Installing CMX 10.5 on Cisco MSE 3375

Contents

Introduction

This document will guide network administrators through the installation of Cisco CMX 10.5 image on Cisco 3375 MSE appliance. This process also includes the instructions on how to set up Cisco Integrated Management Controller (CIMC) that is required for the installation.

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 in the CMX web interface under System->Settings->Upgrade

In order to avoid hitting the [CSCvn64747](#) when installing the 10.5.1-26, it is recommended to first install the 10.5.0 and then upgrade to 10.5.1-26

Prerequisites

Requirements

Cisco 3375 MSE appliance

Cisco CMX 10.5 ISO file (downloaded from https://software.cisco.com)

Components Used

Components used in this guide:

- Cisco 3375 with CIMC version 4.0(1a)

- Cisco Connected Mobile Experiences version10.5.1-27

- MacBook running MacOS Mojave and Google Chrome as Web Browser

Installation

CIMC configuration and KVM launch

Step 1 Plug in monitor into the VGA port and keyboard into the USB port at the back of the appliance. Power on the machine. Press F8 during the boot screen to enter CIMC configuration utility:
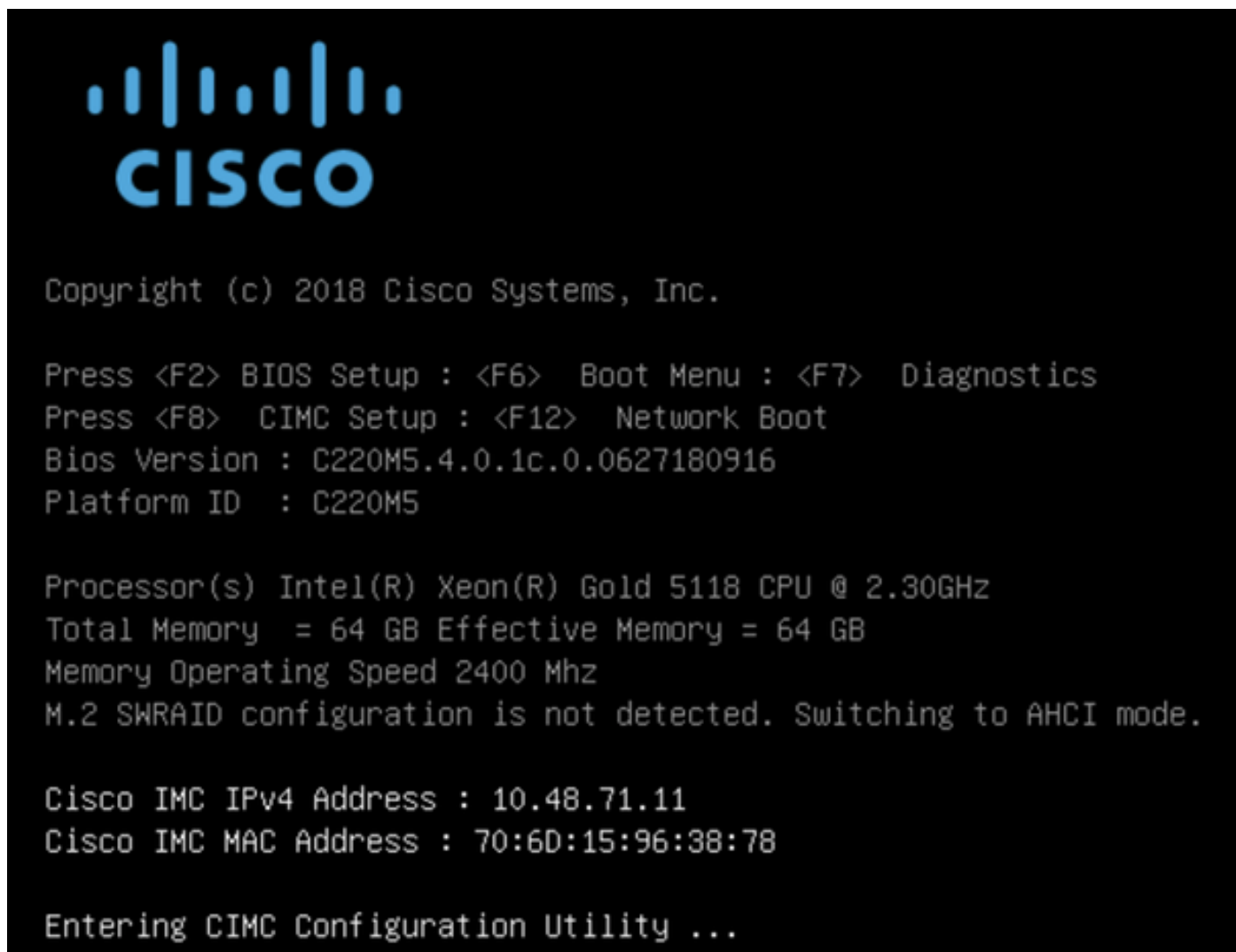

