

Installing CMX 10.5 on Cisco MSE 3365

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Introduction

This document will guide network administrators through the installation of Cisco CMX 10.5 on the MSE 3365 appliance. This process also includes the instructions on how to set up Cisco Integrated Management Controller (CIMC) that is required for the installation.

Note: It is not possible to upgrade from CMX 10.2, 10.3 or 10.4 to 10.5. A fresh new installation is required. If you try to upgrade directly, the following error message will pop up:

MD5 did not match, looks like the cmx file is corrupt. Please download fresh and try again.

Upgrade from 10.5 version to a newer version (e.g. from 10.5.0-206 to 10.5.1-26) can be done from the GUI: System->Settings->Upgrade

In order to avoid hitting the [CSCvn64747](#) when installing the 10.5.1, it is recommended to first install the 10.5.0 and then upgrade to 10.5.1.

Prerequisites

Requirements

Cisco MSE 3365.

Cisco CMX 10.5 ISO file.

Components Used

Components used in this guide:

- Cisco MSE 3365 with CIMC version 2.0(3i),

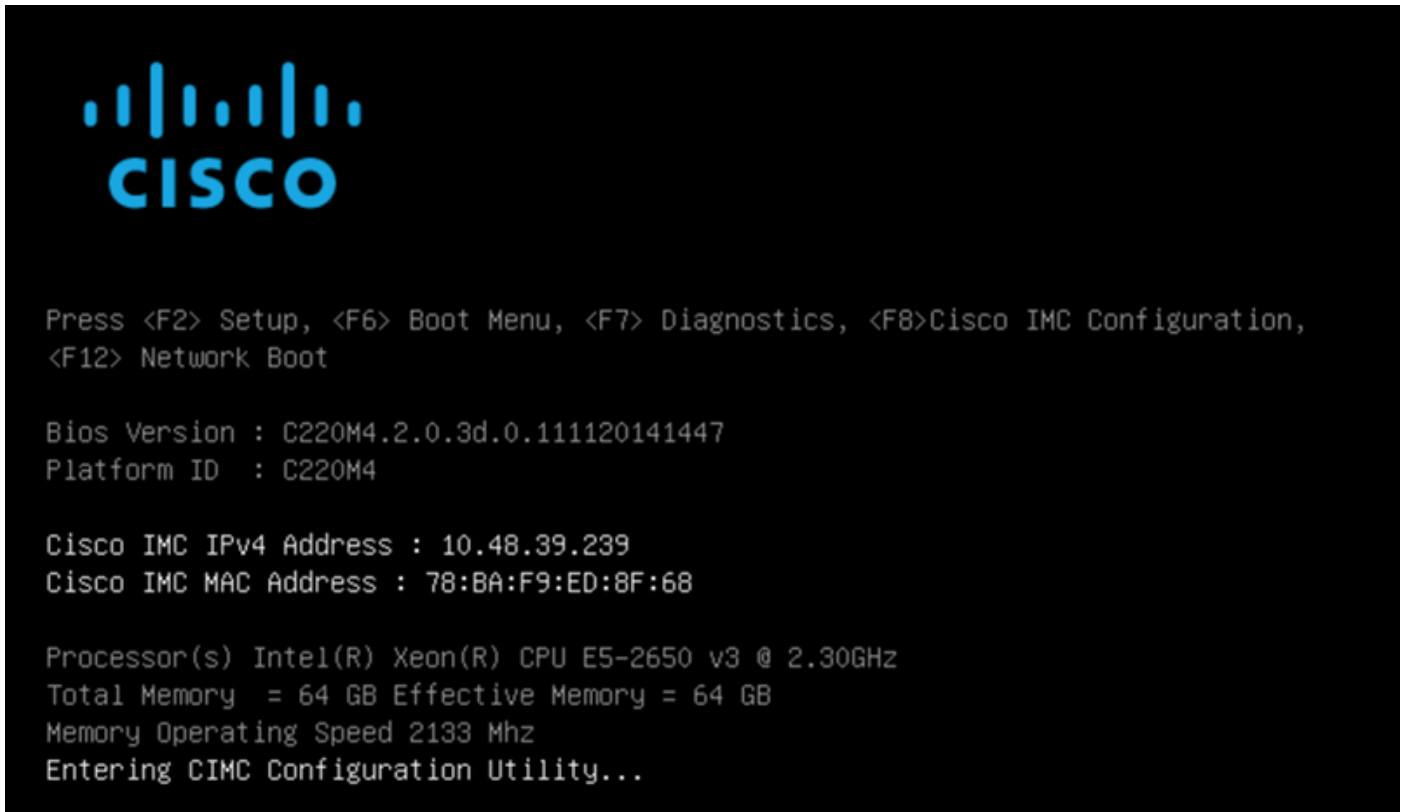
- Cisco Connected Mobile Experiences version 10.5.0-206.
- MacBook running MacOS Mojave and Google Chrome as Web Browser.

Configure

CIMC configuration and KVM launch

Step 1 Plug in monitor and keyboard. Boot up machine. Press **F8** to enter CIMC configuration:

Figure 1. Boot screen



Step 2 Configure the CIMC parameters, press **F10** to save and wait 45 seconds for changes to be applied. Press **F5** to refresh and verify the settings have been applied. Click **ESC** to exit.

Figure 2. Cisco CIMC Configuration Utility

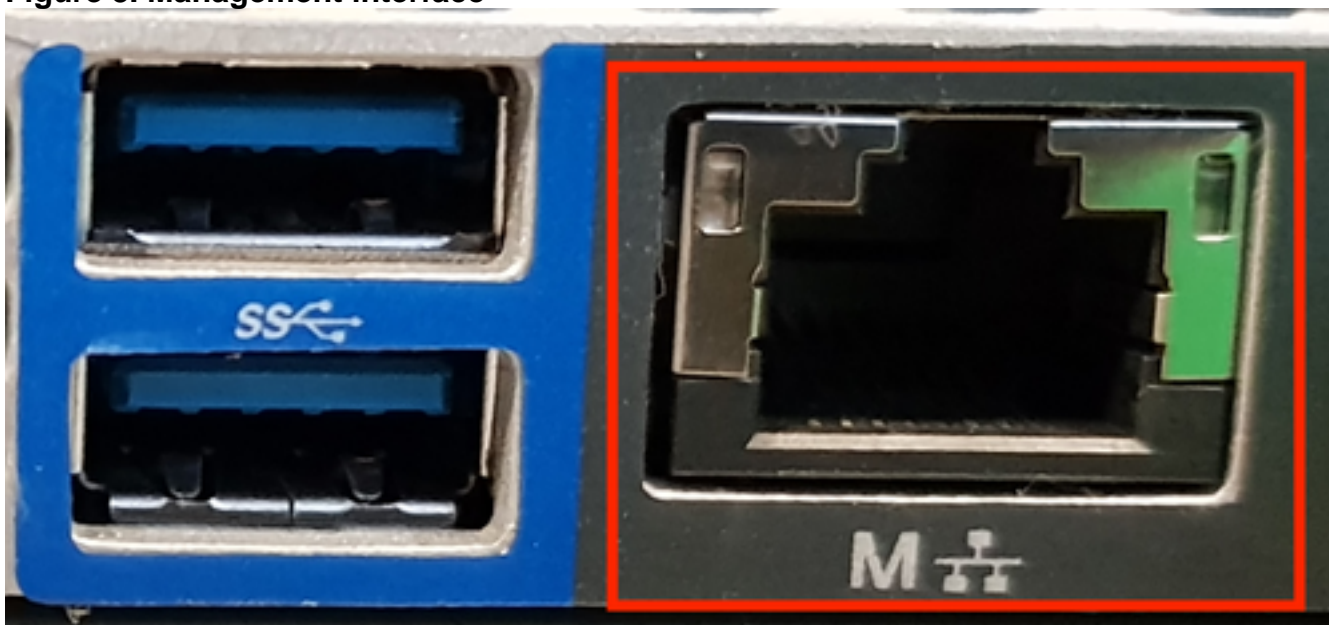
```

Cisco IMC Configuration Utility Version 2.0 Cisco Systems, Inc.
*****
NIC Properties
NIC mode                               NIC redundancy
Dedicated:      [X]                   None:           [X]
Shared LOM:     [ ]                   Active-standby: [ ]
Cisco Card:
  Riser1:       [ ]                   Active-active:  [ ]
  Riser2:       [ ]                   VLAN (Advanced)
  MLOm:         [ ]                   VLAN enabled:   [ ]
Shared LOM Ext: [ ]                   VLAN ID:        1
                                           Priority:       0
IP (Basic)
IPv4:           [X]                   IPv6:           [ ]
DHCP enabled    [ ]
CIMC IP:        10.48.39.239
Prefix/Subnet:  255.255.255.0
Gateway:        10.48.39.5
Pref DNS Server: 10.48.39.33
*****
<Up/Down>Selection  <F10>Save  <Space>Enable/Disable  <F5>Refresh  <ESC>Exit
<F1>Additional settings

