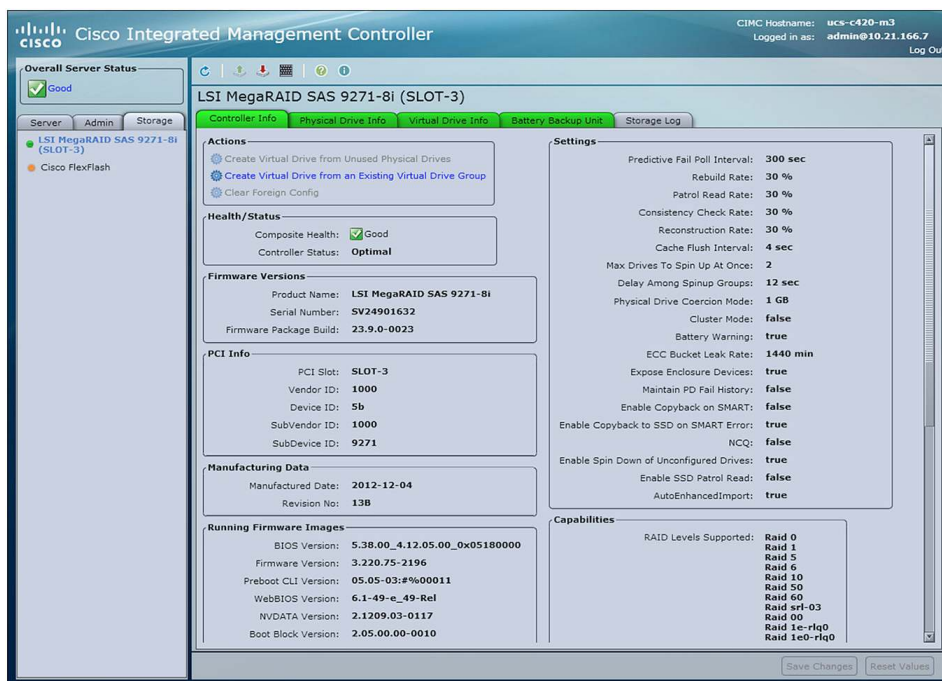


Cisco Integrated Management Controller (IMC) 1.5

Product Overview

The Cisco Integrated Management Controller (IMC) is a baseboard management controller that provides embedded server management for Cisco UCS C-Series Rack Servers. The Cisco IMC enables system management in the datacenter and across distributed branch-office locations. The Cisco IMC supports multiple management interfaces, including a web user interface (Web UI), a command-line interface (CLI), and an XML API that is consistent with the one used by Cisco UCS Manager. The Cisco IMC also supports industry-standard management protocols, including Simple Network Management Protocol Version 3 (SNMPv3) and Intelligent Platform Management Interface Version 2.0 (IPMIv2.0). Figure 1 shows a Cisco IMC screen.

Figure 1. Cisco IMC



Features and Benefits

Table 1 summarizes the features and benefits of the Cisco IMC.

Table 1. Features and Benefits

Feature	Description
Simplified Server Setup and Configuration	
Simple firmware upgrade	<ul style="list-style-type: none">• Out-of-band upgrades<ul style="list-style-type: none">◦ BIOS, Cisco IMC, and Cisco UCS VIC adapter upgrade• Automated Multisystem upgrade<ul style="list-style-type: none">◦ RAID and LOM
Integrated diagnostics	<ul style="list-style-type: none">• Platform diagnostic suite
Local storage configuration	<ul style="list-style-type: none">• Out-of-band RAID configuration wizard• Simple, fast configuration of RAID arrays and multiple volumes
vBoot control	<ul style="list-style-type: none">• Flexible boot target configuration management
Cisco UCS Virtual Interface Card (VIC) configuration	<ul style="list-style-type: none">• Configuration of Cisco UCS VIC• Configuration to enable Ethernet, Fibre Channel over Ethernet (FCoE), Cisco Adapter Fabric Extender (Adapter FEX), and Cisco Data Center Virtual Machine FEX (VM-FEX)• Network interface card (NIC) configuration, which eliminates the need for configuration from the OS
Interfaces	
XML API	<ul style="list-style-type: none">• Easy-to-use programmable interface• Agentless• Microsoft Windows PowerShell support (Cisco PowerTool for standalone Cisco UCS C-Series servers)• Consistent model between Cisco UCS Manager and standalone deployments
WebUI	<ul style="list-style-type: none">• Access to Cisco IMC configuration and control from a web browser
CLI	<ul style="list-style-type: none">• CLI for scripted environments
SNMP v1, v2, and v3	<ul style="list-style-type: none">• Embedded agentless MIB catalog
IPMI v1.5 and v2.0	<ul style="list-style-type: none">• Support for IPMI tool
Windows Management Interface (WMI)	<ul style="list-style-type: none">• Support for WMI
Serial over LAN	<ul style="list-style-type: none">• Support for Serial-over-LAN capability
Remote Administration	
Virtual keyboard, video, and mouse (KVM)	<ul style="list-style-type: none">• Remote access to server console screen
Virtual power on and off	<ul style="list-style-type: none">• Remote power on, off, and reset from WebUI, KVM, and XML API
Global team collaboration (KVM)	<ul style="list-style-type: none">• RBAC for distributed global teams• Up to 5 simultaneous administrator sessions
Locally mountable virtual media	<ul style="list-style-type: none">• Remote mounting of network available media using Network File System (NFS) and Common Internet File System (CIFS); KVM mounted or Cisco IMC mounted• Connectivity support for USB, CD, ISO images, virtual floppy drive images, and remote storage
Serial over LAN	<ul style="list-style-type: none">• SSH Serial-over-LAN server administration
Network Time Protocol (NTP)	<ul style="list-style-type: none">• NTP support for remote operations
SNMP	<ul style="list-style-type: none">• SNMP support from management plane• Use of Cisco Unified Computing System™ (Cisco UCS) MIBs• Consistent data format across Cisco UCS Manager and standalone modes
XML API	<ul style="list-style-type: none">• Agentless out-of-band management
Embedded System Health Monitoring	
System health and configuration data	<ul style="list-style-type: none">• Embedded fault engine, delivering consistent error reporting through Cisco IMC interfaces
System event log	<ul style="list-style-type: none">• Security compliance and event monitoring and filtering

