

通过带SNMP v2和v3的Prime基础设施进行融合接入(5760/3850/3650)管理配置示例

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[配置 \(Prime Infrastructure 2.2及更低版本 \)](#)

[交换机上的SNMP v2配置](#)

[GUI](#)

[CLI](#)

[交换机上的SNMP v3配置](#)

[CLI](#)

[Prime 基础设施](#)

[SNMP v2](#)

[SNMP v3](#)

[配置 \(Prime Infrastructure 3.x及更高版本 \)](#)

[交换机上的SNMP配置\(Denali 16.x\)](#)

[GUI](#)

[交换机上的GUI SNMP v2配置\(Denali 16.x\)](#)

[交换机上的CLI SNMP v2配置\(Denali 16.x\)](#)

[交换机上的GUI SNMP v3配置\(Denali 16.x\)](#)

[交换机上的CLI SNMP v3配置\(Denali 16.x\)](#)

[Prime 基础设施](#)

[SNMP v2](#)

[SNMP v3](#)

[验证](#)

[交换机上的SNMP v2配置\(Cisco IOS-XE\)](#)

[交换机上的SNMP v3配置\(Cisco IOS-XE\)](#)

[Prime基础设施 \(2.2及更低版本 \)](#)

[交换机上的SNMP v2配置\(Denali 16.x\)](#)

[交换机上的SNMP v3配置\(Denali 16.x\)](#)

[Prime 基础设施](#)

[故障排除](#)

[从融合接入](#)

[从Prime基础设施](#)

简介

本文档介绍如何使用简单网络管理协议(SNMP)v2和v3将融合接入(5760/3850/3650)添加到Prime基础设施。

先决条件

要求

Cisco 建议您了解以下主题：

- 融合接入(5760/3850/3650)Cisco IOS® 3.3.x及更高版本或Denali 16.x
- Prime基础设施2.0版或更高版本

使用的组件

本文档不限于特定的软件和硬件版本。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

配置（ Prime Infrastructure 2.2及更低版本 ）

交换机上的SNMP v2配置

GUI

选择Configuration > Controller > Management > SNMP > Communities > New。

CISCO Wireless Controller Home Monitor Configuration Administration Help

Controller

- System
- Internal DHCP Server
- Management
 - Protocol Management
 - SNMP
 - General
 - Communities
 - SNMP V3 Users
 - SNMP Host
 - HTTP-HTTPS
 - Technical Support
 - System Resources Information
 - Controller crash
 - CoreDump
 - AP crash
- Mobility Management
 - Mobility Global Config
 - Mobility Peer
 - Switch Peer Group
- mDNS

SNMP v1/v2c Community

New Remove

Community Name	Status
No data available	

CISCO Wireless Controller Home Monitor Configuration Administration Help

Controller

- System
- Internal DHCP Server
- Management
 - Protocol Management
 - SNMP
 - General
 - Communities
 - SNMP V3 Users
 - SNMP Host
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 - Mobility Global Config
 - Mobility Peer
 - Switch Peer Group
- mDNS

SNMP v1/v2c Community

SNMP v1/v2c Community > New

Community Name

Access Mode

CLI

输入这些命令：

```
conf t
```

```
snmp-server community V2Community RW
```

交换机上的SNMP v3配置

CLI

输入这些命令：

```
conf t
```

```
snmp-server group V3Group v3 auth read V3Read write V3Write
```

```
snmp-server user V3User V3Group v3 auth sha Password1 priv aes 128 Password1
```

```
snmp-server view V3Read iso included
```

```
snmp-server view V3Write iso included
```