```

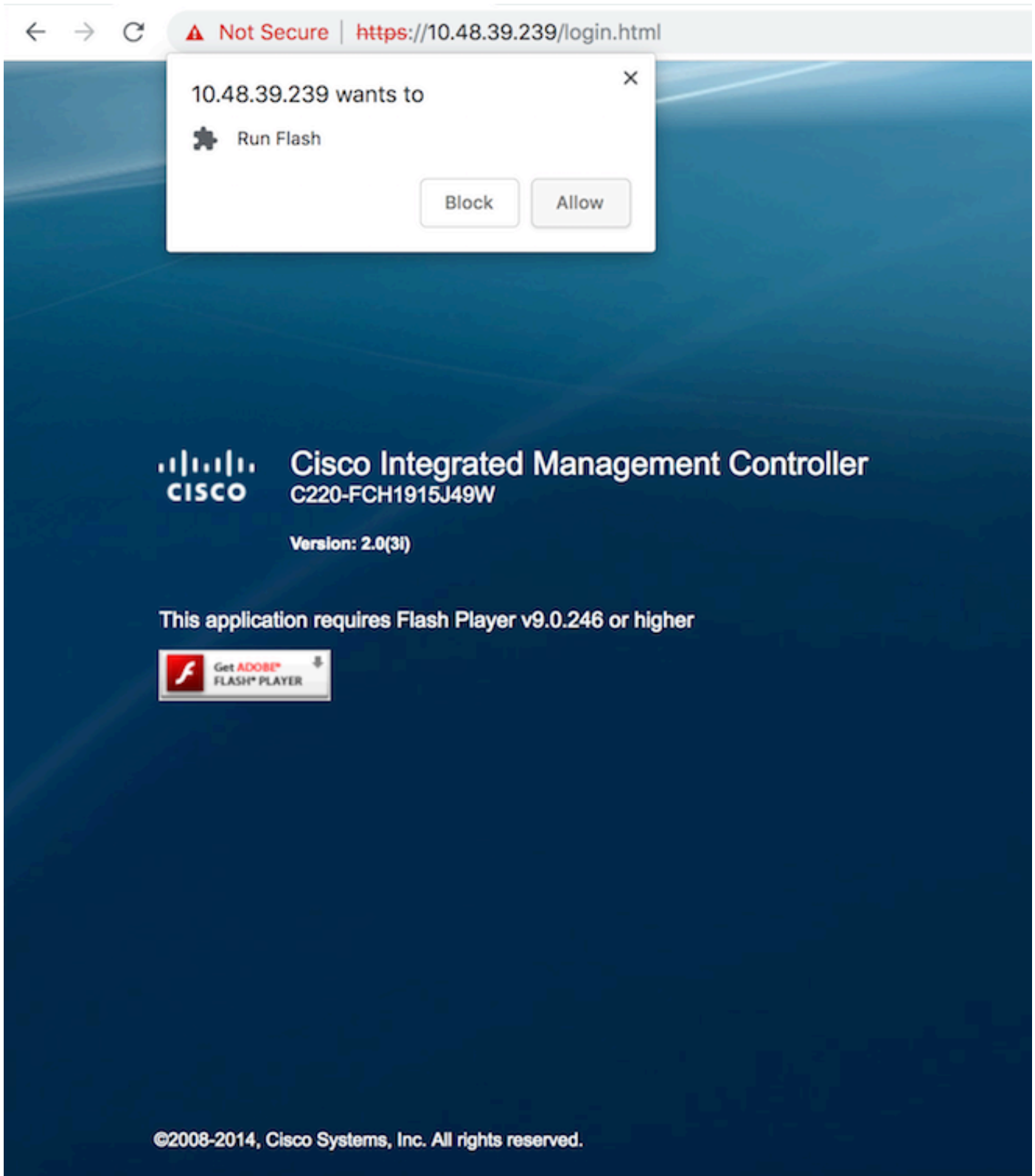
To get access to CIMC from your network, connect the MSE 3365 to the switch via management port located on the back side of the device.

Figure 3. Management interface



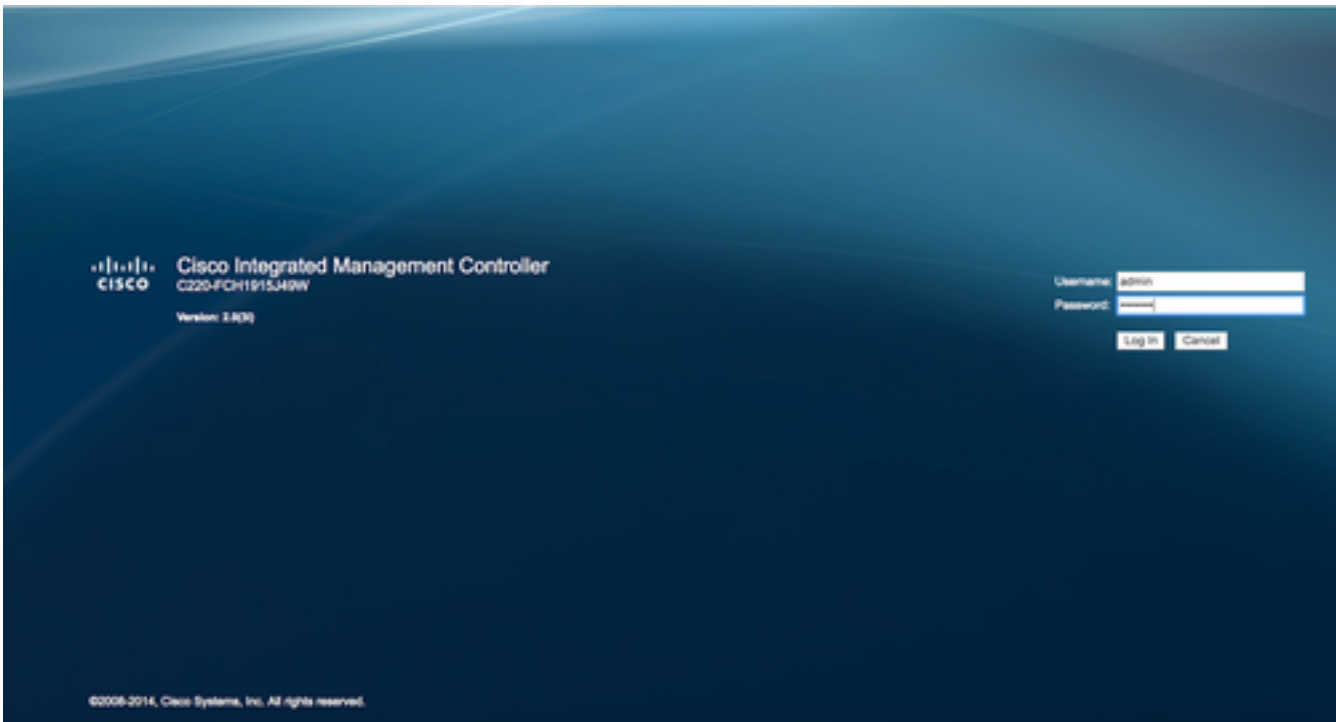
Step 3 In the Chrome Web Browser, go to http://<cimc_ip_address>. In the case permission is needed for Adobe Flash player to run, press **get Adobe flash player** and **Allow**:

