Cisco Virtualized Infrastructure Manager

Cisco® Virtualized Infrastructure Manager is a turnkey lifecycle management platform for enabling the installation, deployment, and management of a highly secure and performant cloud.

Product Overview

Cisco Virtualized Infrastructure Manager helps accelerate a network operator's business transformation goals that are being driven by virtualization. Virtualization is an enabling technology, opening new market opportunities and providing new types of efficiencies. Cisco Virtualized Infrastructure Manager abstracts away much of the complexity of setting up and managing a cloud, providing a simple installation process along with a host of operational and validation tools. The integrated tools within Cisco Virtualized Infrastructure Manager allow operators to test reliability, scalability, and performance of the infrastructure, thereby optimizing their network resources and lifecycle management processes.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tbody>
<tr>
<td>Carrier-class platform</td>
<td>Provides a highly available, secure, scalable, and performant cloud</td>
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<td>Automated deployment</td>
<td>Reduces cloud bring-up time via an end-to-end automated modular flow that is reliable, repeatable, and consistent</td>
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<td>Ubiquitous security</td>
<td>Reduces the surface area for attacks by using a defense-in-depth approach following Cisco's security best practices (development, validation, deployment, and operations)</td>
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<td>&quot;Air-gapped&quot; deployment</td>
<td>Enables offline installation and full software lifecycle management</td>
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<td>Hardware lifecycle management</td>
<td>Provides transparent, fully automated hardware addition, removal, and replacement with zero to minimal service disruption</td>
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<tr>
<td>Software lifecycle management</td>
<td>Provides transparent, fully automated software updates, rollback, and postinstall configuration changes with zero to minimal service disruption</td>
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<td>Data-plane flexibility</td>
<td>OVS, SR-IOV, VPP (fd.io), LinuxBridge</td>
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<td>SDN controller</td>
<td>Provides integration with <a href="http://www.cisco.com">Cisco VTS</a></td>
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<td>Third-party hardware</td>
<td>Fully integrated and validated support for Intel NICs</td>
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<td>Enhanced platform awareness (EPA)</td>
<td>Automated deployment of EPA features across multiple nodes, validated and tuned for a carrier-class cloud</td>
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<td>Standardized interfaces</td>
<td>Provides comprehensive and well-defined RESTful APIs for transparent external integration</td>
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<td>Third-party storage</td>
<td>Integrates with SwiftStack for object storage</td>
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Simple and Automated Installer
Cisco Virtualized Infrastructure Manager makes deploying and managing an on-premise private cloud a simpler process. Cisco Virtualized Infrastructure Manager is built with a full-service, automated installer to get an on-premise, secure, carrier-class cloud up and running. This includes support for an end-to-end deployment starting from bare metal to a fully operational cloud. The workflow for setting up the Cisco Virtualized Infrastructure Manager is simple:

- **Day 0**
  - Download
  - Download the Virtualized infrastructure Manager.

- **Day 1**
  - Install and validate
  - Use the full-service, automated installer to bring up your cloud and then verify things are working properly with the included open-source tools.

- **Day N...**
  - Manage, monitor, and optimize
  - Integrated operation and validation tools for advanced telemetry, analysis, and visualization along with transparent automated software updates aligned with future OpenStack releases.

Private Cloud
The Cisco Virtualized Infrastructure Manager supports a quick and reliable install and bring-up of a cloud (day 0 and day 1). The software also provides easy configuration, ongoing monitoring, data insights, automated updates, upgrades, and pod management functions (day N). As a result, the complexity of managing and maintaining cloud infrastructure deployments is significantly eased.

Integrated Tools
Cisco Virtualized Infrastructure Manager comes with a host of fully integrated operational tools, including:

- Centralized logging for troubleshooting (for example, Elastic Stack)
- Integration with Zenoss for monitoring and assurance
- CloudPulse: NFVI control plane and API endpoint health check (collaboration, docs, Github)
- Virtual Machine Throughput and Performance (VMTP): Full virtual topology bring-up and throughput tests (Github)
- NFVbench: Network end-to-end throughput performance benchmarking (OPNFV)

Security
The Cisco Virtualized Infrastructure Manager is secured via a defense-in-depth approach. Cisco Virtualized Infrastructure Manager code undergoes several security verification cycles. Inherent security features include:

- Minimum attack surface (no unnecessary open ports)
- On-demand password reset
- Randomly generated passwords
- Transparent updates of security patches
- SELinux (host level) always enabled
- SSL support
- TLS support
- Host-based firewalls
- Immutable containers
- Nonroot containers

The Cisco Virtualized Infrastructure Manager is supported on the following hardware platforms:

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Platforms supported</th>
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<tbody>
<tr>
<td>Servers</td>
<td>Cisco UCS® B and C Series</td>
</tr>
<tr>
<td>ToR switches</td>
<td>Cisco Nexus® 9000 Series</td>
</tr>
<tr>
<td>Management switches</td>
<td>Cisco Catalyst® 2000 and 3000 series</td>
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**Licensing Information**

For more information, visit the Cisco Ordering home page.

**Ordering Information**

Cisco VIM is available. To order, visit the Cisco Ordering home page.

For additional product numbers, including hardware options, contact your local Cisco account representative. To place an order, visit the Cisco Ordering home page.

**Cisco Services for Enabling Your Cloud**

Setting up, integrating, and managing cloud services within your network can be complicated. Services from Cisco can help you get your cloud up and running so you can begin transforming your infrastructure and accelerate business innovation and growth. Cisco Services include planning and design services, technical services, and optimization services. For more information about how Cisco Services can help you, visit https://www.cisco.com/go/services.

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**Speed Up and Deploy Secure, Highly Performing, Private On-Premise Clouds**

Transform the way you manage your network’s virtual and physical resources by embracing the power of open-source and cloud virtualization. Develop and deliver newer, better services for your customers using a secure, high-performing cloud with Cisco Virtualized Infrastructure Manager. For additional information, visit https://www.cisco.com/c/en/us/products/cloud-systems-management/virtualized-infrastructure-manager/.