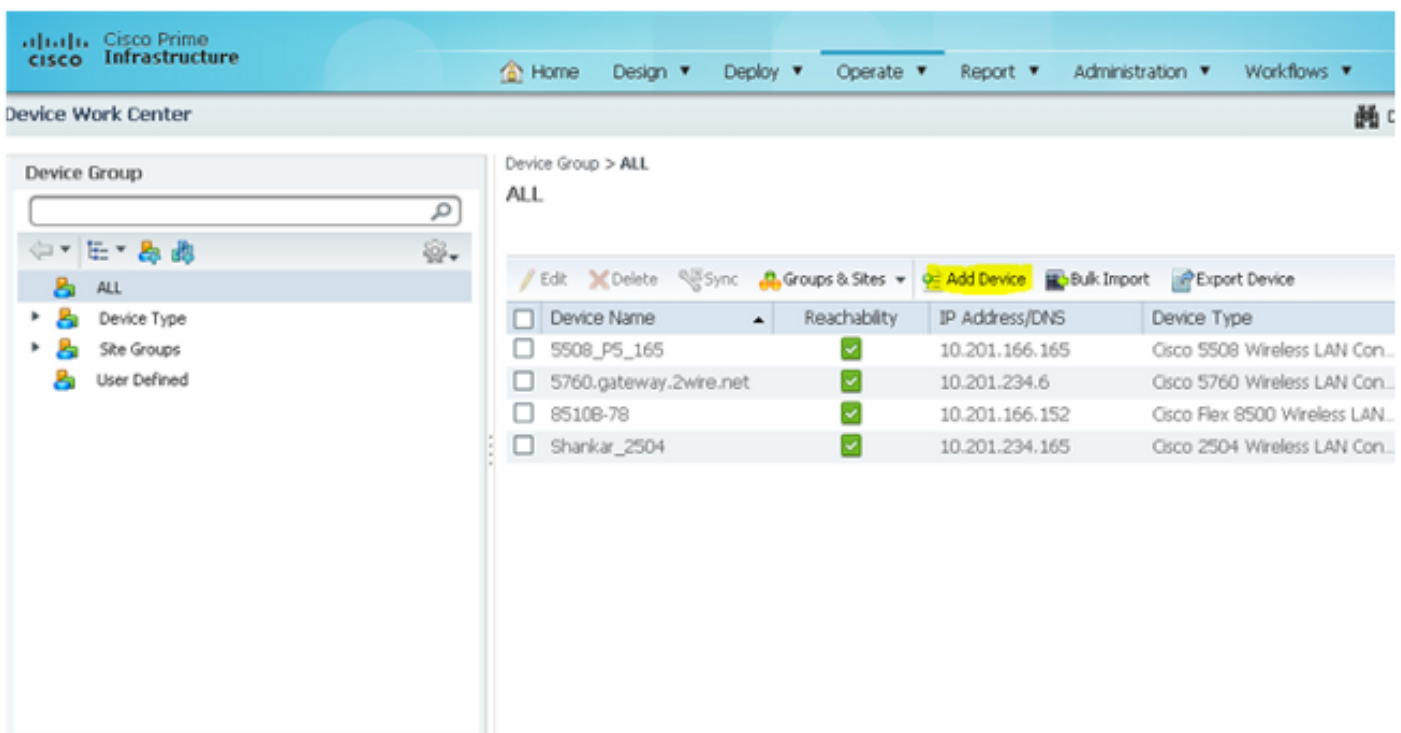
```
snmp-server host 10.201.234.170 version 3 auth V3User
```

```
snmp-server enable traps
```

Prime 基础设施

注意：使用“生命周期”视图。

选择操作>设备工作中心>添加设备。



The screenshot displays the Cisco Prime Infrastructure Device Work Center interface. The top navigation bar includes Home, Design, Deploy, Operate, Report, Administration, and Workflows. The main content area shows the 'Device Group > ALL' view with a table of devices. The table has columns for Device Name, Reachability, IP Address/DNS, and Device Type. The 'Add Device' button is highlighted in yellow.

Device Name	Reachability	IP Address/DNS	Device Type
5508_PS_165	✓	10.201.166.165	Cisco 5508 Wireless LAN Con...
5760.gateway.2wire.net	✓	10.201.234.6	Cisco 5760 Wireless LAN Con...
85108-78	✓	10.201.166.152	Cisco Flex 8500 Wireless LAN...
Shankar_2504	✓	10.201.234.165	Cisco 2504 Wireless LAN Con...

SNMP v2

Add Device

▼ General Parameters *

IP Address

DNS Name

▼ SNMP Parameters

Version

* Retries

* Timeout (secs)

* Community ?

