

# Install Virtual Cisco Unified SIP Proxy (vCUSP) on a VMWare ESXi host

## Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Configuration](#)

[Configure Subinterfaces on vCUSP using Command Line Interface \(CLI\)](#)

## Introduction

This document explains the installation process of Virtual vCUSP on an ESXi host.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified SIP Proxy (CUSP)
- Unified Computing System (UCS) server

Items and actions required before you apply the steps described in this document

- Cisco Unified SIP Proxy (CUSP) OVA file.
- Unified Computing System (UCS) server
- VMware ESXi (starting with version 5.1) should be installed on the UCS server.
- Network configuration should be done on the ESXi host before deploying the CUSP OVA.
- Physical host with the following hardware requirements:

vCPU = 2

Memory = 4GB

Hard drive = 80GB

Network: IP address of your VLAN

- VMware ESXi platform support : Minimum supported version is 5.1

## Components Used

The information in this document is based on these software versions:

- UCSC-C240-M4S server.
- VMware ESXi version deployed :- ESXi 6.0U2
- CUSP version :- 9.0.1

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## About the ESXi networking

This document uses networking configuration by utilizing the standard switch on the ESXi host. You can also use a Distributed Virtual Switch (DVS) as well.

A network standard switch, virtual switch (vSwitch), is responsible for connecting virtual machines to a virtual network. A vSwitch works similar to a physical switch -- with some limitations -- and controls how virtual machines communicate with one another.

This is the same standard switch configuration snapshot of the ESXi host .

The screenshot displays the vSphere Client interface for an ESXi host. The left sidebar shows the navigation tree with 'Networking' selected. The main pane shows the configuration for four standard switches:

- Standard Switch: vswitch-lx-inband-mgmt**:
  - Virtual Machine Port Group: Storage Controller Replication Network
  - Virtual Machine Port Group: Storage Controller Management Network
  - 1 virtual machine(s) | VLAN ID: 952: stCtIVM-FCH2101V05H
  - VMkernel Port: Management Network (vmk0: 10.197.252.84 | VLAN ID: 952, fe80::250:56ff:fe5e:66fb)
  - Physical Adapters: vmnic0 (10000, Full), vmnic1 (stand by)
- Standard Switch: vswitch-lx-vm-network**:
  - No associated port groups
  - Physical Adapters: vmnic4 (10000, Full), vmnic5 (10000, Full)
- Standard Switch: vmotion**:
  - No associated port groups
  - Physical Adapters: vmnic6 (10000, Full), vmnic7 (stand by)
- Standard Switch: vswitch-lx-storage-data**:
  - Virtual Machine Port Group: Storage Controller Data Network (VLAN ID: 955)
  - Physical Adapters: vmnic2 (stand by), vmnic3 (10000, Full)

The bottom of the interface shows a 'Recent Tasks' table and a status bar indicating 'Evaluation Mode: 59 days remaining'.

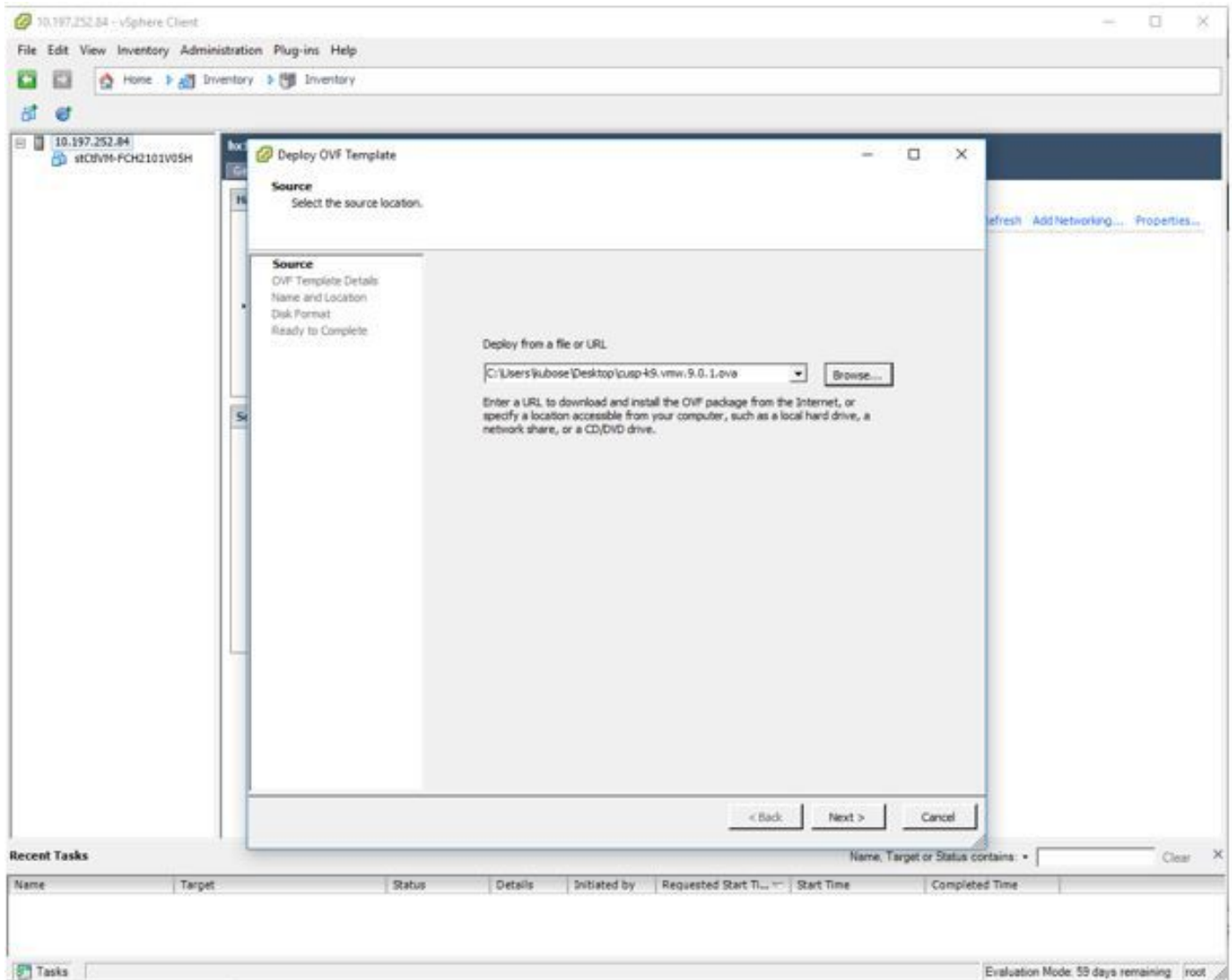
Name	Target	Status	Details	Initiated by	Requested Start Time	Start Time	Completed Time

