# Gecondenseerd toegangsbeheer (5760/3850/3650) via Prime-infrastructuur met SNMP v2 en v3 Configuratievoorbeeld

## Inhoud

Inleiding Voorwaarden Vereisten Gebruikte componenten Instellen (Prime-infrastructuur 2.2 en eerder) SNMP v2-configuratie op een switch GUI CLI SNMP v3-configuratie op een switch CLI Prime-infrastructuur SNMP v2 SNMP v3 Configureer (Prime-infrastructuur 3.x en later) SNMP-configuratie op een switch (Denali 16.x) GUI GUI SNMP v2-configuratie op een switch (Denali 16.x) CLI SNMP v2-configuratie op een switch (Denali 16.x) GUI SNMP v3-configuratie op een switch (Denali 16.x) CLI SNMP v3-configuratie op een switch (Denali 16.x) **Prime-infrastructuur** SNMP v2 SNMP v3 Verifiëren SNMP v2-configuratie op een switch (Cisco IOS-XE) SNMP v3-configuratie op een switch (Cisco IOS-XE) Prime-infrastructuur (2.2 en eerder) SNMP v2-configuratie op een switch (Denali 16.x) SNMP v3-configuratie op een switch (Denali 16.x) **Prime-infrastructuur** Problemen oplossen Van geconvergeerde toegang Prime-infrastructuur

## Inleiding

Dit document beschrijft hoe u geconvergeerde access (5760/3850/3650) aan Prime-infrastructuur kunt toevoegen met Simple Network Management Protocol (SNMP) v2 en v3.

## Voorwaarden

### Vereisten

Cisco raadt kennis van de volgende onderwerpen aan:

- geconvergeerde access point (5760/3850/3650) Cisco IOS mobiele versie 3.3.x en hoger of Denali 16.x
- Prime-infrastructuur versie 2.0 of hoger

#### Gebruikte componenten

Dit document is niet beperkt tot specifieke software- en hardware-versies.

De informatie in dit document is gebaseerd op de apparaten in een specifieke laboratoriumomgeving. Alle apparaten die in dit document worden beschreven, hadden een opgeschoonde (standaard)configuratie. Als uw netwerk live is, moet u de potentiële impact van elke opdracht begrijpen.

## Instellen (Prime-infrastructuur 2.2 en eerder)

#### SNMP v2-configuratie op een switch

GUI

Kies Configuration > Controller > Management > SNMP > Community's > New.

