Contents

Introduction

This document describes how to add Converged Access (5760/3850/3650) to Prime Infrastructure with Simple Network Management Protocol (SNMP) v2 and v3.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Converged Access (5760/3850/3650) Cisco IOS® Version 3.3.x and later or Denali 16.x
- Prime Infrastructure Version 2.0 or later

Components Used

This document is not restricted to specific software and hardware versions.
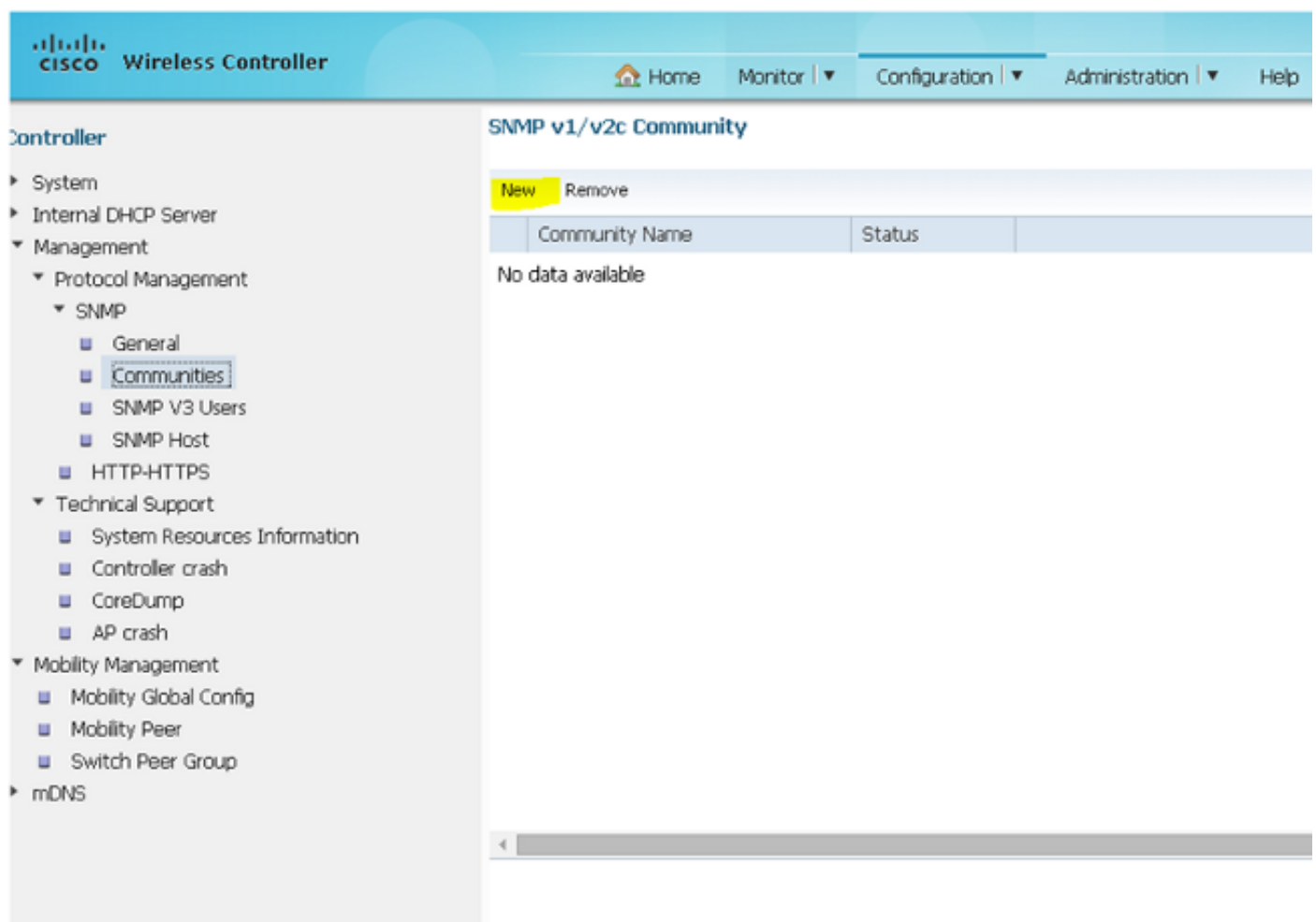
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Configure (Prime Infrastructure 2.2 and Earlier)

SNMP v2 Configuration on a Switch

GUI

Choose **Configuration > Controller > Management > SNMP > Communities > New**.

