# Ultra-M UUID不相符修正MOP - vEPC

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### 簡介

本文檔介紹在託管StarOS VNF的Ultra-M設定中更正元素管理器(EM)和StarOS虛擬網路功能 (VNF)之間的通用唯一識別符號(Universal Unique IDentifier,UUID)不匹配所需的步驟。

## 背景資訊

Ultra-M是經過預先打包和驗證的虛擬化移動資料包核心解決方案,旨在簡化VNF的部署。

Ultra-M解決方案由以下虛擬機器(VM)型別組成:

- 自動IT
- 自動部署
- Ultra自動化服務(UAS)
- •元素管理器(EM)
- 彈性服務控制器(ESC)
- 控制功能(CF)
- •作業階段功能(SF)

Ultra-M的高級體系結構及涉及的元件如下圖所示:



UltraM體系結構

附註: Ultra M 5.1.x版本用於定義本文檔中的過程。

縮寫

VNF	虛擬網路功能
CF	控制功能
SF	服務功能
ESC	彈性服務控制器
澳門幣	程式方法
OSD	對象儲存磁碟
硬碟	硬碟驅動器
固態硬碟	固態驅動器
VIM	虛擬基礎架構管理員
虛擬機器	虛擬機器
EM	元素管理器
UAS	Ultra自動化服務
UUID	通用唯一識別符號

## MoP的工作流程



### EM中的部署ID、UUID及其關係

在Ultra-M設定中有三個主要元件— ESC、EM和StarOS VNF。EM充當ConfD查詢的代理,並代表 StarOS VNF傳送響應。其中的每個元件都作為VM運行並維護資訊。當這三個節點上的VM的資料 /狀態不匹配時,EM中會出現UUID不匹配警報。ESC對EM進行YANG呼叫以獲取ConfD資料。 ConfD同時具有配置資訊和運算元據/狀態。EM轉換來自ESC的查詢並根據需要傳送響應。

### **袹棆**杳

### 在EM中

在ESC中

#### 驗證EM是否處於HA模式並顯示為master/slave:

vsn: 4.1.1 SMP support: yes, using 2 threads Using epoll: yes available modules: backplane, netconf, cdb, cli, snmp, webui running modules: backplane,netconf,cdb,cli,webui status: started cluster status: mode: master node id: 6-1528831279

#### 登入到EM並檢查EM群集是否正常:

\_\_\_\_\_ 9 up up up

ubuntu@vnfd2deploymentem-1:~\$ ncs\_cli -u admin -C admin@scm# show ems EM VNFM ID SLA SCM PROXY 5 up up up

ubuntu@vnfd2deploymentem-1:~\$ ncs\_cli -u admin -C admin@scm# show ncs-state ha ncs-state ha mode master ncs-state ha node-id 9-1518035669 ncs-state ha connected-slave [ 5-1518043097 ]

在ESC中,驗證是否已建立與EM的netconf連線:

connected slaves: 1

ubuntu@vnfd2deploymentem-1:~\$ ncs --status | more

[admin@vnfm2-esc-0 esc-cli]\$ netstat -an | grep 830 0 0.0.0.0:830 0.0.0:\* LISTEN tcp 0 0 172.18.181.6:830 0 0 172.18.181.6:830 0 0 :::830 172.18.181.11:39266 tcp ESTABLISHED 172.18.181.11:39267 ESTABLISHED tcp :::\* tcp LISTEN [admin@vnfm2-esc-0 esc-cli]\$

在ESC中,確保所有VM都處於活動狀態且服務處於活動狀態:

[admin@vnfm2-esc-0 esc-cli]\$ ./esc\_nc\_cli get esc\_datamodel | egrep "<vm\_name>|<state>"

<state>IMAGE\_ACTIVE\_STATE</state> <state>IMAGE\_ACTIVE\_STATE</state> <state>IMAGE\_ACTIVE\_STATE</state> <state>FLAVOR\_ACTIVE\_STATE</state> <state>FLAVOR\_ACTIVE\_STATE</state>