* Confirm Community

▼ Telnet/SSH Parameters

Protocol

* Timeout (secs)

Username

Password

Confirm Password

Enable Password

Confirm Enable Password

SNMP v3

Add Device ✕

▼ **General Parameters ***

IP Address

DNS Name

▼ **SNMP Parameters**

Version

* Retries

* Timeout (secs)

Username

Auth. Type

Auth. Password

Privacy Type

Privacy Password

▼ **Telnet/SSH Parameters**

Protocol

* Timeout (secs)

Username

Password

注意：如果未输入Telnet/Secure Shell参数，则Prime基础设施不会从交换机收集资产。

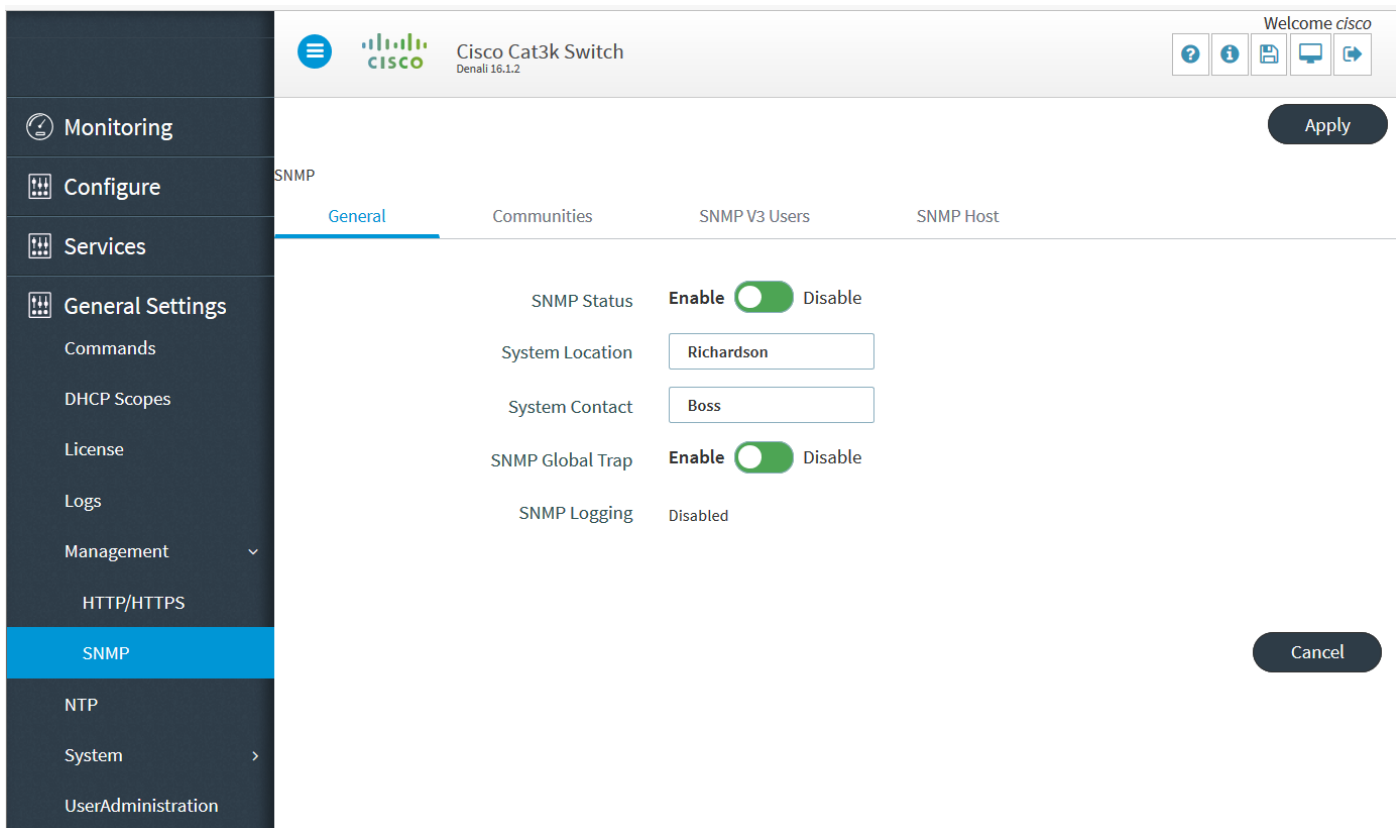
配置 (Prime Infrastructure 3.x及更高版本)

