP
- Radius
- NTP
- L2TP
- Vlan
- **Fluidity**
- Fluidity Advanced
- Fluidity Pole Proximity
- Fluidity Frequency Scan
- Fluidity MPO

Fluidity

● Unit Role

Vehicle



● Automatic Vehicle ID



Vehicle ID

● Network Type

Flat



● Handoff Logic

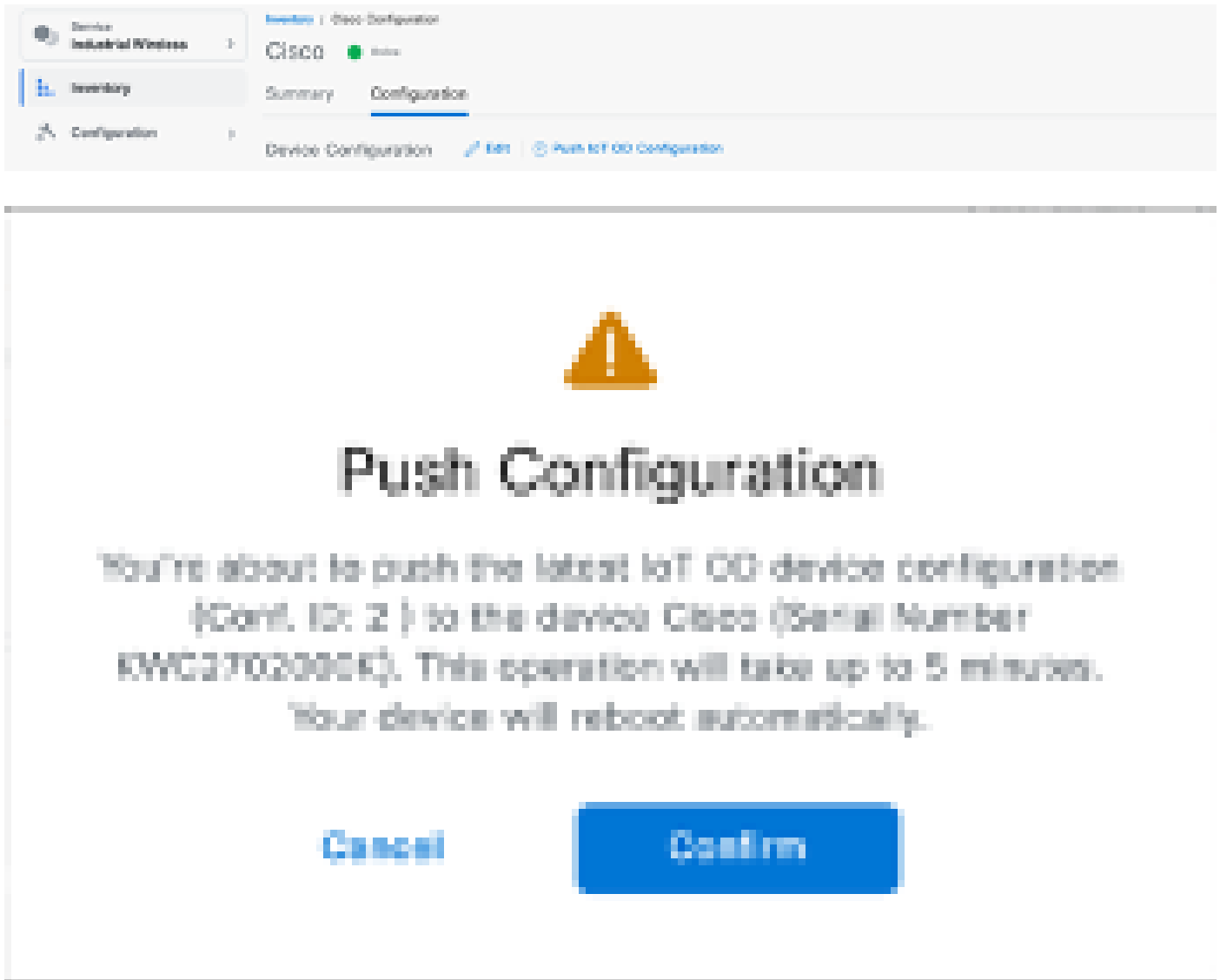
Standard



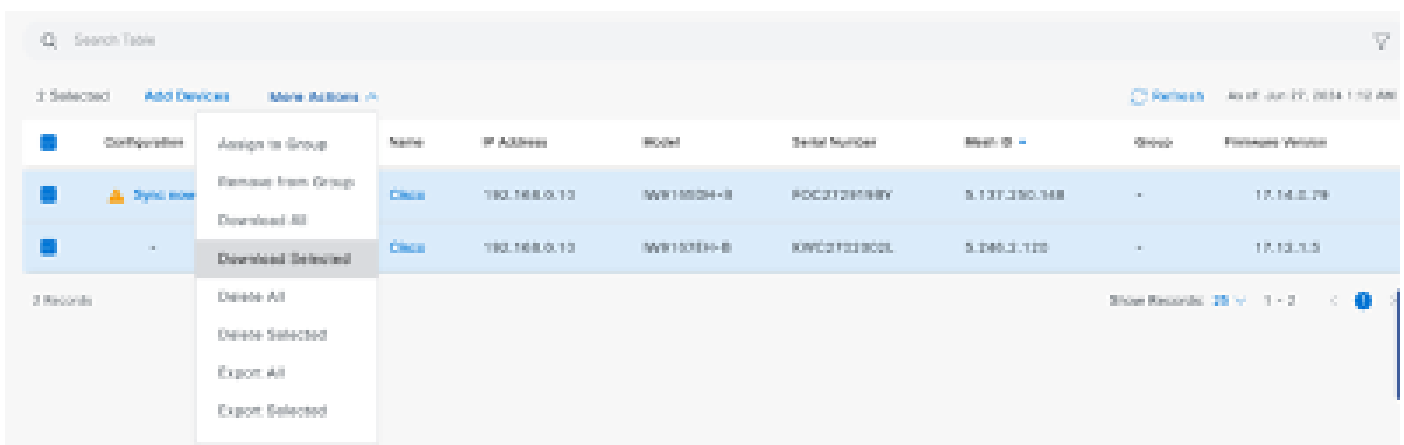
● Enable Primary Pseudowire Enforcement

编辑配置后，点击底部的“保存”。

6. 现在使用“Push IoT OD Configuration”（推送物联网设备配置）按钮可以将更新的配置直接从物联网设备推送到无线电。出现提示后，点击Confirm。设备将重新启动，并可从推送的配置通过IP进行访问。



7. 如果无线电处于“脱机”状态，另一个推送配置的选项是下载配置文件。从Inventory（资产）选项卡中选择一个或多个设备，然后从More Actions（更多操作）下拉菜单中选择Download Selected（下载选定内容）按钮。



下载扩展名为.iwconf的文件。相同的文件可以从IoT-OD选项卡上传到设备的GUI。

IOTOD IW Offline

IW-MONITOR Enabled

FM-QUADRO

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and stats

NETWORK CONFIGURE

- advanced tools

ADVANCED SETTINGS

- advanced radio settings
- static routes
- allowlist / blocklist
- multicast
- snmp
- radius
- ntp
- ethernet filter
- l2tp configuration
- vlan settings
- Fluidity
- misc settings
- smart license

MANAGEMENT SETTINGS

- remote access
- firmware upgrade
- status
- configuration settings
- reset factory default
- reboot
- logout

IOTOD IW Management

IOTOD IW Configuration Mode

Preinstalling: Initial radio configuration phase. The radio **MUST** be configured using the Centralized Web Interface ([IOTOD Industrial Wireless US](#), [IOTOD Industrial Wireless EU](#)) if connection is successful or manually if Offline configuration is selected.

Offline Configuration: It supports local parameter changes through the radio Web UI / CLI or upload of a single file downloaded from IOTOD IW section in [IOTOD Industrial Wireless \(IOTOD Industrial Wireless US, IOTOD Industrial Wireless EU \)](#).

Online Cloud-Managed Configuration: the radio can be configured from the Centralized Web Interface (IOTOD IW section in [IOTOD Industrial Wireless US](#) or [IOTOD Industrial Wireless EU](#)) if it is connected to the Internet and can access IOTOD IW Cloud Server. Radio Web UI and CLI are read-only.

