

Configure Cacti VM after OVA Template Imported

By Double.Lin 3/25/2024

1. VM Template spec: CPU 8 cores, Memory 8GB, HD 100GB.

> CPU	8	▼
> Memory	8	▼ GB ▼
> Hard disk 1	100	GB ▼
> SCSI controller 0	VMware Paravirtual	
▼ Network adapter 1	LAN_GI	▼
Status	<input checked="" type="checkbox"/> Connect At Power On	
Adapter Type	VMXNET 3	▼

2. Download Cacti Template from OneDrive
 - a. [Cacti Template v1.2.25](#)
 - b. PW is Cacti1.2.25
3. Import Template to vCenter as a Template
 - a. Login vCenter => Click VM Host -> Deploy OVF Template -> Local File -> Upload File to select OVA -> Next

TPV_Datacenter

> TPV_Cluster

> 172.16.15.104

Cacti_Kali_32

Cacti_Oracle0

Cacti_Oracle0

Actions - 172.16.15.104

New Virtual Machine...

Deploy OVF Template

Deploy OVF Template

Select an OVF template

Select a name and folder

4 Review details

5 Select storage

Select an OVF template

Select an OVF template from remote URL or local file sys

Enter a URL to download and install the OVF package fro

such as a local hard drive, a network share, or a CD/DVD

☐ URL

☒ Local file

http | https://remoteserver-address/fileto deploy.ovf

UPLOAD FILES

Temp_Cacti_Oracle9_20240117.ovf

CANCEL

NEXT

- b. Click Next

Select a name and folder

Specify a unique name and target location

Virtual machine name: Temp_Cacti_Oracle9_20240117 **Keep same name.**

Select a location for the virtual machine.

▼ twtps251.tpvaoc.com

> TPV_Datacenter

CANCEL

BACK

NEXT

- c. Click Next (or change computer as required)

Select a compute resource

Select the destination compute resource for this operation

▼

TPV_Datacenter

>

TPV_Cluster

>

172.16.15.104

Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

- d. Click Next

Review details

Verify the template details.

⚠ The OVF package contains advanced configuration options, which might pose a security risk. Review the advanced configuration options below. Click next to accept the advanced configuration options.

Publisher	No certificate present
Download size	Unknown
Size on disk	Unknown (thin provisioned) 100.0 GB (thick provisioned)
Extra configuration	nvrn = Cacti_Oracle02_32.14.nvrn

CANCEL

BACK

NEXT

- e. Select Storage -> Next

Select storage

Select the storage for the configuration and disk files

☐ Encrypt this virtual machine (Requires Key Management Server)

Select virtual disk format Thick Provision Lazy Zeroed ▼

VM Storage Policy Datastore Default ▼

☐ Disable Storage DRS for this virtual machine

	Name ▼	Storage Compatibility ▼	Capacity ▼	Provisioned ▼	Free ▼	Type ▼	Cluster
🌐	Host03_HD	--	1.35 TB	1.54 TB	1.03 TB	VMFS 5	
🌐	vol_ME5024_17...	--	17.44 TB	11.47 TB	7.37 TB	VMFS 6	

Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

f. Select Network => Next

Select networks

Select a destination network for each source network.

Source Network	Destination Network
LAN_GI	LAN_GI

IP Allocation Settings

IP allocation: Static - Manual

IP protocol: IPv4

[CANCEL](#) [BACK](#) [NEXT](#)