CLI

Enter these commands:

```
conf t

snmp-server community V2Community RW
```

SNMP v3 Configuration on a Switch

CLI

Enter these commands:

```
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 Infrastructure

Note: Use the Lifecycle view.

Choose **Operate > Device Work Center > Add Device**.

SNMP v2

Add Device   ✕

▼ **General Parameters** *

　　　　　　　⦿　IP Address　　| 10.201.236.136 |

　　　　　　　○　DNS Name　　|　　　　　　　　|

▼ **SNMP Parameters**

　　　　　　　　Version　| v2c　　　　　　▼ |

　　　　　*　Retries　| 2 |

　　　　　*　Timeout　| 10 |　　　(secs)

　　　　*　Community　| •••••••••••• |　　⑦

　　*　Confirm Community　| •••••••••••• |

▼ **Telnet/SSH Parameters**

　　　　　　　Protocol　| Telnet　　　　　▼ |

　　　　　*　Timeout　| 60 |　　　(secs)

　　　　　Username　| cisco |

　　　　　Password　| •••••••• |

　　Confirm Password　| •••••••• |

　　　Enable Password　| •••••••• |

Confirm Enable Password　| ••••••• |

　　　　　　　　　　　　　　　　　[Add]　[Cancel]

SNMP v3

Add Device　　　　　　✕