cisco Wireless Controller	🟠 Home 🛛 M	Nonitor   🔻	Configuration 🔻	Administration 🛛 🔻	Help
Controller	SNMP v1/v2c Community				
System	New Remove				
<ul> <li>Internal DHCP Server</li> </ul>	Community Namo		Ctatur		
<ul> <li>Management</li> </ul>	Community Name		Status		
<ul> <li>Protocol Management</li> </ul>	No data available				
SNMP     General					
Communities					
SNMP V3 Users					
SNMP Host					
HTTP-HTTPS					
<ul> <li>Technical Support</li> </ul>					
System Resources Information					
AP crash					
<ul> <li>Mobility Management</li> </ul>					
<ul> <li>Mobility Global Config</li> </ul>					
Mobility Peer     Cuttale Deer					
mDNS					
110/10					
	•				
ahaha					
սիսիս cisco Wireless Controller	A Home Mo	onitor   🔻	Configuration   •	Administration   🔻	Help
Controller	Mone     Mone       SNMP v1/v2c Community     New	onitor i 🔻	Configuration   🔻	Administration   🔻	Help
Controller	Mome     Mome       SNMP v1/v2c Community     New	ionitor   🔻	Configuration   🔻	Administration   🔻	Help
Controller System Internal DHCP Server	A Home     Ma       SNMP v1/v2c Community     New       SNMP v1/v2c Community > New     V2Community	onitor   🔻	Configuration   🔻	Administration 🗐 🔻	Help
Controller  System Internal DHCP Server Management	Home Mo     SNMP v1/v2c Community     SNMP v1/v2c Community > New     Community Name V2Community	ionitor   🔻	Configuration   •	Administration   🔻	Help
Controller System Internal DHCP Server Management Protocol Management SNMP	Home Mo     SNMP v1/v2c Community     SNMP v1/v2c Community > New     Community Name V2Commun     Access Mode Read/Write	onitor 💌 nity te 💌	Configuration   <b>v</b>	Administration   🔻	Help
Controller     System     Internal DHCP Server     Management     Frotocol Management     SNMP     General	Home Mo     SNMP v1/v2c Community     SNMP v1/v2c Community > New     Community Name V2Commun     Access Mode Read/Write	ionitor   • nity	Configuration   <b>v</b>	Administration   🔻	Help
System     System     Internal DHCP Server     Management     SNMP     General     Communities	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 💌 nity te 💌	Configuration   <b>v</b>	Administration   🔻	Help
System     Internal DHCP Server     Management     SNMP     General     Communities     SNMP V3 Users	Home Mo     SNMP v1/v2c Community     SNMP v1/v2c Community > New     Community Name V2Commun     Access Mode Read/Write	ionitor   •	Configuration   <b>v</b>	Administration   •	Help
System     System     Internal DHCP Server     Management     SNMP     General     Communities     SNMP V3 Users     SNMP Host	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 💌 nity te 💌	Configuration   <b>v</b>	Administration   •	Help
System     System     Internal DHCP Server     Management     SNMP     General     SNMP V3 Users     SNMP Host     HTTP-HTTPS     Technical Support	Home Mo     SNMP v1/v2c Community     SNMP v1/v2c Community > New     Community Name V2Commun     Access Mode Read/Write	onitor 🛛 🔻	Configuration   <b>v</b>	Administration   •	Help
System     System     Internal DHCP Server     Management     Protocol Management     SNMP     General     General     SNMP V3 Users     SNMP Host     HTTP-HTTPS     Technical Support     System Resources Information	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor   •	Configuration   •	Administration   •	Help
Controller  System Internal DHCP Server  Management  Protocol Management  SNMP  General  General  SNMP V3 Users  SNMP V3 Users  SNMP Host  HTTP-HTTPS  Technical Support  System Resources Information  Controller crash	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 🛛 🔻	Configuration 🛛	Administration   •	Help
System     System     Internal DHCP Server     Management     Protocol Management     SNMP     General     General     Communities     SNMP V3 Users     SNMP Host     HTTP-HTTPS     Technical Support     System Resources Information     Controller crash     CoreDump	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 💌	Configuration   V	Administration   •	Help
Wireless Controller      System     Internal DHCP Server     Management     Protocol Management     SNMP     General     General     Communities     SNMP V3 Users     SNMP Host     HTTP-HTTPS     Technical Support     System Resources Information     Controller crash     CoreDump     AP crash	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 🔻	Configuration V	Administration   •	Help
System     System     Internal DHCP Server     Management     Protocol Management     SNMP     General     General     Communities     SNMP V3 Users     SNMP Host     HTTP-HTTPS     Technical Support     System Resources Information     Controller crash     CoreDump     AP crash     Mobility Management	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	ionitor   🔻	Configuration   •	Administration 🗐 🔻	Help
Controller  System  Internal DHCP Server  Management  Protocol Management  SNMP  General  General  Gommunities  SNMP V3 Users  SNMP V3 Users  SNMP Host  HTTP-HTTPS  Technical Support  System Resources Information  Controller crash  CoreDump  AP crash  Mobility Management  Mobility Global Config  Mobility Peer	Home Mo SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Commun Access Mode Read/Write	onitor 💌	Configuration V	Administration   •	Help
System     System     Internal DHCP Server     Management     Protocol Management     SNMP     General     Communities     SNMP V3 Users     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	More     More       SNMP v1/v2c Community     New       SNMP v1/v2c Community > New     New       Community Name     V2Community       Access Mode     Read/Write	onitor 🛛 🔻	Configuration   •	Administration   •	Help

Voer deze opdrachten in:

conf t

snmp-server community V2Community RW

#### SNMP v3-configuratie op een switch

CLI

Voer deze opdrachten in:

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-infrastructuur

Opmerking: Gebruik het uitzicht van de levenscyclus.