交换机上的SNMP配置(Denali 16.x)

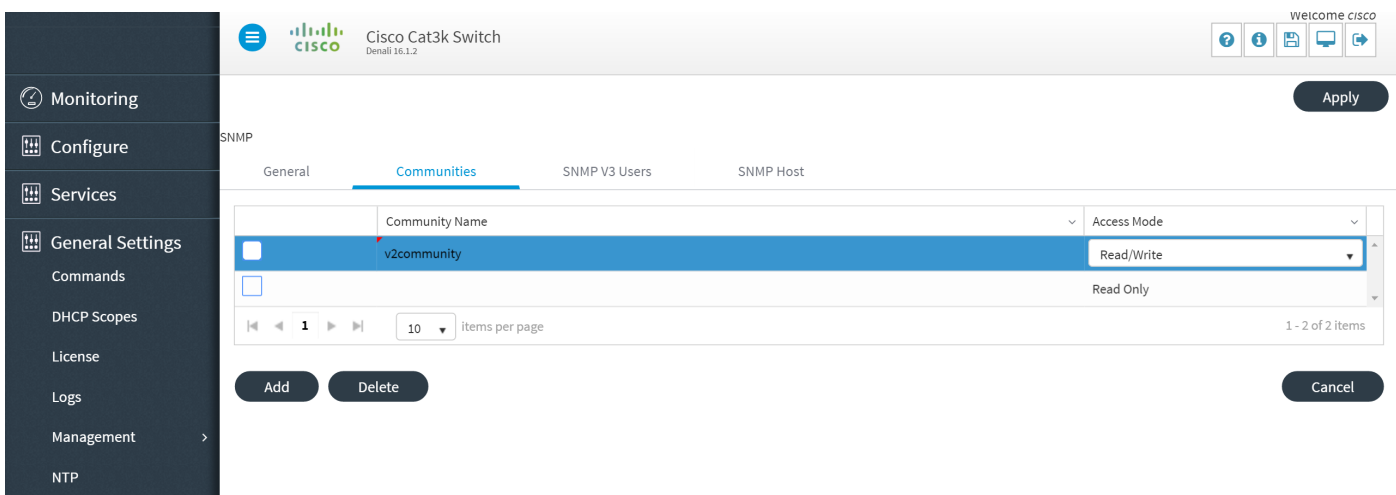
GUI

选择General Settings > Management > SNMP。

启用 SNMP。



交换机上的GUI SNMP v2配置(Denali 16.x)



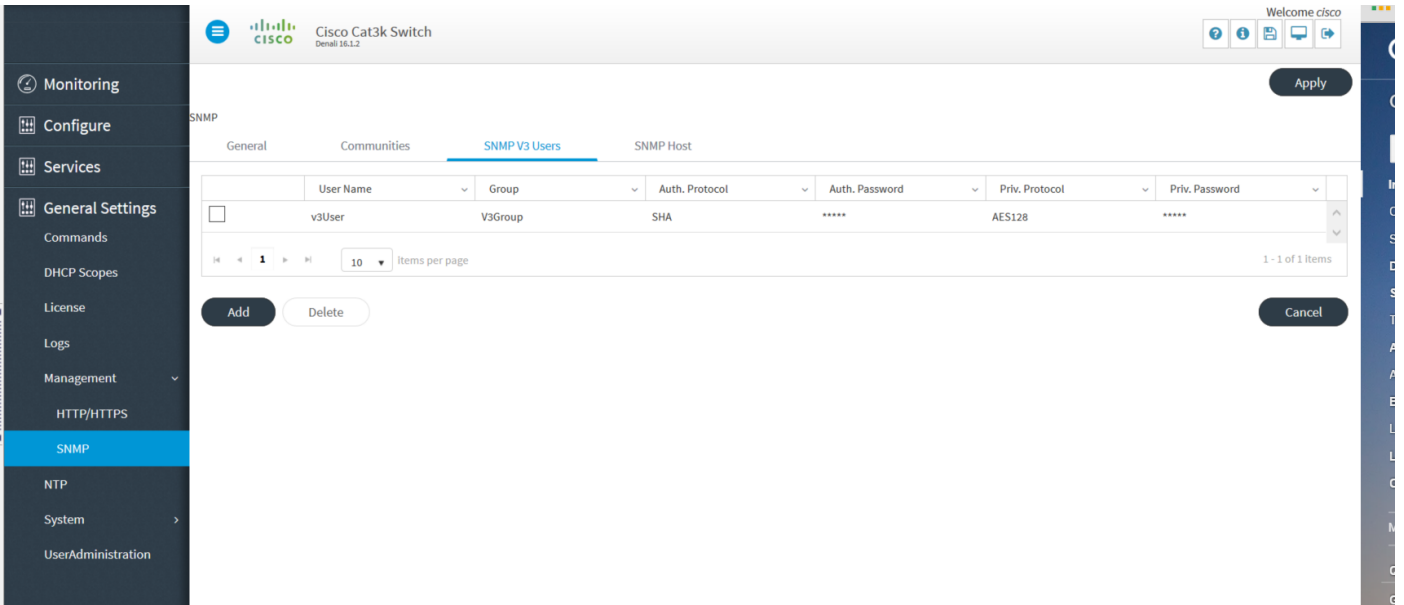
交换机上的CLI SNMP v2配置(Denali 16.x)

