PCRF替代計算伺服器UCS C240 M4

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检查駐留在VM上的思科策略和計費規則功能(PCRF)服務 如果ESC恢復失敗,請刪除並重新部署一個或多個虛擬機器 獲取站點的最新ESC模板 修改檔案的步驟 步驟1.修改匯出模板檔案。 步驟2.運行已修改的匯出模板檔案。 步驟3.修改匯出模板檔案以新增VM。 步驟4.運行已修改的匯出模板檔案。 步驟5.檢查駐留在VM上的PCRF服務。 步驟6.運行診斷程式以檢查系統狀態。 相關資訊

簡介

本文檔介紹在託管思科策略套件(CPS)虛擬網路功能(VNF)的Ultra-M設定中替換故障計算伺服器所 需的步驟。

背景資訊

本文檔面向熟悉Cisco Ultra-M平台的思科人員,詳細介紹在進行計算伺服器更換時,在 OpenStack和CPS VNF級別需要執行的步驟。 附註:Ultra M 5.1.x版本用於定義本文檔中的過程。

運行狀況檢查

在替換「計算」節點之前,請務必檢查Red Hat OpenStack平台環境的當前運行狀況。建議您檢查 當前狀態,以避免在計算替換過程開啟時出現複雜情況。

步驟1.從OpenStack部署(OSPD)。

[root@director ~]\$ su - stack
[stack@director ~]\$ cd ansible
[stack@director ansible]\$ ansible-playbook -i inventory-new openstack_verify.yml -e
platform=pcrf
步驟2.從每15分鐘生成的超健康報告中驗證系統運行狀況。

[stack@director ~]# cd /var/log/cisco/ultram-health 步驟3.檢查檔案ultram_health_os.report。僅服務應顯示為XXX狀態,即neutron-sriov-nicagent.service。

步驟4.檢查是否所有控制器的rabbitmq都從OSPD運行。

```
[stack@director ~]# for i in $(nova list| grep controller | awk '{print $12}'| sed
's/ctlplane=//g') ; do (ssh -o StrictHostKeyChecking=no heat-admin@$i "hostname;sudo rabbitmqctl
eval 'rabbit_diagnostics:maybe_stuck().'" ) & done
步驟5.驗證是否已啟用石碑
```

[stack@director ~]# **sudo pcs property show stonith-enabled** 步驟6.對所有控制器檢驗PC狀態。

•所有控制器節點均在haproxy-clone下啟動。

- •所有控制器節點在galera下均處於Active狀態。
- •所有控制器節點均在Rabbitmg下啟動。

•1個控制器節點處於Active狀態,2個控制器節點處於Standby狀態。

```
步驟7.從OSPD。
```

[stack@director ~]\$ for i in \$(nova list| grep controller | awk '{print \$12}'| sed 's/ctlplane=//g') ; do (ssh -o StrictHostKeyChecking=no heat-admin@\$i "hostname;sudo pcs status") ;done

步驟8.驗證所有openstack服務是否處於活動狀態,從OSPD運行此命令。

[stack@director ~]# sudo systemctl list-units "openstack*" "neutron*" "openvswitch*" 步驟9.驗證控制器的CEPH狀態為HEALTH OK。

;done 步驟10.檢驗OpenStack元件日誌。尋找任何錯誤:

Neutron: [stack@director ~]# sudo tail -n 20 /var/log/neutron/{dhcp-agent,l3-agent,metadataagent,openvswitch-agent,server}.log

Cinder: [stack@director ~]# **sudo tail -n 20 /var/log/cinder/{api,scheduler,volume}.log**

Glance:

[stack@director ~]# **sudo tail -n 20 /var/log/glance/{api,registry}.log** 步驟11.從OSPD對API執行這些驗證。

[stack@director ~]\$ source

[stack@director ~]\$ nova list

[stack@director ~]\$ glance image-list

[stack@director ~]\$ cinder list

[stack@director ~]\$ **neutron net-list** 步驟12.檢驗服務的運行狀況。

Every service status should be "up": [stack@director ~]\$ nova service-list

Every service status should be " :-)":
[stack@director ~]\$ neutron agent-list

Every service status should be "up": [stack@director ~]\$ cinder service-list

備份

在進行恢復時,思科建議使用以下步驟備份OSPD資料庫:

[root@director ~]# mysqldump --opt --all-databases > /root/undercloud-all-databases.sql [root@director ~]# tar --xattrs -czf undercloud-backup-`date +%F`.tar.gz /root/undercloud-alldatabases.sql /etc/my.cnf.d/server.cnf /var/lib/glance/images /srv/node /home/stack tar: Removing leading `/' from member names 此過程可確保在不影響任何例項可用性的情況下替換節點。此外,建議備份CPS配置。

