

使用API调用获取多个分集的运行配置

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简介

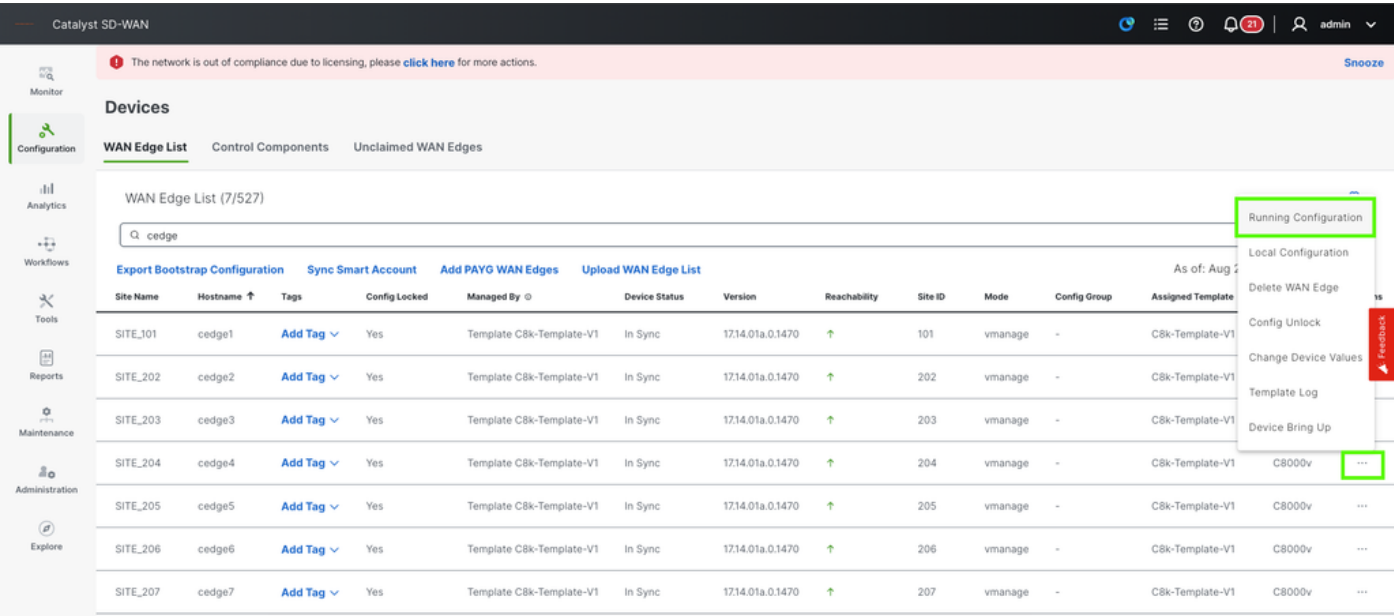
本文档介绍如何使用vManage中提供的某些API调用，以及如何调整它以使用脚本运行它。

问题

如果重叠包含数百或数千台思科边缘路由器，则从vManage收集所需信息并非总是很容易收集的。

示例：

要获得单台Cisco Edge路由器的运行配置，最简单的方法是导航到Configuration > Devices > Wan Edge List，然后点击省略号(...)和Running Configuration。然后，您必须选择并复制所有配置，然后保存为其他文件，如.txt格式。但是，当您想要配置多个思科边缘路由器时，问题就会出现，导致此任务耗时且耗时。



Catalyst SD-WAN

The network is out of compliance due to licensing, please [click here](#) for more actions.

