Esempio di gestione dell'accesso convergente (5760/3850/3650) tramite Prime Infrastructure con configurazione SNMP v2 e v3

Sommario

Introduzione Prerequisiti **Requisiti** Componenti usati Configurazione (Prime Infrastructure 2.2 e versioni precedenti) Configurazione SNMP v2 su uno switch GUI CLI Configurazione di SNMP v3 su uno switch CLI **Prime Infrastructure** SNMP v2 SNMP v3 Configurazione (Prime Infrastructure 3.x e versioni successive) Configurazione SNMP su uno switch (Denali 16.x) GUI Configurazione GUI SNMP v2 su uno switch (Denali 16.x) Configurazione CLI SNMP v2 su uno switch (Denali 16.x) Configurazione GUI SNMP v3 su uno switch (Denali 16.x) Configurazione CLI SNMP v3 su uno switch (Denali 16.x) **Prime Infrastructure** SNMP v2 SNMP v3 Verifica Configurazione di SNMP v2 su uno switch (Cisco IOS-XE) Configurazione di SNMP v3 su uno switch (Cisco IOS-XE) Prime Infrastructure (2.2 e versioni precedenti) Configurazione SNMP v2 su uno switch (Denali 16.x) Configurazione SNMP v3 su uno switch (Denali 16.x) Prime Infrastructure Risoluzione dei problemi Da accesso convergente **Prime Infrastructure**

Introduzione

Questo documento descrive come aggiungere l'accesso convergente (5760/3850/3650) a Prime Infrastructure con Simple Network Management Protocol (SNMP) v2 e v3.

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- Accesso convergente (5760/3850/3650) Cisco IOS[®] versione 3.3.x e successive o Denali 16.x
- Prime Infrastructure versione 2.0 o successiva

Componenti usati

Il documento può essere consultato per tutte le versioni software o hardware.

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Configurazione (Prime Infrastructure 2.2 e versioni precedenti)

Configurazione SNMP v2 su uno switch

GUI

Scegliere Configurazione > Controller > Gestione > SNMP > Community > Nuovo.

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 V	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
System Internal DHCP Server 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 Communities 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 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

Immettere i seguenti comandi:

conf t

snmp-server community V2Community RW

Configurazione di SNMP v3 su uno switch

CLI

Immettere i seguenti comandi:

conf t
snmp-server group V3Group v3 auth read V3Read write V3Write
snmp-server user V3User V3Group v3 auth sha Password1 priv aes 128 Password
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: Utilizzare la vista Ciclo di vita.

Scegliete Operazione > Area di lavoro dispositivi > Aggiungi dispositivo.

uluulu. Cisco Prime				
cisco Infrastructure		Operate	Report 🔻 Administ	ration • Workflows •
Device Work Center				a the second se
Device Group	Device Group > ALL ALL			
ALL ST	/Edit XDelete Sync 🧸	Groups & Sites 👻	👷 Add Device 🛛 🔛 Bulk Impo	rt Propert Device
Base Device Type	Device Name	Reachability	IP Address/DNS	Device Type
🕨 🍰 Site Groups	5508_P5_165	S	10.201.166.165	Cisco 5508 Wireless LAN Con
Sea User Defined	5760.gateway.2wire.net	S	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 General 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: Se non si specificano i parametri Telnet/Secure Shell, Prime Infrastructure non raccoglierà l'inventario dallo switch.

Configurazione (Prime Infrastructure 3.x e versioni successive)

Configurazione SNMP su uno switch (Denali 16.x)

GUI

Scegliere Impostazioni generali > Gestione > SNMP.

Abilitare SNMP.

		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 v					
HTTP/HTTPS					
SNMP					Cancel
NTP					
System >					
UserAdministration					

Configurazione GUI SNMP v2 su uno switch (Denali 16.x)

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

Configurazione CLI SNMP v2 su uno switch (Denali 16.x)

Immettere i seguenti comandi:

conf t

snmp-server community V2Community RW

Configurazione GUI SNMP v3 su uno 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										

Configurazione CLI SNMP v3 su uno switch (Denali 16.x)

Immettere i seguenti comandi:

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

Cisco Prime Infrastructure					 Application Set 	earch		🕂 😣 2 🛛 root - RC	DOT-DOI
↑ Configuration / Network / Network	ork Devices 🔺								?
Device Groups ← * 1 注 +	Add Device		* SNMP Peromotors				×	Selected 0 / Total 1	Ωc
O Search All All Devices (j)	* General 🗸		Version	v2c	▼			. Inventory Collection T	Last In
Device Type (i) Unified AP (i) Wireless Controller (i)	* SNMP 🗸			* SNMP Retries	2) (secs)		10-JUN-16 05:25:47	Comple
Writeless Controller Views Controller User Defined ()	Telnet/SSH 🗸	•	* Read Community	• SNMP Port 161		✓ 0			
l	HTTP/HTTPS		* Confirm Read Community Write Community	••••••] ∕ Ø			
	Civic Location		Confirm Write Community	•••••]			
				Add	erify Credential	s Can	cel		