要備份CPS虛擬機器,請從群集管理器虛擬機器:

or

[root@CM ~]# config_br.py -a export --mongo-all --svn --etc --grafanadb --auth-htpasswd -haproxy /mnt/backup/\$(hostname)_backup_all_\$(date +\%Y-\%m-\%d).tar.gz

確定計算節點中託管的VM

確定託管於計算伺服器上的VM:

[stack@director ~]\$ nova list --field name,host,networks | grep compute-10
| 49ac5f22-469e-4b84-badc-031083db0533 | VNF2-DEPLOYM_s9_0_8bc6cc60-15d6-4ead-8b6a10e75d0e134d | pod1-compute-10.localdomain | Replication=10.160.137.161;
Internal=192.168.1.131; Management=10.225.247.229; tb1-orch=172.16.180.129

附註:此處顯示的輸出中,第一列對應於通用唯一識別符號(UUID),第二列是VM名稱,第三 列是存在VM的主機名。此輸出的引數在後續小節中使用。

禁用駐留在VM上的PCRF服務以關閉

步驟1.登入虛擬機器的管理IP:

[stack@XX-ospd ~]\$ ssh root@

[root@XXXSM03 ~]# monit stop all 步驟2.如果VM是SM、OAM或仲裁者,請停止sessionmgr服務:

[root@XXXSM03 ~]# cd /etc/init.d [root@XXXSM03 init.d]# ls -1 sessionmgr* -rwxr-xr-x 1 root root 4544 Nov 29 23:47 sessionmgr-27717 -rwxr-xr-x 1 root root 4399 Nov 28 22:45 sessionmgr-27721 -rwxr-xr-x 1 root root 4544 Nov 29 23:47 sessionmgr-27727 步驟3.對於每個名為sessionmgr-xxxxx的檔案,運行service sessionmgr-xxxxx stop:

[root@XXXSM03 init.d]# service sessionmgr-27717 stop

從新星聚合清單中刪除計算節點

步驟1.列出新星聚合併基於計算伺服器所託管的VNF識別對應於計算伺服器的聚合。通常,其格式 為<VNFNAME>-SERVICE<X>:

[stack@director ~]\$ nova aggregate-list

++	++
Id Name	Availability Zone
++	++

	29	POD1-AUTOIT	mgmt	
	57	VNF1-SERVICE1	-	
	60	VNF1-EM-MGMT1	-	
	63	VNF1-CF-MGMT1	-	
	66	VNF2-CF-MGMT2	-	
	69	VNF2-EM-MGMT2	-	
	72	VNF2-SERVICE2	-	
	75	VNF3-CF-MGMT3	-	
	78	VNF3-EM-MGMT3	-	
	81	VNF3-SERVICE3	-	
т.		L		

在這種情況下,要替換的計算伺服器屬於VNF2。因此,相應的聚合清單是VNF2-SERVICE2。

步驟2.從已標識的聚合中刪除計算節點(通過主機名刪除,該主機名在**標識計算節點中託管的VM一** 節中說明��

nova aggregate-remove-host

[stack@director ~]\$ nova aggregate-remove-host VNF2-SERVICE2 pod1-compute-10.localdomain 步驟3.驗證是否已從聚合中刪除計算節點。現在,主機不能列在聚合下:

nova aggregate-show

[stack@director ~]\$ nova aggregate-show VNF2-SERVICE2

計算節點刪除

不論計算節點中託管的VM,本節中提到的步驟都是通用的。

從超雲中刪除

步驟1.使用此處顯示的內容建立名為delete_node.sh的指令碼檔案。請確保提到的模板與用於堆疊 部署的deploy.sh指令碼中使用的模板相同。

delete_node.sh

```
openstack overcloud node delete --templates -e /usr/share/openstack-tripleo-heat-
templates/environments/puppet-pacemaker.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/network-isolation.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/storage-environment.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/neutron-sriov.yaml -e /home/stack/custom-templates/network.yaml -e
/home/stack/custom-templates/ceph.yaml -e /home/stack/custom-templates/compute.yaml -e
/home/stack/custom-templates/layout.yaml -e /home/stack/custom-templates/layout.yaml --stack
```

```
[stack@director ~]$ source stackrc
[stack@director ~]$ /bin/sh delete_node.sh
+ openstack overcloud node delete --templates -e /usr/share/openstack-tripleo-heat-
templates/environments/puppet-pacemaker.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/network-isolation.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/storage-environment.yaml -e /usr/share/openstack-tripleo-heat-
templates/environments/neutron-sriov.yaml -e /home/stack/custom-templates/network.yaml -e
/home/stack/custom-templates/ceph.yaml -e /home/stack/custom-templates/compute.yaml -e
/home/stack/custom-templates/layout.yaml -e /home/stack/custom-templates/layout.yaml --stack
pod1 49ac5f22-469e-4b84-badc-031083db0533
Deleting the following nodes from stack pod1:
- 49ac5f22-469e-4b84-badc-031083db0533
Started Mistral Workflow. Execution ID: 4ab4508a-cld5-4e48-9b95-ad9a5baa20ae
```