<state>FLAVOR\_ACTIVE\_STATE</state> <state>SERVICE\_ACTIVE\_STATE</state> <vm\_name>vnfd2-deployment\_c1\_0\_13d5f181-0bd3-43e4-be2d-ada02636d870</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_c4\_0\_9dd6e15b-8f72-43e7-94c0-924191d99555/vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_s2\_0\_b2cbf15a-3107-45c7-8edf-1afc5b787132</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_s3\_0\_882cf1ed-fe7a-47a7-b833-dd3e284b3038</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_s5\_0\_672bbb00-34f2-46e7-a756-52907e1d3b3d</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_s6\_0\_6f30be77-6b9f-4da8-9577-e39c18f16dfb</vm\_name> <state>VM\_ALIVE\_STATE</state> <state>SERVICE\_ACTIVE\_STATE</state> <vm\_name>vnfd2-deployment\_vnfd2-\_0\_02d1510d-53dd-4a14-9e21b3b367fef5b8</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_vnfd2-\_0\_f17989e3-302a-4681-be46f2ebf62b252a</vm\_name> <state>VM\_ALIVE\_STATE</state> <vm\_name>vnfd2-deployment\_vnfd2-\_0\_f63241f3-2516-4fc4-92f3-06e45054dba0</vm\_name> <state>VM\_ALIVE\_STATE</state> [admin@vnfm2-esc-0 esc-cli]\$

## 驗證vnfm-proxy-agent是線上:

在StarOS VNF中

```
[local]POD1-VNF2-PGW# show vnfm-proxy-agent status
Thursday June 21 07:25:02 UTC 2018
VNFM Proxy Agent Status:
State
            : online
Connected to : 172.18.180.3:2181
Bind Address : 172.18.180.13:38233
```

```
VNFM Proxy address count: 3
驗證emctrl show活動狀態:
```

[local]POD1-VNF2-PGW# show emctrl status Thursday June 21 07:25:09 UTC 2018 emctrl status:

#### emctrl in state: ALIVE

### 確定UUID不匹配

必須在StarOS VNF和EM之間比較UUID,以便識別不匹配。這些過程列出了在StarOS VNF和EM中 執行的步驟,以便從各個節點獲取UUID。

在StarOS中,可以從show emctrl vdu list或show card hardware輸出獲取UUID。

[local]POD1-VNF2-PGW# show emctrl vdu list Thursday June 21 07:24:28 UTC 2018 Showing emctrl vdu card[01]: name[CFC\_01 6A982C79BA62]

card[02]: name[CFC\_02 ] uuid[E75AE5EE-2236-4FFD-A0D4-054EC246D506] card[03]: name[SFC\_03 ] uuid[E1A6762D-4E84-4A86-A1B1-84772B3368DC] card[04]: name[SFC\_04 ] uuid[B283D43C-6E0C-42E8-87D4-A3AF15A61A83] card[05]: name[SFC\_05 ] uuid[CF0C63DF-D041-42E1-B541-6B15B0BF2F3E] ] uuid[65344D53-DE09-4B0B-89A6card[06]: name[SFC\_06 85D5CFDB3A551 Incomplete command [local]POD1-VNF2-PGW# show card hardware | grep -i uuid Thursday June 21 07:24:46 UTC 2018 UUID/Serial Number : 33C779D2-E271-47AF-8AD5-6A982C79BA62 UUID/Serial Number : E75AE5EE-2236-4FFD-A0D4-054EC246D506 UUID/Serial Number : E1A6762D-4E84-4A86-A1B1-84772B3368DC UUID/Serial Number : B283D43C-6E0C-42E8-87D4-A3AF15A61A83 UUID/Serial Number : CF0C63DF-D041-42E1-B541-6B15B0BF2F3E : 65344D53-DE09-4B0B-89A6-85D5CFDB3A55 UUID/Serial Number 列出EM中的UUID: ubuntu@vnfd2deploymentem-1:~\$ ncs\_cli -u admin -C admin@scm# show vdus vdu | select vnfci CONSTITUENT MEMORY STORAGE DEVICE DEVICE ELEMENT IS CPU UTILS USAGE ΤD ΤD NAME GROUP GROUP TNFRA UTILS BYTES BYTES INITIALIZED VIM ID \_\_\_\_\_ \_\_\_\_\_ control-function BOOT\_generic\_di-chasis\_CF1\_1 scm-cf-nc scm-cf-nc di-chasis true 33c779d2-e271-47af-8ad5-6a982c79ba62 - true BOOT\_generic\_di-chasis\_CF2\_1 scm-cf-nc scm-cf-nc di-chasis true e75ae5ee-2236-4ffd-a0d4-054ec246d506 true session-function BOOT\_generic\_di-chasis\_SF1\_1 di-chasis \_ true