Figure 4. Launching the CIMC interface



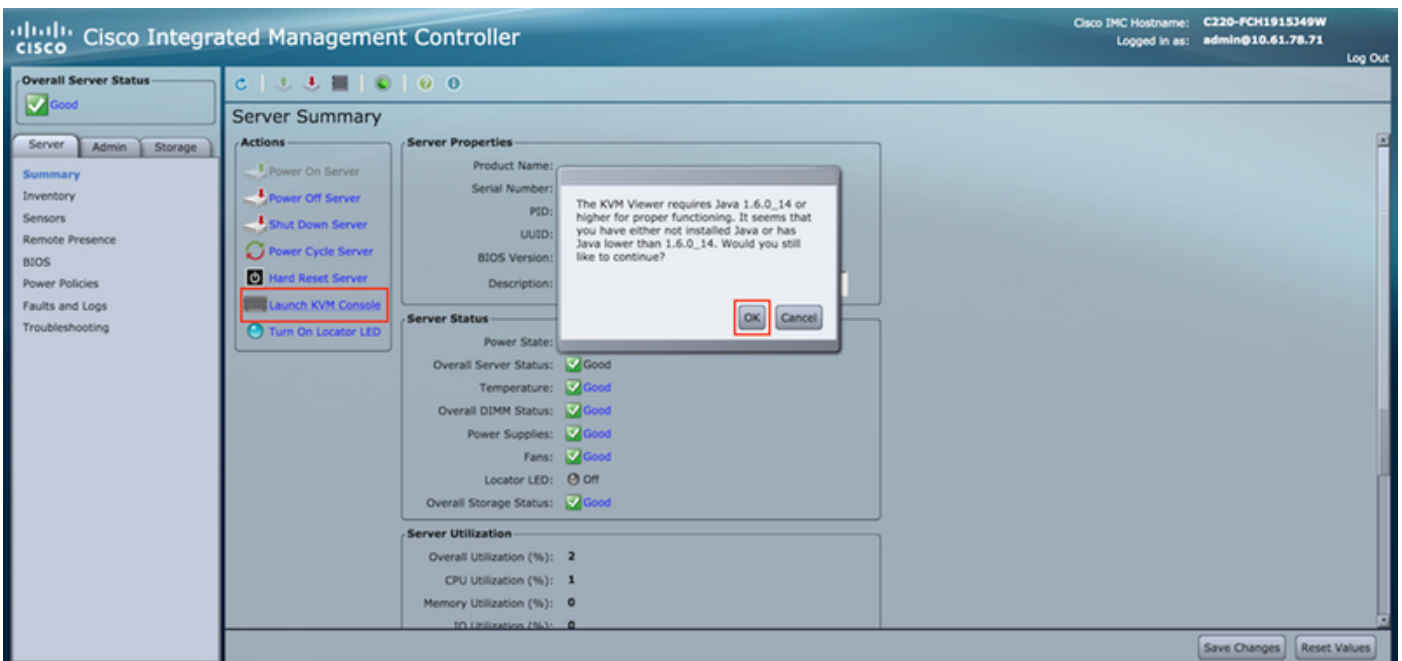
Step 4 When logging in for the first time, the default username will be *admin*. The default password is *password*.

Figure 5. CIMC GUI access



Step 5 Press **Launch KVM Console** and then **OK**. If you are running CIMC v2 (figure 5), Java version 1.6.0_14 or later is required to run KVM.

Figure 6. Launch KVM Console on CIMC v2



CIMC v3 (figure 6) supports HTML5 interface and does not require Java.

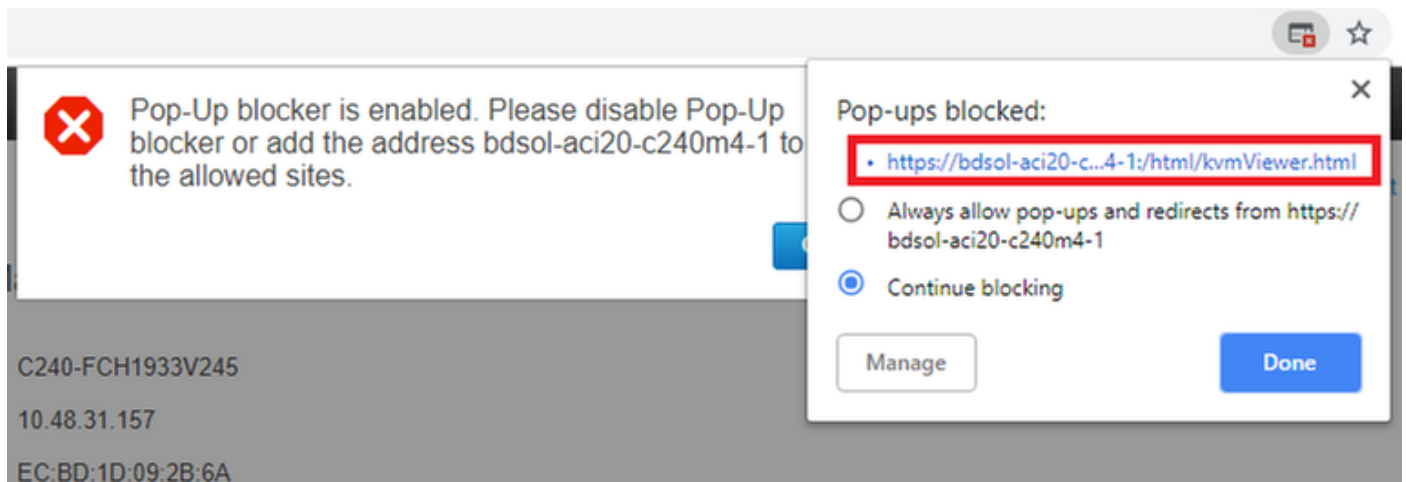
Figure 7. HTML based KVM

Host Power | Launch KVM | Ping



If you decide to use the HTML based KVM, you will have to enable pop-ups or click on the link to open the pop-up manually.

Figure 8. Enabling the pop-ups



Step 6 Once the KVM has launched, press on **Virtual Media** and **Activate Virtual Devices**. After virtual devices are activated, the dropdown menu will expand and additional options will show. Press "MAP CD/DVD" in order to map the ISO file:

Figure 9. Map the Virtual Media



Step 7 Select the downloaded a CMX image and press **Map Device**. Once pressed, the Virtual Media menu will expand again to show what image is mapped:

Figure 10. Map the Virtual Media

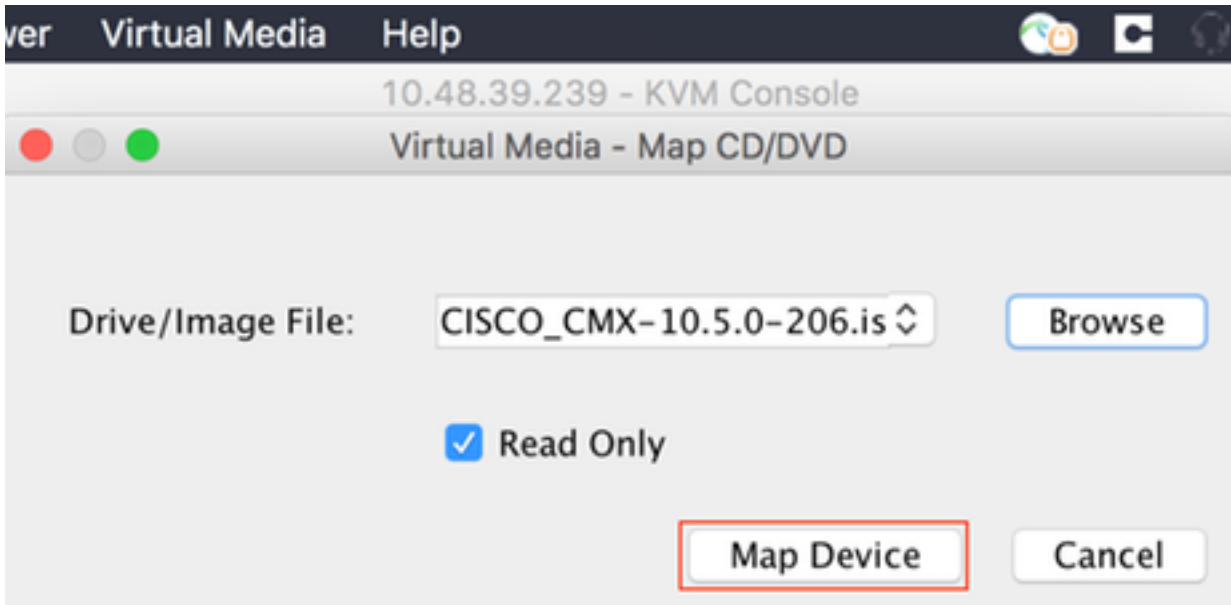


Figure 11. The dropdown Menu will expand and show the mapped image filename



Step 8 After checking the image is properly attached, go to **Power** tab and select **Reset System (warm boot)** to reset the machine. During the bootup process press **F7** to start the installation of the mapped image:

Figure 12. Power options on KVM

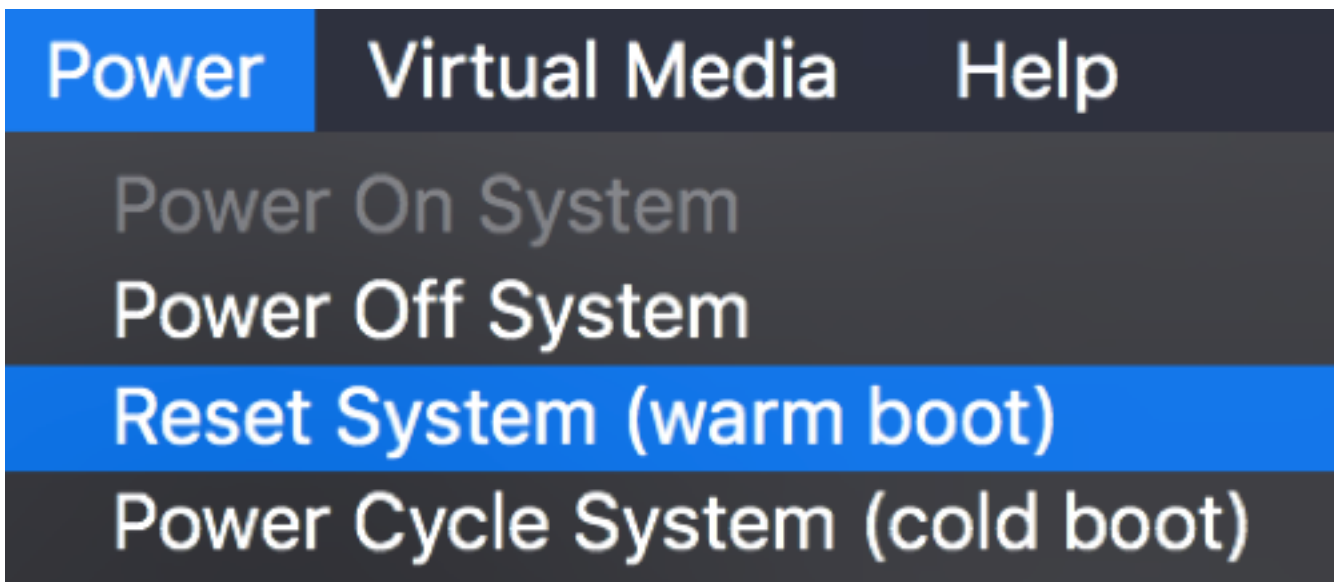
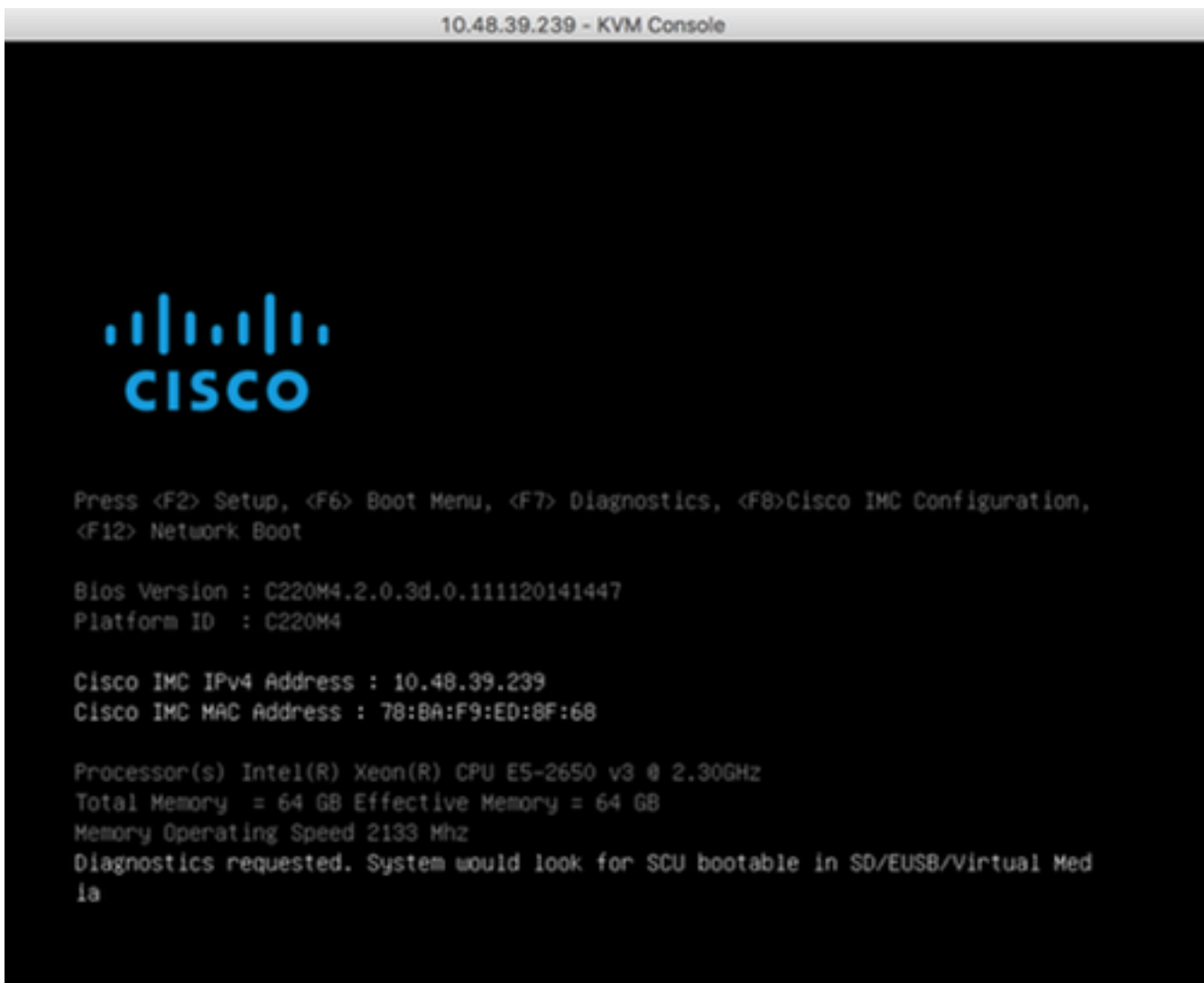


Figure 13. CIMC boot selection menu



CMX image installation

Step 1 Select **Install CMX using current console** to continue the installation. Once selected, the installation scripts will start loading:

Figure 14. CMX Install Method selection

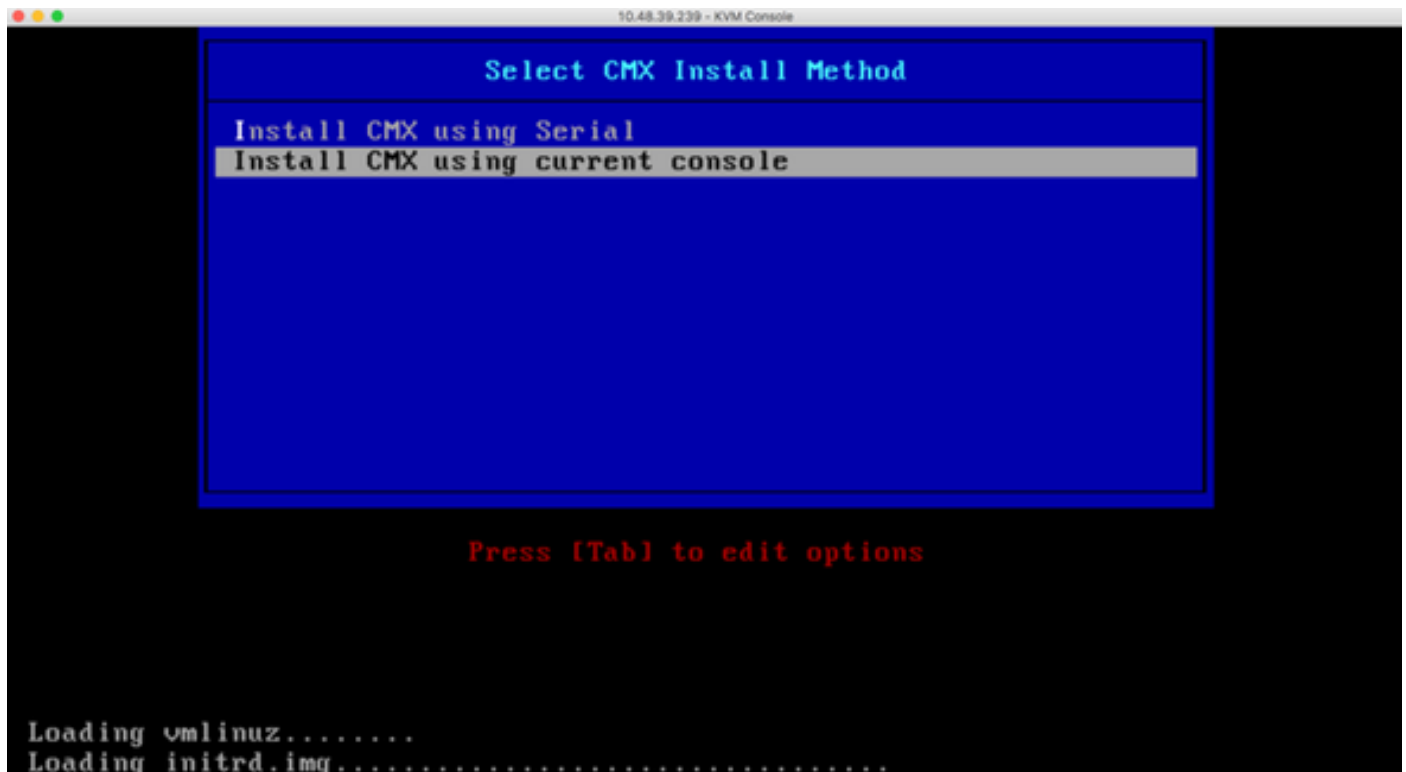
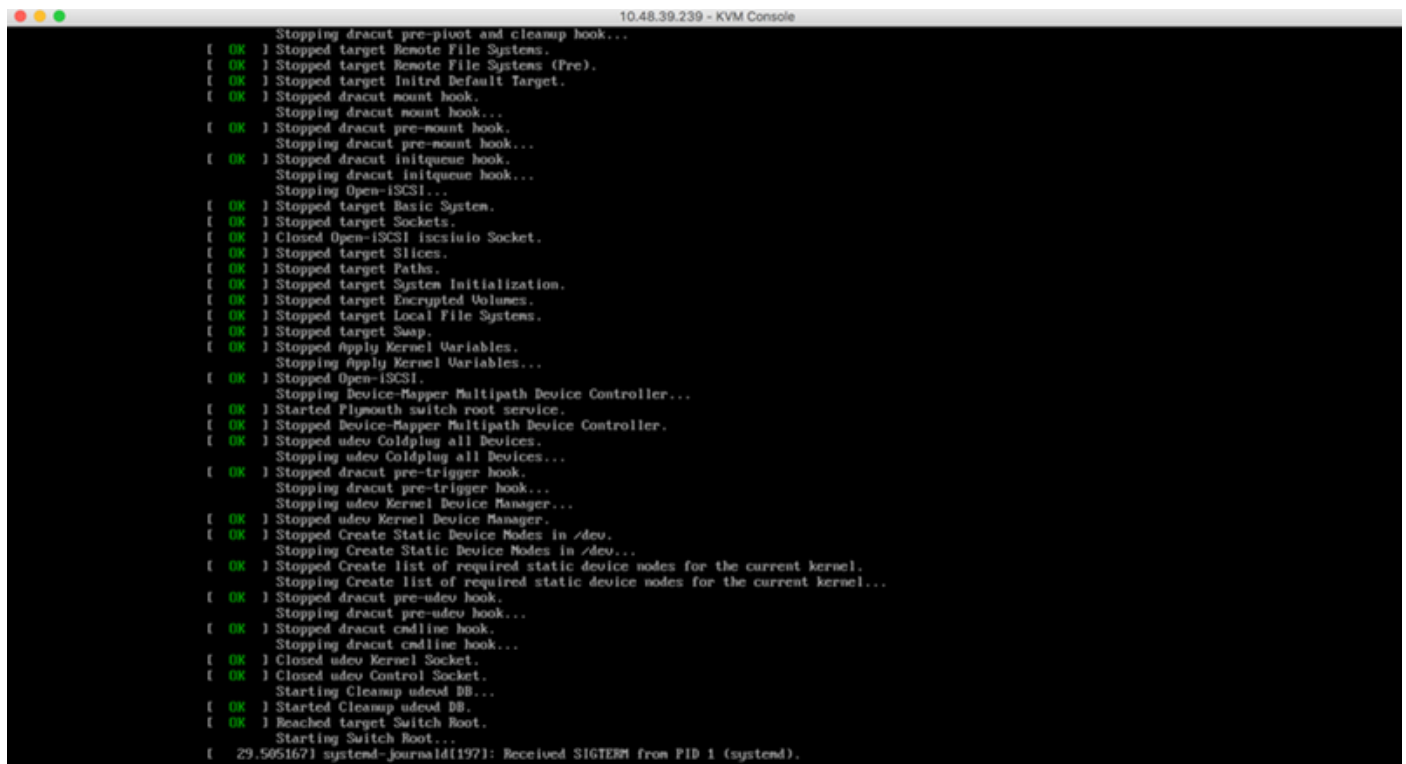


Figure 15. CentOS installation scripts trace



Step 2 Once the installer is starts, it will ask for confirmation. Type in **yes** and then press **Enter** to proceed with the installation. "Yes" might appear in the left upper corner:

Figure 16. Prompt to continue the installation might not be aligned

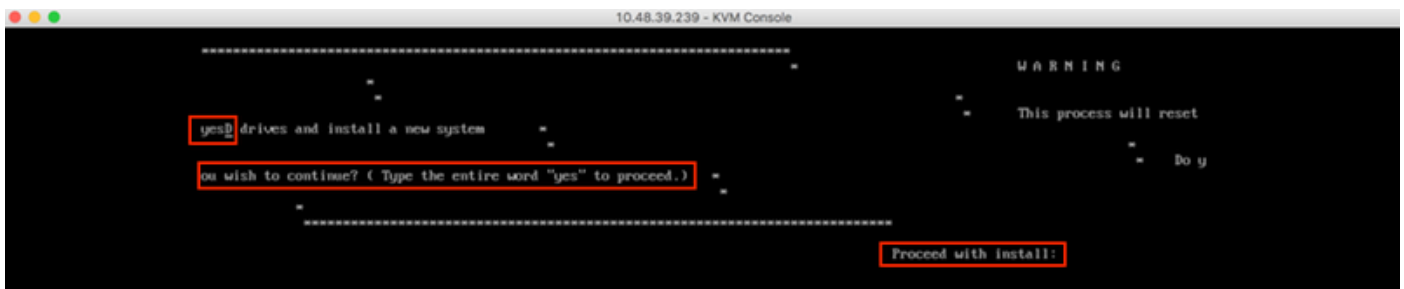
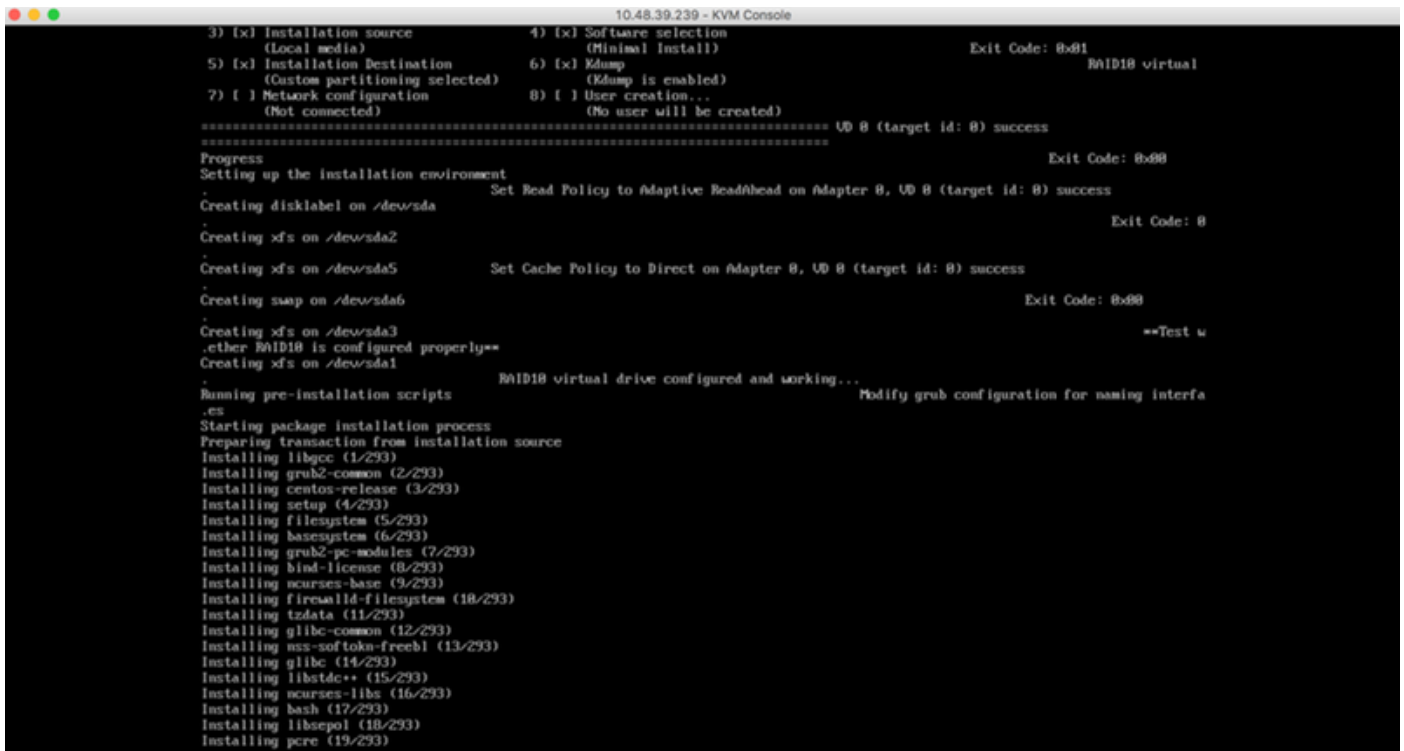