real 0m52.078s user 0m0.383s sys 0m0.086s

步驟2.等待OpenStack堆疊操作變為COMPLETE狀態。

[stack@director ~]\$ openstack stack	list				
ID Updated Time	+	Stack 1	Name Stac	k Status	Creation Time	
5df68458-095d-4 05-08T20:42:48Z	+ 13bd-a8c4-033e68ba79a	0 pod1	UPDATE_COM	PLETE 2018	+	+ 2018- +

-----+

從服務清單中刪除計算節點

從服務清單中刪除計算服務:

[stack@director ~]\$ source corerc
[stack@director ~]\$ openstack compute service list | grep compute-8
| 404 | nova-compute | podl-compute-8.localdomain | nova | enabled | up | 201805-08T18:40:56.000000 |

openstack compute service delete

[stack@director ~]\$ openstack compute service delete 404

刪除中子代理

刪除計算伺服器的舊關聯中子代理和open vswitch代理:

| c3ee92ba-aa23-480c-ac81-d3d8d01dcc03 | Open vSwitch agent | pod1-compute-8.localdomainNone| False | UP| ec19cb01-abbb-4773-8397-8739d9b0a349 | NIC Switch agent | pod1-compute-8.localdomainNone| False | UP| neutron-sriov-nic-agent |

openstack network agent delete

[stack@director ~]\$ openstack network agent delete c3ee92ba-aa23-480c-ac81-d3d8d01dcc03
[stack@director ~]\$ openstack network agent delete ec19cb01-abbb-4773-8397-8739d9b0a349

從Ironic資料庫中刪除

從Ironic資料庫中刪除節點並進行驗證。

[stack@director ~]\$ source stackrc

nova show

[stack@director ~]\$ nova show podl-compute-10 | grep hypervisor | OS-EXT-SRV-ATTR:hypervisor_hostname | 4ab21917-32fa-43a6-9260-02538b5c7a5a

ironic node-delete

[stack@director ~]\$ ironic node-delete 4ab21917-32fa-43a6-9260-02538b5c7a5a
[stack@director ~]\$ ironic node-list (node delete must not be listed now)

安裝新的計算節點

有關安裝新UCS C240 M4伺服器的步驟和初始設定步驟,請參閱:<u>Cisco UCS C240 M4伺服器安</u> <u>裝和服務指南</u>

步驟1.安裝伺服器後,將硬碟插入相應插槽中作為舊伺服器。

步驟2.使用CIMC IP登入到伺服器。

步驟3.如果韌體與以前使用的推薦版本不一致,請執行BIOS升級。BIOS升級步驟如下:<u>Cisco UCS</u> <u>C系列機架式伺服器BIOS升級指南</u>

步驟4.要驗證物理驅動器的狀態,請導航到儲存> Cisco 12G SAS模組化Raid控制器(SLOT-HBA)>物理驅動器資訊。它必須是未配置

此處顯示的儲存可以是SSD驅動器。

	국 레네아 Ci	isco Integrated Manageme	ent Controller		🔶 🗹 🔍 ad	lmin@10.65.33.67	- C240-FCH2114V1NW		
Chassis •	▲ / / Cisco 1 (SLOT-HBA)	2G SAS Modular Raid Co / Physical Drive Info 🔺	ontroller	Refresh	Host Power Launch K	VM Ping Reb	oot Locator LED 🔞 (
Compute	Controller Info	Physical Drive Info Virtual D	Drive Info Battery Backup Unit	Storage Log					
Networking	 Physical Driv 	al Driv Physical Drives Selected 0 / Total 2 🤹 🗸							
Storage •	✓ PD-1 ✓ PD-2	Make Global Hot Spare	Make Dedicated Hot Spare	Iove From Hot Spare Pools Prepare For Removal					
Cisco 12G SAS Modular Raid		Controller	Physical Drive Number	Status	Health	Boot Drive	Drive Firmware		
Cisco FlexFlash		SLOT-HBA	1	Unconfigured Good	Good	false	N003		
Admin •	sco FlexFlash	SLOT-HBA	2	Unconfigured Good	Good	false	N003		

步驟5.若要從RAID級別為1的物理驅動器建立虛擬驅動器,請導航到Storage > Cisco 12G SAS Modular Raid Controller(SLOT-HBA)> Controller Info > Create Virtual Drive from Unused Physical Drives