g. Click Finish

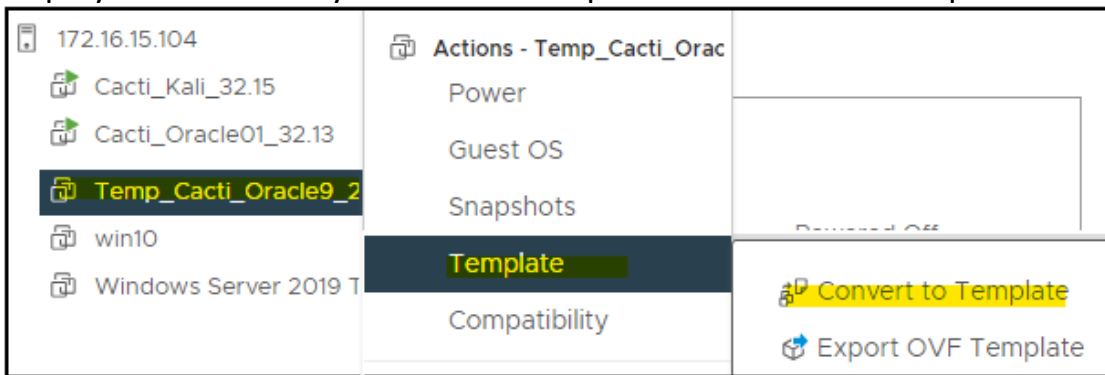
Ready to complete

Review your selections before finishing the wizard

- ▼ Select a name and folder
 - Name: Temp_Cacti_Oracle9_20240117
 - Template name: Temp_Cacti_Oracle9_20240117
 - Folder: TPV_Datacenter
- ▼ Select a compute resource
 - Resource: 172.16.15.104
- ▼ Review details
 - Download size: Unknown
- ▼ Select storage
 - Size on disk: 100.0 GB
 - Storage mapping: 1
 - All disks: Datastore: Host03_HD; Format: Thick provision lazy zeroed
- ▼ Select networks
 - Network mapping: 1
 - LAN_GI: LAN_GI
 - IP allocation settings
 - IP protocol: IPV4
 - IP allocation: Static - Manual

[CANCEL](#) [BACK](#) [FINISH](#)

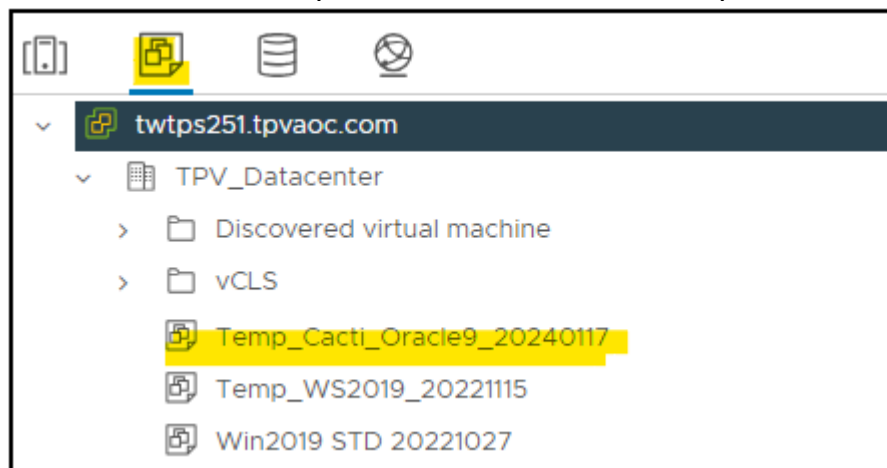
h. Deployed on inventory list=> Click Template => Convert to Template



i. Click Yes to Convert

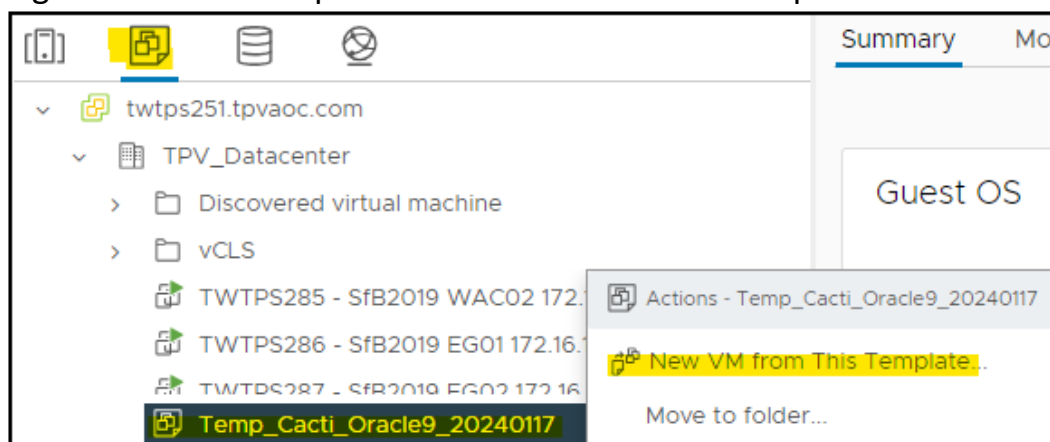


j. Done of Cacti VM imported and convert to Template



4. Deploy from Template

a. Right Click Cacti Template => New VM from this Template



b. Type Cacti host name => Next

Temp_Cacti_Oracle9_20240117 - Deploy From Template

Select a name and folder
Specify a unique name and target location

Virtual machine name: TWTPSVHQ016

Select a location for the virtual machine.

- twtps251.tpvaoc.com
 - TPV_Datacenter
 - Discovered virtual machine
 - vCLS

CANCEL BACK NEXT

c. Select VM Host.

Select a compute resource
Select the destination compute resource for this operation

- TPV_Datacenter
 - TPV_Cluster
 - 172.16.15.104

Compatibility
✓ Compatibility checks succeeded.