#### Kies Bedienen > Apparaatwerkcentrum > Apparaat toevoegen.

cisco Prime cisco Infrastructure	▲ Home Design ▼ Deplo	y 🔻 Operate 🖲	<ul> <li>Report ▼ Admir</li> </ul>	nistration 🔻 Workflows 🔻
Device Work Center				色。
Device Group	Device Group > ALL ALL			
	/ Edit X Delete Sync 4	Groups & Sites 👻	👷 Add Device 🛛 🔛 Bulk In	port Provide
<ul> <li>B Device Type</li> </ul>	Device Name	Reachability	IP Address/DNS	Device Type
Site Groups	5508_P5_165	<b></b>	10.201.166.165	Cisco 5508 Wireless LAN Con
User Defined	5760.gateway.2wire.net	<b></b>	10.201.234.6	Cisco 5760 Wireless LAN Con
	85108-78	<b>S</b>	10.201.166.152	Cisco Flex 8500 Wireless LAN
	Shankar_2504	Sec.	10.201.234.165	Cisco 2504 Wireless LAN Con

Add Device ▼ General Parameters *			×
IP Address	10.201.236.136		
O DNS Name			
▼ SNMP Parameters			
Version	v2c •	]	
* Retries	2		
* Timeout	10	(secs)	
* Community	•••••	2	
* Confirm Community	•••••		
<ul> <li>Telnet/SSH Parameters</li> </ul>			
Protocol	Telnet •	]	
* Timeout	60	(secs)	
Username	cisco		
Password	•••••		
Confirm Password	•••••		
Enable Password	•••••		
Confirm Enable Password	••••••		-
		Add Cancel	
L			

SNMP v3

Add Device General Parameters *			×
<ul> <li>IP Address</li> </ul>	10.201.236.136		
O DNS Name			
<ul> <li>SNMP Parameters</li> </ul>			
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	

Opmerking: Als de parameters van telnet/Secure Shell niet zijn ingevoerd, zal de Primeinfrastructuur geen inventaris van de switch verzamelen.

## Configureer (Prime-infrastructuur 3.x en later)

SNMP-configuratie op een switch (Denali 16.x)

GUI

Kies Algemene instellingen > Beheer > SNMP.

Schakel SNMP in.

		Cisco Cat3k Switch Denali 16.1.2			Welcome cisco     Image: Comparison of the second se
Monitoring     Monitoring					Apply
🔛 Configure	SNMP				
🔛 Services	General	Communities	SNMP V3 Users	SNMP Host	
🔛 General Settings		SNMP Status	Enable Oisable		
Commands		System Location	Richardson		
DHCP Scopes		System Contact	Boss		
License		SNMP Global Trap	Enable Oisable		
Logs		SNMP Logging	Disabled		
Management ~					
HTTP/HTTPS					
SNMP					Cancel
NTP					
System >					
UserAdministration					

### GUI SNMP v2-configuratie op een switch (Denali 16.x)

		Cisco Cat3k Switch					Welcome <i>cisco</i>
Monitoring							Apply
🔛 Configure	SNMP						
🔛 Services	General	Communities	SNMP V3 Users	SNMP Host			
🔛 General Settings		Community Name			~	Access Mode	~
		v2community				Read/Write	▼
Commands						Read Only	~
DHCP Scopes		10 🔹 items per page					1 - 2 of 2 items
License							
Logs	Add	Delete					Cancel
Management >							
NTP							

CLI SNMP v2-configuratie op een switch (Denali 16.x)