# Configuration

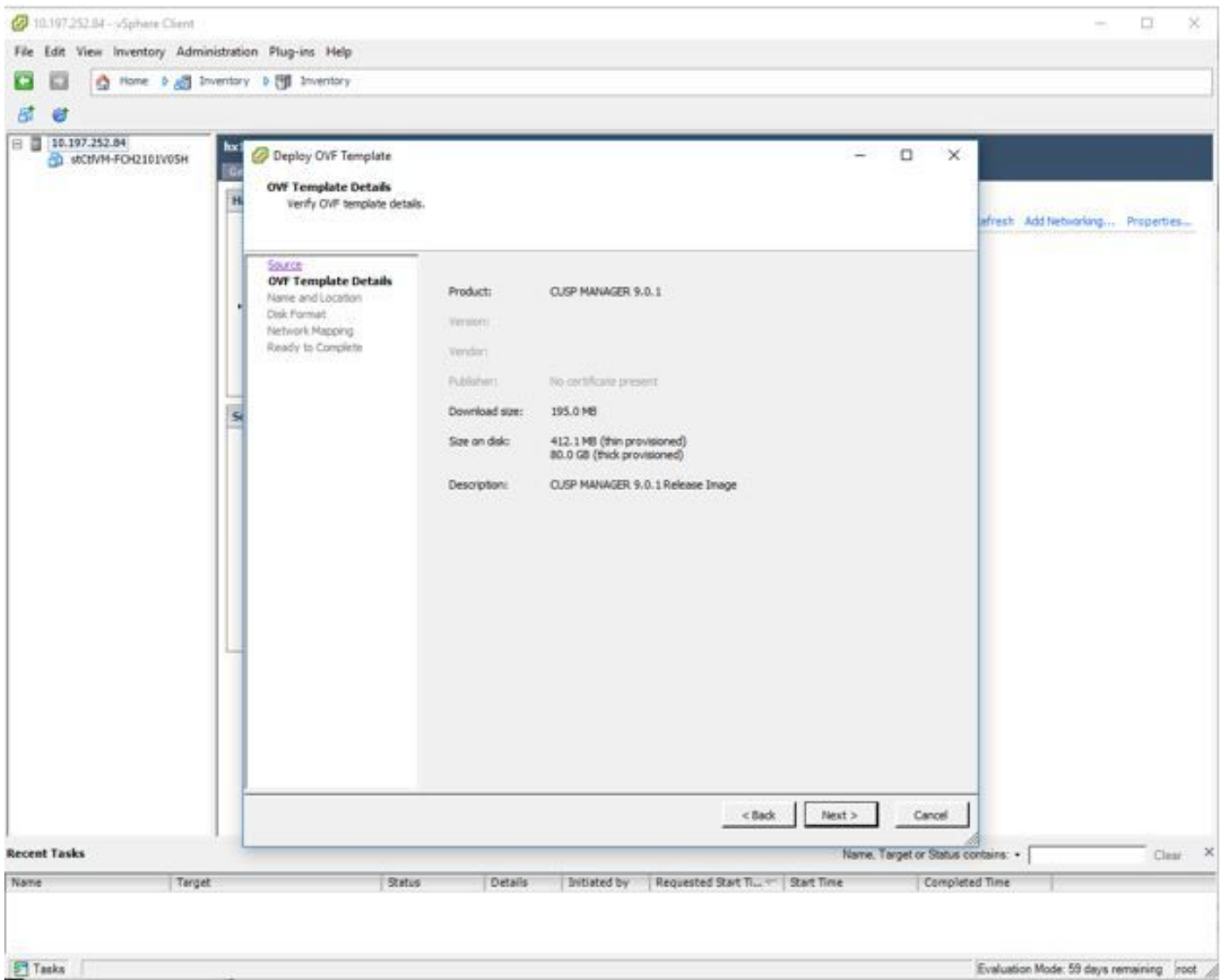
## Steps to deploy the CUSP server

Step 1. Deploy the CUSP OVA on the ESXi host :