BACK NEXT

d. Select Storage => 1.click a data store=>2. Select "Thick Provision Lazy Zeroed"

Select storage
Select the storage for the configuration and disk files

BATCH CONFIGURE CONFIGURE PER DISK

☐ Encrypt this virtual machine (Requires Key Management Server)

Select virtual disk format Thick Provision Lazy Zeroed

VM Storage Policy Keep existing VM storage policies

☐ Disable Storage DRS for this virtual machine

	Name	Storage Compatibility	Capacity	Provisioned	Free
1	Host03_HD	--	1.35 TB	1.65 TB	953.4 GB
	vol_ME5024_17...	--	17.44 TB	11.47 TB	7.37 TB

Compatibility
✓ Compatibility checks succeeded.

CANCEL BACK NEXT

- e. Power on VM after creation => Next

Select clone options

Select further clone options

☐ Customize the operating system

☐ Customize this virtual machine's hardware

☒ Power on virtual machine after creation

CANCEL BACK NEXT

- f. Click Finish

Ready to complete

Click Finish to start creation.

Source template	Temp_Cacti_Oracle9_20240117
Virtual machine name	TWTPSVHQ016
Folder	TPV_Datacenter
Host	172.16.15.104
Datastore	Host03_HD
Disk storage	Thick Provision Lazy Zeroed

CANCEL BACK FINISH

- g. Done

5. Configure VM

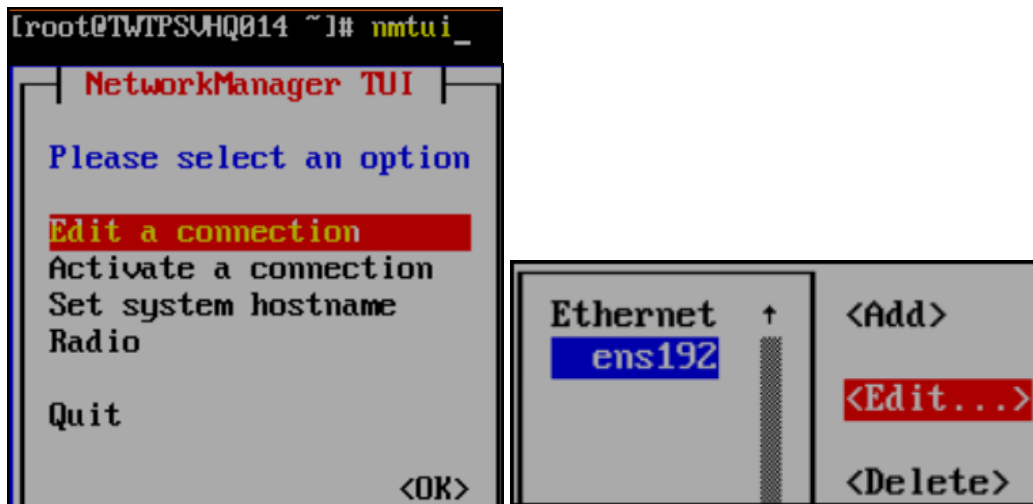
- a. Login as root
- b. Check current NIC's UUIDnm
nmcli con show

```
[root@TWTPSVHQ014 ~]# nmcli con show --active
NAME      UUID                                  TYPE      DEVICE
ens192    bae2836c-84cc-351d-be07-b8d92c3849b1 ethernet  ens192
lo        639b35ee-ad06-4196-b511-889df7f0b2d4 loopback   lo
```