false e1a6762d-4e84-4a86-a1b1-84772b3368dc -\_ BOOT\_generic\_di-chasis\_SF2\_1 di-chasis true false b283d43c-6e0c-42e8-87d4-a3af15a61a83 -\_ BOOT\_generic\_di-chasis\_SF3\_1 -\_ di-chasis true \_ false 828281f4-c0f4-4061-b324-26277d294b86 -BOOT\_generic\_di-chasis\_SF4\_1 -di-chasis true 65344d53-de09-4b0b-89a6-85d5cfdb3a55 false

從該輸出中,您可以看到卡5在EM和StarOS之間存在UUID不匹配:

[local]POD1-VNF2-PGW# show emctrl vdu list Thursday June 21 07:24:28 UTC 2018 Showing emctrl vdu . . . . . card[05]: name[SFC\_05 ] uuid[CF0C63DF-D041-42E1-B541-6B15B0BF2F3E] . . . . . admin@scm# show vdus vdu | select vnfci CONSTITUENT MEMORY STORAGE DEVICE DEVICE ELEMENT IS CPU UTILS USAGE

NAME

GROUP

GROUP

TNFRA

ΤD

INITIALIZED VIM ID UTILS BYTES BYTES

session-function .....

BOOT\_generic\_di-chasis\_SF3\_1 - - di-chasis true false 828281f4-c0f4-4061-b324-26277d294b86 - - -.....

**附註**:如果多個卡的UUID不匹配,請確保僅在完成一個卡之後移動到另一個卡。如果同時嘗 試多個卡,則可能會遇到ESC VM索引問題。

### 恢復UUID

如果CF卡中的UUID不匹配,請確保執行檔案系統同步:

[local]VNF2# filesystem synchronize all 如果不匹配的UUID卡為SF且處於活動狀態,請執行卡遷移以便使其處於備用狀態:

[local]VNF2# card migrate from 4 to 5 如果不匹配的UUID卡為CF且處於活動狀態,請執行卡切換以使它處於備用狀態:

[local]VNF2# card switch from 2 to 1 在EM中,掛起NCS CLI中UUID不匹配的卡:

ubuntu@vnfd2deploymentem-1:~\$ ncs\_cli -u admin -C

admin@scm# suspend-vnfci vdu session-function vnfci BOOT\_generic\_di-chasis\_SF3\_1 success true

**附註**:在某些極少數情況下,EM的suspend-vnfci CLI不會在ESC中啟動服務更新。 在EM中 ,日誌(/var/log/em/vnfm-proxy/vnfm-proxy.log)顯示一條錯誤消息,指示EM具有掛起的請求 並且忽略新請求。要解決此問題,請檢查EM zookeeper以檢視任何停滯的掛起請求,然後手 動清除它們。若要執行此操作,請參閱本文檔的最後一節「清除EM縮放器中的掛起請求(可 選)」。