SNMP v3

Prime Infrastructure					 Application Set 	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	T
O Search All All Devices (j)	* General 🗸]	Version	V3	•			Inventory Collection T	Last Inventory C
 ✓ Device Type (i) ▶ Unified AP (i) 	* 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	 ▼	<i>.</i>			
U	Civic Location]	Auth. Password			0			
			Privacy Type Privacy Password	CFB-AES-128	▼)	0			
			Update	ite & Sync Ve	erify Credentials	Can	cel		
								J	

Verifica

Per verificare che la configurazione funzioni correttamente, consultare questa sezione.

<u>Cisco CLI Analyzer (solo utenti registrati) supporta alcuni comandi show</u>. Usare Cisco CLI Analyzer per visualizzare un'analisi dell'output del comando **show**.

Configurazione di SNMP v2 su uno switch (Cisco IOS-XE)

Immettere questo comando:

5760-79b#show snmp community

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

Configurazione di SNMP v3 su uno switch (Cisco IOS-XE)

Immettere i seguenti comandi:

```
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
```

contextname: <no context specified>
readview : V3Read
notifyview: <no notifyview specified>
row status: active

Nota: Per alcuni problemi noti risolti con l'ID bug Cisco <u>CSCuo52406</u>, la CLI è preferita alla GUI per la configurazione di SNMP v3 sull'accesso convergente.

Prime Infrastructure (2.2 e versioni precedenti)

cisco Infrastructure		A Hanna Davies * Dav	en · Anorata a	- Recent - Adm	inistration • Mindalaus •		
evice Work Center		(a) Home Design * Dep	oy · Operate	· Paguri • Adm	HISTORIUM + MURIOWS +	scovery 🐔 Configurati	en Archives 🖓 Schware Insae Man
					14 ···	annen) 🚮 ann de en	erreren Of sources sustained
Device Group		Device Group > ALL					
	Q.	ALL					
Q+ E+ & #	Q.						
Sal.		/Edt XDelete Sync	🔒 Groups & Sites 👻	👷 Add Device 🛛 👔 Dulk D	inport 📝 Export Device		
Bevice Type		Device Name	 Reachability 	IP Address/DNS	Device Type	Admin Status	Inventory Collection Status
Bite Groups		5508_P5_165		10.201.166.165	Osco 5508 Wreless LAN Con	Managed	Completed
🍰 User Defined		5760-79b	1	10.201.236.136	Osco 5760 Wreless LAN Con	Managed	Completed
		5760.gateway.2wire.net	2	10.201.234.6	Osco 5760 Wireless LAN Con	Managed	Completed
		05108-78	2	10.201.166.152	Osco Flex 6500 Wreless LAN	Managed	Completed
		Sharkar_2504	1	10.201.234.165	Osco 2504 Wireless LAN Con	Managed	Completed

Configurazione SNMP v2 su uno switch (Denali 16.x)

Immettere questo comando:

polaris-3850#show snmp community

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

Configurazione SNMP v3 su uno switch (Denali 16.x)

Immettere i seguenti comandi:

```
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 viluilu Prime Infrastructure					O ▼ Application S	Search	🐥 Ӿ 2 root - RC	iot-domain 🌣
Configuration / Network / Network	workDevices 🔺							0 0 D
Device Groups	Device Groups All Devices						Selected 0 / Total 2	0 c ‡ •
< * ' ≣ +	+• / ×	Admin State 🔻	Sync Group	s & Sites 🔻 Expor	t Device Revoke (Certificate S	Show Quick Filter	• 7
Q Search All All Devices () ▼ Device Type ()	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 (j)	June 10, 2016
► Wireless Controller (i)		Un-Managed		10.201.234.36	<i>i</i>) 10.201.234.36		Synchronizing	
 Location (j) User Defined (j) 								

Risoluzione dei problemi

Le informazioni contenute in questa sezione permettono di risolvere i problemi relativi alla configurazione.

Da accesso convergente

Il comando **show logging** permette di visualizzare i pacchetti attivi inviati dal WLC all'indirizzo IP dell'infrastruttura Prime.

Immettere i seguenti comandi:

```
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
                                     entPhysicalEntry.7.2067 = Gi2/1/1 Container
 --More--
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 Infrastructure

SNMPWALK tra dispositivi.

Immettere i seguenti comandi:

```
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 = community snmp
```

10.201.234.36 = WLC IP

Questo è il risultato se c'è raggiungibilità:

DISMAN-EVENT-MIB::sysUpTimeInstance = Scadenze temporali: xx,xxx