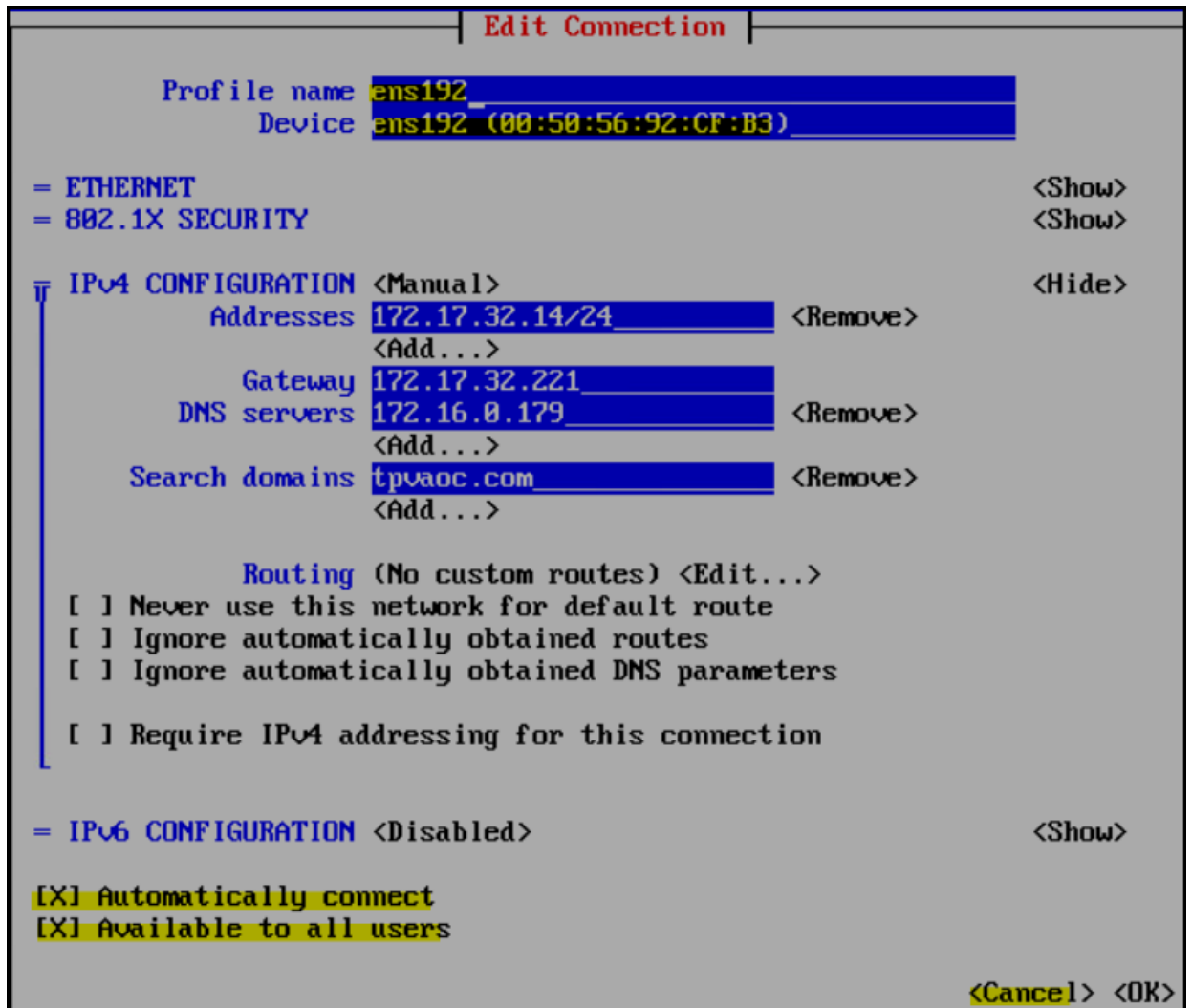
- c. Check current NIC's MAC
ip address

```
[root@TWTPSVHQ014 ~]# ip address
2: ens192: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group
    link/ether 00:50:56:92:cf:b3 brd ff:ff:ff:ff:ff:ff
    altname enp11s0
    inet 172.17.32.14/24 brd 172.17.32.255 scope global noprefixroute ens192
        valid_lft forever preferred_lft forever
```

- d. Check Current NIC configuration
nmtui => Edit a connection =>Edit



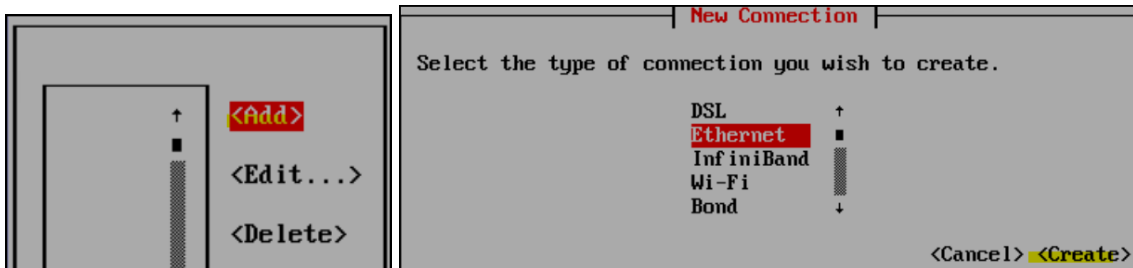
e. Screenshot for re-create NIC reference => Cancel



