Ejemplo de Configuración de Acceso Convergente (5760/3850/3650) a través de Prime Infrastructure con SNMP v2 y v3

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Introducción

Este documento describe cómo agregar acceso convergente (5760/3850/3650) a Prime Infrastructure con protocolo simple de administración de red (SNMP) v2 y v3.

Prerequisites

Requirements

Cisco recomienda que tenga conocimiento sobre estos temas:

- Acceso convergente (5760/3850/3650) Cisco IOS[®] versión 3.3.x y posteriores o Denali 16.x
- Prime Infrastructure versión 2.0 o posterior

Componentes Utilizados

Este documento no tiene restricciones específicas en cuanto a versiones de software y de hardware.

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.

Configurar (Prime Infrastructure 2.2 y versiones anteriores)

Configuración de SNMP v2 en un switch

GUI

Elija Configuration > Controller > Management > SNMP > Communities > New.

cisco Wireless Controller	🟠 Home	Monitor 🔻	Configuration 🛛 🔻	Administration 🛛 🔻	Help
Controller	SNMP v1/v2c Communi	ty			
System	New Remove				
 Internal DHCP Server 	Community Name		Status		
 Management 	Community Name		Status		
 Protocol Management 	No data available				
* SNMP					
SNMP V3 Users					
SNMP Host					
HTTP-HTTPS					
 Technical Support 					
 System Resources Information Controller math 					
Controller crash					
AP crash					
 Mobility Management 					
 Mobility Global Config 					
 Mobility Peer 					
Switch Peer Group					
* mDNs					
	4				
	•				
	<u> </u>				
	<u> </u>				
ujuuju cisco Wireless Controller		Monitor ¥	Configuration 💌	Administration	Hala
սիսիս cisco Wireless Controller	▲ Home	Monitor 🔻	Configuration 🔻	Administration 🔻	Help
Controller	Home SNMP v1/v2c Community > Nev SNMP v1/v2c Community > Nev	Monitor 🔻	Configuration 🔻	Administration 🗐 🔻	Help
Controller System	Home SNMP v1/v2c Community > New	Monitor • ty w	Configuration 🔻	Administration 🔻	Help
Controller System Internal DHCP Server	Home SNMP v1/v2c Community > New Community Name V2Comm	Monitor I 💌	Configuration •	Administration 🔻	Help
Controller System Internal DHCP Server Management Protocol Management	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Assess Marke Read Marke	Monitor 💌	Configuration •	Administration 🔻	Help
System Internal DHCP Server Management SNMP	Home SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V ty w hunity	Configuration ▼	Administration 🔻	Help
Controller System Internal DHCP Server Management Protocol Management SNMP General	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V ty w hunity Vrite V	Configuration •	Administration 🔻	Help
System Internal DHCP Server Management SNMP General Communities	Home SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor 💌 ty w hunity Vrite 💌	Configuration ▼	Administration •	Help
Wireless Controller System Internal DHCP Server Management Fortocol Management SNMP General Communities SNMP V3 Users	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V ty w nunity Vrite V	Configuration 🔻	Administration 🔻	Help
System Internal DHCP Server Management SNMP General Communities SNMP V3 Users SNMP Host	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V ty w nunity Write V	Configuration ▼	Administration •	Help
Controller System Internal DHCP Server Management Vertocol Management SNMP General General SNMP V3 Users SNMP Host HTTP-HTTPS Vertocical Support	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration •	Administration 🔻	Help
Vireless Controller System Internal DHCP Server Management Protocol Management SNMP General General SNMP V3 Users SNMP Host HTTP-HTTPS Technical Support System Resources Information	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V ty w nunity Write V	Configuration v	Administration •	Help
Controller System Internal DHCP Server Management Vertocol Management Vertocol Management SNMP General General Gommunities SNMP V3 Users SNMP Host HTTP-HTTPS Technical Support System Resources Information Controller crash	Home SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	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 Corroller crash CoreDump	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration •	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 Controller crash CoreDump AP crash	Home SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration	Administration •	Help
Wireless Controller System Internal DHCP Server Management Protocol Management SNMP General General SNMP V3 Users SNMP V3 Users SNMP Host SNMP Host HTTP-HTTPS Technical Support System Resources Information Controller crash CoreDump AP crash Mobility Management	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration 🔻	Administration	Help
System Internal DHCP Server Management Protocol Management SNMP General General General SNMP V3 Users SNMP Host HTTP-HTTPS Technical Support System Resources Information Controller crash CoreDump AP crash Mobility Management Mobility Global Config	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration	Administration 🗐	Help
Controller System Internal DHCP Server Management Management SNMP General General Gommunities SNMP V3 Users SNMP Host SNMP Host HTTP-HTTPS Technical Support System Resources Information Controller crash CoreDump AP crash Mobility Management Mobility Global Config Mobility Peer Switch Peer Group	Home SNMP v1/v2c Community SNMP v1/v2c Community > New Community Name V2Comm Access Mode Read/W	Monitor V	Configuration	Administration	Help

Ingrese estos comandos:

conf t

snmp-server community V2Community RW

Configuración de SNMP v3 en un switch

CLI

Ingrese estos comandos:

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

Nota: Utilice la vista Ciclo de vida.