▼ General Parameters *

　⦿ IP Address　| 10.201.236.136 |

　○ DNS Name　|　　　　　　|

▼ SNMP Parameters

　　　Version　| v3　　　▼ |

　*　Retries　| 2 |

　*　Timeout　| 10 |　(secs)

　Username　| V3User |

　Auth. Type　| HMAC-SHA　▼ |

Auth. Password　| •••••••• |

Privacy Type　| CFB-AES-128　▼ |

Privacy Password　| •••••••• |

▼ Telnet/SSH Parameters

　Protocol　| Telnet　　▼ |

　*　Timeout　| 60 |　(secs)

　Username　| cisco |

　Password　| •••••••• |

　　　　　　　[Add]　[Cancel]

Note: If Telnet/Secure Shell parameters are not entered, Prime Infrastructure will not collect
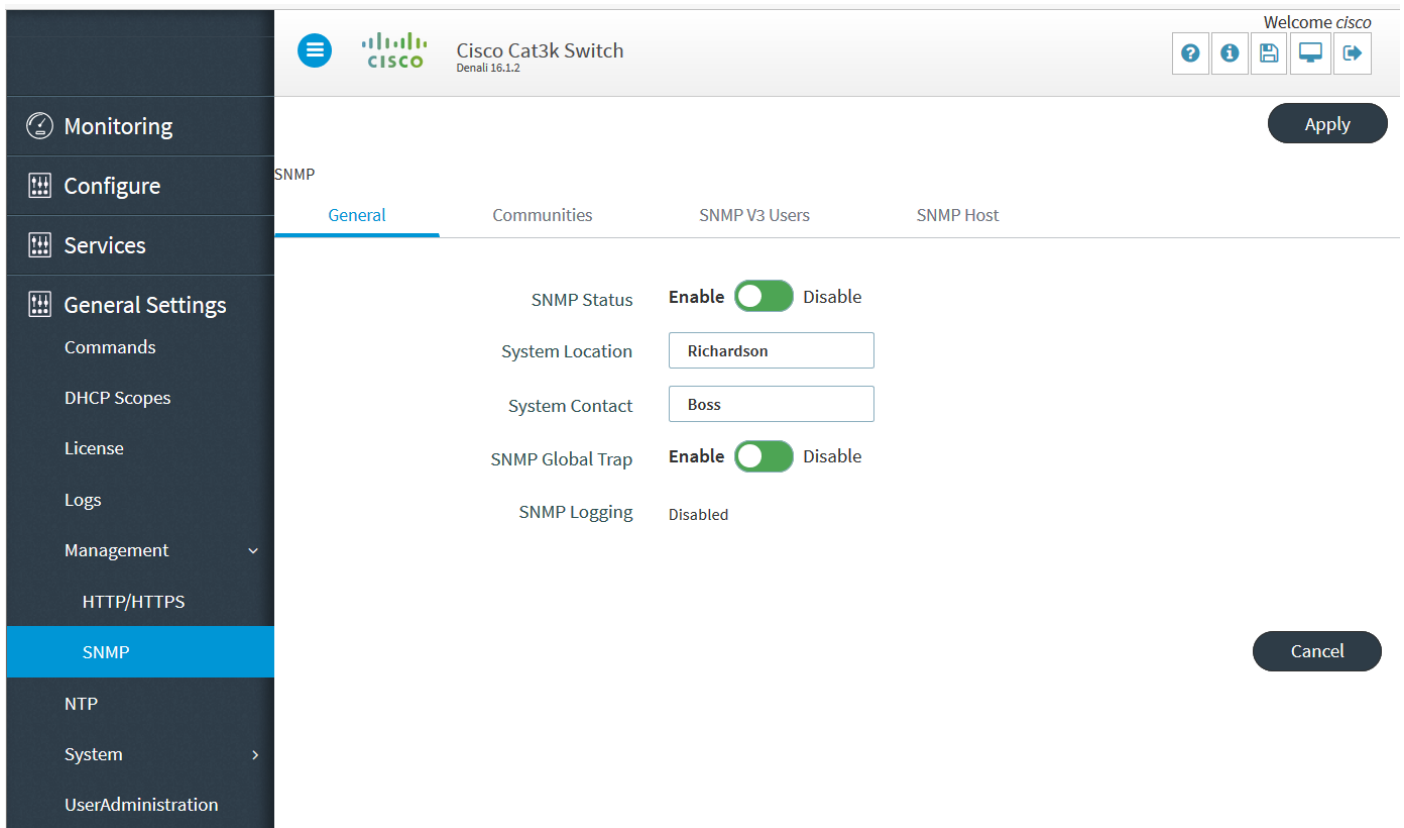
inventory from the switch.

Configure (Prime Infrastructure 3.x and Later)

SNMP Configuration on a Switch (Denali 16.x)

GUI

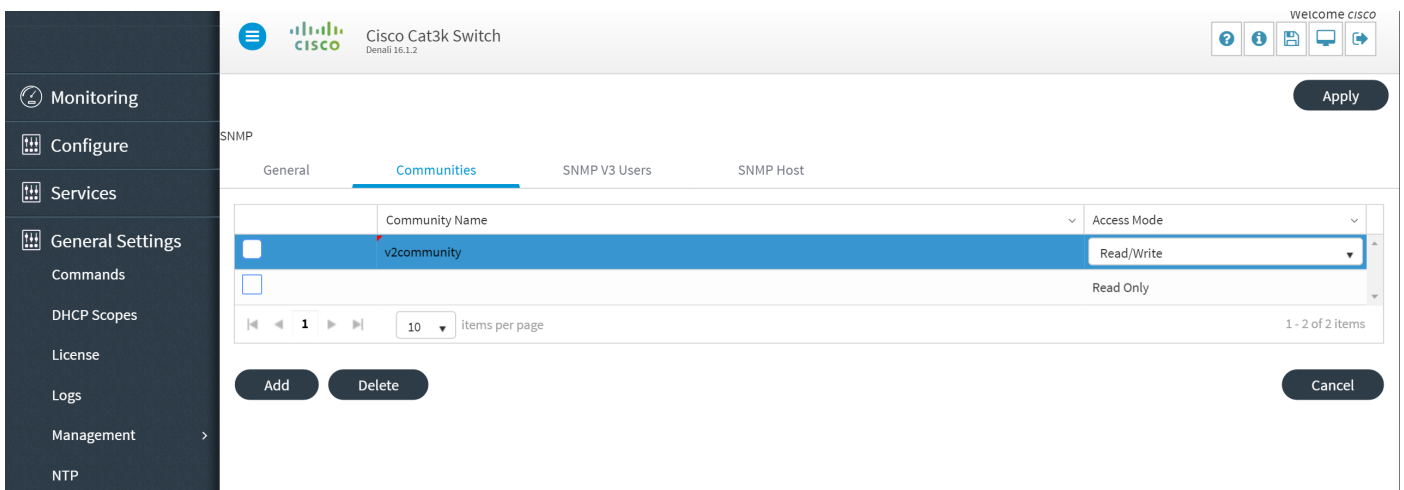Choose **General Settings > Management > SNMP**.

Enable **SNMP**.

GUI SNMP v2 Configuration on a Switch (Denali 16.x)

CLI SNMP v2 Configuration on a Switch (Denali 16.x)

Enter these commands:

