

通过灾难恢复恢复独立vManage

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简介

本文档介绍通过使用配置数据库备份恢复vManage所涉及的步骤。

背景信息

本文档假定已定期进行配置db备份，并且由于某些原因，独立vManage不可恢复，需要重置软件或进行新安装。

本文档可帮助您恢复所有策略、模板、配置和边缘设备证书。

Backup Configuration-db

```
vManage_rcdn01# request nms configuration-db backup path 05_08_20_configdb
Starting backup of configuration-db
config-db backup logs are available in /var/log/nm/neo4j-backup.log file
Successfully saved database to /opt/data/backup/05_08_20_configdb.tar.gz
```

scp到外部服务器。

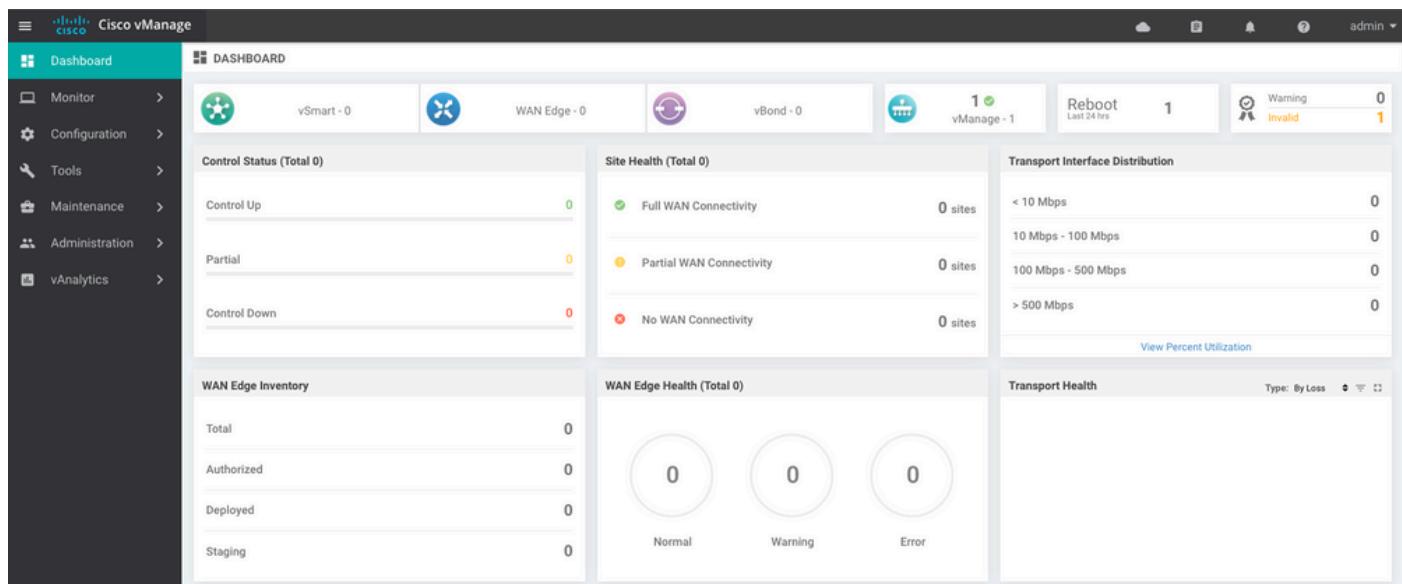
```
vManage_rcdn01# vshe11
vManage_rcdn01:~$ scp /opt/data/backup/05_08_20_configdb.tar.gz user@10.2.3.1://home/ftpuser/ftp/amaugust@10.2.3.1's password:
```

恢复vManage

通过命令重置vManage模拟灾难：

```
vManage_rcdn01# request software reset
```

现在，您有一个新的vManage，与图中所示的类似，建议在恢复备份之前，按照正确的顺序执行恢复过程。



步骤1:vManage上的最低配置

```
system
host-name          vManage_rcdn01
system-ip          xx.xx.xx.xx
site-id            100
organization-name ****.cisco
vbond vbond.list
!
!
vpn 0
host vbond.list ip 10.2.3.4 10.2.3.5
interface eth0
  ip address 10.1.3.8/24
  tunnel-interface
  no shutdown
!
ip route 0.0.0.0/0 10.1.3.1
```

```
!
vpn 512
interface eth1
  ip address 10.11.3.8/24
  no shutdown
!
ip route 0.0.0.0/0 10.1.3.1
!
```

