[How to use]

1. Place the *VMwareCertSetup_MTY_v1.4.exe* on the jump server
2. Double click on *VMwareCertSetup_MTY_v1.4.exe*
3. Select an option from the list based on your need

```
========================================
VMware Cert Test Environment Setup Tool
                v1.4
========================================

Please select an option:
1) Config SUT
2) Config VIVa
3) Config Agent
4) Config vCenter
5) Add PCI Passthrough VM Options (NVIDIA GPU)
6) Deploy/Export OVF
7) Copy agent log
8) Exit


Enter your choice (1-8):
```

Config SUT

```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Installed VMware ESXi OS on SUT
    2. Enabled SSH access on SUT
    3. Obtained the local DHCP IP address (192.168.x.x) of SUT


Enter SUT IP address:
```
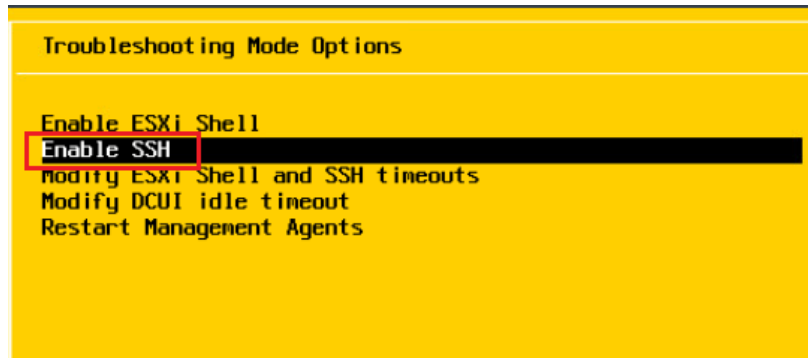
This option does the following:

1. Enable ESXi shell
2. Display system information, including security and network
3. Set up a static network (IP/Netmask/Gateway) based on the user's input
4. Set up the DNS and DNS hostname based on the user's input

   The default hostname will use the last digit of your IP as the trailing character. For example, if you set IP to 192.168.1.**10**, then the hostname will be set to esxi**10**. This is designed for multiple users.

5. Turn off the network firewall

```
Troubleshooting Mode Options


Enable ESXi Shell
Enable SSH
Modify ESXi Shell and SSH timeouts
Modify DCUI idle timeout
Restart Management Agents
```

Config VIVa


```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Downloaded the 'viva-xxxx.ova' from Broadcom TAP website
    2. Deployed the 'viva-xxxx.ova' on TC
    3. Obtained the DHCP IP address of VIVa from TC


Enter VIVa local IP address (192.168.x.x): _
```

This option does the following:

1. Set hostname to "photon-viva"

2. Add input IP and "cert-viva-local" string to /etc/hosts file

3. Verify Internet connectivity

4. Update VIVa service

5. Configure /etc/systemd/network/99-dhcp-en.network file

Config Agent

```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Downloaded the Agent image (.ova) and Runlist (.json) from VIVa
    2. Placed the runlist.json in the current directory
    3. Deployed the agent image on TC
    4. Obtained the DHCP IP address of Agent from TC

Enter Agent local IP address (192.168.x.x):
```

This option does the following:

1. Upload the runlist.json to the agent

2. Verify Internet connectivity

3. Execute AgentLauncher and pull docker image

Config vCenter

```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Downloaded the VCSA image (.iso) and placed it in the current directory
    2. Created a DNS hostname and IP for vCenter VM on DHCP server (ex: vc50 -> 192.168.4.50)


Enter TC IP address <press Enter to accept default 10.240.226.13>:
Enter TC username <press Enter to accept default root>:
Enter TC password <press Enter to accept default Passw0rd!>:
Enter TC datastore <press Enter to accept default datastore1>:

Connected to ESXi host successfully

Enter vCenter VM name: VC-TEST
Enter vCenter IP address: 192.168.1.99
Enter vCenter system name <press Enter to accept vc99.mty.com>:
Enter vCenter prefix <press Enter to accept default 24>:
Enter vCenter gateway <press Enter to accept default 192.168.1.1>:
Enter vCenter DNS server <press Enter to accept default 192.168.1.1>: 192.168.1.10
Enter vCenter NTP server <press Enter to accept default pool.ntp.org>: 192.168.1.10
Enter vCenter root password <press Enter to accept default Passw0rd!>:
Enter vCenter SSO password <press Enter to accept default Lenovo-123>:

Available networks on ESXi host:
  1) VLAN20
  2) VM Network
  3) vnic10
  4) vnic11
  5) vnic12
  6) vnic13
  7) vnic14
  8) vnic15
  9) vnic16
  10) vnic17
  11) vnic3
  12) vnic4
  13) vnic5
  14) vnic6
  15) vnic9
Enter vCenter deployment network (1-15): 3


Mounting VCSA ISO...
```