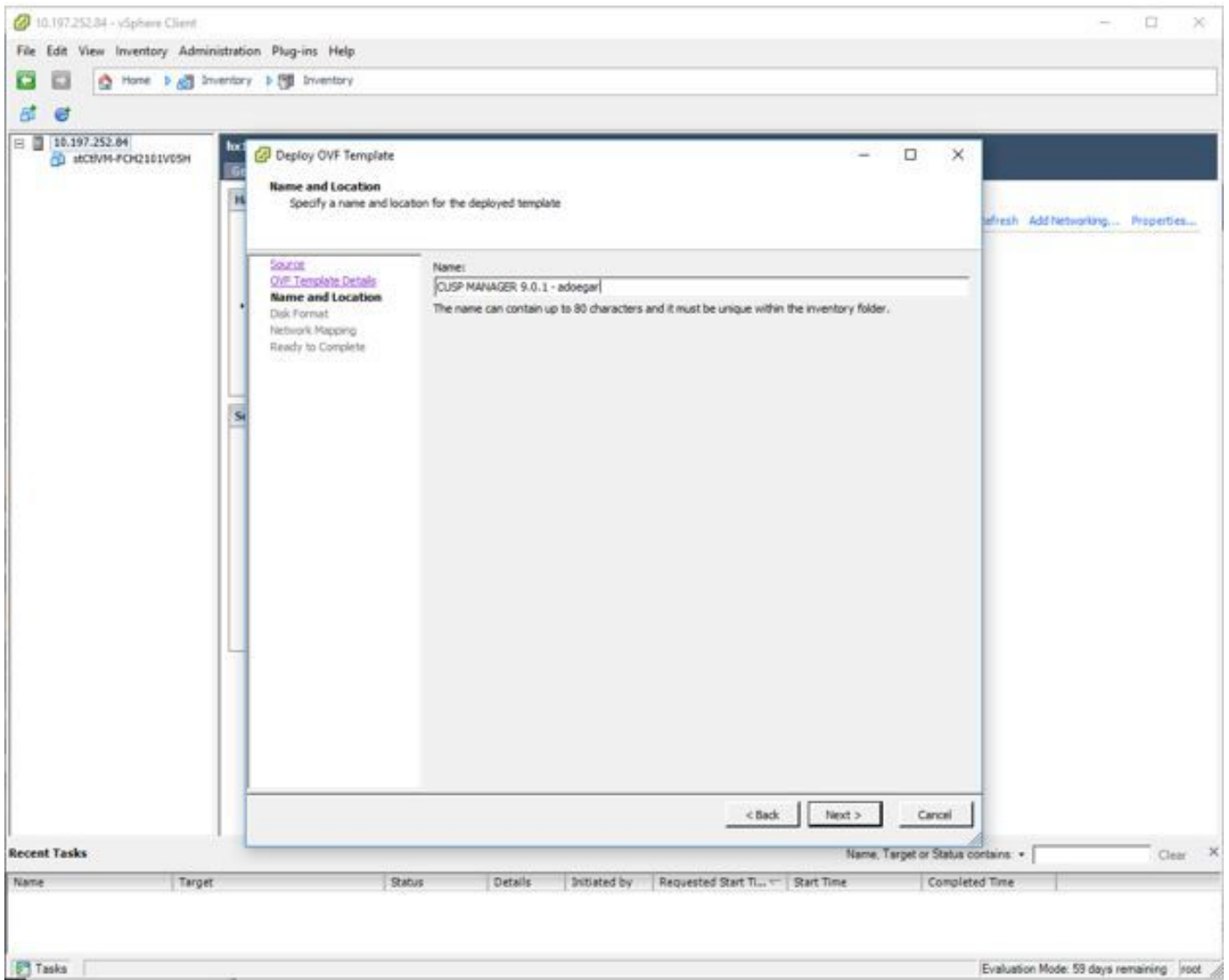
Click on **Browse** option and upload the CUSP OVA file from your local machine.



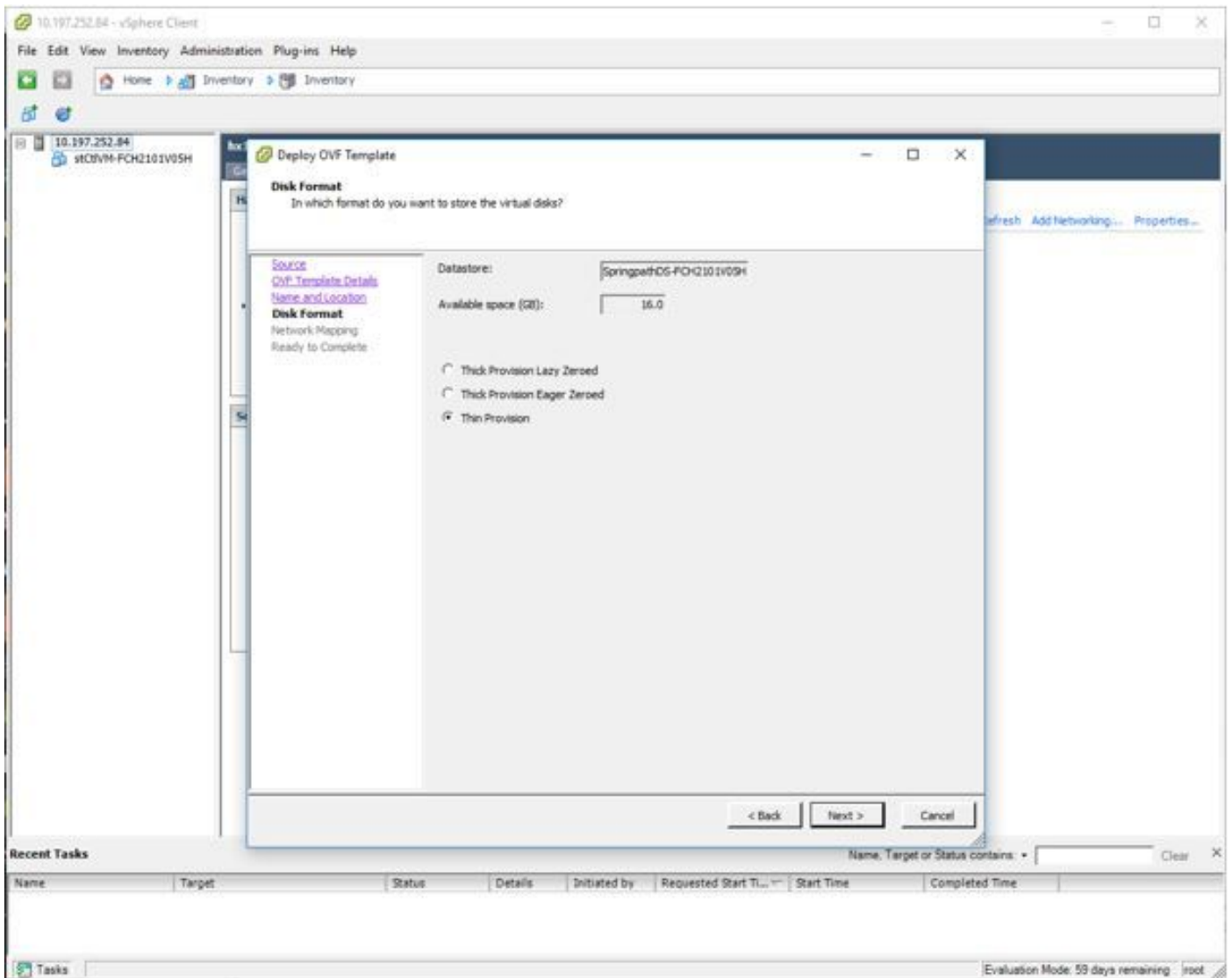
Step 2. Confirm OVF template details.