Figure 1. Boot screen

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.

```
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:                                  Active-active:    [ ]
    Riser1:          [ ]                     VLAN (Advanced)
    Riser2:          [ ]                        VLAN enabled:     [ ]
    MLom:            [ ]                         VLAN ID:          1
  Shared LOM Ext:    [ ]                         Priority:         0
IP (Basic)
 IPV4:               [X]        IPV6:   [ ]
 DHCP enabled        [ ]
 CIMC IP:            10.48.71.11
 Prefix/Subnet:      255.255.255.128
 Gateway:            10.48.71.1
 Pref DNS Server:    0.0.0.0
Smart Access USB
 Enabled             [ ]
****************************************************************************
<Up/Down>Selection    <F10>Save    <Space>Enable/Disable    <F5>Refresh    <ESC>Exit
<F1>Additional settings
```

Figure 2. Cisco IMC Configuration Utility

To get access to CIMC from your network, connect the MSE 3375 to the switch via management port located on the back side of the device:
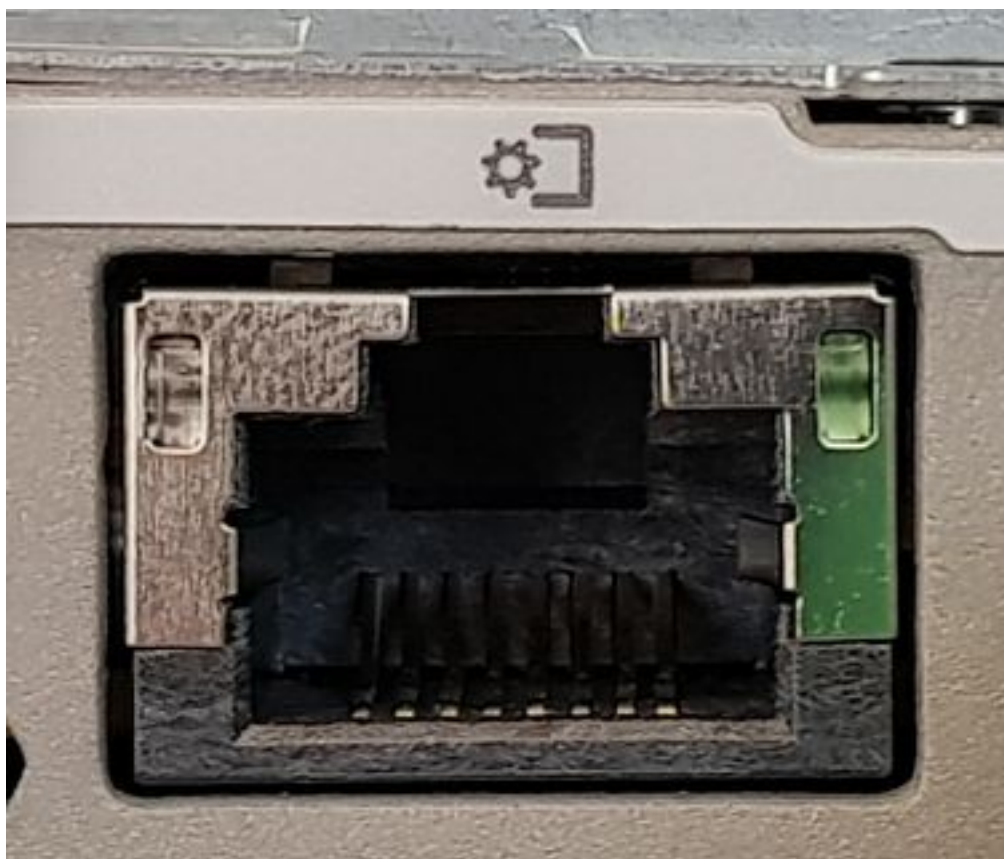

Figure 3. Management port

Step 3 In the Chrome Web Browser, go to http://<cimc_ip_address>. When logging in for the first time, the default username will be *admin*. The default password is *password*.If you are running CIMC version 4.0(1a), the login screen will look like this:

Figure 4. CIMC login screen

Step 4 Once you log in, press Launch KVM Console in the top right corner. CIMC v4 supports both HTML and Java based KVM. Java version 1.6.0_14 or later is required to run Java based KVM. This tutorial will be using an HTML one.