第二步：复制备份配置和根证书

<#root>

```
vManage_rcdn01:~$ scp am****@xx.xx.xx.xx://home/ftpuser/ftp/am****/05_08_20_configdb.tar.gz .
am****@xx.xx.xx.xx's password:
05_08_20_configdb.tar.gz                                         100%  484KB  76.6MB/s  00:
```

verify

```
vManage_rcdn01:~$ ls -lh
total 492K
-rw-r--r-- 1 admin admin  394 May  8 15:20 archive_id_rsa.pub
-rwxr-xr-x 1 admin admin 485K May  8 15:39 05_08_20_configdb.tar.gz
```

Copy root certificate from other controller:

```
vManage_rcdn01:~$ scp admin@vbond://home/admin/root.crt .
viptela 18.4.4
admin@vbond's password:
root.crt                                         100% 1380      2.8MB/s  00:
```

第三步：安装根证书

```
vManage_rcdn01# request root-cert-chain install /home/admin/root.crt
Uploading root-ca-cert-chain via VPN 0
Copying ... /home/admin/root.crt via VPN 0
Updating the root certificate chain..
Successfully installed the root certificate chain
```

第四步：更新基本信息

导航至 Administration > Settings 并配置vBond IP、组织名称和证书的基本信息。

The screenshot shows the Cisco vManage Administration Settings page. Key sections highlighted include:

- Organization Name:** `anycast.cisco`
- vBond:** `vbond [REDACTED]:12346`
- Controller Certificate Authorization:** `Enterprise`
- WAN Edge Cloud Certificate Authorization:** `Automated`

第五步：安装vManage证书

请使用 `root.crt` 安装在Step 2中。

The screenshot shows the Cisco vManage Configuration Certificates page under the Controllers tab. It lists a single entry for the vManage controller with the following details:

CSR Generated	Controller Type	Hostname	System IP	Site ID	Certificate Serial	Expiration Date	uuid	vEdge List St...	Device IP
>	vManage	vManage_rcdn01	1.11.11.11	100	No certificate installed	-	92302e77-c05...	Sync	1.11.11.11

A modal window titled "CSR" is open, displaying the certificate request content:

```
--BEGIN CERTIFICATE REQUEST--
MIIDtjCCAjYCAGAwgcCxZAJBgNVBAYTAjVTMRMwEQQDVQQiEwpDYWxpZm9ybmlh
MREwDwYDVQQIEwhTYW4gSm9z2TEXBmUGA1UECeMOYWihdW1c3QyZj2zY28xFDAS
BgNVBAoTC3ZJUH8bGEgSW5jMUUmwQDVQDEzp2WfUwLlTkyMzAyZTc3LWmw
NWMinNDYsT1NzE3LTVmDeZYmZx2DUyZl0wLnZpcI8bGEuy29MSwiAY,kGzI
hvchNAokBFhNnzXbw3J0.QH-ZpHRHGeuV29MmIBjANBgkgkIj9wBAQEFAOC
AQAMIBBpkCAQEAp4czwUdwgqf0GS9hmcu/w/lsANIMQKKGb6rfBskQx6m/8l
N1LgATHbygq3/53022218+CfmTwqtJSPVwZc4VjpwXKxqScImG2
JgoysSfqad3q4d13PM69HtgCeVFn7bgmMzuTkOXW2zhHW+Pcf5BKRA4e5x
Vng2Y+gAKVTPHykgEjgbZCY8sk/X0mfXYVGp/TM4DPclvbjg/931yy
FdwEqJ/nUJV6dd6k0GtDPddRxOiqb92m9b710Z0JApJvnQi+dJmd9tX2h0M29
HlwSsVWfUCh776dbDwmilM4k9kys5q8shXXsJmQDAAQBo0swOQYJk0ZhhvNAok0
MSwwKAJBgNVHRMEAjAMBGAt1UDgQWBBQwKMQS4Q409c0m0vOvbaJOMSaSjAN
-----END CERTIFICATE REQUEST-----
```

Cisco vManage

CONFIGURATION | CERTIFICATES

WAN Edge List Controllers > Send to vBond

No file chosen

Search Options

	Operation Status	Controller Type	Hostname	System IP	Site ID	Certificate Serial	Expiration Date	vId	vEdge List St...	Device IP	...
>	CSR Generated	vManage	vManage_rcdn01	1.11.11.11	100	No certificate installed	-	92302e77-c05...	Sync	1.11.11.11	...