This option does the following:

1. Create a deployment template based on the user's input
   a. The default hostname will use the last digit of your IP as the trailing character. For example, if you set IP to 192.168.1.**50,** then the hostname will be set to vc**50**. This is designed for multiple users.
   b. When prompted to enter **vCenter deployment network,** be careful to enter the network name which is tied with your local network **192.168.x.x**.
   c. When prompted to enter **vCenter NTP server,** be careful to enter the NTP server which matches your actual environment.
2. Mount the VCSA ISO on the jump server
3. Deploy vCenter on the TC

4. Unmount the VCSA ISO from the jump server

[Note]

The vCenter deployment may take a long time to complete. Do NOT interrupt the process when the command stays at '**VCSA Deployment is still running**'. A successful deployment should look like below:

```
Successfully completed VCSA deployment.  VCSA Deployment Start Time:
2025-05-15T08:13:44.472Z VCSA Deployment End Time: 2025-05-15T09:22:08.848Z

[SUCCEEDED] Successfully executed Task 'MonitorDeploymentTask: Monitoring
Deployment' in TaskFlow 'vcsa_deployment' at 09:22:34
Monitoring VCSA Deploy task completed
== [START] Start executing Task: Join active domain if necessary at 09:22:39 ==
Domain join task not applicable, skipping task

[SUCCEEDED] Successfully executed Task 'Running deployment: Domain Join' in
TaskFlow 'vcsa_deployment' at 09:22:40
[START] Start executing Task: Provide the login information about new
appliance. at 09:22:44
Appliance Name: VC-TEST
System Name: vc99.mty.com
System IP: 192.168.1.99
Log in as: Administrator@vsphere.local

[SUCCEEDED] Successfully executed Task 'ApplianceLoginSummaryTask: Provide
appliance login information.' in TaskFlow 'vcsa_deployment' at 09:22:45
==================================== 09:22:55 ====================================
Result and Log File Information...
WorkFlow log directory:
C:\Users\ADMINI~1\AppData\Local\Temp\vcsaCliInstaller-2025-05-15-07-54-mgunisrm\workflow_1747295666971
vCenter deployment successful!


Unmounting ISO...


Attached        : False
BlockSize       : 0
DevicePath      :
FileSize        : 12929964032
ImagePath       : C:\Users\Administrator\Desktop\VMDK_ESXi80\VMware-VCSA-all-9.0.0.0.24649007.iso
LogicalSectorSize : 2048
Number          :
Size            : 12929964032
StorageType     : 1
PSComputerName  :




*****************************************
All configurations have been completed!
Ensure the jump server switched to the vCenter network (192.168.x.x), then open your browser to visit the following URLs:

   - vCenter Server Management UI: https://vc99.mty.com:5480

   - vCenter Client UI: https://vc99.mty.com

Login with user name: administrator@vsphere.local and password: Lenovo-123
```

Add PCI Passthrough VM Options (NVIDIA GPU)

```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Installed NVIDIA GPU on the target VM
    2. Obtained the IP address of the target VM
_____

Enter Host IP address: _
```

(*For GPU Cert only)

This option does the following:

1. Search for NVIDIA GPU and enable PCI passthrough function

2. Add the PCI device GPU to the targeted VM

3. Add VM options below to the target VM

    - pciHole.start='2048'

    - pciPassthru.use64bitMMIO='TRUE'