Figure 5. Launching KVM console

If pop-ups in your browser are blocked, make sure to press on a link to get forwarded:
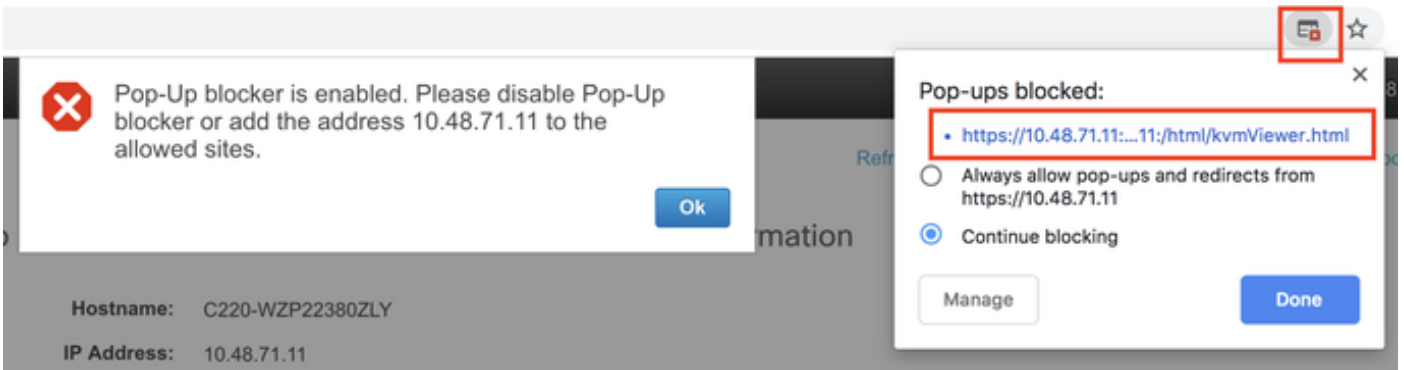
Figure 6. Pop-up being blocked

Step 5 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 up. Press MAP CD/DVD in order to map the CMX 10.5 ISO file:
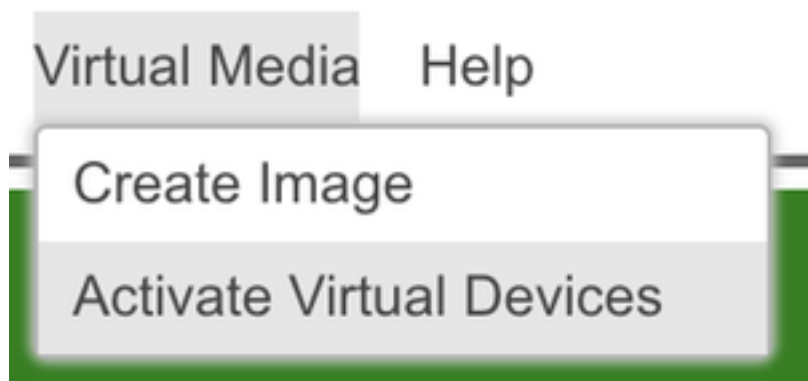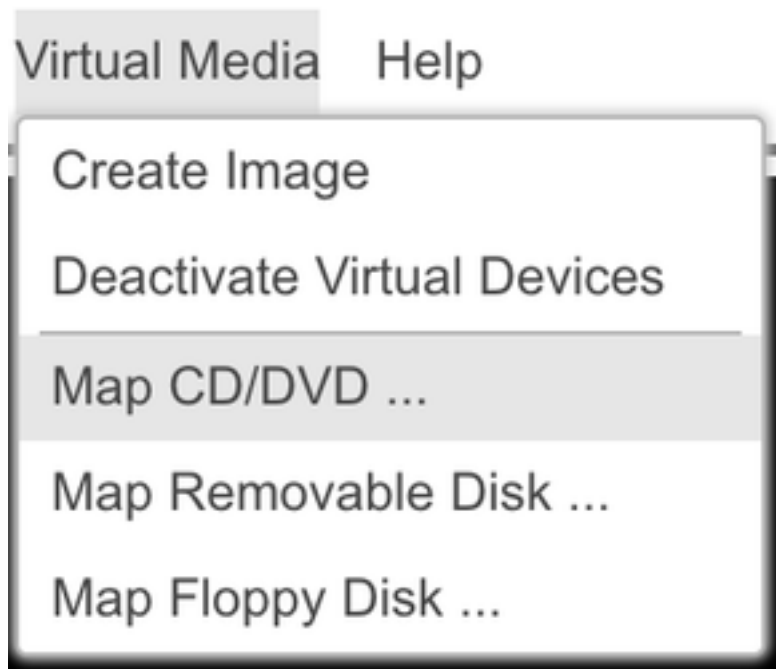