Figure 17. Once Enter is pressed, the installation will start



Step 3 During the installation, the prompt will show **Performing post-installation setup tasks**. This requires the user to press **Enter** in order to continue with the installation process that should take around 20-30 minutes:

Figure 18. Prompt information

```
10.48.39.239 - KVM Console
Installing passwd (269/293)
Installing sudo (270/293)
Installing btrfs-progs (271/293)
Installing xfsprogs (272/293)
Installing e2fsprogs (273/293)
Installing libyajf (274/293)
Installing iwl135-firmware (275/293)
Installing iwl1368-firmware (276/293)
Installing iwl7268-firmware (277/293)
Installing iwl6888g2b-firmware (278/293)
Installing iwl6858-firmware (279/293)
Installing iwl2838-firmware (280/293)
Installing iwl6888g2a-firmware (281/293)
Installing iwl7265-firmware (282/293)
Installing iwl5888-firmware (283/293)
Installing rootfiles (284/293)
Installing ivtv-firmware (285/293)
Installing iwl1888-firmware (286/293)
Installing iwl188-firmware (287/293)
Installing iwl4965-firmware (288/293)
Installing iwl5158-firmware (289/293)
Installing iwl2988-firmware (290/293)
Installing iwl165-firmware (291/293)
Installing iwl3945-firmware (292/293)
Installing iwl6800-firmware (293/293)
Performing post-installation setup tasks
Installing boot loader

Performing post-installation setup tasks
.
Configuring installed system
.
Writing network configuration
.
Creating users
.
Configuring addons
.
Generating initramfs
.
Running post-installation scripts
Mounted /dev/dmzrom
Mon Dec 17 12:27:42 PST 2018
Copying CMX Image file to base location
This may take 20-30 minutes...please wait.
```

CMX initial setup

Step 1 After installation is complete, the machine is going to automatically reboot. This time, **do not press any key while booting**:

Figure 19. Boot process will continue without any user input

```
10.48.39.239 - KVM Console

CISCO

Press <F2> Setup, <F6> Boot Menu, <F7> Diagnostics, <F8>Cisco IMC Configuration,
<F12> Network Boot

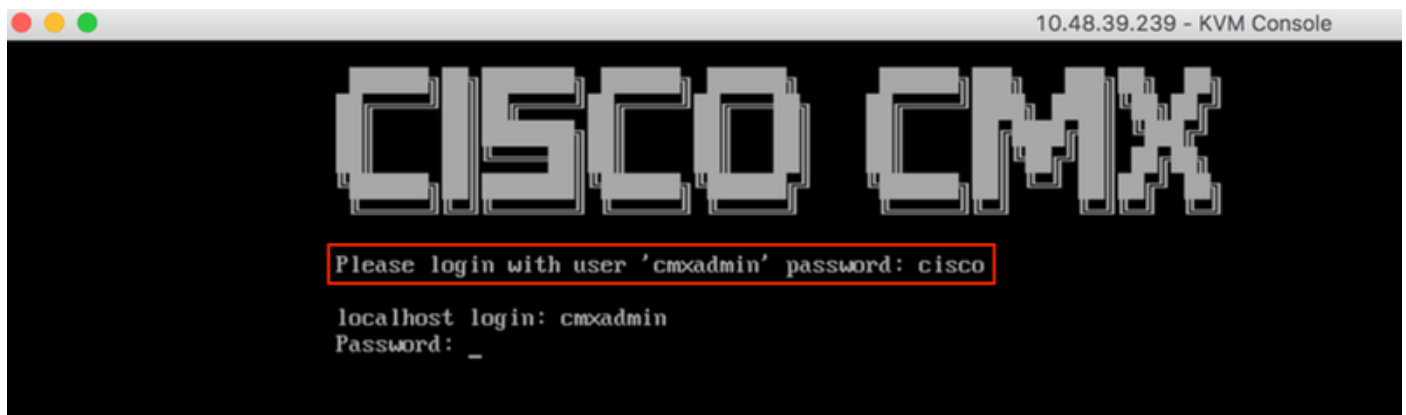
Bios Version : C220M4.2.0.3d.0.111120141447
Platform ID : C220M4

Cisco IMC IPv4 Address : 10.48.39.239
Cisco IMC MAC Address : 78:BA:F9:ED:8F:68

Processor(s) Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz
Total Memory = 64 GB Effective Memory = 64 GB
Memory Operating Speed 2133 Mhz
```

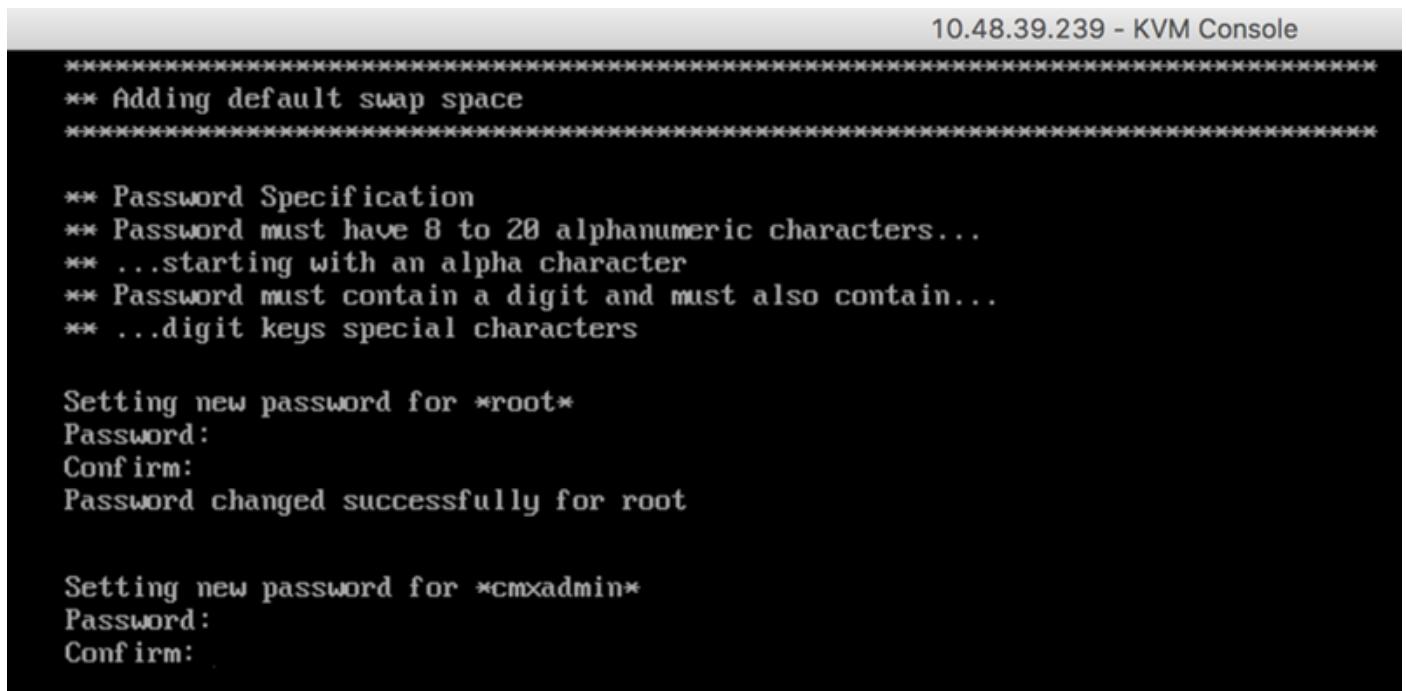
Step 2 Log into CMX using the default credentials (cmxadmin/cisco) as displayed on top:

Figure 20. Cisco CMX initial login



Step 3 You will be prompted to change password for root and cmxadmin users. Password specifications must be met:

Figure 21. Set Cisco CMX password



Step 4 Configure the network parameters. Gateway and DNS need to be reachable for network settings to be applied. In case they are not, you will be prompted to configure network parameters again. If they are reachable, keepalive services will be restarted. During this process, **DO NOT press Enter!!!**

Figure 22. Network configuration on initial setup

```
*****  
Configuring Network..  
*****  
Please enter hostname: cmx-wlaaan  
Please enter IP address: 10.48.71.41  
Please enter netmask: 255.255.255.128  
Please enter gateway: 10.48.71.5  
Please enter DNS server: 10.48.71.33  
Please enter search domain name: cmxwlaaan.cisco.com  
Are the network settings correct?: yes  
Stopping keepalived service  
Verify keepalived service has been stopped  
Successfully stopped the keepalived service.  
Starting keepalived service
```

Figure 23. if gateway is unreachable, network configuration prompt will come up

```
Restarting network...  
Pinging 127.0.0.1..... Success  
Pinging 10.48.71.41..... Success  
Pinging ..... Failed  
Error:  
The network is not configured properly  
Do you want to configure the network again?: _
```

Step 5 After keepalive services are restarted, the installation will prompt to enter NTP server IP address, region and country. In case the NTP is not used, the prompt will skip to Time zone and time/date configuration.