		Cisco I	ntegrated Mana	gement C	ontrol	er			
	Create Virtual	Drive fror	n Unused Physical	Drives				_	0>
Chassis +		RAID Leve	bl: 1		¥	Enable Full Disk Encr	yption:		
Compute						-			
Networking	Create Driv	e Groups							
	Physical Dr	ives		Selected 2 /	Total 2	¢ -	Drive Groups		¢٠
Storage •	ID	Size(MB)	Model	Interface	Туре		Name		
Cisco 12G SAS Modular Raid	✓ 1	1906394 M	MB SEAGA	HDD	SAS		No data available		
Cisco FlexFlash	✓ 2	1906394 M	MB SEAGA	HDD	SAS				
Admin +									
	Virtual Driv	e Properti	es						- 1
		Name:	RAID1			Disk Cache Policy:	Unchanged	•	
	Acce	ss Policy:	Read Write		•	Write Policy:	Write Through	•	
	Re	ad Policy:	No Read Ahead		•	Strip Size (MB):	64k	•	
	Cac	he Policy:	Direct IO		•	Size			MB

		Create Virtual (Drive from	n Unuse	ed Physica	l Drives		_		_		0
Chassis			RAID Lev	əl: 1			¥	Enable Full Disk Encr	yption:			
Compute												
Networking	•	Create Drive	Groups			Selected 0 /	Total 0 🖧	μ	Drive	e Groups		\$
Storage		ID	Size(MB)		Model	Interface	Туре			Name		
Cisco 12G SAS N	lodular Raid	No data availabl	е							DG [1.2]		
Cisco FlexFlash												
Admin												
		Virtual Drive	Propert	ies								
			Name:	BOOTOS	3			Disk Cache Policy:	Uncha	nged	•	
		Acces	s Policy:	Read Wr	ite		•	Write Policy:	Write 1	Through	•	
		Rea	d Policy:	No Read	Ahead		•	Strip Size (MB):	64k		•	

步驟6.選擇VD並設定Set as Boot Drive,如下圖所示。

	😫 altaba C	Disco Integrated Manageme	nt Controller		÷ 🔽 0	admin@10.65.33.67	7 - C240-FCH2114V1NW	*
Chassis •	A / / Cisco	12G SAS Modular Raid Con	troller	Refr	esh Host Power Lau	nch KVM Ping Ret	boot Locator LED 🔞)
Compute	Controller Info	Physical Drive Info Virtual Dri	ve Info Battery Backup	Unit Storage Log				
Networking •	▼ Virtual Drives	Virtual Drives					Selected 1 / Total 1	¥
Storage •	VD-0	Initialize Cancel Initializa	tion Set as Boot Drive	Delete Virtual Drive	Edit Virtual Drive	Hide Drive	>>	
Cisco 12G SAS Modular Ra St	orage	Virtual Drive Number	Name	Status	Health	Size	RAID Level	Во
Cisco FlexFlash] 0	BOOTOS	Optimal	Good	1906394 MB	RAID 1 1	als
Admin 🕨								

步驟7.若要啟用IPMI over LAN,請導覽至Admin > Communication Services > Communication Services,如下圖所示。

	Services Cisco Integrated Management Controller	
		🐥 <mark>V 3</mark> admin@10.65.33.67 - C240-FCH2141V113 🎝
Chassis •	A / / Communication Services / Communications Services *	
Compute		Refresh Host Power Launch KVM Ping Reboot Locator LED 🥝 (
	Communications Services SNMP Mail Alert	
Networking		
Storage •	HTTP Properties	 IPMI over LAN Properties
	HTTP/S Enabled: Session Timeout(seconds): 1800	Enabled: 🗸
Admin 🔹	Redirect HTTP to HTTPS Enabled: Max Sessions: 4	Privilege Level Limit: admin
User Management	HTTP Port: 80 Active Sessions: 1	Encryption Key: 000000000000000000000000000000000000
o sol management	HTTPS Port: 443	Randomize
Networking		
Communication Services	XML API Properties	
	XML API Enabled:	

步驟8。若要停用超執行緒,如圖所示,請導覽至Compute > BIOS > Configure BIOS > Advanced > Processor Configuration。