输入这些命令：

```
conf t
```

```
snmp-server community V2Community RW
```

交换机上的GUI SNMP v3配置(Denali 16.x)



交换机上的CLI SNMP v3配置(Denali 16.x)

输入这些命令：

```
conf t
```

```
snmp-server user V3user V3Group v3 auth sha Password1 priv aes 128 Password1
```

```
snmp-server view V3Read iso included
```

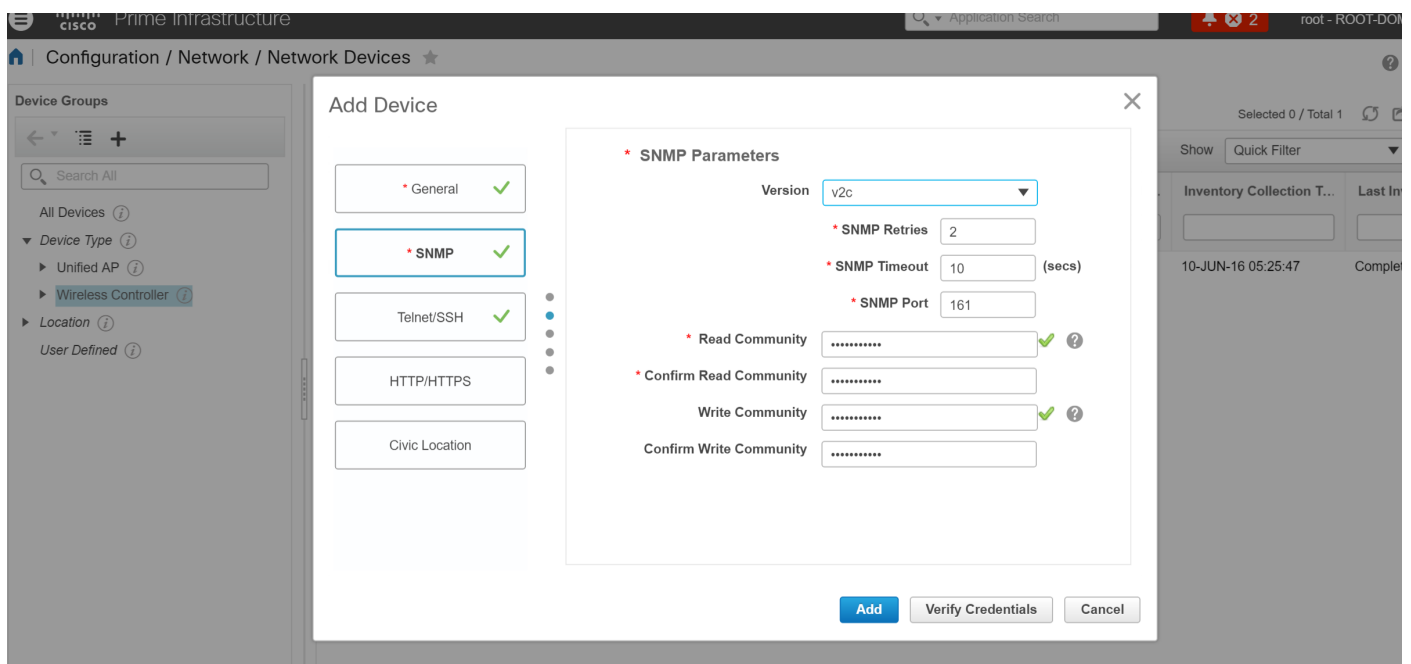
```
snmp-server view V3Write iso included
```

```
snmp-server host 10.201.236.107 version 3 auth V3user
```