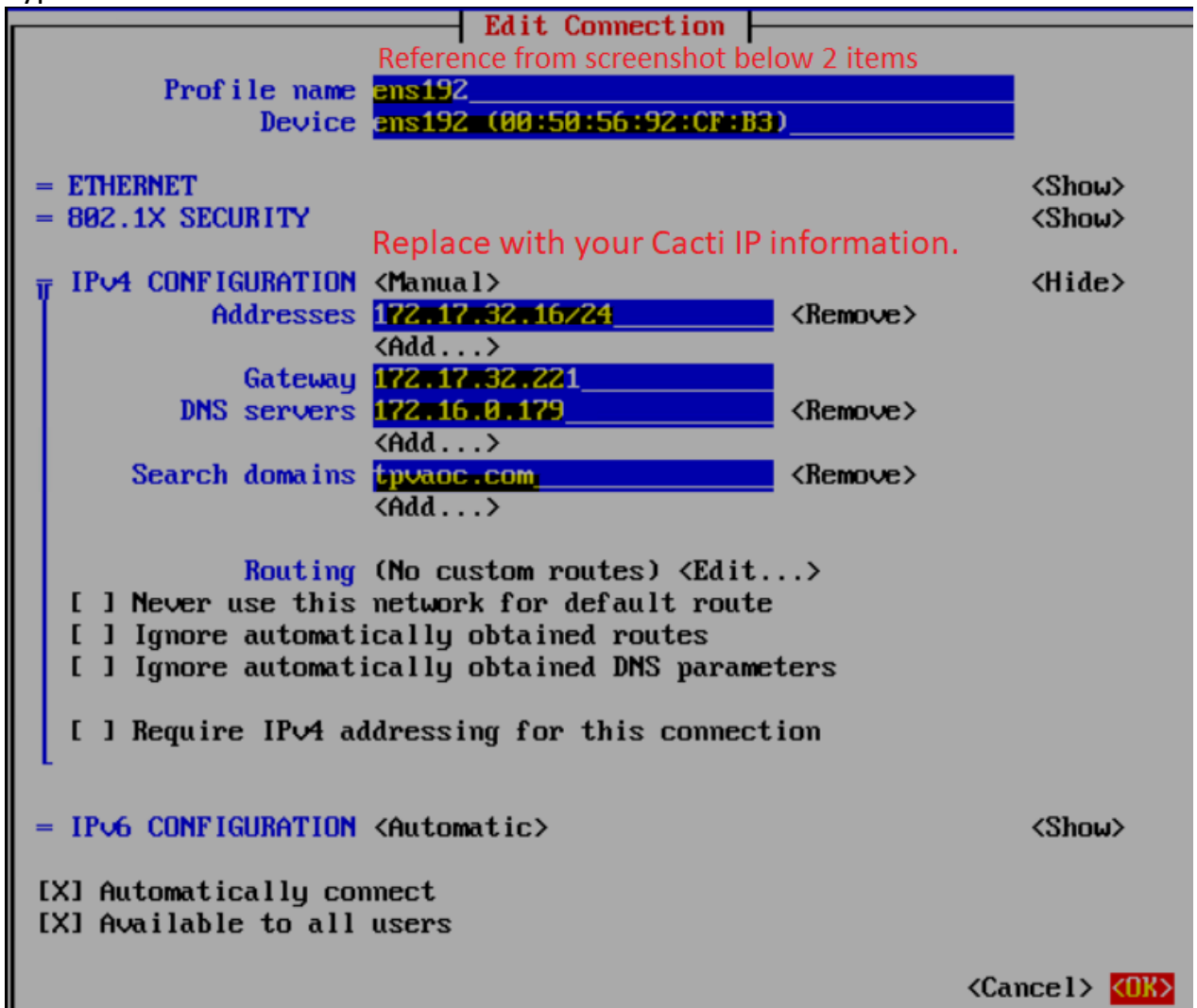
- f. Click ens192 => Delete =>Delete



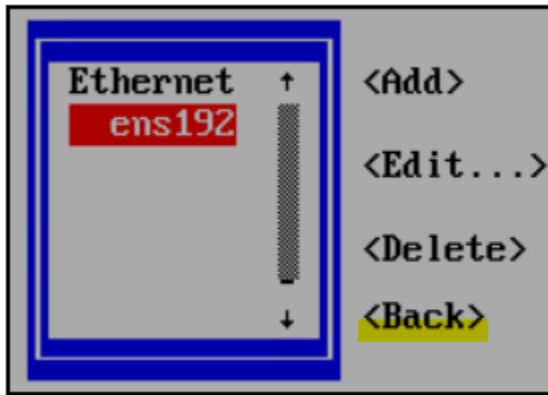
- g. Add => Ethernet => Create



- h. Type information => OK



- i. Click "back



- j. Click Set hostname => type your host name => Ok



- k. Done => Click Quit



- l. nano /etc/hosts

```
GNU nano 5.6.1 /etc/hosts Mod:
127.0.0.1 localhost localhost.localdomain localhost4
::1 localhost localhost.localdomain localhost6
172.17.32.16 TWTPSVHQ016 TWTPSVHQ016.tpvaoc.com
```