	Ŧ	÷ dudu Cis	co Integrate	ed Management (Controller			🐥 🔽 3 admin@10.65.33.67 - C240	0-FCH2141V113
Chassis	•	A / Compute / B	IOS 🛧						
Compute		BIOS Remote I	Management	Troubleshooting	Power Policies	PID Catalog		Refresh Host Power Launch KVM Ping Reboot Lo	ocator LED 🔞
Networking	•	Enter BIOS Setup C	lear BIOS CMOS	Restore Manufacturing	Custom Settings	r ib outling			
Storage	+	Configure BIOS	Configure B	oot Order Configu	re BIOS Profile				
Admin	•	Main Advance	ed Server	Management					
		Note: Default va	lues are shown in I	bold.					
			Reboot	Host Immediately:					
		▼ Proces	ssor Configur	ation					
			Intel(R) Hy	per-Threading Technolo	Disabled		•	Number of Enabled Cores	All
				Execute Disa	ble Enabled		•	Intel(R) VT	Enabled
				Intel(R) V	T-d Enabled		•	Intel(R) Interrupt Remapping	Enabled
				ntel(R) Pass Through DI	MA Disabled		•	Intel(R) VT-d Coherency Support	Disabled
			Intel(R) Pass	Through DMA ATS Supp	ert Enabled		•	CPU Performance	Enterprise

附註:此處顯示的影象和本節中提到的配置步驟是參考韌體版本3.0(3e),如果您使用其他版本,可能會有細微的變化

將新計算節點新增到超雲中

不論計算節點託管的VM,本節中提到的步驟都是通用的。

步驟1.新增具有不同索引的計算伺服器。

建立一個add_node.json檔案,該檔案僅包含要新增的新計算伺服器的詳細資訊。確保以前未使用新 計算伺服器的索引號。通常,遞增下一個最高計算值。

範例:最高驗前是compute-17,因此在2-vnf系統中建立了compute-18。

```
附註:請記住json格式。
```

"pm_password":"<PASSWORD>", "pm_addr":"192.100.0.5" }] 步驟2.匯入json檔案。

[stack@director ~]\$ openstack baremetal import --json add_node.json Started Mistral Workflow. Execution ID: 78f3b22c-5c11-4d08-a00f-8553b09f497d Successfully registered node UUID 7eddfa87-6ae6-4308-b1d2-78c98689a56e Started Mistral Workflow. Execution ID: 33a68c16-c6fd-4f2a-9df9-926545f2127e Successfully set all nodes to available.

步驟3.使用上一步中提到的UUID運行節點內檢。

```
[stack@director ~]$ openstack baremetal node manage 7eddfa87-6ae6-4308-b1d2-78c98689a56e
[stack@director ~]$ ironic node-list |grep 7eddfa87
| 7eddfa87-6ae6-4308-b1d2-78c98689a56e | None | None | powerstack provided to the second statement of the second statement o
```

manageable False

[stack@director ~]\$ openstack overcloud node introspect 7eddfa87-6ae6-4308-b1d2-78c98689a56e -provide
Started Mistral Workflow. Execution ID: e320298a-6562-42e3-8ba6-5ce6d8524e5c
Waiting for introspection to finish...
Successfully introspected all nodes.
Introspection completed.
Started Mistral Workflow. Execution ID: c4a90d7b-ebf2-4fcb-96bf-e3168aa69dc9
Successfully set all nodes to available.
[stack@director ~]\$ ironic node-list |grep available
| 7eddfa87-6ae6-4308-b1d2-78c98689a56e | None | None | power off
| available | False |
步驟4.將IP位址新增到custom-templates/layout.yml(在ComputeIPs下)。您可以將該地址新增到

ComputeIPs:

internal_api: - 11.120.0.43 - 11.120.0.44 -11.120.0.45-11.120.0.43<<< take compute-0 .43 and add here</pre> tenant: - 11.117.0.43 - 11.117.0.44 - 11.117.0.45 - 11.117.0.43 << and here storage: - 11.118.0.43 - 11.118.0.44 -11.118.0.45- 11.118.0.43 << and here

每個型別的清單末尾,此處顯示的compute-0就是一個示例。

步驟5.執行之前用於部署堆疊的deploy.sh指令碼,以便將新的計算節點新增到超雲堆疊。

[stack@director ~]\$./deploy.sh

++ openstack overcloud deploy --templates -r /home/stack/custom-templates/custom-roles.yaml -e
/usr/share/openstack-tripleo-heat-templates/environments/puppet-pacemaker.yaml -e
/usr/share/openstack-tripleo-heat-templates/environments/storage-environment.yaml -e
/usr/share/openstack-tripleo-heat-templates/environments/neutron-sriov.yaml -e
/usr/share/openstack-tripleo-heat-templates/environments/neutron-sriov.yaml -e
/home/stack/custom-templates/network.yaml -e /home/stack/custom-templates/ceph.yaml -e

