

HCLTech Virtualized Infrastructure Manager

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

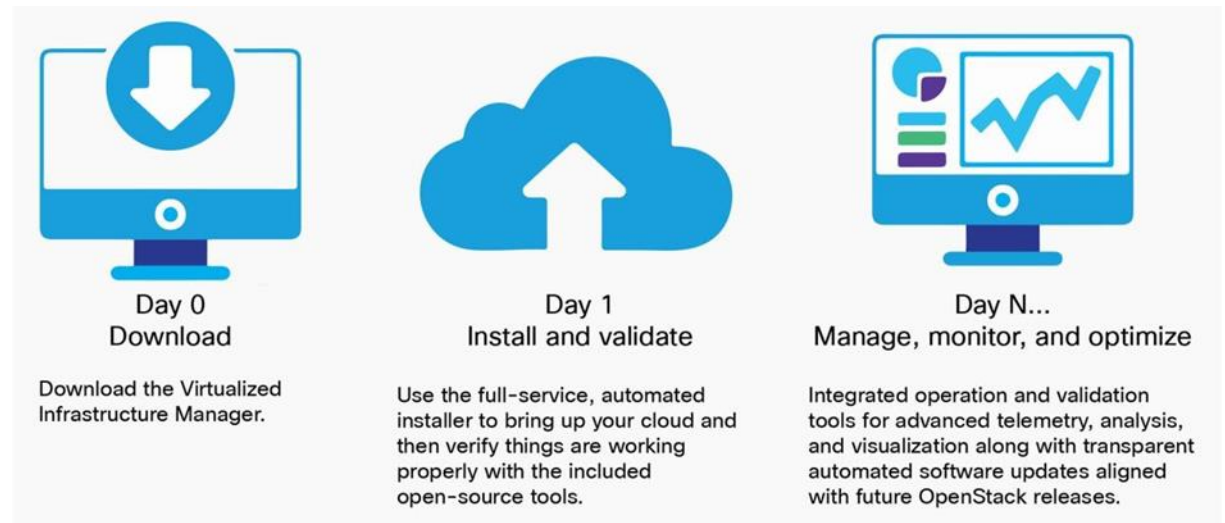
Product Overview

HCLTech 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. HCLTech 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 HCLTech Virtualized Infrastructure Manager allow operators to test reliability, scalability, and performance of the infrastructure, thereby optimizing their network resources and lifecycle management processes.

Features and Benefits	
Feature	Benefit
Carrier-class platform	Provides a highly available, secure, scalable, and performant cloud
Automated deployment	Reduces cloud bring-up time via an end-to-end automated modular flow that is reliable, repeatable, and consistent
Ubiquitous security	Reduces the surface area for attacks by using a defense-in-depth approach following Cisco's security best practices (development, validation, deployment, and operations)
"Air-gapped" deployment	Enables offline installation and full software lifecycle management
Hardware lifecycle management	Provides transparent , fully automated hardware addition, removal, and replacement with zero to minimal service disruption
Software lifecycle management	Provides transparent , fully automated software updates, rollback, and postinstall configuration changes with zero to minimal service disruption
Data-plane flexibility	OVS, SR-IOV, VPP (fd.io), LinuxBridge
SDN controller	Provides integration with Cisco VTS
Third-party hardware	Fully integrated and validated support for Intel NICs
Enhanced platform awareness (EPA)	Automated deployment of EPA features across multiple nodes, validated and tuned for a carrier-class cloud
Standardized interfaces	Provides comprehensive and well-defined RESTful APIs for transparent external integration
Third-party storage	Integrates with SwiftStack for object storage

Simple and Automated Installer

HCLTech Virtualized Infrastructure Manager makes deploying and managing an on-premise private cloud a simpler process. HCLTech 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:



Integrated Tools

HCLTech Virtualized Infrastructure Manager comes with a host of fully integrated operational tools, including:

- Centralized logging for troubleshooting (for example, [Elastic Stack](#))
- 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 HCLTech Virtualized Infrastructure Manager is secured via a defense-in-depth approach.

HCLTech 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 HCLTech Virtualized Infrastructure Manager is supported on the following hardware platforms:

Hardware	Platforms supported
Servers	Cisco UCS® B and C Series
ToR switches	Cisco Nexus® 9000 Series
Management switches	Cisco Catalyst® 2000 and 3000 series