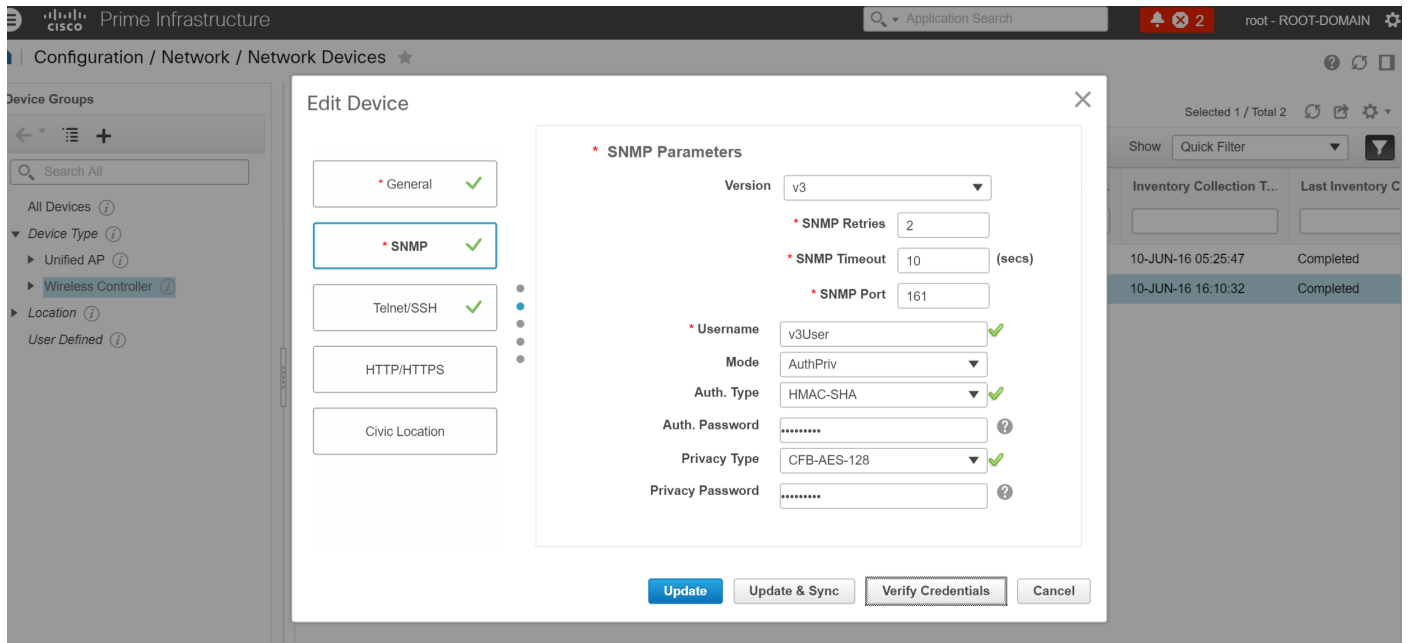
```
snmp-server enable traps
```

Prime 基础设施

SNMP v2



SNMP v3



验证

使用本部分可确认配置能否正常运行。

思科 CLI 分析器 (仅适用于注册客户) 支持某些 show 命令。要查看对 show 命令输出的分析，请使用思科 CLI 分析器。

交换机上的SNMP v2配置(Cisco IOS-XE)