ADN-ultram --debug --log-file overcloudDeploy_11_06_17__16_39_26.log --ntp-server 172.24.167.109 --neutron-flat-networks phys_pcie1_0,phys_pcie1_1,phys_pcie4_0,phys_pcie4_1 --neutron-networkvlan-ranges datacentre:1001:1050 --neutron-disable-tunneling --verbose --timeout 180 ... Starting new HTTP connection (1): 192.200.0.1 "POST /v2/action_executions HTTP/1.1" 201 1695 HTTP POST http://192.200.0.1:8989/v2/action executions 201 Overcloud Endpoint: http://10.1.2.5:5000/v2.0 Overcloud Deployed clean_up DeployOvercloud: END return value: 0 real 38m38.971s user 0m3.605s sys 0m0.466s

步驟6.等待openstack狀態變為完成。

[stack@director ~]\$ openstack stack list
+-----+
----+
| ID | Stack Name | Stack Status | Creation Time |
Updated Time |
+-----+
| 5df68458-095d-43bd-a8c4-033e68ba79a0 | ADN-ultram | UPDATE_COMPLETE | 2017-11-02T21:30:06Z |
2017-11-06T21:40:58Z |
+-----+

-----+

步驟7.檢查新計算節點是否處於活動狀態。

```
[stack@director ~]$ source stackrc
[stack@director ~]$ nova list |grep compute-18
| 0f2d88cd-d2b9-4f28-b2ca-13e305ad49ea | pod1-compute-18 | ACTIVE | - | Running
| ctlplane=192.200.0.117 |
[stack@director ~]$ source corerc
```

```
[stack@director ~]$ openstack hypervisor list |grep compute-18
| 63 | pod1-compute-18.localdomain |
```

恢復虛擬機器

新星聚合清單的新增內容

將計算節點新增到聚合主機並驗證是否新增了主機。

nova aggregate-add-host

[stack@director ~]\$ nova aggregate-add-host VNF2-SERVICE2 pod1-compute-18.localdomain

nova aggregate-show

[stack@director ~]\$ nova aggregate-show VNF2-SERVICE2

從Elastic Services Controller(ESC)恢復VM

步驟1. VM在新星清單中處於錯誤狀態。

[stack@director ~]\$ nova list |grep VNF2-DEPLOYM_s9_0_8bc6cc60-15d6-4ead-8b6a-10e75d0e134d | 49ac5f22-469e-4b84-badc-031083db0533 | VNF2-DEPLOYM_s9_0_8bc6cc60-15d6-4ead-8b6a-10e75d0e134d | ERROR | - | NOSTATE | 步驟2.從ESC恢復VM。

[admin@VNF2-esc-esc-0 ~]\$ sudo /opt/cisco/esc/esc-confd/esc-cli/esc_nc_cli recovery-vm-action DO VNF2-DEPLOYM_s9_0_8bc6cc60-15d6-4ead-8b6a-10e75d0e134d [sudo] password for admin:

```
Recovery VM Action
/opt/cisco/esc/confd/bin/netconf-console --port=830 --host=127.0.0.1 --user=admin --
privKeyFile=/root/.ssh/confd_id_dsa --privKeyType=dsa --rpc=/tmp/esc_nc_cli.ZpRCGiieuW
```

步驟3.監控yangesc.log。

admin@VNF2-esc-esc-0 ~]\$ tail -f /var/log/esc/yangesc.log ... 14:59:50,112 07-Nov-2017 WARN Type: VM_RECOVERY_COMPLETE 14:59:50,112 07-Nov-2017 WARN Status: SUCCESS 14:59:50,112 07-Nov-2017 WARN Status Code: 200 14:59:50,112 07-Nov-2017 WARN Status Msg: Recovery: Successfully recovered VM [VNF2-DEPLOYM_s9_0_8bc6cc60-15d6-4ead-8b6a-10e75d0e134d].

檢查駐留在VM上的思科策略和計費規則功能(PCRF)服務

附註:如果VM處於關閉狀態,則從ESC使用esc_nc_cli開啟它。

檢查群集管理器VM中的diagnostics.sh,如果找到已恢復的VM的任何錯誤,請

步驟1.登入各自的VM。

[stack@XX-ospd ~]\$ **ssh root@**

[root@XXXSM03 ~]# monit start all 步驟2.如果VM是SM、OAM或arbiter,則除了它之外,還要啟動之前停止的sessionmgr服務:

對於每個標題為sessionmgr-xxxx的檔案,運行service sessionmgr-xxxxx start:

[root@XXXSM03 init.d]# service sessionmgr-27717 start 如果仍然沒有清除診斷,則從群集管理器虛擬機器執行build_all.sh,然後在相應的虛擬機器上執行 VM-init。

