# Cisco ONE for Data Center Compute 2.0 Integration Guide

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# Cisco ONE for Data Center Compute Integration Guide

## Introduction

### Overview

Cisco ONE for Data Center Compute helps to build a comprehensive automation platform. It aids in managing and upgrading infrastructure and network software at a reduced cost. Cisco ONE for Data Center Compute also secures private and hybrid cloud deployments for both physical and virtual environments; hence increasing IT agility. Above all, it enables automated, policy-based cloud computing. This assures secure mobility of workload and resources between different cloud models in compliance with all the policies.

Cisco ONE for Data Center Compute provides the following modules to automate and manage hybrid-ready cloud instances:

- Cisco ONE Foundation for Compute
- Cisco ONE Enterprise Cloud Suite

#### Cisco ONE Enterprise Cloud Suite

Cisco ONE Enterprise Cloud Suite provides a set of tools that supports self-service ordering, monitoring, and lifecycle management of private and hybrid cloud instances. You can use Cisco ONE Enterprise Cloud Suite to automate and manage your on-premise private cloud instances and to enable IT infrastructure and resources. Additionally, it supports secured access to hybrid cloud resources along with workload deployment across private and public clouds.

Cisco ONE Enterprise Cloud Suite supports modular automation across all layers of the organization. Modular automation furnishes flexibility to subdivide the automation of an existing infrastructure with minimal impact on productivity.

#### Cisco ONE Foundation for Compute

Cisco ONE Foundation for Compute automates provisioning of virtual private data centers, supports self-service ordering of compute resources your Cisco UCS, and manages your Cisco UCS and multi vendor compute infrastructure. Cisco ONE Foundation for Compute includes Intercloud Fabric for Business (ICFB) and supports deployment of virtual workloads to public clouds.

### Products and Supported Versions

The following table gives information about products included in Cisco ONE for Data Center Compute:

| Product | Functionality | Foundation for Compute | Enterprise Cloud Suite | Version |
|---|---|---|---|---|
| UCS Director* | Supports unified management of converged infrastructure solutions based on the Cisco UCS and Cisco Nexus platforms. | Included*<br>UCS Director Foundation | Included | 5.3 |

| Product | Functionality | Foundation for Compute | Enterprise Cloud Suite | Version |
|---|---|---|---|---|
| Prime Service Catalog Virtual Appliance* | Self-service portal for ordering and managing IT infrastructure and resources. | Included* Prime Service Catalog Foundation | Included | 11.0 |
| Cisco Virtual Application Container Service (VACS) | Supports automated licensing, installation, and deployment of virtual services in the datacenter using container templates. VACS supports ACI containers. | Not included | Included | 2.0 |
| Intercloud Fabric for Business (ICFB) | Supports workload deployment across private and public cloud environments. | Included | Not Included | 2.2.1 |
| UCS Performance Manager* | Supports performance monitoring and capacity planning of Cisco UCS components and UCS Integrated Infrastructure. | Included* UCS Performance Manager Foundation | Included | 1.1 |
| UCS Central | Supports management of Cisco UCS components across distributed datacenters. | Included | Not Included | 1.2 |
| Cisco Energy Management | Supports optimized IT capacity and energy efficiency management. | Included | Not Included | 2.8 |

* Indicates that for Cisco ONE Foundation for Compute, the product versions mentioned in the table are supported.

**Note** Intercloud Fabric for Business (ICFB) supports Amazon Web Services (AWS), Microsoft Azure, and Intercloud Fabric Public Private clouds (ICF-PP). For more information on the list of supported clouds, see *Supported Cloud Providers* section of Cisco Intercloud Fabric Release Notes, Release 2.2.1

# Prerequisites

## Installation Requirements

| Products | Minimum Required resources |
|---|---|
| Prime Service Catalog Virtual Appliance 11.0 | Only vSphere 5.x supported.<br>4 CPU, 16 GB of memory, 100 GB of disk space |

| Products | Minimum Required resources |
|---|---|
| UCS Director 5.3 for VMware<br>(HyperV and BareMetal also available) | VMware vSphere vCenter Server 5.1 or later.<br>Up to 2000 VMs, 4 vCPU, 8 GB Memory, 100 GB Hard Disk<br>(up to 5000 VMs is next level of requirement) |
| UCS Director 5.3 Bare Metal Agent | 2 vCPU, 3 GB Memory, 40 GB Hard Disk |
| Cisco Virtual Application Container Service (VACS) 1.1.2 | VMware vSphere 5.1 or later.<br>Cisco Virtual Services Gateway 5.2(1)VSG3(1.1) - 1 vCPU, 2 GB Memory, 3 GB Hard Disk |
| | Cisco Nexus 1000V VSM - 2 vCPU, 4 GB Memory, 3 GB Hard Disk (Cisco VACS installs the Cisco Nexus 1000V in an HA pair) |
| | Cisco Prime network Services Controller (PNSC) - 4 vCPU, 4 GB Memory, 220 GB Hard Disk |
| | Cisco Cloud Services Router 1000V XE 3.14.0 - 1 vCPU, 4 GB Memory, 8 GB Hard Disk |
| | Cisco Virtual Switch Update Manager (VSUM) - 2 vCPU, 4 GB Memory, 80 GB Hard Disk |
| Intercloud Fabric for Business (ICFB) | VMware vSphere 5.1 or later. |
| | Intercloud Fabric - 8 vCPU (64-bit x86 CPU [VT-capable]), 20 GB Memory, 350 GB Hard Disk |
| | Intercloud Fabric Extender - 2 vCPU, 2 GB Memory, 3 GB Hard Disk |
| | Intercloud Fabric VSM - 2 vCPU, 1 GB Memory, 3 GB Hard Disk |
| | Provider Cloud minimum.<br>**Note** Please see System Requirements as per your chosen provider for more details. |
| | Intercloud Fabric Switch - 4 vCPU, 4 GB Memory, 20 GB Hard Disk |
| | Intercloud Fabric Firewall (VSG) - 1 vCPU, 3 GB Memory, 3 GB Hard Disk |
| | Intercloud Fabric Router (CSR) - 4 vCPU, 4 GB Memory, 8 GB Hard Disk |