Feature	Description
Audit log	<ul style="list-style-type: none"> Security compliance and filtering
Technical support data export	<ul style="list-style-type: none"> Quick access to configuration information, logs, and diagnostic data Simpler and faster troubleshooting and resolution of technical problems
Watchdog timer	<ul style="list-style-type: none"> System crash recovery
Nonmaskable interrupt (NMI) generation	<ul style="list-style-type: none"> Generation of NMI to x86 host Creation of crash dump file Debugging of OS crashes
RAID support	<ul style="list-style-type: none"> Embedded monitoring of entire RAID subsystem: RAID controller, battery backup units, SuperCap batteries, and HDDs
MAC address inventory	<ul style="list-style-type: none"> Inventory of all physical NIC and LOM MAC addresses
Cisco UCS VIC support	<ul style="list-style-type: none"> Monitoring of Cisco UCS VIC Ethernet, Cisco Adapter FEX, Cisco Data Center VM-FEX, and FCoE monitoring
CPU, temperature, fan, and motherboard	<ul style="list-style-type: none"> Remote status and monitoring of system health Run-time monitoring Complete system sensor data
System memory	<ul style="list-style-type: none"> Inventory, specifications, and health status
Predictive failure analysis	<ul style="list-style-type: none"> Memory DIMM failure prediction Battery backup unit or SuperCap battery
Power Management	
Dynamic power capping	<ul style="list-style-type: none"> Data center power management
Power monitoring and reporting	<ul style="list-style-type: none"> Power management Compliance reporting
Network Connectivity	
Single-wire connection	<ul style="list-style-type: none"> Simplified connectivity when deployed in a Cisco UCS Manager domain with a Cisco Nexus® 2232 10GE fabric extender Support for simplified connection with Cisco UCS VIC 1225 Converged fabric
Dedicated management port	<ul style="list-style-type: none"> Dedicated management port for installations requiring separate cable connection for data and management
Generic connectivity support	<ul style="list-style-type: none"> Dynamic Host Configuration Protocol (DHCP) support IPv4 support
Shared LAN-on-motherboard (LOM) mode	<ul style="list-style-type: none"> Simplified cabling Management and data traffic over a single wire
Security	
Secure Sockets Layer (SSL)	<ul style="list-style-type: none"> Cryptographic security
Secure Shell (SSH) 2.0	<ul style="list-style-type: none"> Cryptographic network protocol for secure data communication
Lightweight Directory Access Point (LDAP) support	<ul style="list-style-type: none"> Out-of-the-box Microsoft Active Directory integration
Role-based access control (RBAC)	<ul style="list-style-type: none"> RBAC for separation of concerns in data center operation
Locally stored accounts	<ul style="list-style-type: none"> Capability to define user accounts locally
Other	
Integration with Cisco UCS Manager	<ul style="list-style-type: none"> Service profile management model Scalability Virtual machine migration
Integration with Independent software vendor (ISV) offers	<ul style="list-style-type: none"> Open XML API specification for integration Integration with Altiris; Microsoft System Center Configuration Manager (SCCM), System Center Operations Manager (SCOM), and Windows PowerShell

Management Scope

Cisco IMC provides end-to-end management of all the devices in a rack server.

Licensing

Cisco IMC is currently provided at no additional charge with every Cisco UCS rack server.

Why Cisco?

Cisco has significant experience in responding to customer requirements with solid technology innovations for the enterprise data center. Enhancing Cisco's capability to deliver standards-based solutions is a broad ecosystem of industry-leading partners that provide end-to-end customer solutions and services that can accelerate the transition to an Unified Data Center architecture. Unified computing elevates the traditional product classification of network, server, storage, operating systems, and applications to a data center-wide vision. Cisco Unified Computing Services helps our customers quickly deploy data center resources, simplify ongoing operations, and optimize infrastructure to better meet business needs. For more information about these and other Cisco Data Center Services offerings, visit <http://www.cisco.com/go/unifiedcomputingservices>.

For More Information

- Cisco UCS Manager: <http://www.cisco.com/en/US/partner/products/ps10281/index.html>
- Understanding Cisco UCS Manager Service Profiles (white paper):
http://www.cisco.com/en/US/partner/prod/collateral/ps10265/ps10281/white_paper_c11-590518.html
- Manage Cisco UCS C-Series Rack-Mount Servers (white paper):
http://www.cisco.com/en/US/prod/collateral/ps10265/ps10281/whitepaper_c11-701809.html
- Cisco Unified Computing: <http://www.cisco.com/en/US/products/ps10265/index.html>
- Integrating with Cisco IM: <http://developer.cisco.com/web/unifiedcomputing/c-series-cimc-xml-api>



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