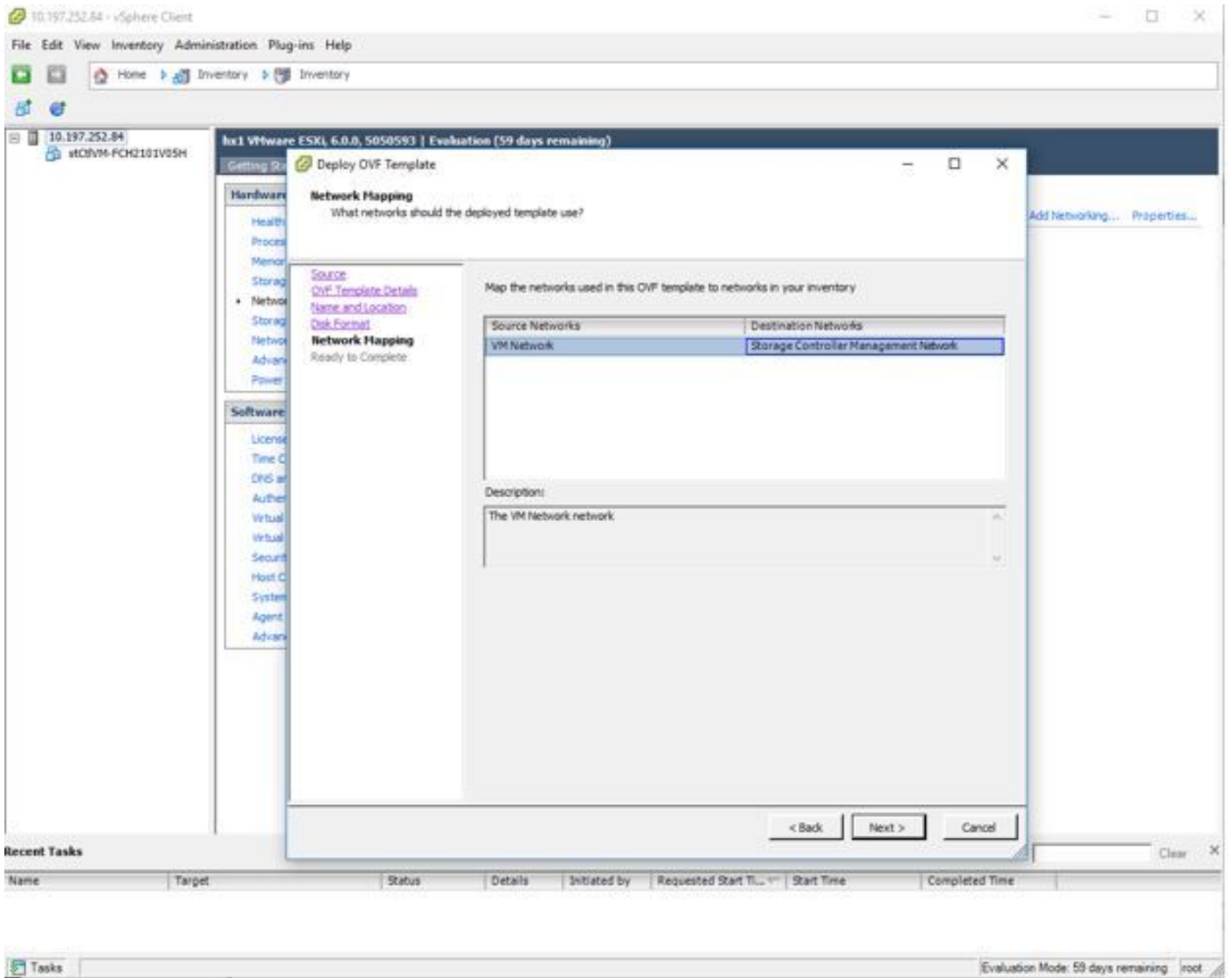
Step 3. Specify a name for deployment and for easy identification of your device.



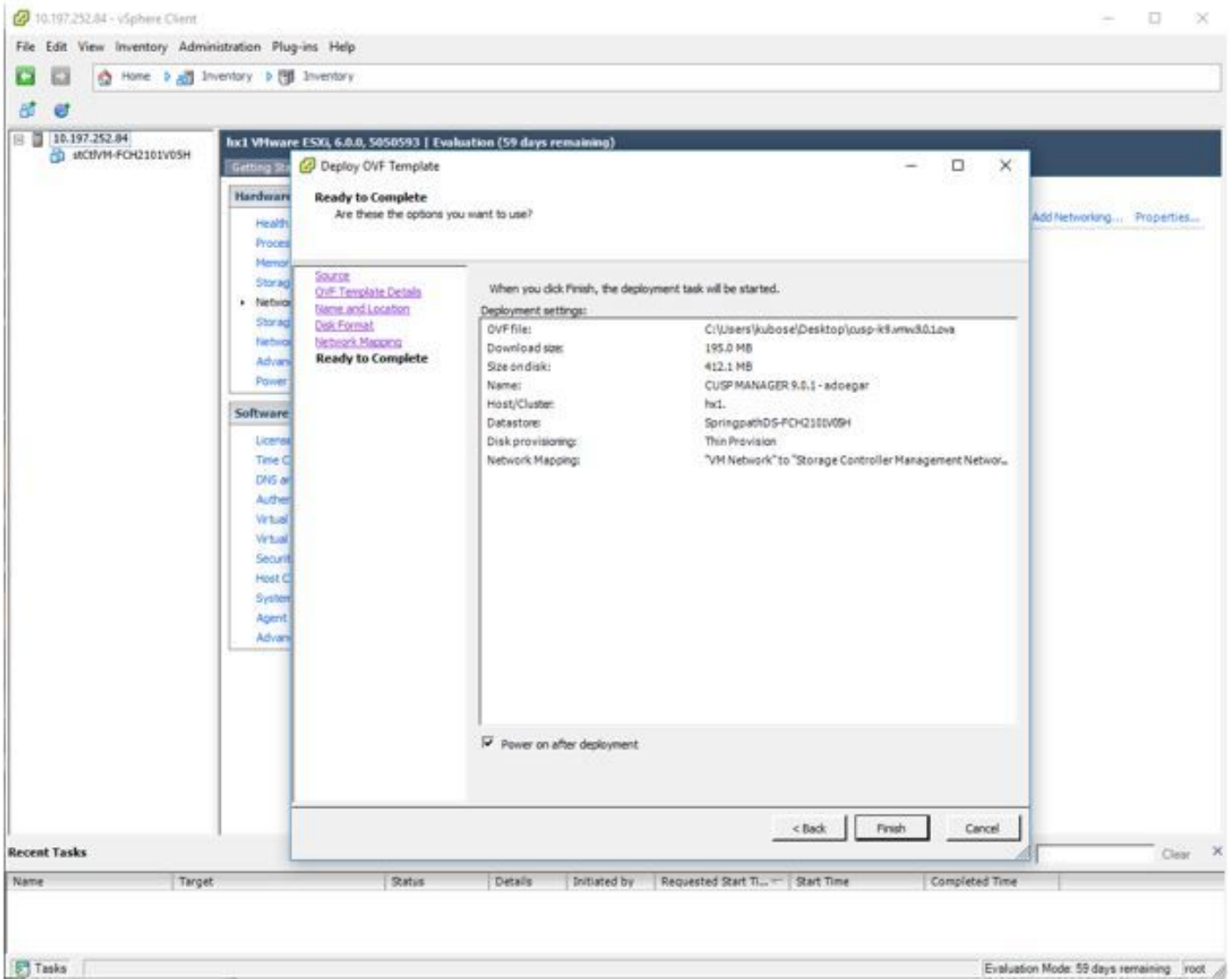
Step 4. Select disk format.