Elija Operate > Device Work Center > Add Device.

cisco Prime cisco Infrastructure	Home Design ▼ Deplor	/ • Operate •	Report V Administ	ration 🔻 Workflows 🔻
Device Work Center				尚 (
Device Group	Device Group > ALL ALL			
	/ Edit X Delete Sync 💰	Groups & Sites 👻	Add Device Bulk Impor	rt Provide
Ba Device Type	Device Name	Reachability	IP Address/DNS	Device Type
Base Site Groups	5508_P5_165		10.201.166.165	Cisco 5508 Wireless LAN Con
User Defined	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

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	•••••		
 Telnet/SSH Parameters 			
Protocol	Telnet •]	
* Timeout	60	(secs)	
Username	cisco		
Password	•••••		
Confirm Password	•••••		
Enable Password	•••••		
Confirm Enable Password	••••••		+
		Add Cancel	

SNMP v3

Add Device			×
 deneral Parameters 			*
 IP Address 	10.201.236.136		
O 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 Cance	

Nota: Si no se ingresan los parámetros de Telnet/Secure Shell, Prime Infrastructure no recopilará el inventario del switch.

Configurar (Prime Infrastructure 3.x y posterior)

Configuración de SNMP en un switch (Denali 16.x)

GUI

Elija General Settings > Management > SNMP.

Habilite SNMP.

		Cisco Cat3k Switch			Welcome cisco Image: Comparison of the second se
④ 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 🚺 Disable		
Logs		SNMP Logging	Disabled		
Management ~					
HTTP/HTTPS					
SNMP					Cancel
NTP					
System >					
UserAdministration					

Configuración de GUI SNMP v2 en un switch (Denali 16.x)

		Cisco Cat3k Switch					Image: Welcome cisco Image: Optimized state
Monitoring							Apply
🔛 Configure	SNMP						
🔛 Services	General	Communities	SNMP V3 Users	SNMP Host			
🔛 General Settings		Community Name			~	Access Mode	~
Commands		v2community				Read/Write	•
communus						Read Only	~
DHCP Scopes		10 🔻 items per page	2				1 - 2 of 2 items
License							
Logs	Add D	pelete					Cancel
Management >							
NTP							

Configuración SNMP v2 de CLI en un switch (Denali 16.x)

Ingrese estos comandos:

conf t

snmp-server community V2Community RW Configuración de GUI SNMP v3 en un switch (Denali 16.x)

		Cisco Cat3k Switch							00	Welcome cisco
④ Monitoring										Apply
🖽 Configure	SNMP									
🔛 Services	General	Communities	SNMP V3 Users	SNI	MP Host					
🔛 General Settings		User Name ~	Group	~	Auth. Protocol ~	· ,	Auth. Password ~	Priv. Protocol ~	Priv. Password	~
Commands		4303CI	43010up		311A			ALGIEG		~
DHCP Scopes	4 4 1 ⊳	Items per page								1 - 1 of 1 items
License	Add	Delete								Cancel
Logs										
Management ~										
HTTP/HTTPS										
SNMP										
NTP										
System >										
UserAdministration										

Configuración SNMP v3 de CLI en un switch (Denali 16.x)

Ingrese estos comandos:



SNMP v2

Cisco Prime Infrastructure					 Application Set 	arch		🕂 Ӿ 2 root - R0	DOT-DOM
↑ Configuration / Network / Network	ork Devices 🔺								0
Configuration / Network /	Add Device Add Device Ceneral SNMP Telnet/SSH HTTP/HTTPS Civic Location]]]	* SNMP Parameters Version * Read Community * Confirm Read Community Write Community Confirm Write Community	v2c SNMP Retries SNMP Timeout SNMP Port	▼ [2 [10 [161) (secs)) () () () () () ()	×	Selected 0 / Total 1 Show Quick Filter Inventory Collection T 10-JUN-16 05:25:47	Complet
				Add	erify Credential	s Can	icel		

