Preface

The Cisco Virtualized Multi-Tenanted Data Center Solution (VMDC), Version 1.1, Deployment Guide provides the system-level best practices and deployment guidelines required to deploy a virtualized, multi-tenanted data center. You can use the reference architecture to build multi-tenanted solutions that enable highly available, elastic, and resilient services for virtualized compute, network, and storage.

The Infrastructure as a Service (IaaS) architecture focuses on compute and virtualized hosting in a public or private cloud. The IaaS architecture integrates the Cisco Unified Compute System (UCS) B series blade servers, Cisco UCS 5100 chassis, and Cisco UCS 6100 series Fabric Interconnects.

The following sections define the purpose and intended audience of this guide:

- Document Purpose, page 5
- Audience, page 5

Document Purpose

This guide helps the reader to better understand the VMDC solution. It guides the reader on basic design principles and considerations for end-to-end features enablement across the solution components.

Audience

This guide is written for network administrators, IT personnel, and/or consultants who responsible for configuring the software settings across the network, compute, and storage devices required to realize the solution. We assume you are experienced with the installation and acceptance of products in this solution and that you understand the procedures required to upgrade and troubleshoot network, storage, and operating systems.

This guide requires basic familiarity with the following concepts and solution components:

- Data center network architectures and designs
- OSI Layer 2/Layer 3 designs and protocols
- Spanning Tree Protocol (STP)
- IP protocols
- OSPF, BGP, and IS-IS routing protocols
- MPLS, Layer 2 VPNs, Layer 3 VPNs
- Firewalls and load balancers

- Fibre Channel and FCoE
- Quality of Service
- Storage Area Networking (SAN) basics
- Cisco Nexus family of data center switches
- Cisco Catalyst family of switches and service modules
- Cisco MDS family of SAN switches
- Cisco Unified Compute System (UCS)
- VMware Virtual Machines, Virtual Center, ESX, and vSphere 4.0
- Familiarity with Microsoft Windows and Linux operating systems

Related Documentation

The following documentation is related to this solution.

Related Cisco Product Documentation

- Nexus 1000V Configuration Guides
- UCS 6100 CLI Configuration Guide
- UCS 6100 GUI Configuration Guide
- Cisco UCS 5108 Blade Server Chassis Configuration
- UCS Manager CLI Configuration Guide
- UCS Manager GUI Configuration Guide
- Nexus 7000 Configuration Guides
- Cisco Catalyst 6500 Configuration Guides
- Cisco Catalyst 6500 VSS Configuration Guides
- Cisco Catalyst 6500 Release Notes
- Cisco 7600 Configuration Guides
- Cisco 7600 ES+ Configuration Guides
- Cisco Application Control Engine Module Configuration Guides
- Cisco Firewall Service Module Configuration Guide 4.0

Related Third-Party Documentation

- VMware Vsphere CLI documentation
- VMware Vsphere Configuration Maximums
- VMware Vsphere Power CLI Documentation
- VMware's Fibre Channel SAN Configuration Guide
- VMware San Compatibility Guide

- VMware Optimization Guide
- Linux Command Lookup
- DHCP Static Route RFC 2132
- DHCP Static Route RFC 3442
- Fibre Channel over Ethernet