Figure 7. Activate Virtual Devices

Figure 8. Map CD/DVD

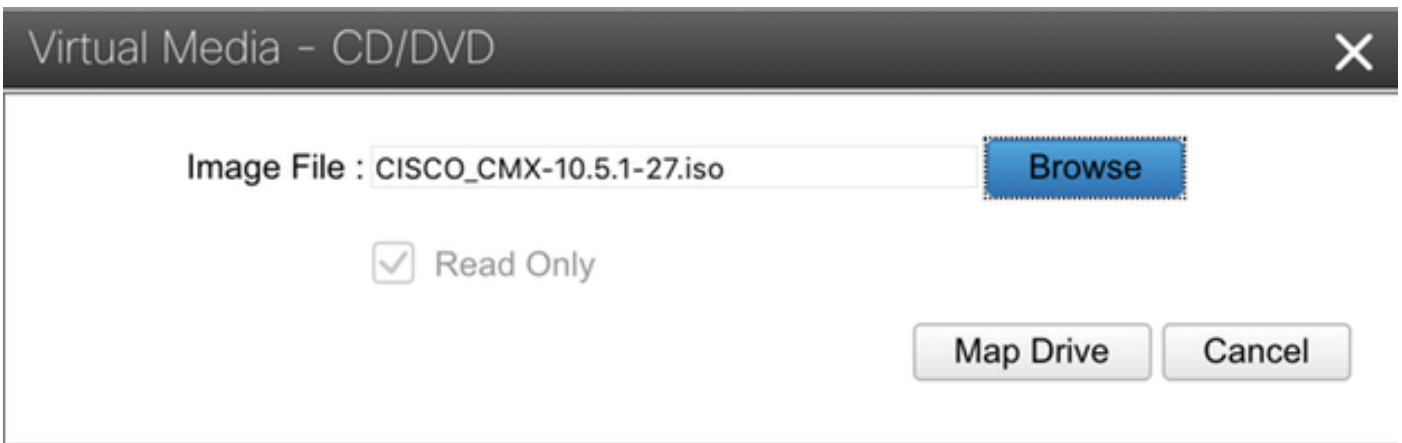**Step 6 Navigate to and select the downloaded CMX image and press Map Drive. Once pressed, the Virtual Media menu will expand again to show what image is mapped:**

Figure 9. Mapping the drive

Figure 10. Mapped CMX image

Step 7 After checking the image is properly attached, go to Power tab and select Reset System (warm boot) to reset the appliance. During the boot process press F7 to start the installation of the mapped image:
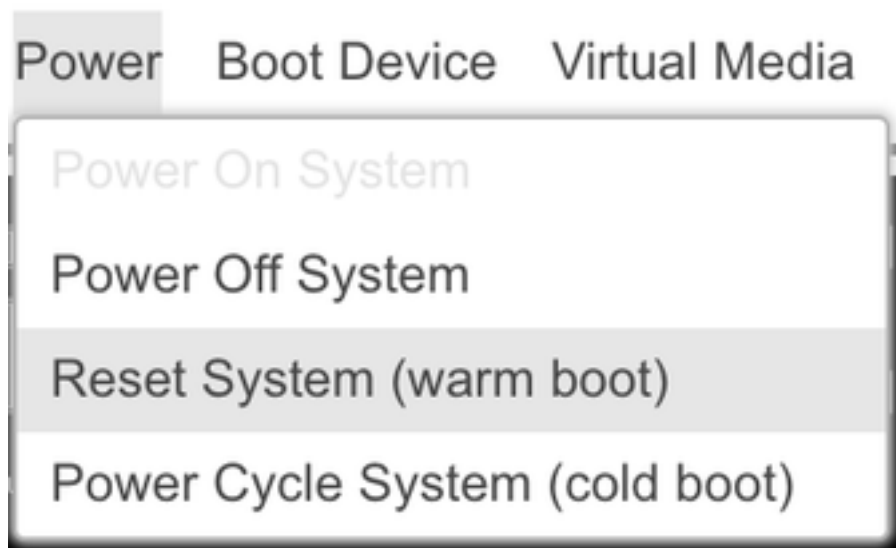