Step 5. Select the VM network in which you want to deploy the device.

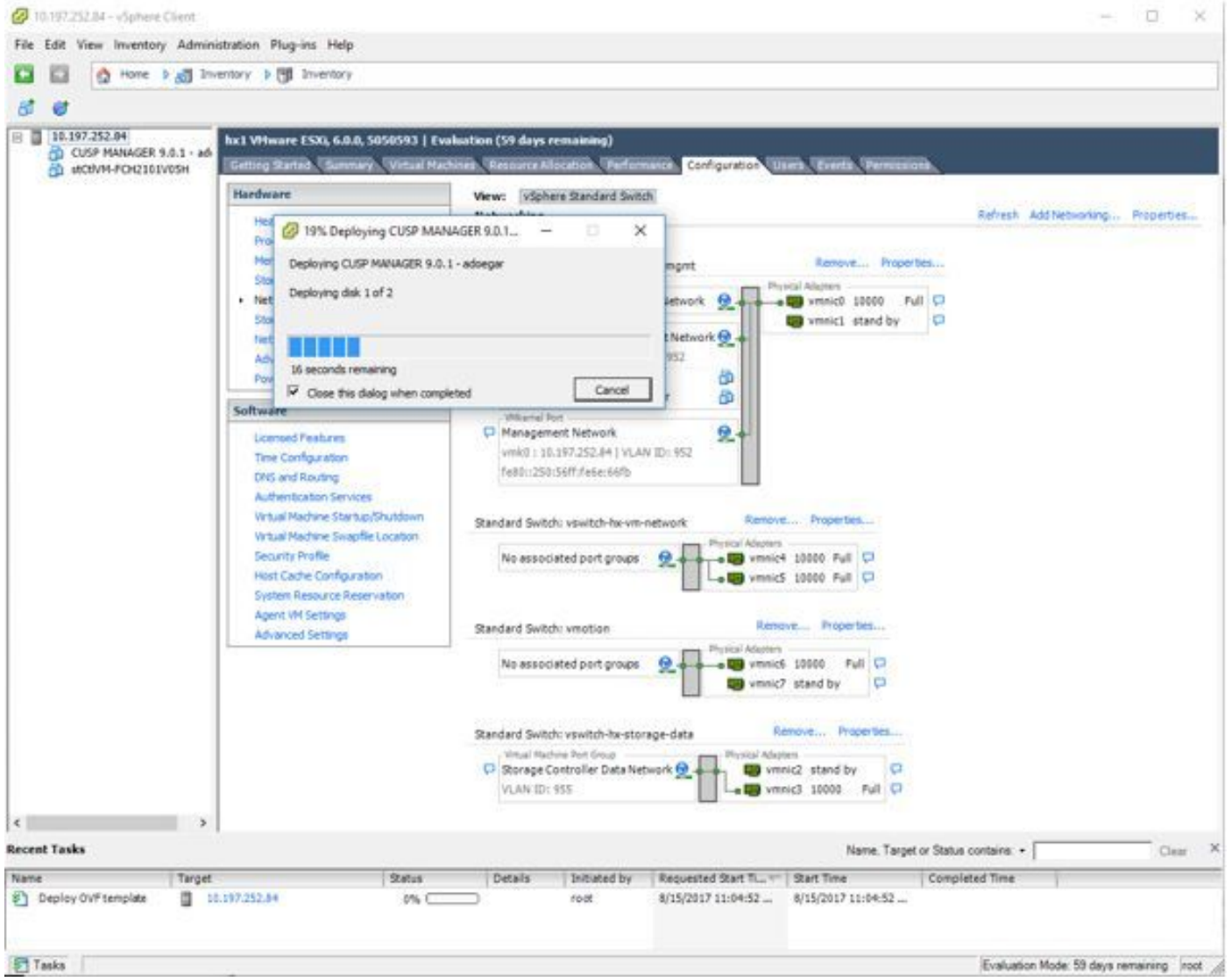


Step 6. Confirm the details and click on Finish option to deploy the VM.