    - pciPassthru.64bitMMIOSizeGB='256'

4. Lock memory reservation

Deploy/Export OVF

```
<Prerequisites>
To move forward, make sure you've already completed the following:
    1. Installed 'VMware OVF Tool' on this machine (jump server)
    2. Obtained the IP address of the target ESXi host
    3. Placed the OVF (.ova) file in the current directory (for Deploy use)
_____


Verifying if VMware OVF tool is installed...
VMware OVF Tool has been installed


1) Deploy OVF to ESXi host
2) Export OVF from ESXi host
3) Delete VM from ESXi host

Enter your choice (1-3): _
```

This option does the following:

1. Deploy the targeted .ova file on the ESXi host

   You can also use this option to deploy **VIVa** or **Agent** as long as the .ova file is available and present in the same directory as the tool.

2. Export a .ova file from the targeted ESXi host
3. Delete a VM from the targeted ESXi host
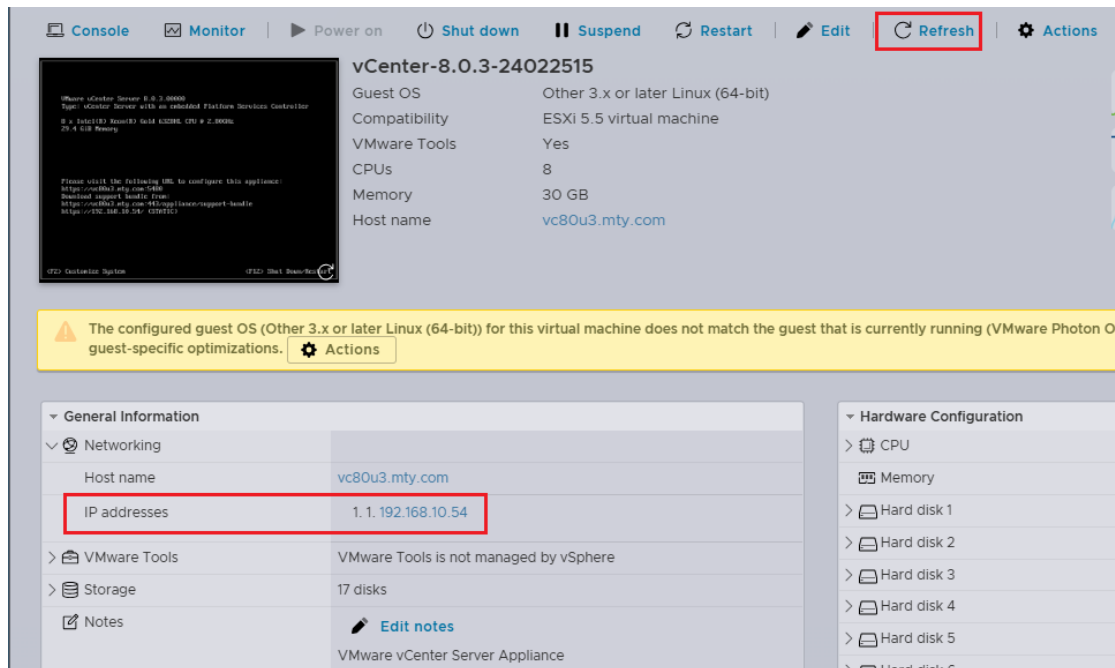
Copy agent log

This option does the following:

1. Copy the latest test result from Agent to the current directory

[Q & A]

Q1: **How can I obtain the VM IP without accessing it?**

A1: On your ESXi host, ensure the VM is powered on. Click on the virtual machine and **refresh** the page. Look for the IP addresses under **Networking**

Q2: **Can I use the Deploy/Export OVF function to deploy the current NFS VM on another jump server?**

A2: Sure, you can. Just export the NFS VM to the .ova file. Transfer the .ova file to the new jump server and deploy it using the same tool. After the deployment is complete, you may need to enter the OS to modify the network IP settings to fit your new environment.

Q3: **What can I do if I find a bug or have some good ideas?**

A3: Feedback is welcome! Please send an email to Mike Lu klu7@lenovo.com