Voer deze opdrachten in:

conf t

snmp-server community V2Community RW

GUI SNMP v3-configuratie op een switch (Denali 16.x)

		Cisco Cat3k Switch					0	Welcome cisco
Monitoring     Monitoring								Apply
🔛 Configure	SNMP							
🔛 Services	General	Communities	SNMP V3 Users S	NMP Host				
🖽 General Settings		User Name v	Group ~	Auth. Protocol ~	Auth. Password ~	Priv. Protocol ~	Priv. Password	~
Commands		v3User	V3Group	SHA		AES128		Û
DHCP Scopes		▶ 10 ¥ items per page						1 - 1 of 1 items
License	Add	Delete						Cancel
Logs								
Management ~								
HTTP/HTTPS								
SNMP								
NTP								
System >								
UserAdministration								

### CLI SNMP v3-configuratie op een switch (Denali 16.x)

Voer deze opdrachten in:



#### SNMP v2

Cisco Prime Infrastructure					<ul> <li>Application Set</li> </ul>	earch	-	🕂 😣 2 🛛 root - RO	OT-DON
↑ Configuration / Network / Network	ork Devices 🔺								?
Device Groups	Add Device		* SNMP Parameters				×	Selected 0 / Total 1 Show Quick Filter	Ω e ▼
O Search All All Devices (i)	* General 🗸		Version	v2c	•	] 1		. Inventory Collection T	Last In
Device Type ()     Unified AP ()	* SNMP 🗸			* SNMP Timeout	10	(secs)		10-JUN-16 05:25:47	Complet
Wireless Controller () Location () User Defined ()	Telnet/SSH 🗸	•	* Read Community	* SNMP Port	* SNMP Port 161				
	HTTP/HTTPS	•	* Confirm Read Community Write Community	••••••		] ✓ ❷			
	Civic Location		Confirm Write Community	•••••		]			
				Add V	erify Credential	s Can	cel		

#### SNMP v3

Prime Infrastructure					<ul> <li>Application Set</li> </ul>	arch		🐥 😣 2 root - R(	DOT-DOMAIN 🌣
Configuration / Network / Netw	vork Devices 🔺								0 Ø 🛛
Device Groups	Edit Device						$\times$	Selected 1 / Total 2	O B & .
< ĭ ≣ +			* SNMP Parameters					Show Quick Filter	<b>T</b>
O Search All All Devices (j)	* General 🗸	]	Version	V3	•			Inventory Collection T	Last Inventory C
<ul> <li>✓ Device Type (i)</li> <li>▶ Unified AP (i)</li> </ul>	* SNMP 🗸	]		* SNMP Retries * SNMP Timeout	2	(secs)		10-JUN-16 05:25:47	Completed
Wireless Controller  Location	Telnet/SSH 🗸	• • •	* Username	* SNMP Port	161	) ~		10-JUN-16 16:10:32	Completed
User Defined (j)	HTTP/HTTPS	•	Mode Auth, Type	AuthPriv	<b></b>	J			
U	Civic Location	]	Auth. Password			0			
			Privacy Type Privacy Password	CFB-AES-128	<b>▼</b> )	<b>0</b>			
			Update	te & Svnc	erify Credentials	Can	cel		
			opado-		, erouonitura				

### Verifiëren

Gebruik dit gedeelte om te bevestigen dat de configuratie correct werkt.

De <u>Cisco CLI Analyzer</u> (alleen geregistreerde klanten) ondersteunt bepaalde **show-**opdrachten. Gebruik de Cisco CLI Analyzer om een analyse van de opdrachtoutput te bekijken.