输入此命令：

```
5760-79b#show snmp community
```

```
Community name: V2Community
Community Index: V2Community
Community SecurityName: V2Community
storage-type: nonvolatile          active
```

交换机上的SNMP v3配置(Cisco IOS-XE)

输入这些命令：

```
5760-79b#show snmp user
```

```
User name: V3User
Engine ID: 80000009030068BC0C5A8F80
storage-type: nonvolatile          active
Authentication Protocol: SHA
Privacy Protocol: AES128
Group-name: V3Group
```

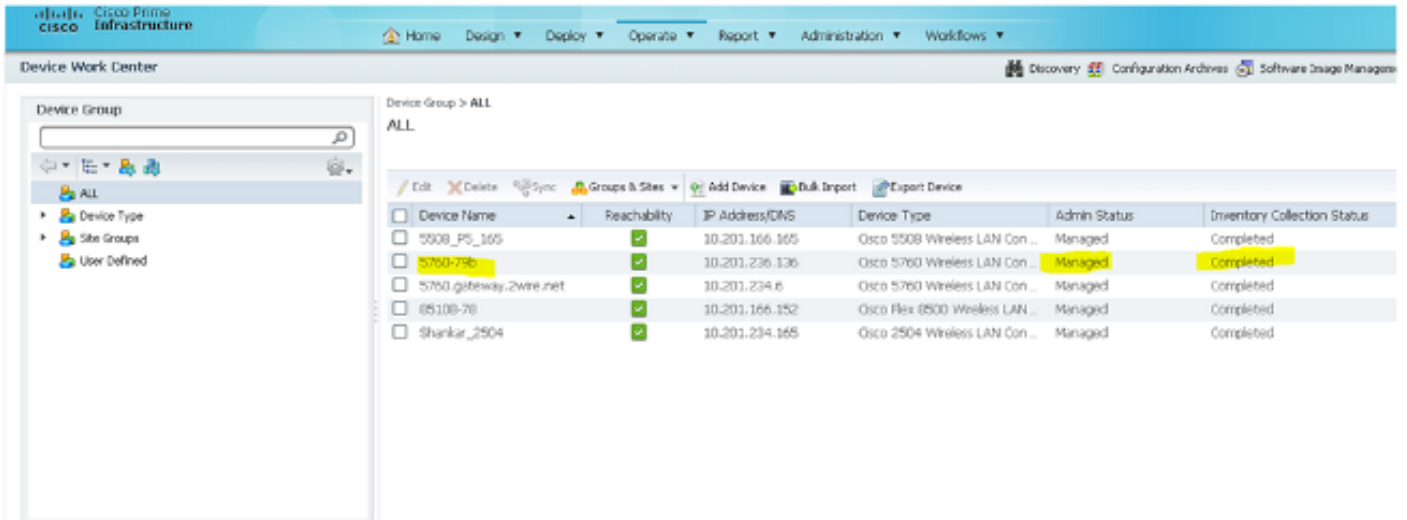
```
5760-79b#show snmp group
```

```
groupname: V3Group                                security model:v3 auth
```

```
contextname: <no context specified>          storage-type: nonvolatile
readview : V3Read                            writeview: V3Write
notifyview: <no notifyview specified>
row status: active
```

注意：对于Cisco Bug ID CSCuo52406中解决的某些已知问题，CLI优先于GUI在融合接入上进行SNMP v3配置。

Prime基础设施 (2.2及更低版本)



交换机上的SNMP v2配置(Denali 16.x)

输入此命令：

```
polaris-3850#show snmp community
```

```
Community name: v2community
Community Index: v2community
Community SecurityName: v2community
storage-type: nonvolatile      active
```

交换机上的SNMP v3配置(Denali 16.x)

输入这些命令：

```
polaris-3850#show snmp user
```

```
User name: v3user
Engine ID: 80000009030068BC0C5A8F80
storage-type: nonvolatile      active
Authentication Protocol: SHA
Privacy Protocol: AES128
Group-name: V3Group
```

```
polaris-3850#show snmp group
```

```
groupname: V3Group
contextname: <no context specified>
readview : V3Read
notifyview: <no notifyview specified>
row status: active
security model:v3 auth
storage-type: nonvolatile
writeview: V3Write
```