Figure 11. Restarting the appliance

Figure 12. 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:
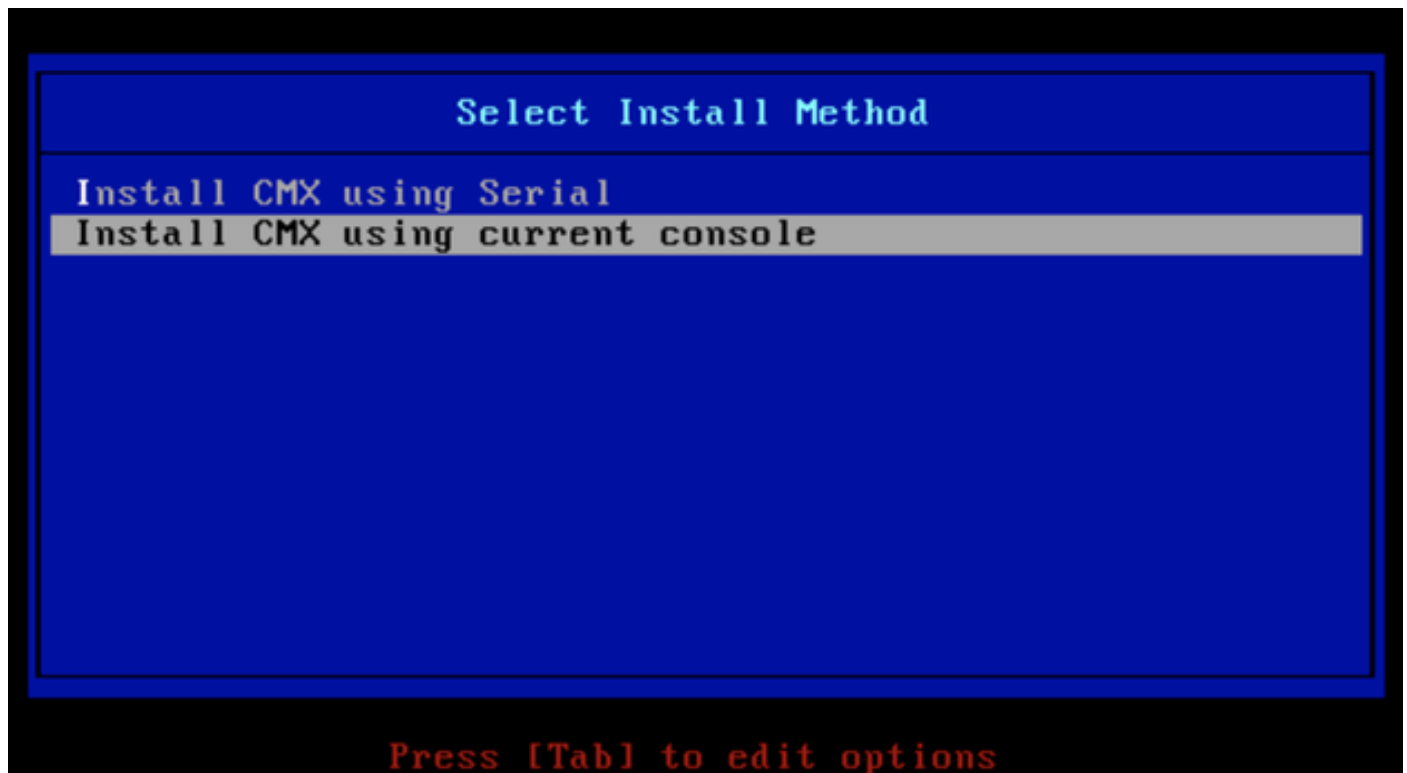

Figure 13. Continue installation in the current KVM

Figure 14. CentOS installation script trace

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

Figure 15. Prompt to continue the installation might not be aligned

```
*Disable PD Fail history so no manual intervention required in rebuilding dropped volume**
========================================================================        **Changes drive in state Unconfigured-
Installation               **Ignore errors in case drives are already good**
                                                           RAID10 virtual drive sucessfully created
 1) [x] Language settings            2) [x] Time settings                              Now configur
        (English (United States))           (America/Los_Angeles timezone)
 3) [x] Installation source          4) [x] Software selection
        (Local media)                       (Minimal Install)operly**
 5) [x] Installation Destination     6) [x] Kdump
        (Custom partitioning selected)      (Kdump is enabled)      RAID10 virtual drive configured and working...
 7) [ ] Network configuration        8) [ ] User creation                                 Modify g
        (Not connected)                     (No user will be created)
========================================================================
========================================================================
Progress
Setting up the installation environment
.
Creating disklabel on /dev/sda
.
Creating xfs on /dev/sda2
.
Creating xfs on /dev/sda5
.
Creating swap on /dev/sda6
.
Creating xfs on /dev/sda3
.
Creating xfs on /dev/sda1
.
Running pre-installation scripts
.
Starting package installation process
Preparing transaction from installation source
Installing libgcc (1/293)
Installing grub2-common (2/293)
Installing centos-release (3/293)
Installing setup (4/293)
Installing filesystem (5/293)
Installing basesystem (6/293)
Installing grub2-pc-modules (7/293)
Installing bind-license (8/293)
Installing ncurses-base (9/293)
Installing firewalld-filesystem (10/293)
Installing tzdata (11/293)
Installing glibc-common (12/293)
```