- m. Configure Time server to local DC

```
nano /etc/chrony.conf
#pool 2.pool.ntp.org iburst
pool 172.16.0.179 iburst
```

pool 172.16.0.178 iburst

```
GNU nano 5.6.1 /etc/chrony.conf
# Use public servers from the pool.ntp.org project.
# Please consider joining the pool (https://www.pool.ntp.org)
#pool 2.pool.ntp.org iburst
pool 172.16.0.179 iburst
pool 172.16.0.178 iburst
```

- n. Reboot now

```
[root@TWTPSVHQ014 ~]# reboot now
```

- o. Verify UUID is different with previous now.

nmcli con show

```
[root@TWTPSVHQ016 ~]# nmcli con show
```

NAME	UUID	TYPE	DEVICE
ens192	811ef187-497d-4da5-9956-bf508643df9c	ethernet	ens192

Previous is

```
[root@TWTPSVHQ014 ~]# nmcli con show --active
```

NAME	UUID	TYPE	DEVICE
ens192	bae2836c-84cc-351d-be07-b8d92c3849b1	ethernet	ens192
lo	639b35ee-ad06-4196-b511-889df7f0b2d4	loopback	lo

- p. Test Network connection is fine

Ping www.cisco.com

```
[root@TWTPSVHQ016 ~]# ping www.cisco.com
PING e2867.dscs.akamaiedge.net (23.208.81.43) 56(84) bytes of data.
64 bytes from a23-208-81-43.deploy.static.akamaitechnologies.com (23.208.81.43): icmp_seq=1 ttl=53 time=65.0 ms
64 bytes from a23-208-81-43.deploy.static.akamaitechnologies.com (23.208.81.43): icmp_seq=2 ttl=53 time=65.1 ms
64 bytes from a23-208-81-43.deploy.static.akamaitechnologies.com (23.208.81.43): icmp_seq=3 ttl=53 time=86.0 ms
64 bytes from a23-208-81-43.deploy.static.akamaitechnologies.com (23.208.81.43): icmp_seq=4 ttl=53 time=66.3 ms
```

6. Re-verify OS related.

- a. Check DNS is local DC

nano /etc/resolv.conf

```
GNU nano 5.6.1 /etc/resolv.conf
## Generated by NetworkManager
search tpvaoc.com
nameserver 172.16.0.179
```

- b. Change HostName

hostname

```
[root@TWTPSVHQ016 ~]# hostname
TWTPSVHQ016.tpvaoc.com
```

7. Setting time zone

- a. Review the current system date and time configuration:

```
[root@TWTPSVHQ016 ~]# timedatectl
          Local time: Thu 2024-01-18 00:08:14 CST
        Universal time: Wed 2024-01-17 16:08:14 UTC
              RTC time: Wed 2024-01-17 16:08:14
            Time zone: Asia/Taipei (CST, +0800)
System clock synchronized: yes
              NTP service: active
        RTC in local TZ: no
```

- b. List all system time zones. Press the q key to exit:

timedatectl list-timezones

```
[root@TWTPSVHQ016 ~]# timedatectl list-timezones
Africa/Abidjan
Africa/Accra
Africa/Addis_Ababa
Africa/Algiers
Africa/Asmara
```

- c. Search for your time zone, using underscores for compound names. For example, to find Pacific Daylight Time (PDT):

timedatectl list-timezones | grep 'Sao_Paulo'

```
[root@TWTPSVHQ016 ~]# timedatectl list-timezones | grep 'Sao_Paulo'
America/Sao_Paulo
```

- d. Set your time zone:

timedatectl set-timezone America/Sao_Paulo

```
[root@TWTPSVHQ016 ~]# timedatectl set-timezone America/Sao_Paulo
[root@TWTPSVHQ016 ~]#
```

- e. Verify new time zone is changed

timedatectl

```
[root@TWTPSVHQ016 ~]# timedatectl
          Local time: Wed 2024-01-17 13:23:35 -03
        Universal time: Wed 2024-01-17 16:23:35 UTC
              RTC time: Wed 2024-01-17 16:23:35
            Time zone: America/Sao_Paulo (-03, -0300)
System clock synchronized: yes
              NTP service: active
        RTC in local TZ: no
```

8. Configure Time Server to local DC

- a. nano /etc/chrony.conf


```
#pool 2.pool.ntp.org iburst
pool 172.16.0.179 iburst
pool 172.16.0.178 iburst
```