Total Rows: 1

Install Certificate

Certificate Text

```
-----BEGIN CERTIFICATE-----
MIIEQjCCAppwggIwAgTwgFHbasykxDQYJKoZIhvNcNAQELBQAebdDELMakGA1UE
BhAgVhMdczAIBpNvBAG7M02nCwIDVQ2HEB0G09OMRb7c1V1VQ2HEvGbWF1
Z3Vzrc5cXNbzbEXM8lUCA1UECwM0YHdhW1c3Dz1ZzY2b0aNBgNvMTBLJv
b3fD2T4efw9yMDA1MDgxNcEMD0BaFw9Mz1MDgxNcEMD0BaHNM0x+COYDVOQG
EwVUzETMREGA1UECBMk027saV2zcm5pYTTRMABG41UEB+MII3fuiEpc2UfzAV
BgVBVAz1DmPfYYvnXhKwvnpC2N-MR02eEyDfQGEKw2zSV02vHiehJvFTME0G
A1UEAAd5dm11bmFnZSD5MMwKmUm13Mj1MDVLTQ2MmEtYTcxkj0T2AxM21mWQ1
MmYhMC5zXBz0vhLmNvTEMCAGCSqSb3DCgJAPYtC3wc9yDEBz3XB02vhxh
LmNbVTCASh=DOYJKz2IwNAQEBBQADggEPADCCAQcGpEBAKehMFBH4KmshqXO
t2zLcPSgqZTBlhmuXwVwpnwJ7GdyAEz2gpmX14d7Qp9Phfa8c
5rVoP6kyeT2MGXFdfstMNViwasUnCjhRerEnfmnd5YOHShz6jg5/Wx2iAnZB
Z/W46TM7kyqD1ts4R1v3H7ASkAhuCvZ4NmPeAJsn1Ux8pIPB1oG2bwMrErJP
17zgnBWbVhQzT2r0zA3Jb246Pd7d8sm@XcBKf51Y+nXep0hQz3XZUcToqm/

```

Select a file

Install Cancel

Cisco vManage

TASK VIEW

Install Certificate

Initiated By: admin From: 169.254.0.253

Total Task: 1 | Success: 1

Search Options

Status	Message	Device Type	Device IP	vManage IP
Success	Successfully synced vEdge list on vManage-9...	vManage	92302e77-c05c-462a-a717-5f013b31d52f	1.11.11.11

8-May-2020 16:15:06 UTC] Install Certificate, on device 92302e77-c05c-462a-a717-5f013b31d52f, started by user "admin" from IP address "169.254.0.253"
[8-May-2020 16:15:06 UTC] Pushing serial list to vManage-92302e77-c05c-462a-a717-5f013b31d52f (vManage_rcdn01)
[8-May-2020 16:15:06 UTC] Started processing serial list file on vManage-92302e77-c05c-462a-a717-5f013b31d52f (vManage_rcdn01)
[8-May-2020 16:15:07 UTC] Completed processing serial list file on vManage-92302e77-c05c-462a-a717-5f013b31d52f (vManage_rcdn01)
[8-May-2020 16:15:07 UTC] Done - Push vSmart List for vManage-92302e77-c05c-462a-a717-5f013b31d52f (vManage_rcdn01)
[8-May-2020 16:15:07 UTC] Pushed serial list to vManage-92302e77-c05c-462a-a717-5f013b31d52f (vManage_rcdn01)
[8-May-2020 16:15:07 UTC] Updated controllers with new certificate serial number of vManage-92302e77-c05c-462a-a717-5f013b31d52f

Cisco vManage

DASHBOARD

vSmart - 0 WAN Edge - 0 vBond - 0 vManage - 1 Reboot Last 24 hrs 1 Warning Invalid 0