| Products | Minimum Required resources |
|---|---|
| UCS Central | ESX 5.0 U3 minimum.<br>4 vCPU, 12 GB Memory, 40 GB Hard Disk 1, 40 GB Hard Disk 2 |
| UCS Performance Manager (UCSPM) | 4 vCPU, 32 GB Memory, 50 GB Hard Disk (Small Domain) |
| Cisco Energy Management | 2 vCPU, 4 GB Memory, 20 GB Hard Disk |

# Installing Cisco ONE for Data Center Compute Products

## Recommended Installation Order

Installing Cisco ONE for Data Center Compute products in the recommended order supports seamless integration and minimizes manual configuration required to facilitate integration. The following table gives information about the recommended order for installing Cisco ONE for Data Center Compute products:

For more information about product requirements and installation, see the hyperlinks given in the Installation Reference column.

| Product Installed | Installation Reference |
|---|---|
| Cisco UCS Central | Cisco UCS Central Installation Guide |
| Cisco UCS Director | Cisco UCS Director Installation Guide |
| Cisco VACS | Cisco VACS Installation Guide |
| Cisco Intercloud Fabric for Business | Cisco Intercloud Fabric for Business Installation Guide |
| Cisco Prime Service Catalog | Cisco Prime Service Catalog Installation Guide |
| Cisco UCS Performance Manager | Cisco UCS Performance Manager Installation Guide |

# Integrating Cisco ONE for Data Center Compute Products

The following sections provide deployment and the integration procedures for all the products in Cisco ONE for Data Center Compute Suite.

## Integrating Prime Service Catalog Virtual Appliance with UCS Director

To integrate Prime Service Catalog Virtual Appliance with UCS Director, deploy both the products by following the links in the table - section Recommended Installation Order, and then see Integrating UCS Director (UCSD) or Intercloud Fabric for Business (ICFB) with Prime Service Catalog section of Cisco Prime Service Catalog 11.0 Administration and Operation Guide

## Integrating Prime Service Catalog with Intercloud Fabric for Business

To integrate Prime Service Catalog Virtual Appliance with Intercloud Fabric for Business (ICFB), see Integrating UCS Director (UCSD) or Intercloud Fabric for Business (ICFB) with Prime Service Catalog section of Cisco Prime Service Catalog 11.0 Administration and Operation Guide

## Integrating Prime Service Catalog with Cisco VACS

To integrate Prime Service Catalog Virtual Appliance with Cisco VACS, see Integrating UCS Director (UCSD) or Intercloud Fabric for Business (ICFB) with Prime Service Catalog section of Cisco Prime Service Catalog 11.0 Administration and Operation Guide

# Use Cases for Cisco ONE for Data Center Compute

## Use Cases and Required Products

The following table provides information about different Cisco ONE for Data Center Compute use cases and products required to support the use cases:

**Note** The Cisco ONE for Data Center Compute use cases listed in the following table are supported on VMware ESXI hypervisor and VMware vSphere systems. Cisco ONE for Data Center Compute supports Flexpod, Vblock, EMC VSPEX, and other Multi-vendor compute environments within a private cloud.

| Use Case | Required Products | Supported Suites | Scope |
|---|---|---|---|
| Onboard new Integrated Infrastructure | UCS Director | Cisco One Enterprise Cloud Suite | You can rapidly add new infrastructure to existing cloud/data center environment. |
| Infrastructure as a Service | UCS Director<br>Prime Service Catalog<br>Intercloud Fabric for Business (if deploying Virtual Machines to the public cloud) | Cisco One Enterprise Cloud Suite<br>Cisco One Foundation for Compute | You can order Virtual Machines from a catalog to deploy on the private/public cloud and Bare Metal servers on private cloud. |
| Application Stack Deployment | Prime Service Catalog<br>UCS Director | Cisco One Enterprise Cloud Suite | You can design and deploy complete multi-tier application stack using a graphical user interface.<br>**Note** Application Stack Deployment use case uses Fenced Containers. |
| Tenant Self-Administration | Prime Service Catalog<br>UCS Director (in MSP mode only) | Cisco One Enterprise Cloud Suite | Tenant administrators can manage consumption of their own capacity through the portal.<br>**Note** Only available in an ACI-Fabric environment. |

| Use Case | Required Products | Supported Suites | Scope |
|---|---|---|---|
| Secure Application Segmentation | UCS Director<br>Virtual Application Container Service | Cisco One Enterprise Cloud Suite | You can rapidly deploy applications in securely segmented virtual environment. |
| Secure Network Extension to the Public Cloud | Prime Service Catalog<br>Intercloud Fabric for Business | Cisco One Enterprise Cloud Suite<br>Cisco One Foundation for Compute | You can securely move workloads between private and public clouds. |

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*, at: http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html.

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