```
conf t
```

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

GUI SNMP v3 Configuration on a Switch (Denali 16.x)
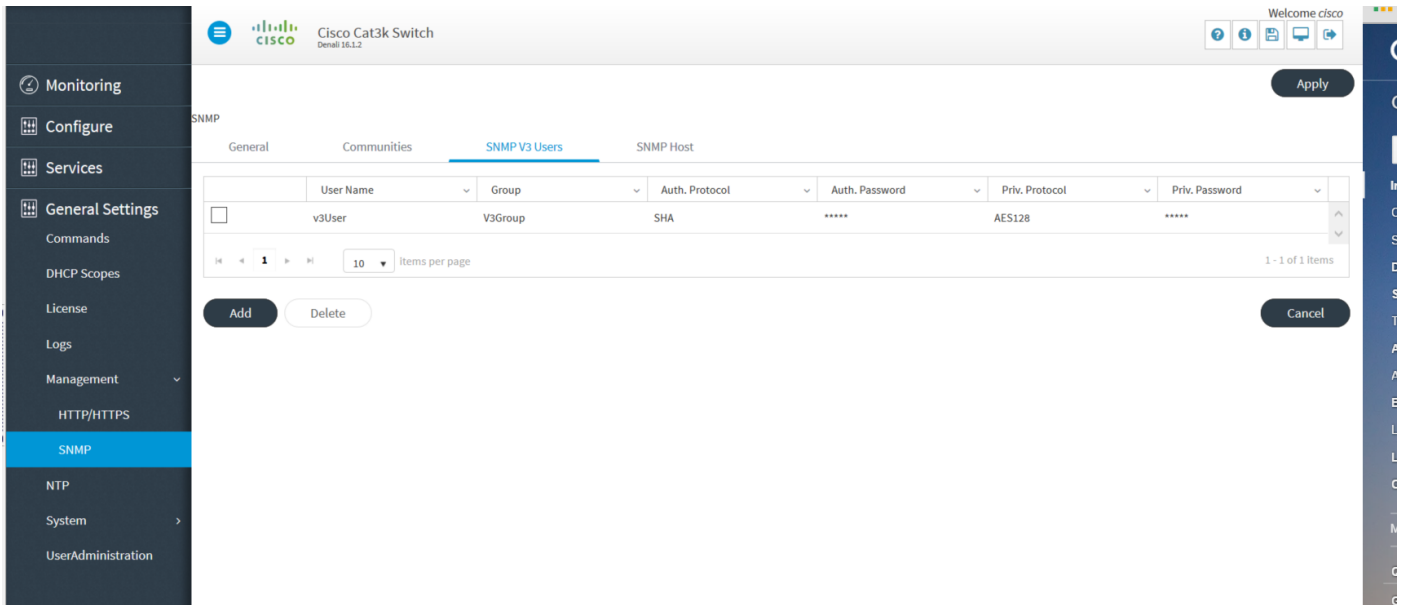
CLI SNMP v3 Configuration on a Switch (Denali 16.x)

Enter these commands:

```
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 Infrastructure

SNMP v2
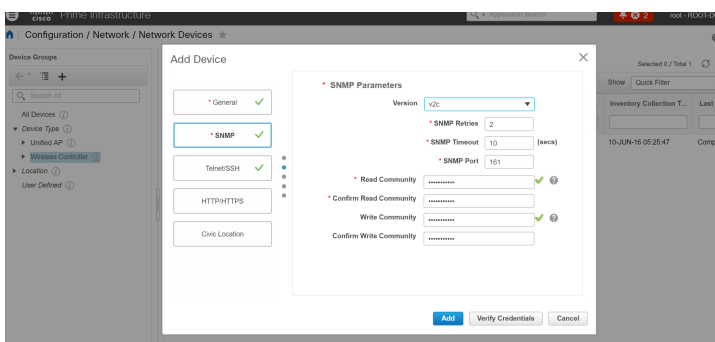
SNMP v3
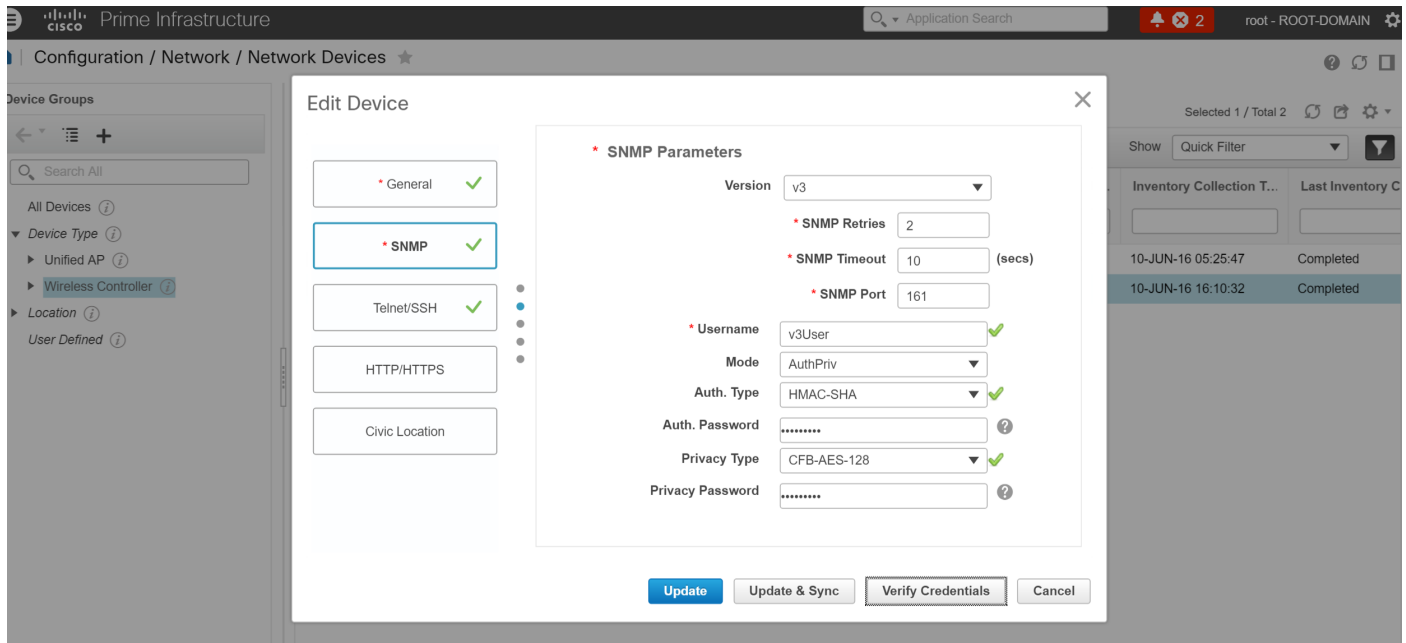
Verify

Use this section to confirm that your configuration works properly.

The Cisco CLI Analyzer (registered customers only) supports certain **show** commands. Use the Cisco CLI Analyzer in order to view an analysis of **show** command output.