#### SNMP v2-configuratie op een switch (Cisco IOS-XE)

Typ deze opdracht:

5760-79b#show snmp community

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

#### SNMP v3-configuratie op een switch (Cisco IOS-XE)

Voer deze opdrachten in:

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

User name: V3User Engine ID: 8000009030068BC0C5A8F80 storage-type: nonvolatile active Authentication Protocol: SHA Privacy Protocol: AES128 Group-name: V3Group contextname: <no context specified>
readview : V3Read
notifyview: <no notifyview specified>
row status: active

Opmerking: De CLI heeft de voorkeur boven de GUI voor SNMP v3-configuratie bij geconvergeerde toegang voor een aantal bekende problemen die worden aangepakt in Cisco bug-ID <u>CSCuo52406</u>.

#### Prime-infrastructuur (2.2 en eerder)

alitatia Cisco Prime							
cisco Intrastructure		🏠 Home Design 🔹 De	ploy • Operate •	Report • Admir	nistration • Workflows •		
Device Work Center					飾り	scovery 👭 Configurati	on Archives 🥳 Software Image Manager
Device Group	<u>م</u>	Device Group > ALL ALL					
ALL ST ST ST	22+	/ Edt XDelete Sync	🚑 Groups & Sites 💌	👷 Add Device 🛛 🜇 Duk Dr	port Papart Device		
<ul> <li>B Device Type</li> </ul>		Device Name	Reachability	IP Address/DNS	Device Type	Admin Status	Inventory Collection Status
<ul> <li>A Ste Groups</li> </ul>		5508_P5_165	<b>P</b>	10.201.166.165	Osco 5508 Wreless LAN Con	Managed	Completed
🋃 User Defined		5760-79b	<b>2</b>	10.201.236.136	Osco 5760 Wreless LAN Con	Managed	Completed
		5760.gateway.2wire.net		10.201.234.6	Osco 5760 Wreless LAN Con	Managed	Completed
		05108-78	<b>2</b>	10.201.166.152	Osco Flex 0500 Wheless LAN	Managed	Completed
		Shankar_2504	<b>1</b>	10.201.234.165	Osco 2504 Wireless LAN Con	Managed	Completed

#### SNMP v2-configuratie op een switch (Denali 16.x)

#### Typ deze opdracht:

polaris-3850#show snmp community

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

#### SNMP v3-configuratie op een switch (Denali 16.x)

Voer deze opdrachten in:

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

User name: v3user Engine ID: 8000009030068BC0C5A8F80 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> security model:v3 auth
storage-type: nonvolatile
writeview: V3Write

#### Prime-infrastructuur

E 'llulu' Prime Infrastructure					O - Application S	Search	🐥 😣 2 root - F	ROOT-DOMAIN 🌣
Configuration / Network / Network	workDevices 🔺							000
Device Groups	Device Groups All Devices						Selected 0 / Total 2	064.
← * 1 +	+• / ×	Admin State 🔻	Sync Group	os & Sites 🔻 Export	Device Revoke	Certificate S	Show Quick Filter	• 7
<ul> <li>Q Search All</li> <li>All Devices ⑦</li> <li>✓ Device Type ⑦</li> </ul>	Reachab	Admin Status	Device Name	IP Address	DNS Name	Device Type	Last Inventory Collect	Last Success
► Unified AP (i)		Managed	AirMario	10.201.236.100 🚊 🧃	) 10.201.236.100	Cisco 2504 Wireless	Completed (	j) June 10, 2016
► Wireless Controller ( <i>i</i> )		Un-Managed		10.201.234.36 (į	) 10.201.234.36		Synchronizing	i)
<ul> <li>Location () User Defined ()</li> </ul>								

### Problemen oplossen

Deze sectie bevat informatie waarmee u problemen met de configuratie kunt oplossen.

#### Van geconvergeerde toegang

De opdracht **show logging** toont actieve pakketten die naar het IP-adres van de Primeinfrastructuur van de WLC worden verzonden.

Voer deze opdrachten in:

```
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, regid 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
```

#### Prime-infrastructuur

SNMPWALK tussen apparaten.

Voer deze opdrachten in:

```
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

Dit is het resultaat als bereikbaarheid er is:

DISMAN-EVENT-MIB::sysUpTimeInstance = Time-ticks: xx.xxx