

在工业无线接入点中配置第2层网状网透明度

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简介

本文档介绍第2层网状透明功能的功能和配置。

第2层网状网透明度

第2层透明是固件版本为17.12.1及更高版本的IW9165和IW9167接入点提供的一项功能。

此功能允许选项阻止或允许通用第2层数据包通过IW网络。自动检测并报告流经IW网络的数据包上的Ether类型。

它支持非IP第2层协议在无线网状网络中无缝传输，扩展了各种工业应用的覆盖范围和功能。

以太网类型是以太网帧中的两个二进制八位数字段，表示负载中封装的是哪种类型的协议。

除保留的Ether类型外，用户还可以选择允许特定的Ether类型、第2层Ether类型和Ethernet-I数据包。数据包过滤在MPLS隧道的入口/出口点完成。

出口点始终是网络的网状端，入口点可以是固定基础设施设置中的网状点，也可以是流动性设置中的车辆无线电。

许多工业设备和系统依赖传统协议（如Modbus、DNP3）或运行在OSI模型第2层的专有协议。第2层网状透明允许这些设备通过无线网状网络无缝通信，即使它们不是基于IP的。

CLI 配置

检测并添加以太网类型

默认情况下，允许Profinet数据包0x8892的以太网类型和QNet 0x8204的以太网类型。

1. 使用以下命令可以显示检测到的以太类型列表。

```
MP#show mpls ether-filter
```

Ether-type	Direction	Description
0x6002	INGRESS	---
0x86DD	INGRESS	IPv6
0x8035	INGRESS	RARP

2. 可以使用以下命令添加检测到的以太网类型或所有可用的以太网类型。

```
MP#config mpls ether-filter allow-list add 0x86DD
```

```
MP#write
```

```
MP#reload
```

```
MP#config mpls ether-filter allow-list add all
```

```
MP#write
```

```
MP#reload
```

3. 可以从运行配置中检查添加的以太网类型配置。

```
MP#show run
```

```
Ethernet Filter allow-list: 0x8035 0x86dd 0x8899, ethernet-I block
```

4. 也可以从允许列表中删除特定以太网类型。

```
MP#config mpls ether-filter allow-list delete 0x86DD
```

```
MP#write
```

```
MP#reload
```

5. 还可以使用以下命令清除检测到的以太网类型。

```
MP#config mpls ether-filter table clear
```

```
[ME_Primary#config mpls ether-filter table clear
[ME_Primary#
[ME_Primary#
[ME_Primary#show mpls ether-filter
Ether-type      Direction      Description
0x86DD          INGRESS        IPv6
```

GUI 配置

接入点的GUI（在CURWB模式下）也支持相同的配置。导航到GUI侧面板上高级设置下的以太网过滤器字段。

通过选中所有以太网类型的复选框允许所有以太网类型。

IOTOD IW

Offline

IW-MONITOR

Enabled

FM-QUADRO

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and stats

NETWORK CONTROL

- 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

Ethernet Filter

Detected ethernet types

To add a detected ethernet type to the allowlist click on Add.

Ethertype	Description	Direction	Action
0x86DD	IPv6	INGRESS	Add

[Clear detected](#)

Allow all ethernet types

Allow Ethernet 1 protocols

[Save](#)

仅允许特定以太网类型

取消选中Allow all ethernet types选项并添加所需的以太网类型。单击Save and Apply执行更改。



ULTRA RELIABLE
WIRELESS BACKHAUL

Cisco URWB IW9167EH Configurator

5.246.226.200 - MESH END MODE

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Ethernet Filter

Detected ethernet types

To add a detected ethernet type to the allowlist click on Add.

Ethertype	Description	Direction	Action
0x6002	---	INGRESS	Add
0x86DD	IPv6	INGRESS	Add

[Clear detected](#)

Allow all ethernet types

Allow Ethernet 1 protocols

Allowed ethernet types

To add a specific ethernet type to the allowlist, insert it in the text field and click on Add.

Ethertype	Description	Action
<input type="text" value="0x86DD"/>		Add

[Clear allowed](#)

[Save](#)



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Ethernet Filter

Detected ethernet types

To add a detected ethertype to the allowlist click on Add.

Ethertype	Description	Direction	Action
0x6002	---	INGRESS	Add
0x86DD	IPv6	INGRESS	Add

[Clear detected](#)

Allow all ethernet types

Allow Ethernet 1 protocols

Allowed ethernet types

To add a specific ethertype to the allowlist, insert it in the text field and click on Add.

Ethertype	Description	Action
0x86DD	IPv6	Delete
<input type="text"/>		Add

[Clear allowed](#)

[Save](#)

单击GUI上的Clear detected选项以清除检测到的以太网类型

Ethernet Filter

Detected ethernet types

To add a detected ethertype to the allowlist click on Add.

Ethertype	Description	Direction	Action
0x6002	---	INGRESS	<button>Add</button>
0x86DD	IPv6	INGRESS	<button>Add</button>

Clear detected

保留以太网类型

某些以太网类型是保留的，不能从列表中添加或删除。

Ether-type (range)	Forwardable	Notes
0x0000 – 0x05FF	User-configurable	Ethernet-I frames. STP and CDP are subject to other configuration options
0x0800	Yes	IPv4
0x0806	Yes	ARP (IPv4)
0x0900 – 0x09FF	No	Cisco URWB signaling protocols
0x8100	Yes	IEEE 802.1Q VLAN encapsulation
0x8847 – 0x8848	No	MPLS
0xFFFF	No	IANA reserved

任何使用它的尝试都会导致如下所示的错误：

```
ME_Primary#conf mpls ether-filter allow-list add 0x8847
error: ether-type 0x8847 is reserved
ME_Primary#
```

以太网1协议

也可以从CLI或GUI阻止或允许以太网1协议。

```
MP#config mpls ether-filter ethernet-I block
```

```
MP#write
```

```
MP#show run
```

```
Ethernet Filter allow-list: 0x86dd, ethernet-I block
```

```
MP#config mpls ether-filter ethernet-I forward
```

```
MP#write
```

```
MP#show run
```

```
Ethernet Filter allow-list: 0x86dd, ethernet-I forward
```

在无线电的GUI中，可以选中Allow Ethernet 1 protocols复选框以允许并取消选中该复选框以阻止以太网1帧。单击Save and Apply以应用更改。



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Configuration contains changes. Apply these changes?

Discard

Review

Apply

Ethernet Filter

Detected ethernet types

To add a detected ethertype to the allowlist click on Add.

Ethertype	Description	Direction	Action
0x6002	---	INGRESS	Add
0x86DD	IPv6	INGRESS	Add

Clear detected

Allow all ethernet types

Allow Ethernet 1 protocols

Allowed ethernet types

To add a specific ethertype to the allowlist, insert it in the text field and click on Add.

Ethertype	Description	Action
0x86DD	IPv6	Delete
<input type="text"/>		Add

Clear allowed

Save

关于此翻译

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