Devices

WAN Edge List Control Components Unclaimed WAN Edges

WAN Edge List (7/527)

Q cedge

Export Bootstrap Configuration Sync Smart Account Add PAYG WAN Edges Upload WAN Edge List

Site Name	Hostname	Tags	Config Locked	Managed By	Device Status	Version	Reachability
SITE_101	cedge1	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_202	cedge2	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_203	cedge3	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_204	cedge4	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_205	cedge5	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_206	cedge6	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑
SITE_207	cedge7	Add Tag	Yes	Template C8k-Template-V1	In Sync	17.14.01a.0.1470	↑

Running Configuration

Host: 40.40.40.1
Site ID: 204
Device Model: C8000v

```

system
system-ip 40.40.40.1
overlay-id 1
site-id 204
no transport-gateway enable
port-offset 0
control-session-gps 300
admin-tech-on-failure
sp-organization-name CISCORTPLAB
organization-name CISCORTPLAB
port-hop
track-transport
track-default-gateway
console-baud-rate 9600
no on-demand enable
on-demand idle-timeout 10
vbond 192.168.51.117 port 12346
!
banner login \x03Un authorised Logins tracked\x03
banner motd \x03Restricted Use\x03
service timestamps debug datetime msec
service timestamps log datetime msec
service tcp-keepalives-in
service tcp-keepalives-out
no service tcp-small-servers
no service udp-small-servers
hostname cedge4
username admin privilege 15 secret 9
$9$3V6L3V6L2VU2k$ysPx0dgl8Rj0KqMdmfHdShkdaMmhtzGaUpq8tPpTfo
vrf definition 10
description Corporate
  
```

[Close](#)

API调用概述

此过程是一个示例，说明如何使用简单的API调用获取所需的所有信息。

步骤1:

使用URL或IP地址正常登录vManage。

Catalyst SD-WAN

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Monitor [All Sites](#)

Overview Devices Applications Security Multicloud Tunnels Logs

Control Components

1 Validator	2 Controller	1 Manager
-------------	--------------	-----------

WAN Edges

7 Reachable	1 Unreachable
-------------	---------------

Certificate Status

1 Warning	3 Invalid
-----------	-----------

Licensing

0 Assigned	8 Unassigned
------------	--------------

Reboot

0 Last 24 hrs

Site Health [Poor Performing Sites](#)

9 Sites

Site name	Usage (GB)
SITE_202	0
SITE_203	0
SITE_10	0
SITE_207	0
SITE_206	0

Tunnel Health [Latency \(ms\)](#) [Fair Tunnels](#)