Figure 16. Once Enter is pressed, the installation will start

Step 3 The CMX installation process should take around 20-30 minutes:

```
Running post-installation scripts
Mounted /dev/cdrom
            Sun Jan 20 14:11:26 PST 2019
                                     Copying CMX Image file to base location
                                                 This may take 20-30 minutes....please wait.
..
```

Figure 17. Installation takes 20-30 minutes

CMX initial setup

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

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

Figure 18. Logging in for the first time

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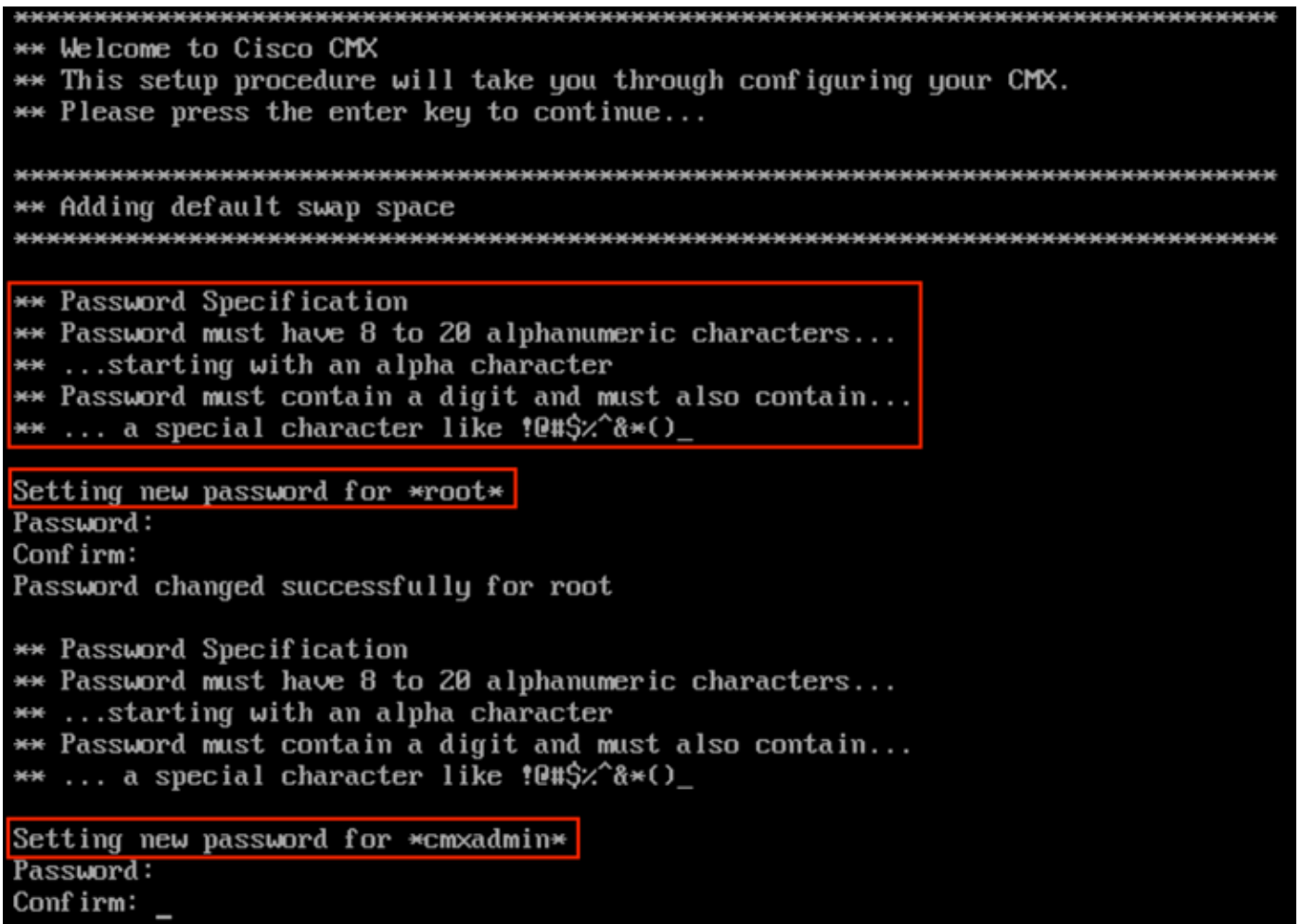

