



## Prepare UCS Servers

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This chapter describes how to configure and prepare UCS servers for iNode Manager software installation.

- Configure the servers using the [Cisco Integrated Management Controller \(CIMC\)](#).
- Install the ESXi Hypervisor.
- Add the ESXi hosts to a vSphere cluster using VMware vCenter.
- [Install and Configure iNode Manager Cluster, on page 1](#)
- [Add ESXi Hosts to vSphere Virtual Infrastructure, on page 3](#)

## Install and Configure iNode Manager Cluster

To install and configure the Cisco iNode Manager cluster, do the following:

1. [UCS Server Installation, on page 1](#)
2. [Update Firmware, on page 2](#)
3. [Configure Boot Drives, on page 2](#)
4. [Configure Data Drives, on page 2](#)
5. [Install the VMware ESXi Hypervisor, on page 2](#)
6. [Reboot ESXi Host and Set Boot Device, on page 3](#)

## UCS Server Installation

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**Step 1** Rack mount the servers.

For more details, refer the [Cisco UCS C220 M5 Server Installation and Service Guide](#).

**Step 2** Ensure that both power supplies are connected on each server and power on the servers.

**Step 3** Connect the network cables.

- For CIMC, use the 1-Gb Ethernet dedicated management port.
- For ESXi Host Management, use the Ethernet Port 1 of the Dual 1Gb/10Gb Intel X550T onboard NIC.

- For iNode Manager data, connect port 1 of the Intel XL710 40G NIC in PCIe Slot 1 to the SP Router/Leaf Switch using Cisco QSFP-40G-SR4.

**Step 4** Connect the UCS KVM console adapter or connect a keyboard and a monitor directly to the server.

**Step 5** Configure the Cisco IMC through the KVM console and update the [Network Settings](#)

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## Update Firmware

Download the latest Hardware Update Utility for the UCS C220 M5 server from the [Cisco Software Download](#) site. The Utility helps you to update the CIMC, BIOS, and device firmware for storage controllers, network adapters, SSDs, and other components.

## Configure Boot Drives

**Step 1** Enable the Cisco MSTOR Boot Optimized M.2 RAID Controller.

**Step 2** Create RAID 1 virtual drive from 2 x M.2 SSD drives.

**Step 3** Set Stripe Size to 64 KB.

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## Configure Data Drives

**Step 1** Enable Cisco 12G SAS Modular RAID Controller.

**Step 2** Create RAID 5 enabled virtual drive using 4 x SSDs.

**Step 3** Set Stripe Size to 64 KB.

**Step 4** Set the Write Cache Policy to **Write Back with Good BBU**.

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## Install the VMware ESXi Hypervisor

**Step 1** Install VMware ESXi 7.0 Update 3 on the M.2 RAID 1 Virtual Drive (Boot Drive).

Use the Cisco Custom ISO: `vmware-esxi-7.0.3d-19482537-Custom-Cisco-4.2.2-a.iso`

**Step 2** Set a password for the root user per the installation process.

**Step 3** Reboot the VMware ESXi host according to the installation process.

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## Reboot ESXi Host and Set Boot Device

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- Step 1** Interrupt the boot process with F2 after the host resets and boot into the BIOS.
  - Step 2** Under the **Boot Options** tab set the **Boot Option #1** to the UEFI target: `VMWARE ESXi`
  - Step 3** Disable all other boot options.
  - Step 4** Save changes and exit.
  - Step 5** Confirm whether the host boots directly into VMware ESXi.
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## Add ESXi Hosts to vSphere Virtual Infrastructure

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- Step 1** Configure ESXi host management networking.
    - a) Log in to the ESXi host through the DCUI with the root account.
    - b) Configure the Management Network: Update IP configuration, DNS configuration, custom DNS suffixes, and VLAN ID (if necessary).
  - Step 2** Add ESXi hosts to the VMware vCenter server.
    - a) In VMware vCenter, create a new, dedicated cluster for iNode Manager.
      - Do not enable DRS or any HA features.
    - b) Add each new iNode Manager ESXi host to the new iNode Manager cluster.
  - Step 3** Configure and enable required ESXi host features.
    - a) Configure time on the host: Enable NTP.
    - b) Apply ESXi host licenses.
    - c) Create a new data store on the data drive storage device.
  - Step 4** Configure VM networking.
    - a) Ensure VMware vSwitch connectivity to the physical switch.
    - b) Create a PortGroup and vSwitch for the K8s cluster node VM management network.
- Note** For Multinode deployment, ensure that the network name setup is similar across UCS hosts for ease of use and configuration.
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