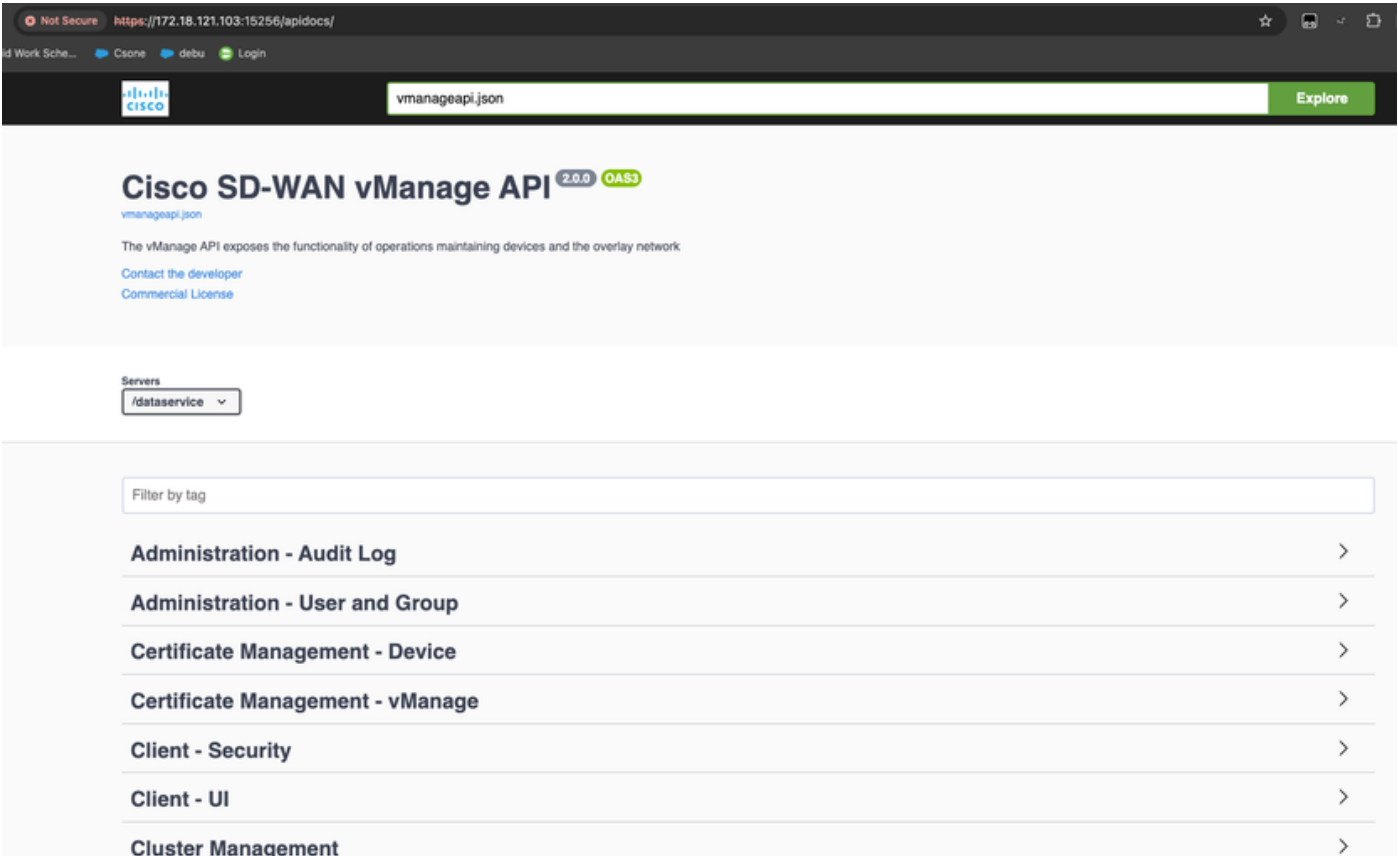
72 Tunnels

Tunnel	Latency (ms)
cedge3.mpls-cedge4.m...	4.84
cedge3.biz-internet-ced...	32.89
cedge2.biz-internet-ced...	28.17
cedge4.biz-internet-ced...	28.02
cedge1.mpls-cedge5.mpls	27.22

Step 2.