Figure 24. NTP and Time zone configuration

```

Restarting network...
Pinging 127.0.0.1.... Success
Pinging 10.48.71.41.... Success
Pinging 10.48.71.5.... Success
Network configuration completed successfully
*****
Checking if the machine meets required specification...
*****
+-----+-----+-----+-----+
| Check | Minimum Required | Actual | Result |
+-----+-----+-----+-----+
| Memory | 24GB              | 63GB  | #      |
+-----+-----+-----+-----+
| CPU    | 8                 | 20    | #      |
+-----+-----+-----+-----+
| Disk   | 150GB             | 1167GB | #      |
+-----+-----+-----+-----+
| hostname | RFC Compliant Hostname | cmx-wlaaan | #      |
+-----+-----+-----+-----+
*****
Configuring NTP Server...
*****
Please enter the NTP server name (blank for no NTP server) []: 10.48.71.33
Setting ntp server 10.48.71.33
*****
Configuring Timezone and date...
*****
Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.
 1) Africa
 2) Americas
 3) Antarctica
 4) Arctic Ocean
 5) Asia
 6) Atlantic Ocean
 7) Australia
 8) Europe
 9) Indian Ocean
10) Pacific Ocean
11) none - I want to specify the time zone using the Posix TZ format.
#? 8_

```

Figure 25. Country selection

Please select a country.

- | | | |
|-------------------------|-------------------|-------------------|
| 1) Albania | 18) Guernsey | 35) Poland |
| 2) Andorra | 19) Hungary | 36) Portugal |
| 3) Austria | 20) Ireland | 37) Romania |
| 4) Belarus | 21) Isle of Man | 38) Russia |
| 5) Belgium | 22) Italy | 39) San Marino |
| 6) Bosnia & Herzegovina | 23) Jersey | 40) Serbia |
| 7) Britain (UK) | 24) Latvia | 41) Slovakia |
| 8) Bulgaria | 25) Liechtenstein | 42) Slovenia |
| 9) Croatia | 26) Lithuania | 43) Spain |
| 10) Czech Republic | 27) Luxembourg | 44) Sweden |
| 11) Denmark | 28) Macedonia | 45) Switzerland |
| 12) Estonia | 29) Malta | 46) Turkey |
| 13) Finland | 30) Moldova | 47) Ukraine |
| 14) France | 31) Monaco | 48) Vatican City |
| 15) Germany | 32) Montenegro | 49) Åland Islands |
| 16) Gibraltar | 33) Netherlands | |
| 17) Greece | 34) Norway | |
- #? 5

The following information has been given:

Belgium

Therefore TZ='Europe/Brussels' will be used.

Local time is now: Mon Dec 17 22:08:50 CET 2018.

Universal Time is now: Mon Dec 17 21:08:50 UTC 2018.

Is the above information OK?

1) Yes

2) No

#? 1

The Timezone selected is Europe/Brussels

The current time is Mon Dec 17 21:08:58 UTC 2018

Enter Date (YYYY-mm-dd hh:mm:ss) (blank to sync with ntp): []:

Step 6 Next prompt will ask you to select the if you want disk encryption. CLI setup ends here and the remain the configuration will be done through CMX web interface (GUI).

Figure 26. Disk encryption setup

```
*****
Disk Encryption...
*****
Do you want to encrypt the /opt partition of the disk ? [y/N]: n
*****
CMX OS Configuration is complete.
Please visit below url to continue CMX configuration
*****

https://cmx-wlaaan:1984

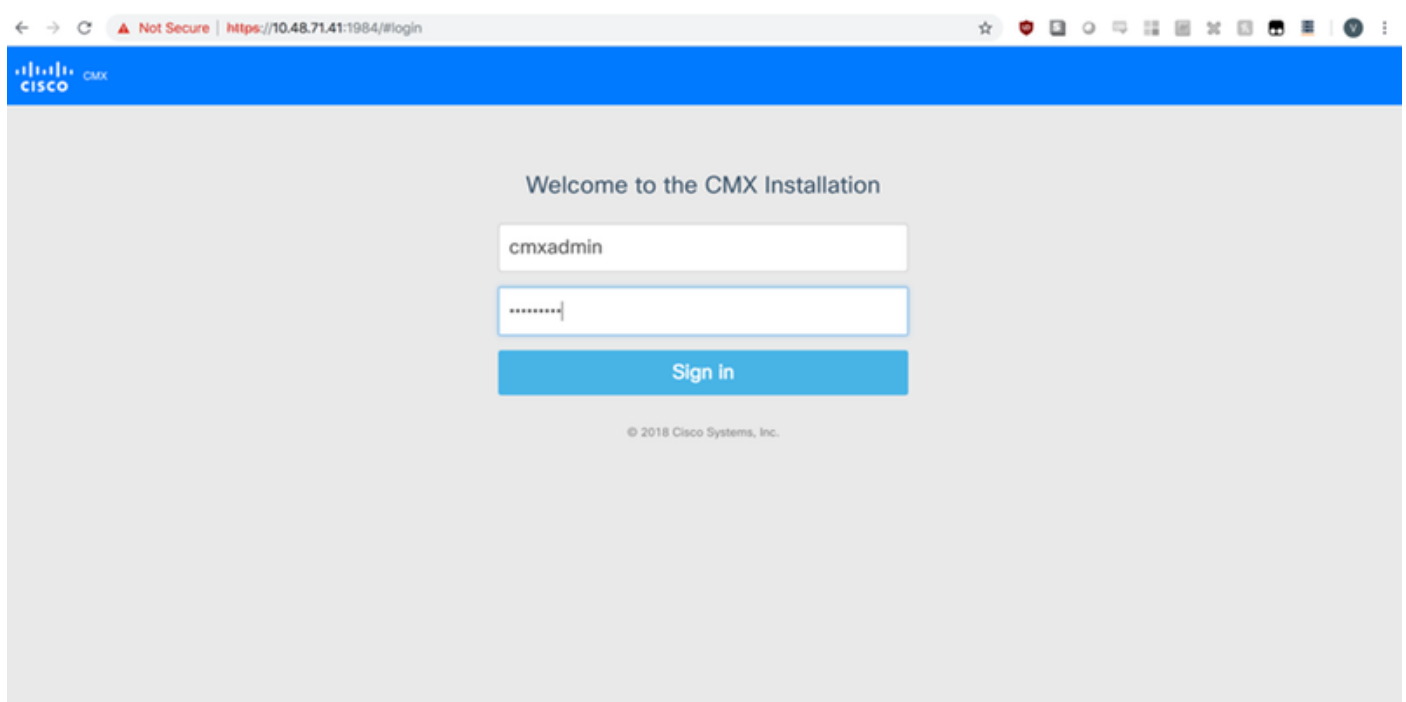
[cmxadmin@localhost ~]$
```

CMX node installation

Access the CMX GUI through `https://<cmx_ip_address>:1984`. Port 1984 is only used during the initial setup or upgrade.

Step 1 Log in using `cmxadmin` user and the password that was previously configured.

Figure 27. CMX GUI node installation login



Step 2 Select the CMX node type (Location or Presence). Note that this cannot be changed afterwards. After selecting, wait for the configuration and startup to finish.