Online Cloud-Managed

Offline

UPLOAD IOTOD IW CONFIGURATION FILE

Upload Configuration File

Select configuration file exported from IOTOD Industrial Wireless: Browse No file selected

Upload Configuration

可以从Status页面检查配置。

OTOD IW

Cloud-Managed

IW-MONITOR

Disabled

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and state

NETWORK CONTROL

- advanced tools

ADVANCED SETTINGS

- advanced radio settings
- static routes
- allowlist / blocklist
- snmp
- radius
- ntp
- ethernet filter
- l2tp configuration
- vlan settings
- Fluidity
- misc settings

MANAGEMENT SETTINGS

- remote access
- status
- reboot
- logout

STATUS

Device: Cisco IOT IW9165DH Series Access Point
Name: MP_TRK&Backhaul
ID: 5.137.255.148
Serial: FCC2729180Y
Operating Mode: Mesh Point
Uptime: 3 days, 4:07 (h:mm:ss)
Firmware version: 17.14.0.79

DEVICE SETTINGS

IP: 10.122.136.9
Netmask: 255.255.255.192
MAC address: 40:36:5a:89:fa:94
Configured MTU: 1500

WIRED0

Status: up
Speed: 1000 Mb/s
Duplex: full
MTU: 1500

WIRED1

Status: down

WIRELESS SETTINGS

Operating region: B

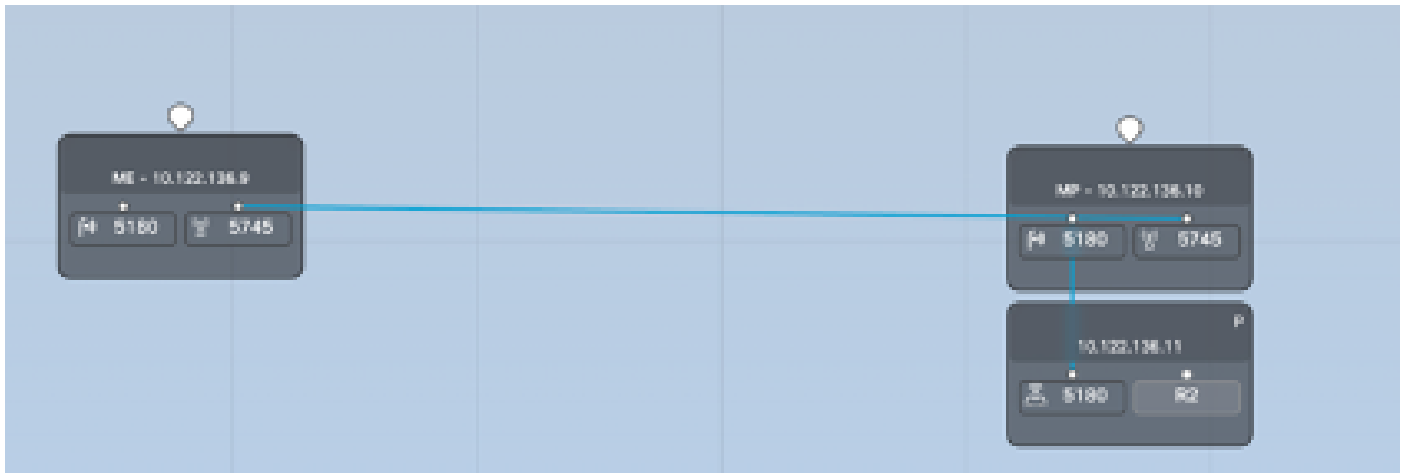
Radio 1

Interface: enabled
Mode: fluidity
Frequency: 5150 MHz
Channel: 35
Channel Width: 20 MHz
Current tx power: 17 dBm
Current tx power level: 1
Antenna gain: not selected
Antenna number: 2
Radio Mode: cma/ca
Maximum link length: 3 km

Radio 2

Interface: enabled
Mode: fluidmax primary
Frequency: 5240 MHz
Channel: 48
Channel Width: 20 MHz
Current tx power: 8 dBm

8. 可以访问“网状终端”无线电上的FM-Quadro页面来检查“流动性”设置的布局。



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