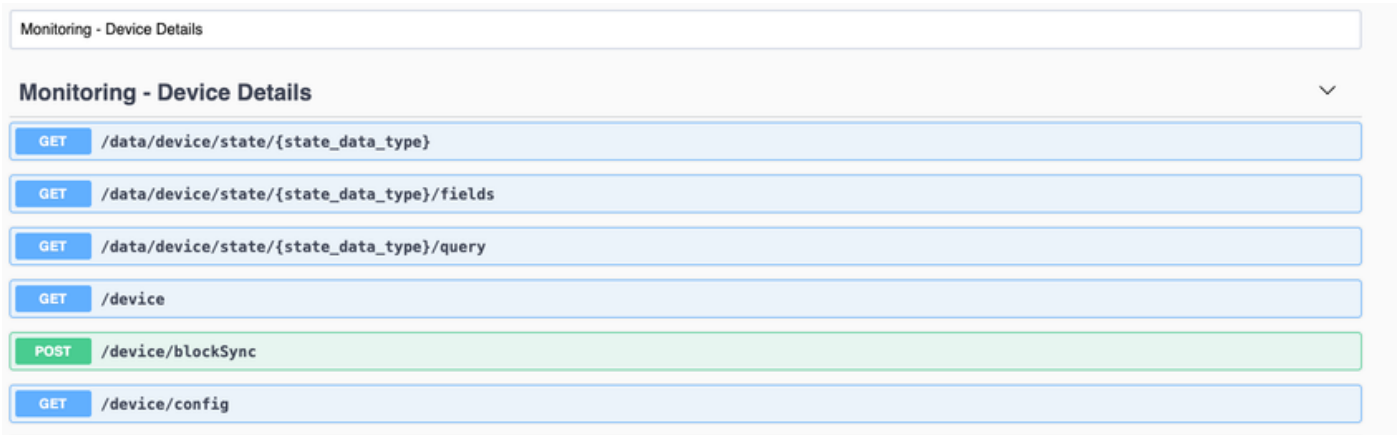
打开新的选项卡浏览器，然后复制并粘贴vManage的URL，并添加后缀

/apidocs(https://172.18.121.103:15256/apidocs)。



第 3 步：

在搜索框中，键入Monitoring - Device Details。



第 4 步：

要获取一个设备的配置，您必须尝试/device/config API调用。

GET /device/config

Get device running configuration

Parameters

Try it out

Name	Description
deviceId * required array[string] (query)	Device Id list

第 5 步：

输入一个Cisco Edge路由器的System-IP并运行API调用。

GET /device/config

Get device running configuration

Parameters

Cancel

Name	Description
deviceId * required array[string] (query)	Device Id list

10.10.10.1

Add Item

Execute

Responses

Curl

This curl can be used to run scripts

curl -X GET "https://172.18.121.103:15256/dataservice/device/config?deviceId=10.10.10.1" -H "accept: text/plain" -H "X-XSRF-TOKEN: A7BBC8CFA4F0D32644D071247F7C087556F8EE0C7BEF9B434C4CF4EE2D708005B9EABC14354244085A305008E4680B3BC010"

Request URL

https://172.18.121.103:15256/dataservice/device/config?deviceId=10.10.10.1

Server response

Code	Details
200	Response body In this section you can see the configuration of device. <pre> system system-ip 10.10.10.1 overlay-id 1 site-id 101 no transport-gateway enable port-offset 0 control-session-pps 300 admin-tech-on-failure sp-organization-name CISCORTPLAB organization-name CISCORTPLAB port-hop track-transport track-default-gateway console-baud-rate 9600 no on-demand enable on-demand idle-timeout 10 vbond 192.168.51.117 port 12346 ! banner login \x03Un authorised Logins tracked\x03 banner motd \x03Restricted Use\x03 service timestamps debug datetime msec service timestamps log datetime msec service tcp-keepalives-in service tcp-keepalives-out no service tcp-small-servers no service udp-small-servers hostname cedgel username admin privilege 15 secret 9 \$9\$3V6L3V6L2VUI2k\$ysPnX0dg8RLj9KgMdmfHdSHkdaMniHzGaUpcqH6pfTo </pre> This option downloads html file with the configuration. Download

在脚本中使用Curl

更好的选择是在脚本中使用API调用生成思科边缘路由器的配置文件。

步骤1:

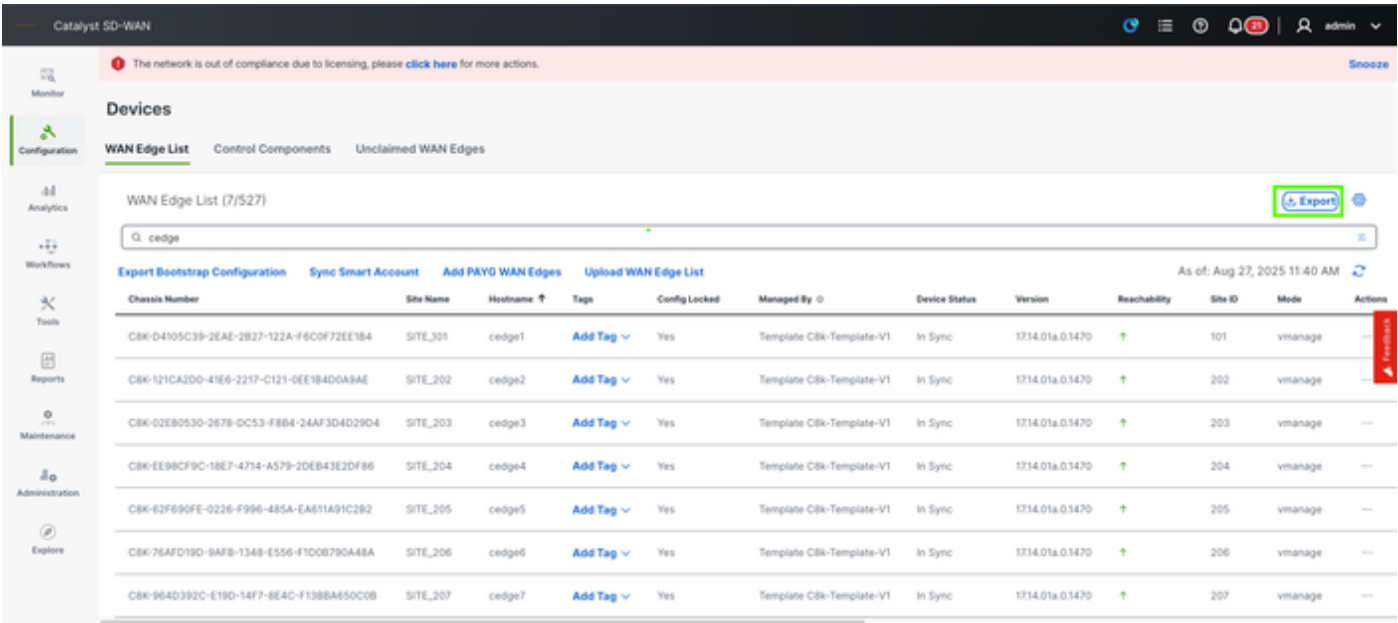
首先，在shell或CLI命令行中，创建一个存储所有备份文件的文件夹。

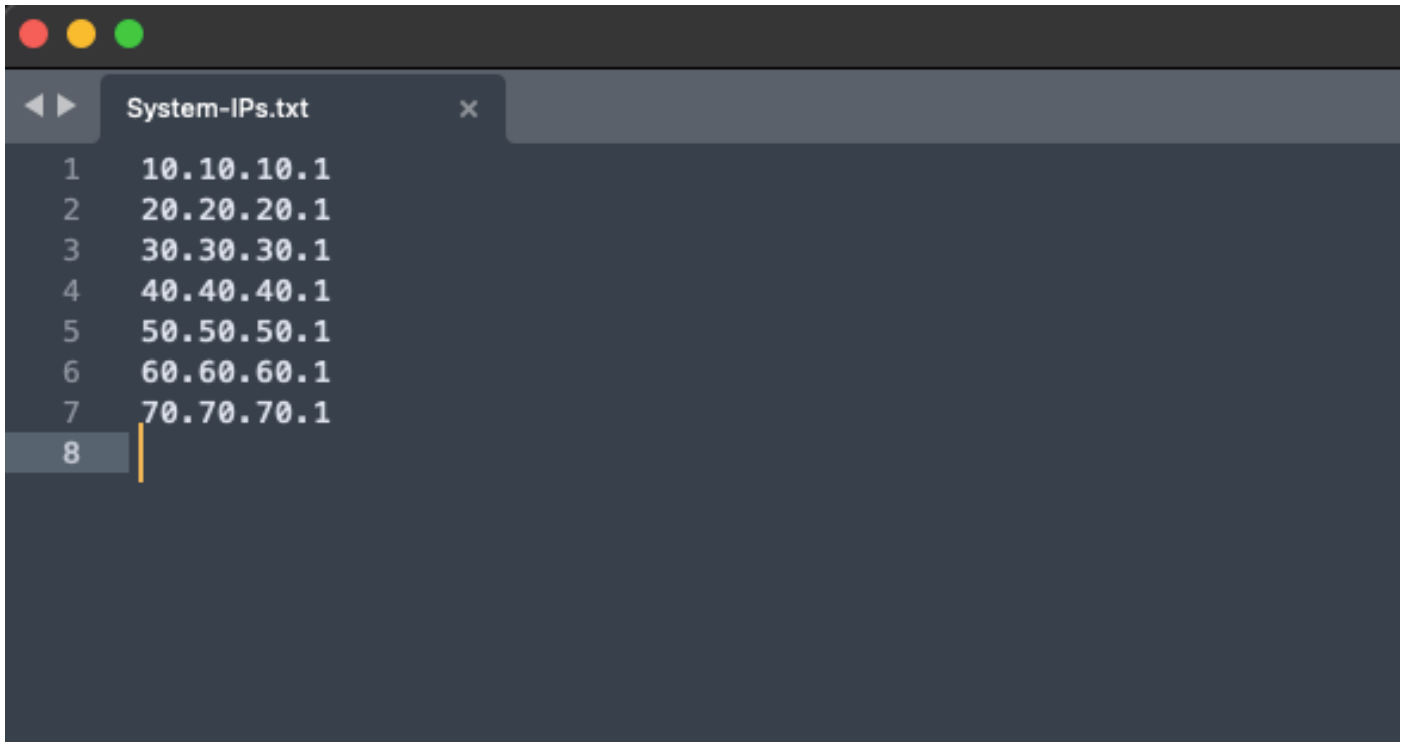
```
lufrias@LUFRIAS-M-P9Q2 Desktop % mkdir Backup_cedges
lufrias@LUFRIAS-M-P9Q2 Desktop % cd Backup_cedges
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % pwd
/Users/lufrias/Desktop/Backup_cedges
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
```