Control Status (Total 0)

- Control Up 0
- Partial 0
- Control Down 0

Site Health (Total 0)

- Full WAN Connectivity 0 sites
- Partial WAN Connectivity 0 sites
- No WAN Connectivity 0 sites

Transport Interface Distribution

- < 10 Mbps 0
- 10 Mbps - 100 Mbps 0
- 100 Mbps - 500 Mbps 0
- > 500 Mbps 0

View Percent Utilization

WAN Edge Inventory

Total	0
Authorized	0
Deployed	0
Staging	0

WAN Edge Health (Total 0)

Normal	Warning	Error
0	0	0

Transport Health

Type: By Loss

第六步：恢复数据库

```
<#root>

vManage_rcdn01# request nms configuration-db restore path /home/admin/05_08_20_configdb.tar.gz

Configuration database is running in a standalone mode
0 [main] INFO com.viptela.vmanage.server.deployment.cluster.ClusterConfigurationFileHandler - Trying to
4 [main] INFO com.viptela.vmanage.server.deployment.cluster.ClusterConfigurationFileHandler - Working on
Successfully saved cluster configuration for localhost
Starting DB backup from: localhost
Creating directory: local
cmd to backup db: sh /usr/bin/vconfd_script_nms_neo4jwrapper.sh backup localhost /opt/data/backup/local
Finished DB backup from: localhost
Stopping NMS application server on localhost
Stopping NMS configuration database on localhost
Reseting NMS configuration database on localhost
Restoring from DB backup: /opt/data/backup/staging/graph.db-backup
cmd to restore db: sh /usr/bin/vconfd_script_nms_neo4jwrapper.sh restore /opt/data/backup/staging/graph.db-backup
Successfully restored DB backup: /opt/data/backup/staging/graph.db-backup
Starting NMS configuration database on localhost
Waiting for 10s before starting other instances...
Polling neo4j at: localhost
NMS configuration database on localhost has started.
Updating DB with the saved cluster configuration data
Successfully reinserted cluster meta information
Starting NMS application-server on localhost
Waiting for 120s for the instance to start...
Removed old database directory: /opt/data/backup/local/graph.db-backup
Successfully restored database
```

此步骤需要较长时间，具体取决于备份。

您可以通过以下方式验证该流程： tailing vShell上的日志。

```
<#root>

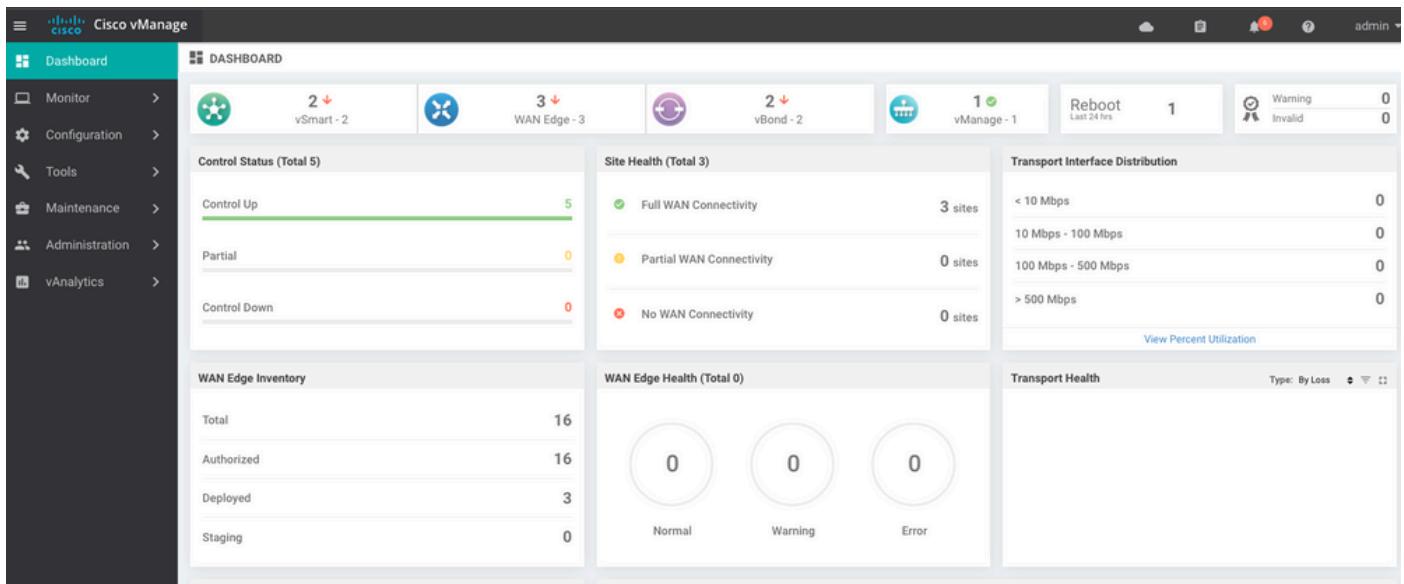
vManage_rcdn01:~$ tail -fq /var/log/nms/vmanage-server.log /var/log/nms/neo4j-out.log
```