Figure 28. CMX GUI node selection

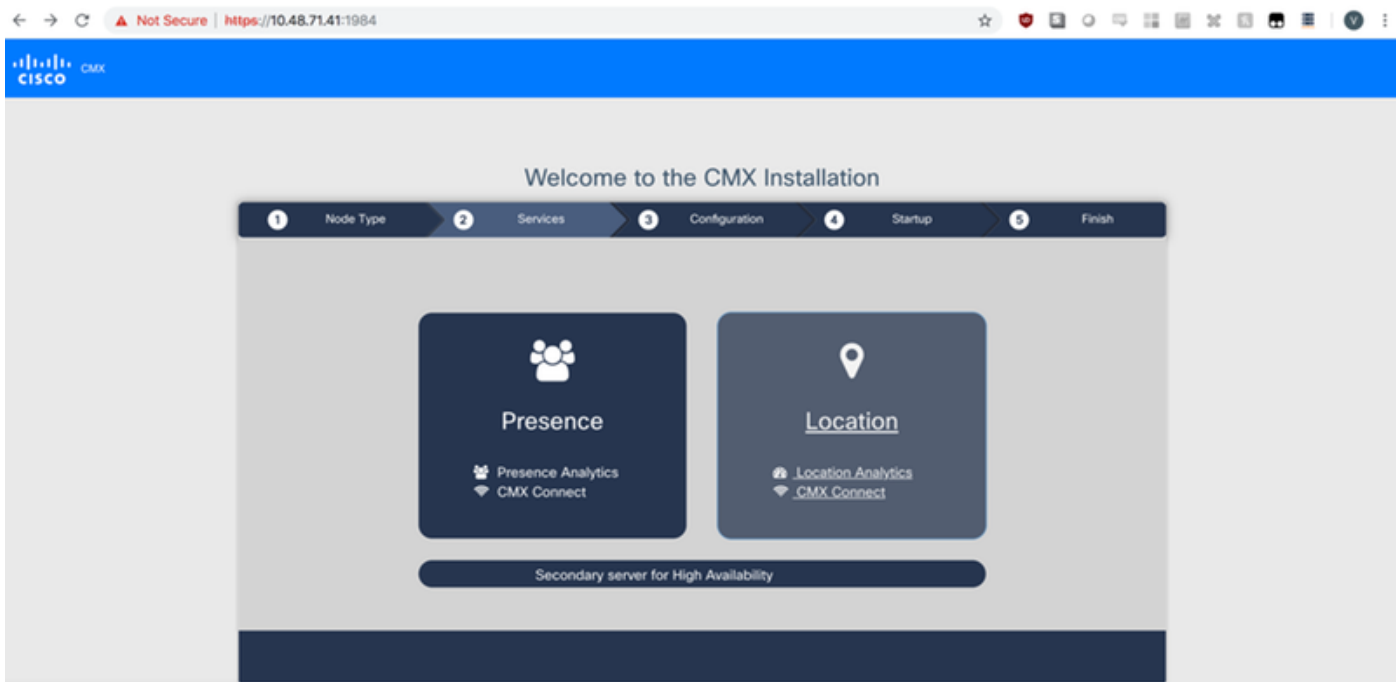


Figure 29. CMX configuration installation

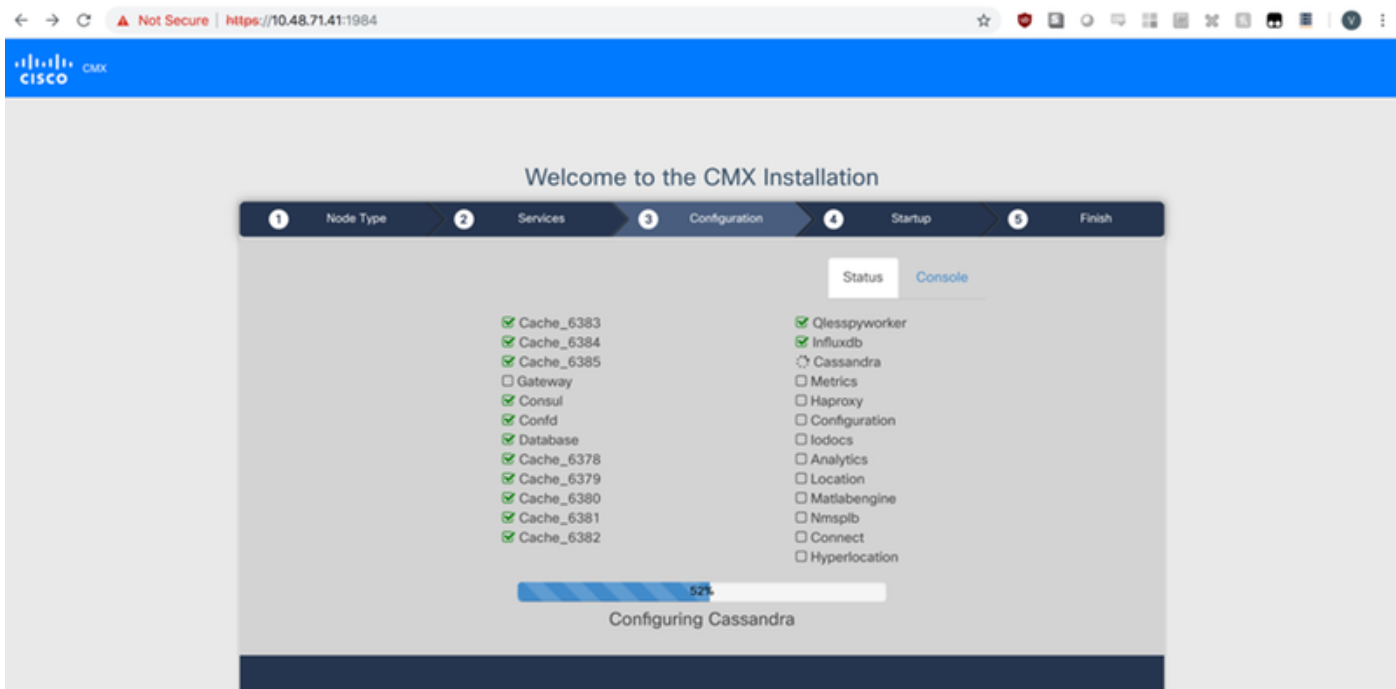
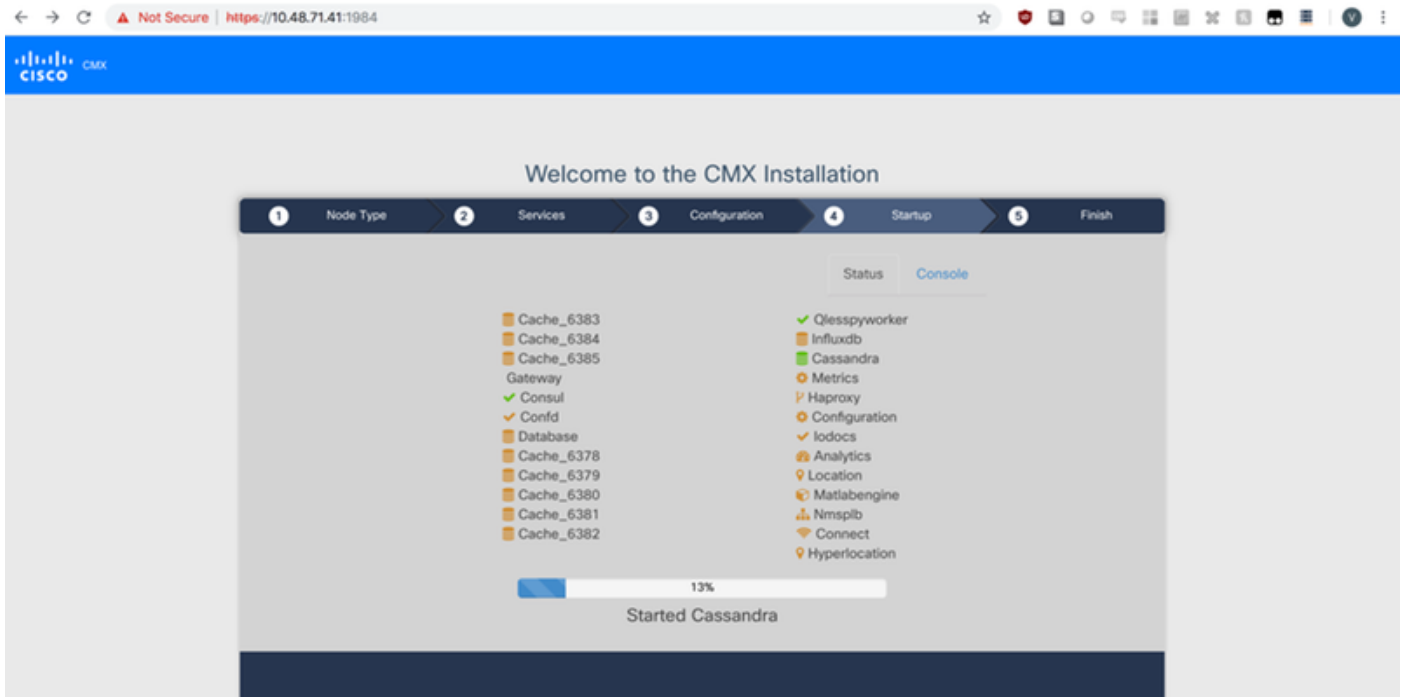


Figure 30. CMX starting services



Step 3 Press Please click to continue setup

Figure 31. CMX installation completion



Installation process is now done. You are now redirected to the setup assistant to finish the node's specific configuration (maps import, pairing with wireless controller and mail server).

Figure 32. CMX basic setup assistant

SETUP ASSISTANT

- Introduction
- Set New Password
- Maps and Controllers
- Mail Server
- Done!

Welcome to CMX

Please proceed through this setup assistant to get your system up and running.

Do not show setup again

Cancel

Next

System at a Glance

Node	IP Address
cmx-wlaaan	10.48.71.41

Settings

Memory	CPU
14.60%	1.41%

Coverage Details

Access Points

Placed AP	Missing AP	Active AP	AP
0	0	0	0

Campus	Building	Floor	Zone	Total
-	-	-	-	0

Client	Client	Tag	Tag	Interferer
0	0	0	0	0

AP	Client	Total
0	0	0

System Time

Mon Dec 17 22:18:17 CET 2018