Step 2.

使用需要备份的云翼路由器的所有系统IP地址创建一个.txt文件。您可以从vManage和export CSV文件获取的系统IP地址列表。

需要将该文件命名为System-IPs.txt，并将其保存在先前创建的同一目录(Backup_cedges)中。





第 3 步：

确认文件已保存。

```
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % ls -l
total 8
-rw-r--r--@ 1 lufrias  staff  77 Aug 27 12:20 System-IPs.txt
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
```

第 4 步：

继续创建脚本。可以使用vi或任何记事本，请注意将其保存为.sh格式。

```
#!/bin/bash

#Define your variables

echo "Please type vManage URL in following format"
echo "https://172.18.121.103:15256 or https://vmanage.cisco.com"

read VMANAGE

echo "Please enter username to access vmanage"

read USER

echo "Password:"

read PASSWORD
```

```
#DEFINING THE API CALLS TO LOGIN AND BODY
```

```
security_url="$VMANAGE/j_security_check"
```

```
credentials="j_username=$USER&j_password=$PASSWORD"
```

```
#EXECUTE THE API CALL TO LOGIN TO THE VMANAGE.
```

```
curl --request POST --silent --insecure -c cookies.txt --url $security_url --data $credentials
```

```
#EXECUTE THE API CALL TO GET A TOKEN
```

```
TOKEN=$(curl "$VMANAGE/dataservice/client/token" -X GET -b cookies.txt -s --insecure)
```

```
arr_csv=()
```

```
while IFS= read -r line
```

```
do
```

```
    arr_csv+=("$line")
```

```
    curl --insecure -b cookies.txt -H "accept: text/plain" -H "X-XSRF-TOKEN: $TOKEN" -X GET "$VMANAGE/"
```

```
    echo $line
```

```
done < System-IPs.txt
```

```
echo "Running config was collected from following System_IPs:"
```

```
index=0
```

```
for record in "${arr_csv[@]}"
```

```
do
```

```
    echo "Record at index-${index} : $record"
```

```
    ((index++))
```

```
done
```

```
curl "$VMANAGE/logout" -b cookies.txt --silent --insecure -H "X-XSRF-TOKEN: $TOKEN"
```

```
echo "Check files, if they are empty or with message "Bad request" check user and password"
```

第 5 步：

更改文件的权限，使其可以运行。

```
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % ls -l
total 16
-rw-r--r--@ 1 lufrias  staff    77 Aug 27 12:20 System-IPs.txt
-rw-r--r--  1 lufrias  staff  1174 Aug 27 12:47 config_backup_script.sh
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % chmod +x config_backup_script.sh
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % ls -l
total 16
-rw-r--r--@ 1 lufrias  staff    77 Aug 27 12:20 System-IPs.txt
-rwxr-xr-x  1 lufrias  staff  1174 Aug 27 12:47 config_backup_script.sh
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
```