在ESC上yangesc.log中驗證事務是否被接受,並等待其完成:

```
19:27:31,333 12-Jun-2018 INFO Tenant: core
19:27:31,333 12-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
19:27:31,333 12-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
19:27:31,333 12-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
07:29:49,510 21-Jun-2018 INFO ===== GET OPERATIONAL/INFO DATA =====
07:30:32,318 21-Jun-2018 INFO ===== GET OPERATIONAL/INFO DATA =====
07:36:25,083 21-Jun-2018 INFO ===== GET OPERATIONAL/INFO DATA =====
07:36:25,628 21-Jun-2018 INFO
07:36:25,628 21-Jun-2018 INFO ===== CONFD TRANSACTION STARTED =====
07:36:25,717 21-Jun-2018 INFO
07:36:25,717 21-Jun-2018 INFO ===== UPDATE SERVICE REQUEST RECEIVED (UNDER TENANT) =====
07:36:25,717 21-Jun-2018 INFO Tenant name: core
07:36:25,717 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:36:25,843 21-Jun-2018 INFO
07:36:25,843 21-Jun-2018 INFO ===== CONFD TRANSACTION ACCEPTED =====
07:37:04,535 21-Jun-2018 INFO
07:37:04,536 21-Jun-2018 INFO ===== SEND NOTIFICATION STARTS =====
07:37:04,536 21-Jun-2018 INFO Type: VM_UNDEPLOYED
07:37:04,536 21-Jun-2018 INFO Status: SUCCESS
07:37:04,536 21-Jun-2018 INFO Status Code: 200
07:37:04,536 21-Jun-2018 INFO Status Msg: VM Undeployed during deployment update, VM name:
[vnfd2-deployment_s6_0_6f30be77-6b9f-4da8-9577-e39c18f16dfb]
07:37:04,536 21-Jun-2018 INFO Tenant: core
07:37:04,536 21-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
07:37:04,536 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:37:04,536 21-Jun-2018 INFO VM group name: s6
07:37:04,537 21-Jun-2018 INFO User configs: 1
07:37:04,537 21-Jun-2018 INFO VM Source:
07:37:04,537 21-Jun-2018 INFO
                              VM ID: cf0c63df-d041-42e1-b541-6b15b0bf2f3e
                               Host ID:
07:37:04,537 21-Jun-2018 INFO
47853854d13d80e6d0212dabb0be2e12c12e431bf23d4e0260642594
07:37:04,537 21-Jun-2018 INFO Host Name: podl-compute-9.localdomain
07:37:04,537 21-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
07:37:04,550 21-Jun-2018 INFO
07:37:04,550 21-Jun-2018 INFO ===== SEND NOTIFICATION STARTS =====
07:37:04,550 21-Jun-2018 INFO Type: SERVICE_UPDATED
07:37:04,550 21-Jun-2018 INFO Status: SUCCESS
07:37:04,550 21-Jun-2018 INFO Status Code: 200
07:37:04,550 21-Jun-2018 INFO Status Msg: Service group update completed successfully
07:37:04,550 21-Jun-2018 INFO Tenant: core
07:37:04,550 21-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
07:37:04,550 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:37:04,550 21-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
07:41:55,912 21-Jun-2018 INFO ===== GET OPERATIONAL/INFO DATA =====
```

#### 在取消部署虛擬機器並更新服務後,繼續掛起的卡:

admin@scm# resume-vnfci vdu session-function vnfci BOOT\_generic\_di-chasis\_SF3\_1

success true

從yangesc.log中確認VM已重新部署且處於活動狀態:

# ESC on vnfm2-esc-0.novalocal is in MASTER state. 

[admin@vnfm2-esc-0 ~]\$ cd /opt/cisco/esc/esc-confd/esc-cli [admin@vnfm2-esc-0 esc-cli]\$ tail -f /var/log/esc/yangesc.log 07:41:55,912 21-Jun-2018 INFO ===== GET OPERATIONAL/INFO DATA ===== 07:41:56,412 21-Jun-2018 INFO

```
07:41:56,413 21-Jun-2018 INFO ===== CONFD TRANSACTION STARTED =====
07:41:56,513 21-Jun-2018 INFO
07:41:56,513 21-Jun-2018 INFO ===== UPDATE SERVICE REQUEST RECEIVED (UNDER TENANT) =====
07:41:56,513 21-Jun-2018 INFO Tenant name: core
07:41:56,513 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:41:56,612 21-Jun-2018 INFO
07:41:56,612 21-Jun-2018 INFO ===== CONFD TRANSACTION ACCEPTED =====
07:43:53,615 21-Jun-2018 INFO
07:43:53,615 21-Jun-2018 INFO ===== SEND NOTIFICATION STARTS =====
07:43:53,616 21-Jun-2018 INFO Type: VM_DEPLOYED
07:43:53,616 21-Jun-2018 INFO Status: SUCCESS
07:43:53,616 21-Jun-2018 INFO Status Code: 200
07:43:53,616 21-Jun-2018 INFO Status Msg: VM Deployed in a deployment update. VM name: [vnfd2-
deployment_s6_0_23cc139b-a7ca-45fb-b005-733c98ccc299]
07:43:53,616 21-Jun-2018 INFO Tenant: core
07:43:53,616 21-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
07:43:53,616 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:43:53,616 21-Jun-2018 INFO VM group name: s6
07:43:53,616 21-Jun-2018 INFO User configs: 1
07:43:53,616 21-Jun-2018 INFO VM Source:
                                VM ID: 637547ad-094e-4132-8613-b4d8502ec385
07:43:53,616 21-Jun-2018 INFO
07:43:53,616 21-Jun-2018 INFO Host ID:
47853854d13d80e6d0212dabb0be2e12c12e431bf23d4e0260642594
07:43:53,616 21-Jun-2018 INFO Host Name: pod1-compute-9.localdomain
07:43:53,616 21-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
07:44:20,170 21-Jun-2018 INFO
07:44:20,170 21-Jun-2018 INFO ===== SEND NOTIFICATION STARTS =====
07:44:20,170 21-Jun-2018 INFO Type: VM_ALIVE
07:44:20,170 21-Jun-2018 INFO Status: SUCCESS
07:44:20,170 21-Jun-2018 INFO Status Code: 200
07:44:20,170 21-Jun-2018 INFO Status Msg: VM_Alive event received during deployment update, VM
ID: [vnfd2-deployment_s6_0_23cc139b-a7ca-45fb-b005-733c98ccc299]
07:44:20,170 21-Jun-2018 INFO Tenant: core
07:44:20,170 21-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
07:44:20,170 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:44:20,170 21-Jun-2018 INFO VM group name: s6
07:44:20,170 21-Jun-2018 INFO User configs: 1
07:44:20,170 21-Jun-2018 INFO VM Source:
07:44:20,170 21-Jun-2018 INFO VM ID: 637547ad-094e-4132-8613-b4d8502ec385
07:44:20,170 21-Jun-2018 INFO
                                Host ID:
47853854d13d80e6d0212dabb0be2e12c12e431bf23d4e0260642594
07:44:20,170 21-Jun-2018 INFO Host Name: podl-compute-9.localdomain
07:44:20,170 21-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
07:44:20,194 21-Jun-2018 INFO
07:44:20,194 21-Jun-2018 INFO ===== SEND NOTIFICATION STARTS =====
07:44:20,194 21-Jun-2018 INFO Type: SERVICE_UPDATED
07:44:20,194 21-Jun-2018 INFO Status: SUCCESS
07:44:20,194 21-Jun-2018 INFO Status Code: 200
07:44:20,194 21-Jun-2018 INFO Status Msg: Service group update completed successfully
07:44:20,194 21-Jun-2018 INFO Tenant: core
07:44:20,194 21-Jun-2018 INFO Deployment ID: 9bcad337-d1f0-463c-8450-de7697b1e104
07:44:20,194 21-Jun-2018 INFO Deployment name: vnfd2-deployment-1.0.0-1
07:44:20,194 21-Jun-2018 INFO ===== SEND NOTIFICATION ENDS =====
```

