The bridge to possible

Cisco Ultra Cloud Core

Contents

Cisco® Ultra Cloud Core has unique capabilities making it the revenue-generating foundation of 5G transformation by speeding delivery of new services, reducing costs, and mitigating risks.

Product overview

Cisco Ultra Cloud Core is a Kubernetes-based solution that provides a common execution environment for Cisco's container-based 5G applications. This cloud-native platform is designed to meet the high-security and high-availability requirements of service provider networks. Additionally, it is designed for distributed architectures enabling multicloud and edge services at massive scale.

Using the Cisco Ultra Cloud Core, Cisco 5G applications are enabled with:

- Advanced analytics and advanced infrastructure health checks
- Simplified and low-risk methods to introduce new 5G services, new configurations, and upgrades
- Automated deployment and automated testing as part of a CICD workflow
- Consistent technology and software components across all Cisco 5G applications

Service providers who use the Cisco Ultra Cloud Core can benefit with faster time to market for new services, easier and automated deployments and upgrades, and overall lower operational costs.

Features and benefits

Table 1. Ultra Cloud Core features and benefits

Feature	Benefit
Cisco intelligent service mesh	What it is: Intelligent service mesh routes traffic within the cluster to specific application instances.
	Result: Multiple variations and configurations of services can run concurrently.
	Result: New services and upgrades can be introduced with very low risk.
Common execution environment	What it is: Common components for logging, alarming, events, deployment, upgrades, configuration, and provisioning
	Result: Cisco 5G applications are configured the same, deployed the same, and share the same logging, alarming, telemetry components.
	Result: Onboarding additional Cisco applications is easy.
Cisco operations center	What it is: An agent can deploy applications using a YANG schema and expose NETCONF/RESTCONF interfaces to each product by integrating with Cisco Network Services Orchestrator.
	Result: Common API, command line interface (CLI), and GUI interface to each 5G application
	Result: All change management can be orchestrated.
Granular tracing	What it is: Integration with application dynamics and open tracing for traffic flow monitoring
	Result: A new level of visibility of traffic flows across network functions and between and within services

Feature	Benefit
Release automation framework	What it is: This framework provides the ability to automate testing as part of the service deployment.
	Result: Testing becomes part of the service deployment workflow.
	Result: This automation reduces the time needed to certify new services, code, and new configurations, and reduces the time to market.

Cisco integrated intelligent service mesh functionality

The Cisco Ultra Cloud Core provides an intelligent service mesh that connects all services in the platform. This service mesh allows granular control of traffic flows within the Cisco Ultra Cloud Core based on message attributes or subscriber details. New or upgraded services can run concurrently in the platform alongside existing services, and the service mesh controls which messages are directed to the new service. Per-service telemetry is available to compare and evaluate the success of the new service. As a result, rollouts and upgrades are low risk and can be entirely automated–removing the human element.

Unique benefits:

- Reduce risks from introducing software upgrades or new services
- Faster time to market and revenue (up to 90% faster)

Platform support

Table 2. Platform support

Product family	Platforms supported
Cisco Ultra Cloud Core	VMware 6.5
	OpenStack
	Bare metal
	Google Cloud
	Amazon Cloud
	Microsoft Azure

Licensing

Table 3.   Licensing

Uses Cisco Smart Licensing - registers applications and number of sessions	
Application base	Per 5G application, per cluster
Sessions (increments of 10k)	Per 5G application, network-wide

Product specifications

Table 4.   Product specifications

Cisco Ultra Cloud features
Cisco common execution environment
Cisco intelligent service mesh
Release automation framework
Custom data store adapters

System requirements

Table 5.   System requirements

Feature	Description
Disk space	2 x 800 GB SSD (RAID 1) or equivalent input/output operations per second (IOPS) and redundancy
Hardware	• High-performance x86 64-bit chipset • CPU performance Passmark benchmark of 13K rating per chip and 1365 rating per thread, or better • ESX-compatible if using VMware
Memory	• At least DDR3-1600 or better than 1600 MT/s • ECC
Deployment requirement	Hardware oversubscription, network saturation, or CPU oversubscription reduces application performance and predictability. The Cisco Ultra Cloud Core will detect and take action when infrastructure requirements are not met.

Ordering information

Table 6.   Ordering information

Product IDs	Ultra mobility platform capabilities
UCC-SMI-BAS-L-K9	SMI Basic perpetual
UCC-SMI-BAS-B-K9	SMI Basic subscription
UCC-SMI-PLS-L-K9	SMI Plus perpetual
UCC-SMI-PLS-B-K9	SMI Plus subscription

Warranty information

Cisco Ultra Cloud Core has the standard Cisco software warranty.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

Cisco and Partner Services

Using the Cisco lifecycle services approach, Cisco and our partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you deploy and operate Cisco technologies and optimize their performance throughout the network lifecycle.

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Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

Call to action

Position your network for success with Cisco Ultra Cloud Core. For more information, contact your local account representative.

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