步骤 7. 检查服务

```
vManage_rcdn01# request nms all status
```

步骤 8重新验证控制器

目前，您可以观察到所有策略、模板和配置都已加载到vManage中，但所有控制器均已关闭。



您需要对所有控制器重新进行身份验证。

导航至 Configuration > Devices. 编辑每个控制器并填写管理IP地址（管理IP可以在本地配置中找到）用户名和密码。

The screenshot shows the Configuration > Devices > Controllers page. The table lists the following controllers:

Controller Type	Hostname	System IP	Site ID	Mode	Assigned Template	Device Status	Certificate Stat...	Policy Name	Policy Version	UUID	Actions
vManage	-	-	-	CLI	-	In Sync	Installed	-	-	acdaf52...	More
vManage	vManage_rcdn01	1.11.11.11	100	CLI	-	In Sync	Installed	-	-	92302e...	More
vSmart	vsmart	1.1.1.2	100	CLI	-	In Sync	Installed	-	-	0e3ce6...	More
vSmart	vsmart_rtp	1.2.2.2	100	CLI	-	In Sync	Installed	-	-	7c5bf5a...	More
vBond	vbond	1.1.1.3	100	CLI	-	In Sync	Installed	-	-	30b8e0...	More
vBond	vbond_rtp	1.1.2.2	100	CLI	-	In Sync	Installed	-	-	-	More

A context menu is open over the vBond row, listing options: Running Configuration, Local Configuration, Template Log, Edit, Invalidate, and Device Bring Up.

步骤 9 将更新发送到控制器

The screenshot shows the Configuration > Certificates > Controllers page. The table lists certificates for vBonds:

Controller Type	Hostname	System IP	Expiration Date	uuid	Operation Status	Site ID	Certificate Serial	vEdge List St...	Device IP	Actions
vBond	vbond	1.1.1.3	28 Mar 2023 8:33:00 PM CDT	30b8e052-3c...	Installed	100	068BCFF16E5D1CE4	Sync	1.1.1.1/7	More
vBond	vbond_rtp	1.1.2.2	20 Apr 2023 2:07:00 PM CDT	9ff911c1-f1a2...	Installed	100	27630C538F9B0950	Sync	1.1.1.1/7	More
vSmart	vsmart	1.1.1.2	21 Apr 2023 8:02:00 PM CDT	0e3ce626-b1...	vBond Updated	100	4E103617F5961C5D	Sync	1.1.1.1/7	More
vSmart	vsmart_rtp	1.2.2.2	21 Apr 2023 7:49:00 PM CDT	7c5bf5ab-6a8...	vBond Updated	100	3620573D1767DCC9	Sync	1.1.1.1/1	More

A red box highlights the "Send to vBond" button in the top navigation bar.