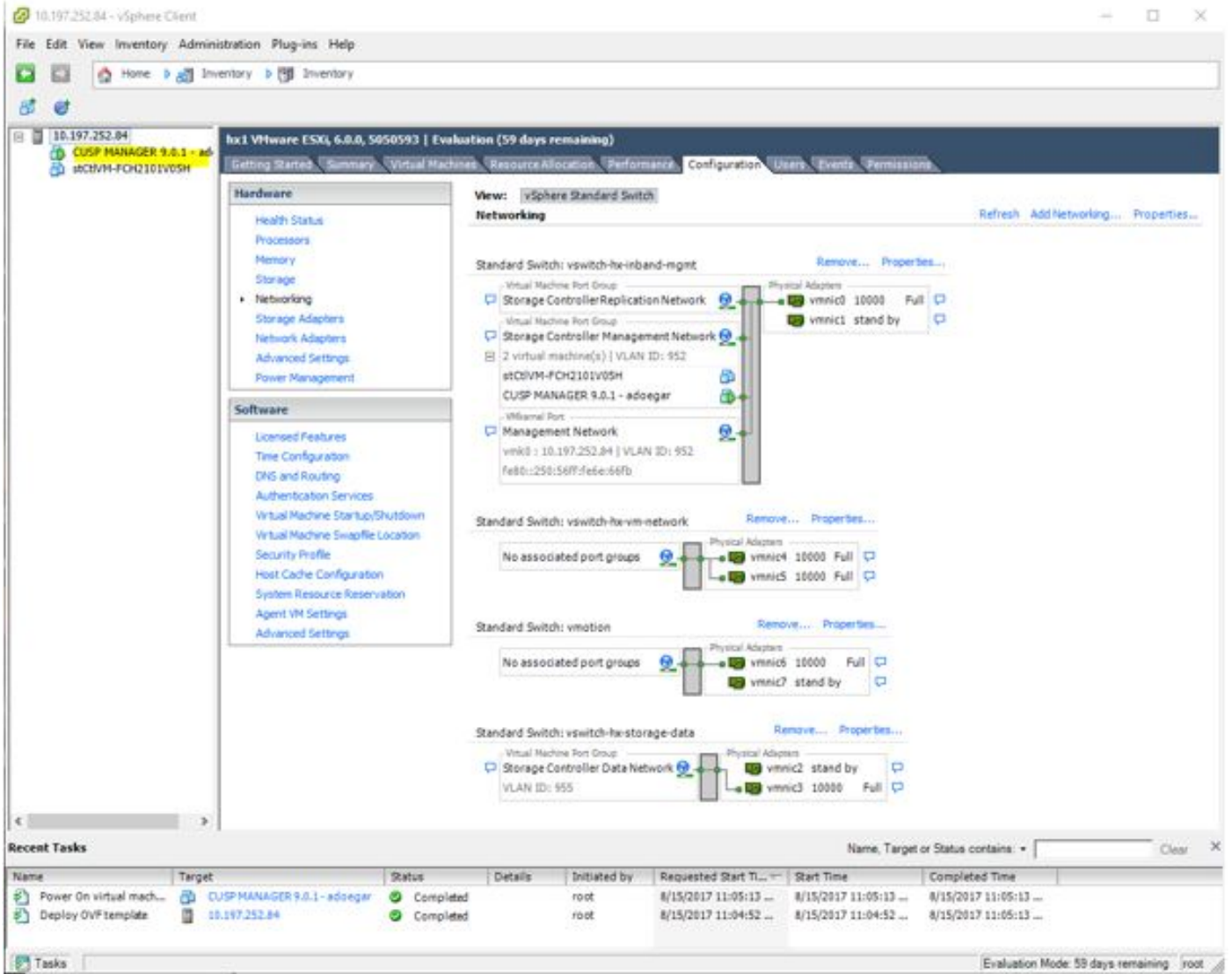


step 7. VM installation in progress.