/var/qps/install/current/scripts/build_all.sh

ssh VM e.g. ssh pcrfclient01
/etc/init.d/vm-init

如果ESC恢復失敗,請刪除並重新部署一個或多個虛擬機器

如果ESC恢復命令(上面)不起作用(VM_RECOVERY_FAILED),則刪除並讀取各個VM。

獲取站點的最新ESC模板

在ESC門戶上:

步驟1。將游標置於藍色Action按鈕上,此時會開啟一個彈出視窗,然後點選Export Template,如 下圖所示。

		ILASTIC SCRUCCISC		8	Deployments View all the current deployments											🕫 / Depl	oyments
	0	Adm ESC A	in dmin		Status of all VM(s)												
		Д Account Sa	illinga		0 VMs waiting	5	0 VMs deploying	4	78 VMs deployed	🖌 78 VMs active		A 0 VM deploy	s faile (Erro	ed to r)	A	0 VMs deploy error state	yed in
	Ð	Dashboard															
	¢	Notification	s		A list of deployments											 New Dept 	oyment
	۵	Deploymen	its														
þ	8	Resources		>	Show 10 entries										Search	h:	
	$\overline{\Omega}_{0}^{0}$	System		>	Deployment Name	-	Tenant Name	٥	Deployment ID		٥	# of VNFs	٥	Status	٥	Actions	۲
	E	Infrastructu	re	>	RIP1-tmo		Port		78c67b40-0b6a-42de-8e	xd1-44279a6e5906		23		Activ	•	Actions +	
	-	About			RIP2-tmo		Porf		d29e095a-8bcb-4067-80	184-670d570c3a3f		23		Activ	•	Actions -	
					Showing 1 to 2 of 2 entries									- 🛧	Up	date	
														Q	l M	ew VNFs	
															Ex	port Temp	late
L														×	l Un	deploy	ſ

步驟2.提供了一個將模板下載到本地電腦的選項,請檢查Save File,如下圖所示。

disto ESC	× +
← → פ ים	i 🏠 https://10.145.0.75:9001/deployments
News SLK Lab	BH Cisco Labs Kellys Lab My CPS VM Customers 🌣 Most Visited 💩 Getting Started
cisco	You have chosen to open:
ELA STIC SERVICES CONTROLLE	temporaryDepXmlFile.xml
Admin	which is: XML Document (8.5 KB) from: https://10.145.0.75:9001
ESC Admin	What should Firefox do with this file?
<u>Ω</u> Account Settings	C Open with Office XML Handler (default)
٥	
🏟 Dashboard	Do this <u>a</u> utomatically for files like this from now on.
♣ Notifications	OK Cancel
Deployments	

步驟3.如圖所示,選擇位置並儲存檔案以供日後使用。



步驟4.登入到要刪除的站點的Active ESC,並將以上儲存的檔案複製到此目錄的ESC中。

/opt/cisco/esc/cisco-cps/config/gr/tmo/gen 步驟5.將Directory更**改為/opt/cisco/esc/cisco-cps/config/gr/tmo/gen**:

cd /opt/cisco/esc/cisco-cps/config/gr/tmo/gen

修改檔案的步驟

步驟1.修改匯出模板檔案。

在此步驟中,您將修改匯出模板檔案,以刪除與需要恢復的VM相關聯的VM組。

匯出模板檔案用於特定群集。

該群集中有多個vm_groups。 每個VM型別(PD、PS、SM、OM)有一個或多個vm_groups。

附註:某些vm_groups有多個VM。 將刪除並重新新增該組內的所有VM。

在該部署中,您需要標籤一個或多個vm_groups以進行刪除。

範例:

<vm_group>

<name>cm</name>

現在,將<vm_group>更改為<vm_group nc:operation="delete">並儲存更改。

步驟2.運行已修改的匯出模板檔案。

在ESC運行中:

/opt/cisco/esc/esc-confd/esc-cli/esc_nc_cli edit-config /opt/cisco/esc/ciscocps/config/gr/tmo/gen/

在ESC門戶中,您應該能夠看到一個或多個虛擬機器移動到undeploy狀態,然後完全消失。

可在ESC的/var/log/esc/yangesc.log中跟蹤進度

範例:

```
09:09:12,608 29-Jan-2018 INFO ===== UPDATE SERVICE REQUEST RECEIVED(UNDER TENANT) =====

09:09:12,608 29-Jan-2018 INFO Tenant name: Pcrf

09:09:29,794 29-Jan-2018 INFO Deployment name: WSP1-tmo

09:09:29,794 29-Jan-2018 INFO ===== CONFD TRANSACTION ACCEPTED =====

09:10:19,459 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====

09:10:19,459 29-Jan-2018 INFO Type: VM_UNDEPLOYED

09:10:19,459 29-Jan-2018 INFO Status: SUCCESS

09:10:19,459 29-Jan-2018 INFO Status Code: 200

09:10:22,292 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====

09:10:22,292 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====

09:10:22,292 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====

09:10:22,292 29-Jan-2018 INFO Status: SUCCESS

09:10:22,292 29-Jan-2018 INFO Type: SERVICE_UPDATED

09:10:22,292 29-Jan-2018 INFO Status: SUCCESS

09:10:22,292 29-Jan-2018 INFO Type: SERVICE_UPDATED

09:10:22,292 29-Jan-2018 INFO Status: SUCCESS

09:10:22,292 29-Jan-2018 INFO STATU
```