Cisco vManage

CONFIGURATION | CERTIFICATES

WAN Edge List Controllers

> Send to Controllers

Total Rows: 15

State	Device Model	Chassis Number	Hostname	IP Address	Serial No./Token	Validate
Green	vEdge Cloud	ceaf1eb3-62cf-059d-634a-5649fca28125	Site03_vEdge...	1.1.1.6	EBOC7777	Invalid Staging Valid
Green	C1101-4P	C1101-4P-FGL221792P7	Site01_C1101	1.1.1.5	01633D8F	Invalid Staging Valid
Green	ISR4451-X	ISR4451-X/K9-FOC16491MWM	Site02_ISR44...	1.1.1.4	F42E	Invalid Staging Valid
Green	CSR1000v	CSR-953188CO-2D85-5D4B-A24A-2CEEE71...	-	-	Token - 40fcfc5d96bc40fc39a0d7bfbc7e354	Invalid Staging Valid
Green	CSR1000v	CSR-91AA7B9A-C7E7-B8E9-F205-15B7322...	-	-	Token - 18bb348fdfc64ef3b5712046ccbd774	Invalid Staging Valid

现在，您会看到所有设备都可以通过vManage进行管理。

Cisco vManage

DASHBOARD

vSmart - 2 WAN Edge - 3 vBond - 2 vManage - 1 Reboot Last 24 hrs 3 Warning Invalid 0

Control Status (Total 4)

- Control Up: 4
- Partial: 0
- Control Down: 0

Site Health (Total 2)

- Full WAN Connectivity: 2 sites
- Partial WAN Connectivity: 0 sites
- No WAN Connectivity: 0 sites

Transport Interface Distribution

- < 10 Mbps: 9
- 10 Mbps - 100 Mbps: 0
- 100 Mbps - 500 Mbps: 0
- > 500 Mbps: 0

View Percent Utilization

WAN Edge Inventory

Total	Authorized	Deployed	Staging
15	15	3	0

WAN Edge Health (Total 2)

Normal	Warning	Error
2	0	0

Transport Health

Type: By Loss

Top Applications

No data to display

Application-Aware Routing

Tunnel Endpoints	Avg. Latency (ms)	Avg. Loss (%)	Avg. Jitter (ms)
Site02_ISR4451.default Site03_vEdge_Cloud...	50.5	0.013	37.333
Site01_C1101.default Site02_ISR4451.default	32.167	0.012	0
Site02_ISR4451.default Site01_C1101.default	32	0	0
Site01_C1101.default Site03_vEdge_Cloud...	25.917	0	41.083

Cisco vManage

CONFIGURATION | TEMPLATES

Device Feature

Add Template

Template Type: Non-Default

Total Rows: 10

Name	Description	Type	Device Model	Device Templates	Devices Attached	Updated By	Last Updated
vEdge_VPN_0	Default Transport VPN tem...	WAN Edge VPN	C1111-4PLTEEA C1117-4P...	0	0	admin	23 Apr 2020 9:30:47 AM C...
Default_AAA	Default AAA template settin...	AAA	C1111-4PLTEEA C1117-4P...	1	1	admin	23 Apr 2020 9:42:40 AM C...
cEdge_VPN_0	Default Transport VPN tem...	WAN Edge VPN	C1111-4PLTEEA C1117-4P...	1	1	admin	23 Apr 2020 9:31:47 AM C...
vEdge_VPN_512_Interface	VPN 512 Interface config	WAN Edge Interface	C1111-4PLTEEA C1117-4P...	0	0	admin	23 Apr 2020 9:33:40 AM C...
vEdge_VPN_0_Interface	VPN 0 Interface config	WAN Edge Interface	C1111-4PLTEEA C1117-4P...	0	0	admin	23 Apr 2020 9:31:07 AM C...
Default_Banner	Banner for amaugust.cisco	Banner	ISR4451-X C1101-4P vEd...	1	1	admin	23 Apr 2020 8:17:38 AM C...
vEdge_VPN_512	VPN 512 add default route	WAN Edge VPN	C1111-4PLTEEA C1117-4P...	0	0	admin	23 Apr 2020 9:32:40 AM C...
cEdge_VPN_0_Interface	VPN 0 Interface config	WAN Edge Interface	C1111-4PLTEEA C1117-4P...	1	1	admin	23 Apr 2020 9:15:37 AM C...
cEdge_VPN_512	VPN 512 add default route	WAN Edge VPN	C1111-4PLTEEA C1117-4P...	1	1	admin	23 Apr 2020 9:33:16 AM C...
cEdge_VPN_512_Interface	VPN 512 Interface config	WAN Edge Interface	C1111-4PLTEEA C1117-4P...	1	1	admin	23 Apr 2020 9:34:20 AM C...

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