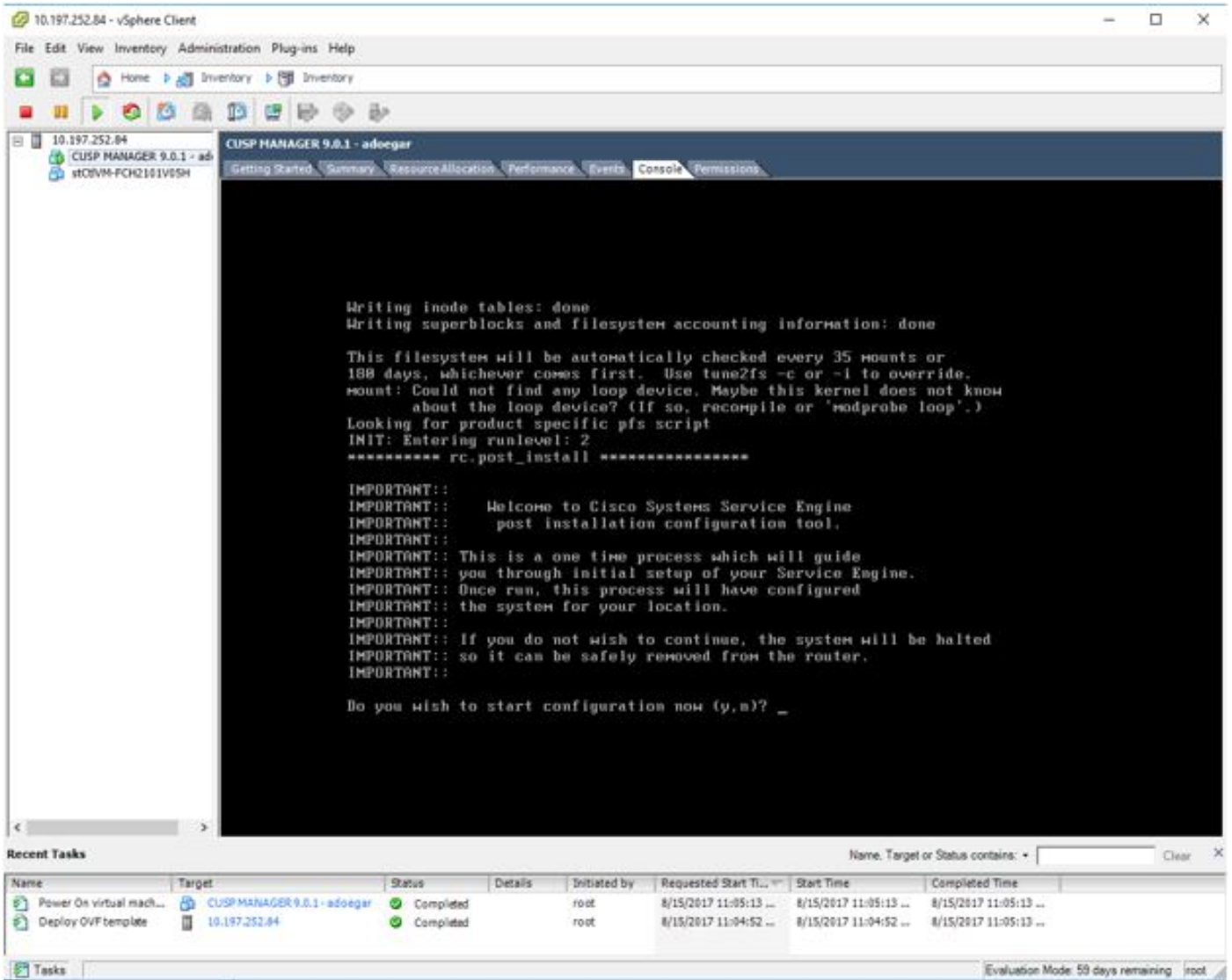




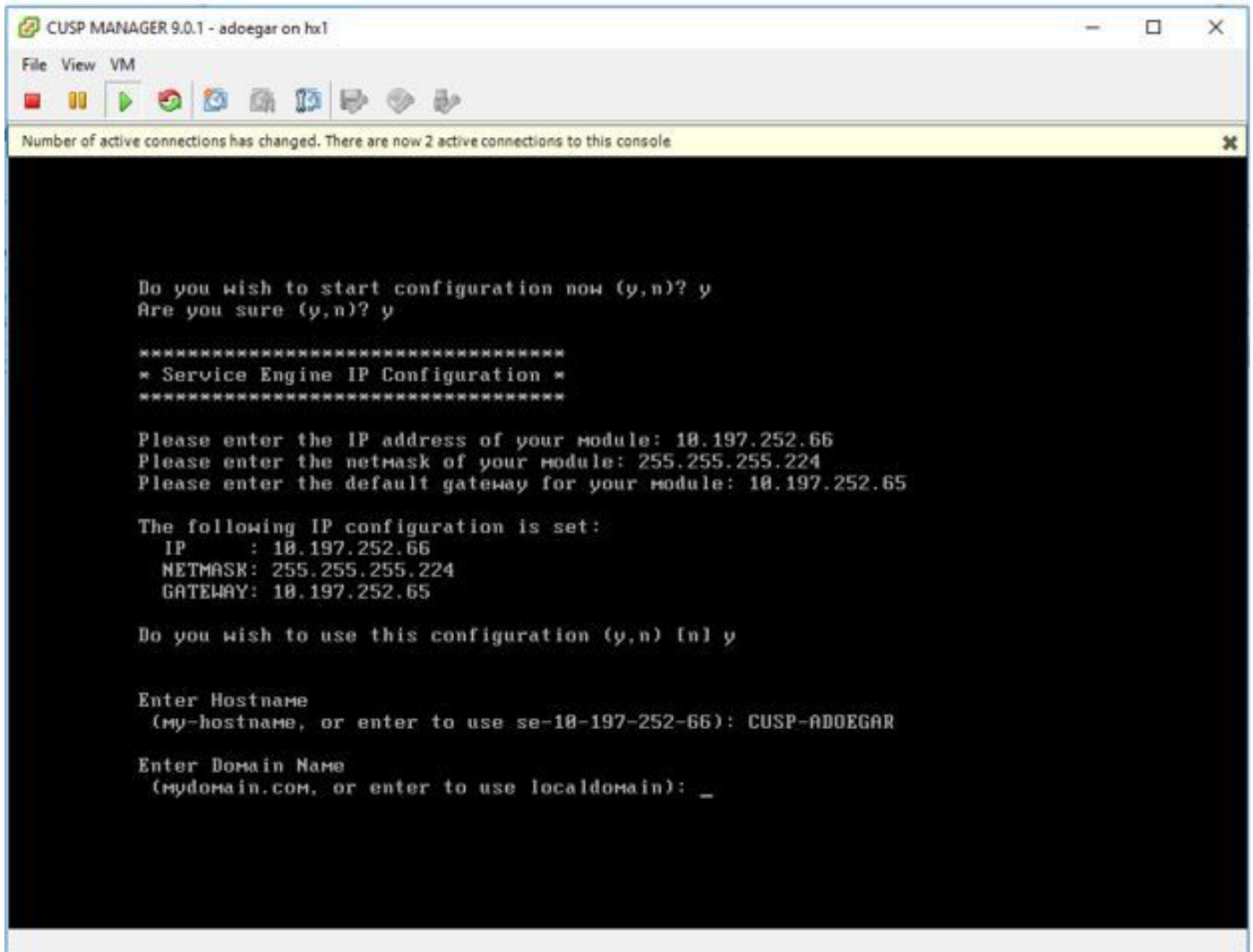
Step 8. CUPS VM deployment completed. Highlighted is the VM.



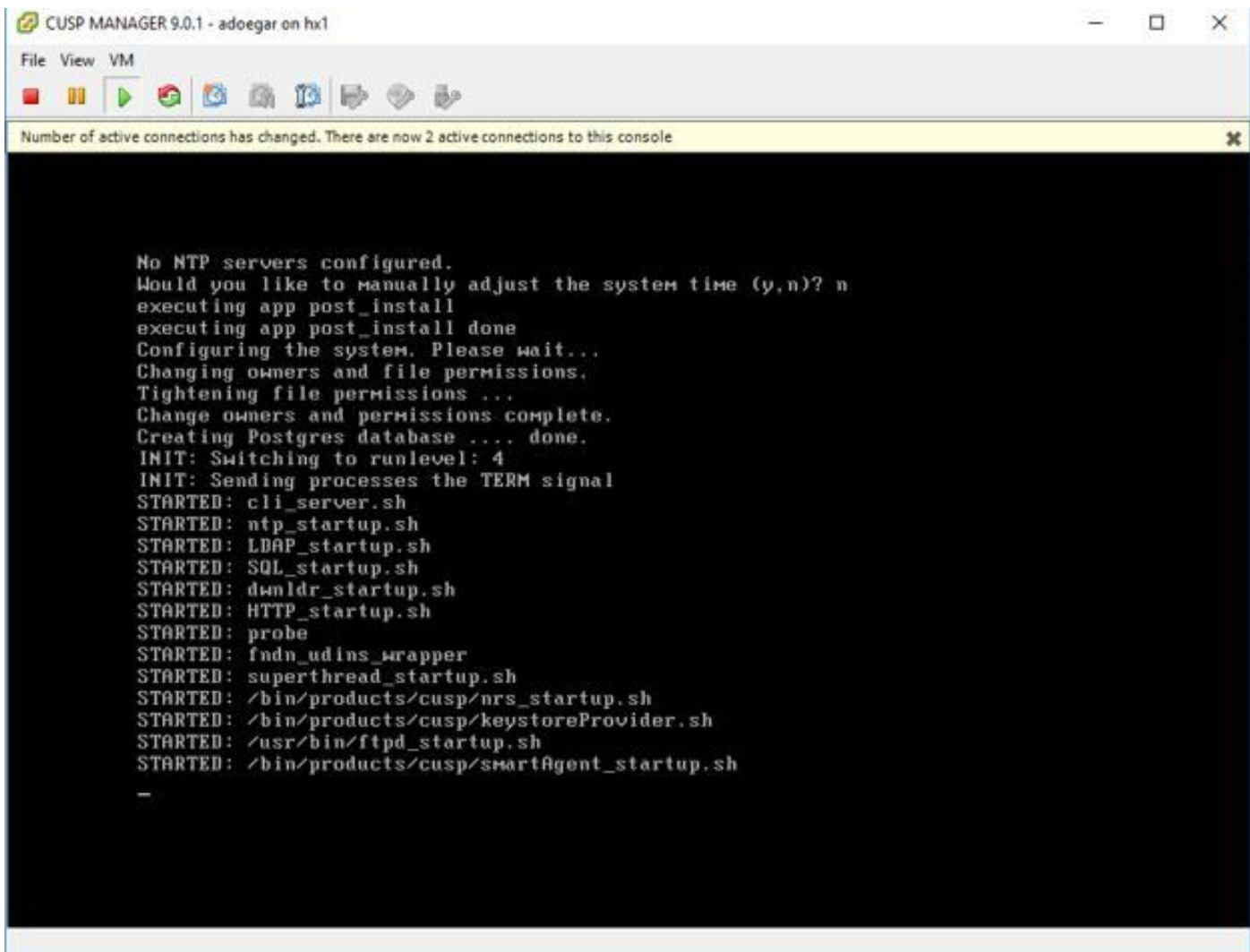
Step 9. Select the CUSP VM and click on the Console tab.