SNMP v2 Configuration on a Switch (Cisco IOS-XE)

Enter this command:

```
5760-79b#show snmp community

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

SNMP v3 Configuration on a Switch (Cisco IOS-XE)

Enter these commands:

```
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
```

> **Note**: The CLI is preferred over the GUI for SNMP v3 configuration on Converged Access for some known issues that are addressed in Cisco bug ID CSCuo52406.

Prime Infrastructure (2.2 and Earlier)

SNMP v2 Configuration on a Switch (Denali 16.x)

Enter this command:

```
polaris-3850#show snmp community

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

SNMP v3 Configuration on a Switch (Denali 16.x)

Enter these commands:

```
polaris-3850#show snmp user

User name: v3user
Engine ID: 80000009030068BC0C5A8F80
storage-type: nonvolatile        active
Authentication Protocol: SHA
Privacy Protocol: AES128
Group-name: V3Group
```
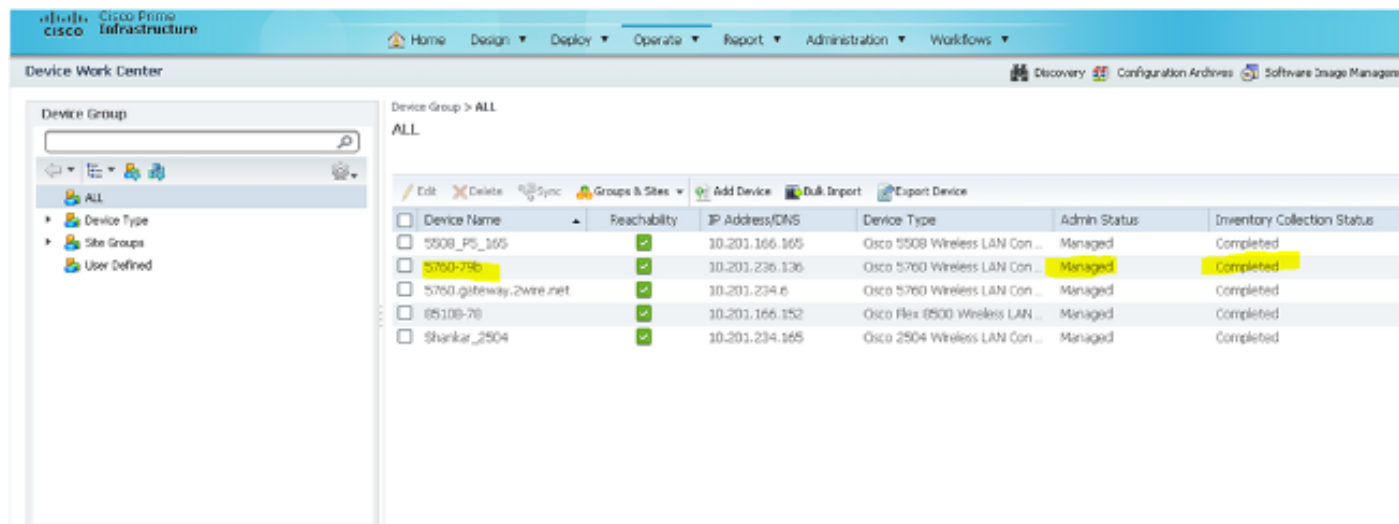
```
polaris-3850#show snmp group
groupname: V3Group                    security model:v3 auth
contextname: <no context specified>   storage-type: nonvolatile
readview : V3Read                     writeview: V3Write
notifyview: <no notifyview specified>
row status: active
```

Prime Infrastructure

Troubleshoot

This section provides information you can use to troubleshoot your configuration.

From Converged Access

The **show logging** command shows active packets sent to the Prime Infrastructure IP address from the WLC.

Enter these commands:

```
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, nonrptr 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, nonrptr 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, nonrptr 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
```

From Prime Infrastructure

SNMPWALK between devices.

Enter these commands:

```
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

This is the result if reachablity is there:

DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: xx.xxx