Figure 19. Changing root and cmxadmin passwords

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 20. Network parameters setup

Figure 21. If gateway is unreachable, network configuration prompt will come up

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:

```
Restarting network...
Pinging 127.0.0.1..... Success
Pinging 10.48.39.240..... Success
Pinging 10.48.39.5..... Success
Network configuration completed successfully
**************************************************************************
Checking if the machine meets required specification...
**************************************************************************

+----------+----------------------+-------------+---------+
|  Check   |   Minimum Required   |   Actual    | Result  |
+==========+======================+=============+=========+
| Memory   | 24GB                 | 63GB        | ■       |
+----------+----------------------+-------------+---------+
| CPU      | 8                    | 24          | ■       |
+----------+----------------------+-------------+---------+
| Disk     | 150GB                | 1882GB      | ■       |
+----------+----------------------+-------------+---------+
| hostname | RFC Compliant Hostname | mse-3375-1 | ■      |
+----------+----------------------+-------------+---------+

**************************************************************************
Configuring NTP Server...
**************************************************************************
Please enter the NTP server name (blank for no NTP server) []: _
```

Figure 22. NTP configuration

```
********************************************************************************
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
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
```

Figure 23. Timezone and date configuration

Step 6 You will be prompted to confirm entered information. If you select No, you will be taken back to the NTP configuration prompt:

```
The following information has been given:

         Belgium

Therefore TZ='Europe/Brussels' will be used.
Local time is now:      Mon Jan 21 00:11:16 CET 2019.
Universal Time is now:  Sun Jan 20 23:11:16 UTC 2019.
Is the above information OK?
1) Yes
2) No
#?
```

Figure 24. NTP configuration

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

Disk encryption is one of the requirements for GDPR compliance. Full information about CMX GDPR compliance can be found on this link.

Figure 25. Disk encryption prompt

Once encrypted, the drive cannot be unencrypted.

CMX node installation

Step 1 Access the CMX GUI trough https://<cmx_ip_address>:1984. Port 1984 is only used during the initial setup or upgrade. Log in using *cmxadmin*user and the password that was previously configured:
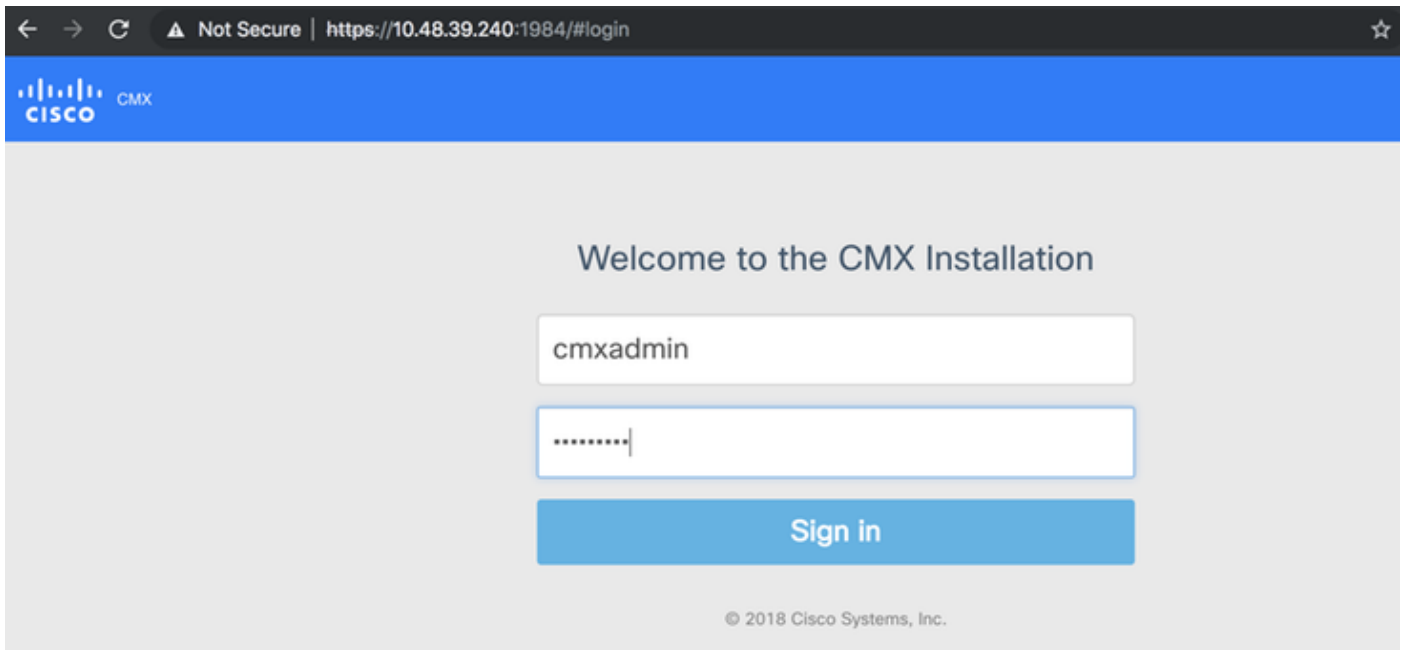