Step 10. Enter the necessary details in order to get connectivity like IP address, subnetmask, default gateway, DNS address, NTP address username/password.



Step 11. Once the configuration is saved the installation of the shell scripts starts.



The screenshot shows a terminal window titled "CUSP MANAGER 9.0.1 - adoegar on hx1". The window has a menu bar with "File", "View", and "VM". Below the menu bar is a toolbar with various icons. A yellow status bar at the top of the terminal area reads "Number of active connections has changed. There are now 2 active connections to this console". The main terminal area displays the following text:

```
No NTP servers configured.  
Would you like to manually adjust the system time (y,n)? n  
executing app post_install  
executing app post_install done  
Configuring the system. Please wait...  
Changing owners and file permissions.  
Tightening file permissions ...  
Change owners and permissions complete.  
Creating Postgres database ... done.  
INIT: Switching to runlevel: 4  
INIT: Sending processes the TERM signal  
STARTED: cli_server.sh  
STARTED: ntp_startup.sh  
STARTED: LDAP_startup.sh  
STARTED: SQL_startup.sh  
STARTED: dnmldr_startup.sh  
STARTED: HTTP_startup.sh  
STARTED: probe  
STARTED: fndn_udins_wrapper  
STARTED: superthread_startup.sh  
STARTED: /bin/products/cusp/nrs_startup.sh  
STARTED: /bin/products/cusp/keystoreProvider.sh  
STARTED: /usr/bin/ftpd_startup.sh  
STARTED: /bin/products/cusp/smartAgent_startup.sh  
-
```

Step 12. Ready to use the CUSP VM.

The screenshot shows a terminal window titled "CUSP MANAGER 9.0.1 - adoeGAR on hx1". The terminal output is as follows:

```
STARTED: /usr/bin/ftpd_startup.sh
STARTED: /bin/products/cusp/smartAgent_startup.sh

Waiting 19 ...

IMPORTANT::
IMPORTANT::      Administrator Account Creation
IMPORTANT::
IMPORTANT:: Create an administrator account.
IMPORTANT:: With this account, you can log in to the
IMPORTANT:: Cisco Unified SIP Proxy
IMPORTANT:: GUI and run the initialization wizard.
IMPORTANT::

Enter administrator user ID:
  (user ID): admin
Enter password for admin:
  (password):
Confirm password for admin by reentering it:
  (password):


SYSTEM ONLINE
CUSP-ADOEGAR# _
```

Step 13. Type the IP address on the web browser and login to the CUSP server.

Log In

10.197.252.66/admin/Common/HomePage.do

Search



Cisco Unified SIP Proxy  
Version 9.0.1

User Name:

Password:

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## Configure Subinterfaces on vCUSP using Command Line Interface (CLI)

You can define multiple sub interfaces in vCUSP and there is no specific restriction on the number of sub interfaces from vCUSP side.

This is one example for creating a sub interface.

1. Open SSH session to your vCUSP
2. Configure subinterface for FastEthernet 0 under configure terminal:

```
Interface FastEthernet 0.10
ip address 10.64.86.229 255.255.0.0
end
```

3. Issue command **show interfaces** to verify:



```
se-10-106-108-78# sh interfaces
FastEthernet 0 is up, line protocol is up
  Internet address is 10.106.108.78 mask 255.255.255.224 (configured locally)
    32 packets input, 2244 bytes
    0 input errors, 0 dropped, 0 overrun, 0 frame errors
    36 packets output, 2408 bytes
    0 output errors, 0 dropped, 0 overrun, 0 collision errors
    0 output carrier detect errors

FastEthernet 1 is up, line protocol is up
  3 packets input, 180 bytes
  0 input errors, 0 dropped, 0 overrun, 0 frame errors
  7 packets output, 618 bytes
  0 output errors, 0 dropped, 0 overrun, 0 collision errors
  0 output carrier detect errors

FastEthernet 0.709 is up, line protocol is up
  Internet address is 10.106.108.89 mask 255.255.255.224 (configured locally)
    0 packets input, 0 bytes
    0 input errors, 0 dropped, 0 overrun, 0 frame errors
    4 packets output, 384 bytes
    0 output errors, 0 dropped, 0 overrun, 0 collision errors
    0 output carrier detect errors

FastEthernet 0.10 is up, line protocol is up
  Internet address is 10.106.108.89 mask 255.255.255.224 (configured locally)
    0 packets input, 0 bytes
    0 input errors, 0 dropped, 0 overrun, 0 frame errors
    4 packets output, 384 bytes
    0 output errors, 0 dropped, 0 overrun, 0 collision errors
    0 output carrier detect errors
```

**Note:** Subinterface creation on FastEthernet 1 is not possible as of now.