SNMP v3

Prime Infrastructure				0,	 Application Searc 	h	🐥 😣 2 🛛 root - R	.00t-domain 🏠
Configuration / Network / Netv	work Devices ★							000
Device Groups	Edit Device					×	Selected 1 / Total 2	0 c ¢ ·
<* '≣ +			* SNMP Parameters				Show Quick Filter	v
O Search All	* General 🗸		Version	v3	▼		Inventory Collection T	Last Inventory C
▼ Device Type (i)	* SNMP			* SNMP Retries	2			
Unified AP		J		* SNMP Timeout	10 (s	secs)	10-JUN-16 05:25:47	Completed
Location (i)	Telnet/SSH 🗸	•	* Username	* SNMP Port	161		10-3014-10 10.10.32	Completed
User Defined (j)	HTTP/HTTPS		Mode	AuthPriv	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
ĺ			Auth. Type	HMAC-SHA	▼ 🗸			
	Civic Location		Auth. Password					
			Privacy Password	·····	V			
			Undeta	to 8 Suma	wife Cradentiale	Canaal		
			Update		erny Credentials	Cancel		

Verificación

Use esta sección para confirmar que su configuración funciona correctamente.

El Analizador de Cisco CLI (solo clientes registrados) admite determinados comandos show. Utilice el Analizador de Cisco CLI para ver un análisis de los resultados del comando show.

Configuración de SNMP v2 en un switch (Cisco IOS-XE)

Ingrese este comando:

5760-79b#show snmp community

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

Configuración de SNMP v3 en un switch (Cisco IOS-XE)

Ingrese estos comandos:

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

User name: V3User Engine ID: 80000009030068BC0C5A8F80 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

Nota: La CLI es preferible a la GUI para la configuración SNMP v3 en el acceso convergente para algunos problemas conocidos que se abordan en el Id. de error de Cisco <u>CSCuo52406</u>.

Prime Infrastructure (2.2 y anteriores)

cisco Infrastructure				_			
		🔔 Home Design 🖲 Depl	oy • Operate •	Report • Admir	nistration • Workflows •		
evice Work Center					飾り	scovery 👥 Configurati	on Archives 🥳 Software Image Mana
Device Group	Q	Device Group > ALL ALL					
😔 • 🗄 • 😹 👌	÷.						
ALL		/Edit XDelete Sync	🔒 Groups & Sites 👻	👷 Add Device 🛛 👔 Duk. Ir	nport 🔮 Export Device		
 Bevice Type 		Device Name	Reachability	IP Address/DNS	Device Type	Admin Status	Inventory Collection Status
 Site Groups 		5508_P5_165		10.201.166.165	Osco 5508 Wreless LAN Con	Managed	Completed
🎝 User Defined		5760-79b		10.201.236.136	Osco 5760 Wreless LAN Con	Managed	Completed
		5760.gateway.2wire.net		10.201.234.6	Osco 5760 Wireless LAN Con	Managed	Completed
		05108-70	2	10.201.166.152	Osco Flex 0500 Wreless LAN	Managed	Completed
		Shankar_2504	2	10.201.234.165	Osco 2504 Wireless LAN Con	Managed	Completed

Configuración de SNMP v2 en un switch (Denali 16.x)

Ingrese este comando:

polaris-3850#show snmp community

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

Configuración de SNMP v3 en un switch (Denali 16.x)

Ingrese estos comandos:

```
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>
row status: active

security model:v3 auth
storage-type: nonvolatile
writeview: V3Write

Prime Infrastructure

E viluelu Prime Infrastructure					O ₄ ▼ Application Se	earch	🐥 Ӿ 2 root - RC	ot-domain 🌣
Configuration / Network / Network	workDevices 🔺							000
Device Groups	Device Groups All Devices						Selected 0 / Total 2	0 c ¢ •
<" ≣ +	+• / ×	Admin State 🔻	Sync Group	s & Sites 🔻 Expo	ort Device Revoke C	ertificate St	Quick Filter	• 7
 Q Search All All Devices ĵ ▼ Device Type (i) 	Reachab	Admin Status	Device Name	IP Address	DNS Name	Device Type	Last Inventory Collect.	. Last Success
► Unified AP (j)		Managed	AirMario	10.201.236.100 📃	<i>i</i> 10.201.236.100	Cisco 2504 Wireless	Completed (i)	June 10, 2016
► Wireless Controller (i)		Un-Managed		10.201.234.36	(<i>i</i>) 10.201.234.36		Synchronizing	1
► Location ① User Defined ⑦								

Troubleshoot

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

Desde el acceso convergente

El comando **show logging** muestra los paquetes activos enviados a la dirección IP de la infraestructura Prime desde el WLC.

Ingrese estos comandos:

```
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, regid 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
```

Desde Prime Infrastructure

SNMPWALK entre dispositivos.

Ingrese estos comandos:

```
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 = comunidad snmp
```

10.201.234.36 = IP del WLC

Este es el resultado si hay disponibilidad:

DISMAN-EVENT-MIB::sysUpTimeInstance = Tiempos de tiempo: xx.xxx