第六步：

使用./config_backup_script.sh命令运行脚本。考虑完成此操作需要一些时间，具体取决于设备的数量。

```
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % ./config_backup_script.sh
Please type vManage URL in following format
https://172.18.121.103:15256 or https://vmanage.cisco.com
https://172.18.121.103:15256
Please enter username to access vmanage
admin
Password:
qwerty1234Q
```

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7238	0 7238	0 0	1133 0	--:--:--	0:00:06	--:--:--	1761

10.10.10.1

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7218	0 7218	0 0	1799 0	--:--:--	0:00:04	--:--:--	1800

20.20.20.1

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7225	0 7225	0 0	1978 0	--:--:--	0:00:03	--:--:--	1978

30.30.30.1

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7225	0 7225	0 0	1491 0	--:--:--	0:00:04	--:--:--	2031

40.40.40.1

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7225	0 7225	0 0	2717 0	--:--:--	0:00:02	--:--:--	2718

50.50.50.1

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100 7225	0 7225	0 0	1610 0	--:--:--	0:00:04	--:--:--	1641

```

60.60.60.1
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100  7225    0  7225    0    0   1668      0 --:--:--  0:00:04 --:--:--  1668
70.70.70.1
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100   40    0   40    0    0   108      0 --:--:--  --:--:--  --:--:--   107

```

80.80.80.1
Running config was collected from following System_IPs:

```

Record at index-0 : 10.10.10.1
Record at index-1 : 20.20.20.1
Record at index-2 : 30.30.30.1
Record at index-3 : 40.40.40.1
Record at index-4 : 50.50.50.1
Record at index-5 : 60.60.60.1
Record at index-6 : 70.70.70.1
Record at index-7 : 80.80.80.1

```

Method Not AllowedCheck files, if they are empty or with message Bad request check user and password
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %

第 7 步：

最后，使用ls -l命令检查文件存在。

```

lufrias@LUFRIAS-M-P9Q2 Backup_cedges % ls -l
total 152
-rw-r--r-- 1 lufrias staff 7238 Sep 11 10:06 10.10.10.1.txt
-rw-r--r-- 1 lufrias staff 7218 Sep 11 10:06 20.20.20.1.txt
-rw-r--r-- 1 lufrias staff 7225 Sep 11 10:06 30.30.30.1.txt
-rw-r--r-- 1 lufrias staff 7225 Sep 11 10:06 40.40.40.1.txt
-rw-r--r-- 1 lufrias staff 7225 Sep 11 10:06 50.50.50.1.txt
-rw-r--r-- 1 lufrias staff 7225 Sep 11 10:06 60.60.60.1.txt
-rw-r--r-- 1 lufrias staff 7225 Sep 11 10:07 70.70.70.1.txt
-rw-r--r-- 1 lufrias staff 40 Sep 11 10:07 80.80.80.1.txt
-rw-r--r--@ 1 lufrias staff 88 Sep 10 11:48 System-IPs.txt
-rwxr-xr-x 1 lufrias staff 1352 Sep 11 09:49 config_backup_script.sh
-rw-r--r-- 1 lufrias staff 288 Sep 11 10:06 cookies.txt
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %

```

检查配置文件。

```

lufrias@LUFRIAS-M-P9Q2 Backup_cedges % more 10.10.10.1.txt
system
system-ip          10.10.10.1
overlay-id         1
site-id            101
no transport-gateway enable
port-offset        0

```

```
control-session-pps 300
admin-tech-on-failure
sp-organization-name CISCORTPLAB
organization-name CISCORTPLAB
port-hop
track-transport
track-default-gateway
console-baud-rate 9600
no on-demand enable
on-demand idle-timeout 10
vbond 192.168.51.117 port 12346
```

如果文件为空或显示错误消息“Bad request”，请检查身份验证用户名和密码。

```
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % more 30.30.30.1.txt
Bad Request
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
```

如果文件显示“No device found for system IP”，表示系统IP在vManage中不存在。您必须更正System-IPs.txt并删除错误的System-IP。

```
lufrias@LUFRIAS-M-P9Q2 Backup_cedges % more 80.80.80.1.txt
No device found for system IP 80.80.80.1
lufrias@LUFRIAS-M-P9Q2 Backup_cedges %
```

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