Figure 26. CMX GUI node installation login

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 27. CMX node type selection

Figure 28. Startup process

Step 3 Press Please click to continue setup:

Figure 29. Click to continue setup

Step 4 Installation process is now done. You will be redirected to the setup assistant to finish the node's specific configuration (maps import, pairing with wireless controller and mail server setup):

Once the setup is complete, make sure to clear browser cookies and cache. Not doing this might result in some CMX web pages being blank.
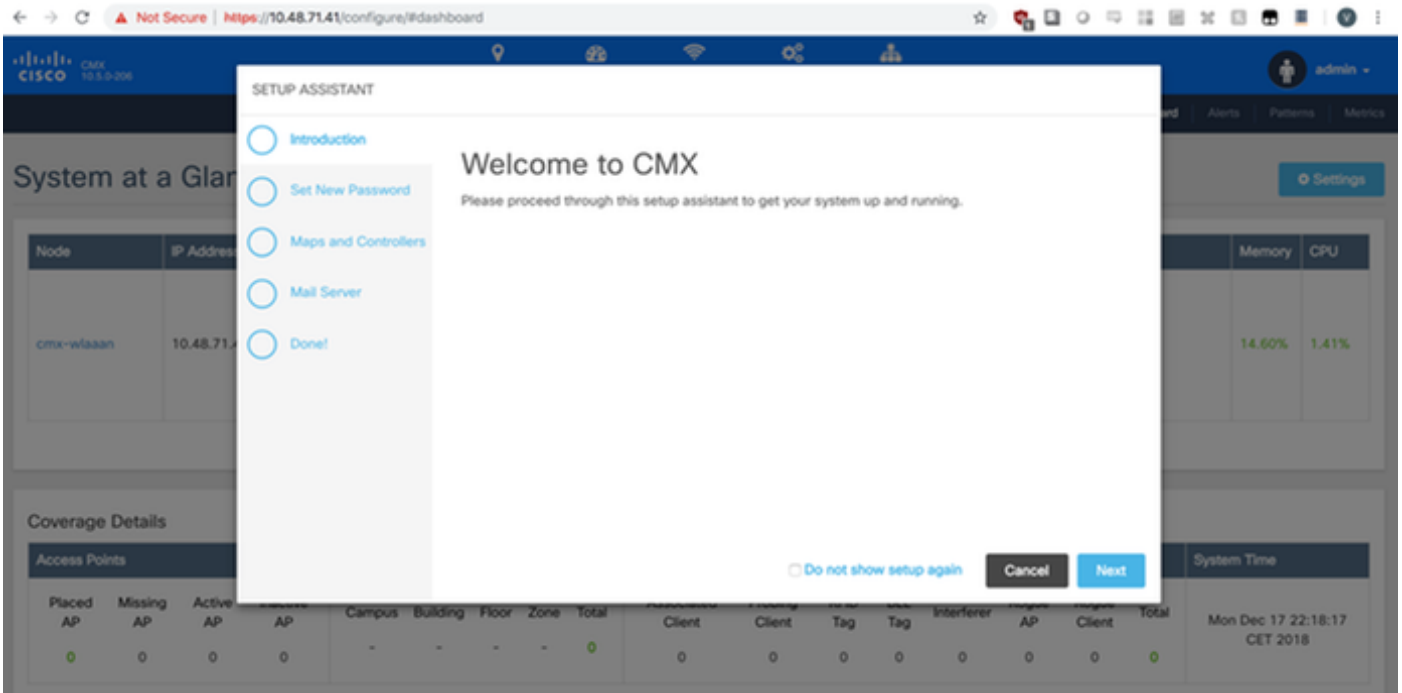

Figure 29.CMX setup assistant