



# Cisco MSE Virtual Appliance Overview

- [Overview, page 1-1](#)
- [Cisco MSE Virtual Appliance Reference Hardware Configurations, page 1-1](#)
- [Resource Management, page 1-2](#)

## Overview

The Cisco Mobility Services Engine (MSE) is offered as a virtual appliance, to support lower-end, standard, and high end deployments.

The following are the MSE virtual appliance standard templates:

- Open Virtualization Format (OVF) for VMware
- Virtual Hard Disk (VHD) for Microsoft Hyper-V
- Open Virtualization Format (OVF) for Citrix XenServer

## Cisco MSE Virtual Appliance Reference Hardware Configurations

[Table 1-1](#) lists the available MSE virtual appliance reference hardware configurations.

**Table 1-1**      *Reference Hardware Configurations*

	<b>MSE Low-End Virtual Appliance</b>	<b>MSE Standard Virtual Appliance</b>	<b>MSE High-End Virtual Appliance</b>
<b>Processor</b>	UCS-CPU-E5-2609 (qty 1)	UCS-CPU-E5-2660 (qty 1)	UCS-CPU-E5-2660 (qty 2)
<b>RAM</b>	UCS-MR-1X082RX-A (qty 1) - 8 GB	UCS-MR-1X082RX-A (qty 2) - 16 GB	UCS-MR-1X041RX-A (qty 4) - 24 GB
<b>Disk</b>	UCS-HDD300G12F208 (qty 2, in RAID 1 configuration)	UCS-HDD300G12F208 (qty 4, in RAID 10 configuration)	UCS-HDD300G12F208 (qty 4, in RAID 10 configuration)
<b>RAID</b>	UCS-RAID-9266CV	UCS-RAID-9266CV	UCS-RAID-9266CV

Table 1-2 lists example Cisco Unified Computing System™ (Cisco UCS) configurations that match the minimum requirements.

**Table 1-2 Example Cisco UCS Configurations that Match the Minimum Requirements**

	MSE Low-End Virtual Appliance	MSE Standard Virtual Appliance	MSE High-End Virtual Appliance
	<b>UCSC-C240-M3L</b> UCS C240 M3 LFF w/o CPU, memory, HD, PCIe, PSU w/rail kit, expdr	<b>UCSC-C240-M3L</b> UCS C240 M3 LFF w/o CPU, memory, HD, PCIe, PSU w/rail kit, expdr	<b>UCSC-C240-M3L</b> UCS C240 M3 LFF w/o CPU, memory, HD, PCIe, PSU w/rail kit, expdr
	<b>UCS-CPU-E5-2609</b> 2.4 GHz E5-2609/80W 4C/10MB Cache/DDR3 1066MHz	<b>UCS-CPU-E5-2660</b> 2.20 GHz E5-2660/95W 8C/20MB Cache/DDR3 1600MHz	<b>UCS-CPU-E5-2660</b> 2.20 GHz E5-2660/95W 8C/20MB Cache/DDR3 1600MHz
	<b>UCS-MR-1X082RX-A</b> 8GB DDR3-1333-MHz RDIMM/PC3-10600/2R/1.35v	<b>UCS-MR-1X082RX-A</b> 8GB DDR3-1333-MHz RDIMM/PC3-10600/2R/1.35v	<b>UCS-MR-1X041RX-A</b> 4GB DDR3-1333-MHz RDIMM/PC3-10600/1R/1.35v
	<b>UCS-HDD300GI2F208</b> 300GB SAS 15K RPM 3.5 inch HDD/hot plug/drive sled mounted	<b>UCS-HDD300GI2F208</b> 300GB SAS 15K RPM 3.5 inch HDD/hot plug/drive sled mounted	<b>UCS-HDD300GI2F208</b> 300GB SAS 15K RPM 3.5 inch HDD/hot plug/drive sled mounted
	<b>UCS-RAID-9266CV</b> MegaRAID 9266CV-8i w/TFM + Super Cap	<b>UCS-RAID-9266CV</b> MegaRAID 9266CV-8i w/TFM + Super Cap	<b>UCS-RAID-9266CV</b> MegaRAID 9266CV-8i w/TFM + Super Cap
	<b>UCSC-PSU-650W</b> 650W power supply for C-Series rack servers	<b>UCSC-PSU-650W</b> 650W power supply for C-Series rack servers	<b>UCSC-PSU-650W</b> 650W power supply for C-Series rack servers
	<b>R2XX-DMYMPWRCORD</b> No power cord option	<b>R2XX-DMYMPWRCORD</b> No power cord option	<b>R2XX-DMYMPWRCORD</b> No power cord option

## Resource Management

Resource management depends on the license that you want to deploy. Table 1-3 lists the different levels at which you can configure the virtual appliance.

**Table 1-3 Virtual Machine Sizing Chart**

Primary MSE Virtual Appliance Level	Resources		Supported License (Individually)		
	Total Memory	Virtual CPUs	Base License (APs)	CMX License (APs)	wIPS License (APs)
Low End	8G	4	200	Not supported	2000
Standard	16G	8	2500	2500	6000
High End	24G	16	5000	5000	8000