步驟3.修改匯出模板檔案以新增VM。

在此步驟中,您將修改匯出模板檔案,以重新新增與正在恢復的VM相關聯的VM組。

匯出模板檔案被分解為兩個部署(cluster1 / cluster2)。

每個群集內都有一個vm_group。每個VM型別(PD、PS、SM、OM)有一個或多個vm_groups。

附註:某些vm_groups有多個VM。 將重新新增該組內的所有VM。

範例:

<vm_group nc:operation="delete">

<name>cm</name>

將<vm_group nc:operation="delete">更改為僅<vm_group>。

附註:如果由於主機被替換而需要重新生成VM,則該主機的主機名可能已更改。 如果主機的 主機名已更改,則需要更新vm_group的placement部分中的主機名。

<位置>

<type>zone_host</type>

<enforcement>嚴格</enforcement>

<host>wsstackovs-compute-4.localdomain</host>

</placement>

在執行此MOP之前,將前面部分中所示主機的名稱更新為Ultra-M團隊提供的新主機名。安裝新主機 後,儲存更改。

步驟4.運行已修改的匯出模板檔案。

在ESC運行中:

```
/opt/cisco/esc/esc-confd/esc-cli/esc_nc_cli edit-config /opt/cisco/esc/cisco-
cps/config/gr/tmo/gen/
```

在ESC門戶中,您應該能夠看到一個或多個虛擬機器重新出現,然後進入活動狀態。

可在ESC的/var/log/esc/yangesc.log中跟蹤進度

範例:

```
09:14:00,906 29-Jan-2018 INFO ===== UPDATE SERVICE REQUESTRECEIVED (UNDER TENANT) =====
09:14:00,906 29-Jan-2018 INFO Tenant name: Pcrf
09:14:00,906 29-Jan-2018 INFO Deployment name: WSP1-tmo
09:14:01,542 29-Jan-2018 INFO
09:14:01,542 29-Jan-2018 INFO ===== CONFD TRANSACTION ACCEPTED =====
09:16:33,947 29-Jan-2018 INFO
09:16:33,947 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====
09:16:33,947 29-Jan-2018 INFO Type: VM_DEPLOYED
09:16:33,947 29-Jan-2018 INFO Status: SUCCESS
09:16:33,947 29-Jan-2018 INFO Status Code: 200
09:19:00,148 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====
09:19:00,148 29-Jan-2018 INFO Type: VM_ALIVE
09:19:00,148 29-Jan-2018 INFO Status: SUCCESS
09:19:00,148 29-Jan-2018 INFO Status Code: 200
09:19:00,275 29-Jan-2018 INFO ===== SEND NOTIFICATION STARTS =====
09:19:00,275 29-Jan-2018 INFO Type: SERVICE_UPDATED
09:19:00,275 29-Jan-2018 INFO Status: SUCCESS
09:19:00,275 29-Jan-2018 INFO Status Code: 200
```

步驟5.檢查駐留在VM上的PCRF服務。

檢查PCRF服務是否關閉並啟動。

[stack@XX-ospd ~]\$ ssh root@

[root@XXXSM03 ~]# monsum
[root@XXXSM03 ~]# monit start all
如果VM是SM、OAM或arbiter,請啟動之前停止的sessionmgr服務:

對於每個標題為sessionmgr-xxxx的檔案,運行service sessionmgr-xxxxx start:

[root@XXXSM03 init.d]# service sessionmgr-27717 start 如果診斷資訊仍不清晰,請從群集管理器虛擬機器執行build_all.sh,然後在相應的虛擬機器上執行 VM-init。

/var/qps/install/current/scripts/build_all.sh

ssh VM e.g. ssh pcrfclient01
/etc/init.d/vm-init

步驟6.運行診斷程式以檢查系統狀態。

[root@XXXSM03 init.d]# diagnostics.sh

相關資訊

- https://access.redhat.com/documentation/enus/red_hat_openstack_platform/10/html/director_installati...
- <u>https://access.redhat.com/documentation/en-</u> us/red_hat_openstack_platform/10/html/director_installati...。
- 技術支援與文件 Cisco Systems