- b. systemctl restart chronyd

```
[root@TWTPSVHQ014 ~]# systemctl restart chronyd
[root@TWTPSVHQ014 ~]#
```

- ```
[root@TWTPSVHQ018 ~]# systemctl status chronyd
● chronyd.service - NTP client/server
 Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; preset: enabled)
 Active: active (running) since Thu 2024-02-15 11:19:59 CST; 10s ago
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com systemd[1]: Starting NTP client/server...
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com chronyd[3640]: chronyd version 4.3 starting (+CMDMON +NTI
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com chronyd[3640]: Frequency -8.853 +/- 1.482 ppm read from
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com chronyd[3640]: Using right/UTC timezone to obtain leap s
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com chronyd[3640]: Loaded seccomp filter (level 2)
 Feb 15 11:19:59 TWTPSVHQ018.tpvaoc.com systemd[1]: Started NTP client/server.
 Feb 15 11:20:03 TWTPSVHQ018.tpvaoc.com chronyd[3640]: Selected source 172.16.0.178 <=Your DC IP
 Feb 15 11:20:03 TWTPSVHQ018.tpvaoc.com chronyd[3640]: System clock TAI offset set to 37 seconds
```

- ```
[root@TWTPSVHQ018 ~]# reboot now
[root@TWTPSVHQ018 ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; preset: enabled)
   Active: active (running) since Thu 2024-02-15 11:40:48 CST; 1min 53s ago
 Feb 15 11:40:48 TWTPSVHQ018.tpvaoc.com systemd[1]: Started NTP client/server.
 Feb 15 11:40:50 TWTPSVHQ018.tpvaoc.com chronyd[907]: Source 172.16.0.178 offline
 Feb 15 11:40:50 TWTPSVHQ018.tpvaoc.com chronyd[907]: Source 172.16.0.179 online
 Feb 15 11:40:50 TWTPSVHQ018.tpvaoc.com chronyd[907]: Source 172.16.0.178 online
 Feb 15 11:40:50 TWTPSVHQ018.tpvaoc.com chronyd[907]: Source 172.16.0.179 online
 Feb 15 11:40:55 TWTPSVHQ018.tpvaoc.com chronyd[907]: Selected source 172.16.0.178
```

- 
- The screenshot shows a web browser with the address bar displaying `https://time.is`. The page content shows the text `TIME.IS` and a large digital clock display showing `11:25:47`. To the right of the browser is a terminal window with the prompt `root@TWTPSVHQ018:~`. The terminal shows the command `date` being executed, resulting in the output `Thu Feb 15 11:25:46 AM CST 2024`. A red arrow points from the terminal output to the clock display on the website.

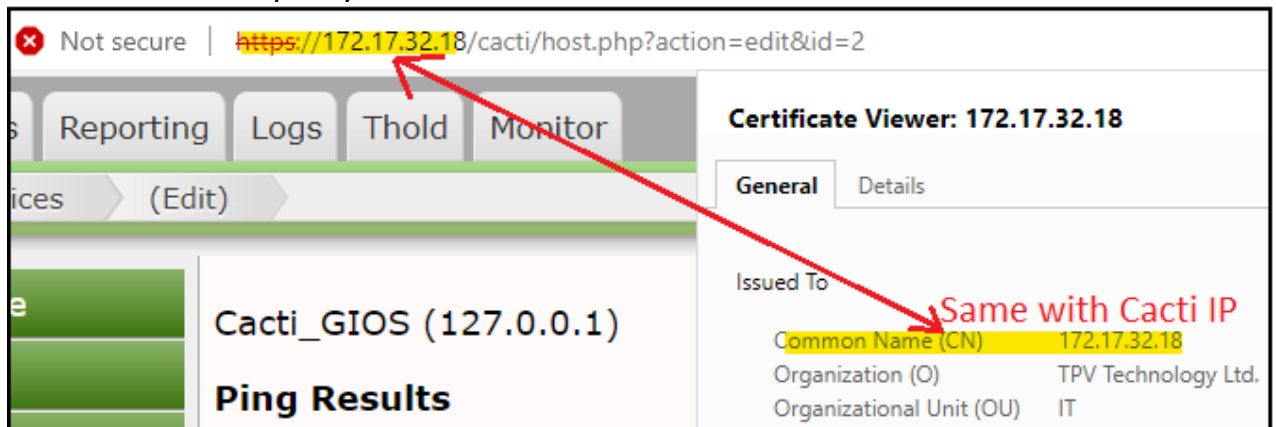
- [illegible]

- ```
[root@TWTPVHQ014 ~]# ls -lh /etc/ca
total 8.0K
-rw-r--r--. 1 root root 1.5K Jan 8 22:21 cacti.crt
-rw-----. 1 root root 1.7K Jan 8 22:19 cacti.key
```

- c. systemctl restart httpd

```
[root@TWTPSVHQ018 ~]# systemctl restart httpd
```

- d. Check CA IP is map to your new Cacti



## 10. Modify Cacti related

- a. nano /etc/php.ini

```
date.timezone = America/Sao_Paulo
```

```
GNU nano 5.6.1 /etc/php.ini
date.timezone = America/Sao_Paulo
```

- b. Change Mail/DNS on Web console.