#### 再次比較StarOS和EM中的UUID,確認已修復不匹配:

admin@scm# show vdus vdu | select vnfci

CONSTITUENT

IS			CPU	UTILS	USAGE	
ID	ID	NAME	GROUP	(	GROUP	INFRA
INITIALIZED	VIM ID	UTILS	BYTES	BYTE:	S 	
control-func	tion BOOT generic di-chasis CF1 1	scm-cf-nc	scm-c	 f-nc (	di-chasis	true
true	33c779d2-e271-47af-8ad5-6a982c79ba	62 -	-	_		01 40
0140	BOOT generic di-chasis CF2 1	scm-cf-nc	scm-cf	-nc di	i-chasis	true
true	e75ae5ee-2236-4ffd-a0d4-054ec246d5	06 -	_	_		
session-func	tion BOOT generic di-chasis SF1 1	_	-	c	di-chasis	true
false	ela6762d-4e84-4a86-alb1-84772b3368	dc -	-	_		
	BOOT_generic_di-chasis_SF2_1	-	-	d	i-chasis	true
false	b283d43c-6e0c-42e8-87d4-a3af15a61a	.83 -	-	-		
	BOOT_generic_di-chasis_SF3_1	-	-	đ	i-chasis	true
false	637547ad-094e-4132-8613-b4d8502ec3	85 -	-	-		
	BOOT_generic_di-chasis_SF4_1	-	-	d	i-chasis	true
false	65344d53-de09-4b0b-89a6-85d5cfdb3a	.55 -	-	-		
[local]POD1-	VNF2-PGW# show emctrl vdu list					
Thursday Jun	e 21 09:09:02 UTC 2018					
Showing emct	rl vdu					
card[01]: na	me[CFC_01			] uuio	d[33C779D2	-E271-47AF-8AD5-
6A982C79BA62	]					
card[02]: na	me[CFC_02			] uuio	d[E75AE5EE	-2236-4FFD-A0D4-
054EC246D506	]					
card[03]: na	me[SFC_03			] uuio	d[E1A6762D	-4E84-4A86-A1B1-
84772B3368DC	]					
card[04]: na	me[SFC_04			] uuio	d[B283D43C	-6E0C-42E8-87D4-
A3AF15A61A83	]					
card[05]: na	me[session-function/BOOT_generic_di	-chasis_SF	3_1	] uuio	d[637547AD	-094E-4132-8613-
B4D8502EC385	]					
card[06]: na	me[SFC_06			] uuio	d[65344D53	-DE09-4B0B-89A6-
85D5CFDB3A55	]					
Incomplete c	ommand					
[local]POD1-	VNF2-PGW#					
[local]POD1-	VNF2-PGW#					
[local]POD1-	VNF2-PGW#					
[local]POD1-	VNF2-PGW# show card hardware   grep	o −i uuid				
Thursday Jun	e 21 09:09:11 UTC 2018		2003.50			
UUID/Serial	Number : 33C779D2-E271-47AF-8	AD5-6A982C	/9BA62			
UUID/Serial	Number : E/5AE5EE-2236-4FFD-A	UD4-054EC24	46D506			
UUID/Serial	Number         EIA6/62D-4E84-4A86-A           Number         ED002D422	LBL-84772B	3368DC			
UUID/Serial	Number : B283D43C-6E0C-42E8-8	/D4-A3AF157	A61A83			
UUID/Serial	Number : 637547AD-094E-4132-8	613-B4D8502	ZEC385			
UUID/Serial	Number : 65344D53-DE09-4B0B-8	9A6-85D5CFI	UB3A55			
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### 清除EM Zookeeper中的掛起請求

附註:這是選用的。

訪問zookeeper:

ubuntu@ultramvnfmlem-0:~\$ /opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh

<snip>

[zk: localhost:2181(CONNECTED) 0] **列出待處理請求**:

[zk: localhost:2181(CONNECTED) 0] rmr /request/request0000000xx 清除所有掛起請求後,再次重新啟動掛起請求。

#### 關於此翻譯

思科已使用電腦和人工技術翻譯本文件,讓全世界的使用者能夠以自己的語言理解支援內容。請注 意,即使是最佳機器翻譯,也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準 確度概不負責,並建議一律查看原始英文文件(提供連結)。