Prime 基础设施

The screenshot shows the Cisco Prime Infrastructure web interface. The top navigation bar includes the Cisco logo, 'Prime Infrastructure', an application search bar, and a notification icon with '2' alerts. The breadcrumb trail is 'Configuration / Network / Network Devices'. On the left, there is a 'Device Groups' sidebar with a search bar and a tree view containing 'All Devices', 'Device Type' (with sub-items 'Unified AP' and 'Wireless Controller'), 'Location', and 'User Defined'. The main area displays a table titled 'All Devices' with the following data:

	Reachab...	Admin Status	Device Name	IP Address	DNS Name	Device Type	Last Inventory Collect...	Last Success
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed	AirMario	10.201.236.100	10.201.236.100	Cisco 2504 Wireless ...	Completed	June 10, 2016
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Un-Managed		10.201.234.36	10.201.234.36		Synchronizing	

故障排除

本部分提供的信息可用于对配置进行故障排除。

从融合接入

`show logging`命令显示从WLC发送到Prime基础设施IP地址的活动数据包。

输入这些命令：

```
polaris-3850#debug snmp packets
Polaris-3850#show logging
entPhysicalEntry.7.2042 = Gi2/0/1
*Jun 10 15:58:51.817: SNMP: Packet sent via UDP to 10.201.236.107
*Jun 10 15:58:51.819: SNMP: Packet received via UDP from 10.201.236.107 on Vlan1105
*Jun 10 15:58:51.825: SNMP: Get-bulk request, reqid 945449769, nonrprr 0, maxreps 10
Jun 10 15:58:51.904: SNMP: Packet sent via UDP to 10.201.236.107
*Jun 10 15:58:51.927: SNMP: Packet received via UDP from 10.201.236.107 on Vlan1105
*Jun 10 15:58:51.928: SNMP: Get-bulk request, reqid 945449775, nonrprr 0, maxreps 10
entPhysicalEntry.7.2062 = NULL TYPE/VALUE
*Jun 10 15:58:51.931: SNMP: Response, reqid 945449775, errstat 0, erridx 0
entPhysicalEntry.7.2063 = Gi2/0/22
entPhysicalEntry.7.2064 = Gi2/0/23
entPhysicalEntry.7.2065 = Gi2/0/24
entPhysicalEntry.7.2066 = Switch 2 FRU Uplink Module 1
--More-- entPhysicalEntry.7.2067 = Gi2/1/1 Container
entPhysicalEntry.7.2068 = Gi2/1/2 Container
entPhysicalEntry.7.2069 = Te2/1/3 Container
entPhysicalEntry.7.2070 = Te2/1/4 Container
entPhysicalEntry.8.1 = V01
*Jun 10 15:58:51.951: SNMP: Packet sent via UDP to 10.201.236.107
*Jun 10 15:58:51.974: SNMP: Packet received via UDP from 10.201.236.107 on Vlan1105
*Jun 10 15:58:51.975: SNMP: Get-bulk request, reqid 945449777, nonrprr 0, maxreps 10
ciscoEnvMonTemperatureStatusEntry.3 = NULL TYPE/VALUE
*Jun 10 15:58:51.978: SNMP: Response, reqid 945449777, errstat 0, erridx 0
ciscoEnvMonTemperatureStatusEntry.3.2008 = 28
ciscoEnvMonTemperatureStatusEntry.3.2009 = 40
ciscoEnvMonTemperatureStatusEntry.3.2010 = 44
```

```
ciscoEnvMonTemperatureStatusEntry.6.2008 = 1  
--More--          *Jun 10 15:58:52.001: SNMP: Packet sent via UDP to 10.201.236.107
```

从Prime基础设施

设备之间的SNMPWALK。

输入这些命令：

```
PrimeInfrastructurejoker/admin# shell  
Enter shell access password :  
Starting bash shell ...
```

```
ade # snmpwalk -v2c -c v2community 10.201.234.36 sysUpTime  
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (238833753) 27 days, 15:25:37.53  
v2community = snmp community
```

10.201.234.36 = WLC IP

如果存在可达性，则会出现以下结果：

```
DISMAN-EVENT-MIB::sysUpTimeInstance =计时器 : xx.xxx
```