Add your Cacti IP into "Exchange AP relay allow IP" list.

|                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div> Main Console Create Management Data Collection Templates Automation Presets Import/Export FlowView Configuration Settings Users User Groups User Domains Plugins Utilities Troubleshooting </div> <div>  </div> </div> | <div> General Paths Device Defaults Poller Data Visual Authentication Performance Spikes </div> <div> Mail/Reporting/DNS Alerting/Thold Monitor Weathermap Misc </div> <div> Cacti Settings (Mail/Reporting/DNS) </div> <div> URL Linking </div> <div> Server Base URL ? https://Your_Cacti_IP/cacti/ </div> <div> Emailing Options Send a Test Email </div> <div> Notify Primary Admin of Issues ? <input checked="" type="checkbox"/> </div> <div> Test Email ? YourName@tpv-tech.com </div> <div> Mail Services ? SMTP </div> <div> Ping Mail Server ? Yes </div> <div> From Email Address ? Cacti.YourSite@tpv-tech.com </div> <div> From Name ? Cacti.YourSite </div> <div> Word Wrap ? 120 </div> <div> SMTP Options </div> <div> SMTP Hostname ? Your_Exchange_IP </div> <div> SMTP Port ? 25 </div> <div> SMTP Username ? DELETE admin </div> <div> SMTP Password ? Delete password Delete password </div> <div> SMTP Security ? None </div> <div> SMTP Timeout ? 10 </div> |
|                                                                                                                                                                                                                                                                                                                     | <div> User Groups User Domains Plugins Utilities Troubleshooting </div> <div>  </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### c. Change Thresholds

|                     |                                                                                                                                                                                   |       |                 |        |             |                       |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------|--------|-------------|-----------------------|
| <b>Main Console</b> | General                                                                                                                                                                           | Paths | Device Defaults | Poller | Performance | <b>Alerting/Thold</b> |
| Create              | <b>Cacti Settings (Alerting/Thold)</b>                                                                                                                                            |       |                 |        |             |                       |
| Management          | <b>Emailing Options</b>                                                                                                                                                           |       |                 |        |             |                       |
| Configuration       | Send Emails with Urgent Priority ? <input type="checkbox"/>                                                                                                                       |       |                 |        |             |                       |
| <b>Settings</b>     | Send Alerts as Text ? <input type="checkbox"/>                                                                                                                                    |       |                 |        |             |                       |
| Users               | Send Email separately for each address <input type="checkbox"/>                                                                                                                   |       |                 |        |             |                       |
| User Groups         | From Email Address ? Cacti.Site_Name@tpv-tech.com                                                                                                                                 |       |                 |        |             |                       |
| User Domains        | From Name ? Cacti.Site_Name                                                                                                                                                       |       |                 |        |             |                       |
| Plugins             | <b>Device Notification Email Options</b>                                                                                                                                          |       |                 |        |             |                       |
| Utilities           | Global Notification Email ? YourMailbox@tpv-tech.com                                                                                                                              |       |                 |        |             |                       |
|                     | Down Subject ? Device Error: <DESCRIPTION> (<HOSTNAME>) is DOWN                                                                                                                   |       |                 |        |             |                       |
|                     | Down Message ? System Error : <DESCRIPTION> (<HOSTNAME>) is <DOWN/UP><br><br><br>Site: <SITE><br>Location: <LOCATION><br>Reason: <MESSAGE><br>Average system response: <AVG_TIME> |       |                 |        |             |                       |

### d. Modify Data Collectors

|                        |                                   |                         |
|------------------------|-----------------------------------|-------------------------|
| <b>Main Console</b>    | <b>Site [edit: Main Poller]</b>   |                         |
| Create                 | <b>Data Collector Information</b> |                         |
| Management             | Name ?                            | Main Poller             |
| <b>Data Collection</b> | Data Collector Hostname ?         | YourCactiName.tpaoc.com |
| <b>Data Collectors</b> | TimeZone ? Your TimeZ one         | Asia/Taipei             |
| Data Queries           |                                   |                         |