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The bridge to possible

Cisco Intersight

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Product overview

Cisco Intersight™ is a software-as-a-service (SaaS) hybrid cloud operations platform that delivers intelligent automation, observability, operations, and optimization to customers for traditional, cloud-native, and hybrid IT infrastructure and resources. It supports the Cisco Unified Computing System™ (Cisco UCS®) and Cisco HyperFlex™ hyperconverged infrastructure, Cisco® networking platforms, virtualization and container platforms, third-party servers and storage, public cloud platforms and services, and other integration endpoints. Because it is a SaaS-delivered platform, Intersight functionality increases and expands with weekly releases.

With Intersight, you get all of the benefits of SaaS delivery and full lifecycle management of distributed infrastructure and workloads across data centers, remote sites, branch offices, edge environments, and public cloud platforms. This empowers you to observe, analyze, optimize, update, maintain, and automate your environment through a unified platform in ways that were not previously possible. As a result, your organization can achieve significant TCO savings, delivering hybrid IT infrastructure, resources, and applications faster in support of new business initiatives.

For Cisco infrastructure, the Intersight platform works in conjunction with Cisco UCS Manager, Cisco Integrated Management Controller (IMC), and Cisco HyperFlex Connect. In addition, Intersight integrates with third-party storage, servers, public cloud services, virtualization, container platforms, and other SaaS services. You can simply associate a model-based configuration to provision servers and associated storage and fabric automatically, regardless of form factor. Using profiles, IT staff can consistently align policy, server personality, and workloads. These policies can be created once and used to simplify server deployments, resulting in improved productivity and compliance, and lower risk of failures due to inconsistent configuration. In addition, Cisco provides integrations to third-party operations tools, such as ServiceNow, to allow customers to use their existing solutions more efficiently.

"We don't have to babysit the data center anymore. HyperFlex and Intersight have been up and running for two years. We have had zero downtime on the hardware, and have seen a 10x improvement in operational efficiency."

David De Roock,
ICT Infrastructure Manager, EXMAR

Cisco Intersight technical features and benefits

Table 1.   Main features and benefits

Feature	Benefits
Unified monitoring and management	• Simplify the monitoring and management of Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public cloud resources and workloads, all from one unified hybrid IT operations platform • Increase scale across data centers, remote locations, and public cloud without additional complexity • Use unified dashboards for at-a-glance insights across Cisco, third-party, and public cloud resources • Cisco UCS Manager, Cisco IMC software, Cisco HyperFlex Connect, and Cisco UCS Director tunneling allow access to element managers that do not have local network access.
Configuration, provisioning, and installation	• All Cisco, third-party, and public cloud resources can be allocated and reallocated among application workloads for more dynamic and efficient use of hybrid IT capacity. • Policy-based profiles and templates for deployment and configuration enable you to consistently provision and operate your hybrid IT infrastructure and resources, maintain standardization, eliminate configuration errors, and minimize configuration drift. • Leverage policies and templates or clone profiles to quickly provision Cisco UCS or HyperFlex servers, regardless of where they are deployed • Create, deploy, and manage Cisco HyperFlex configurations • Install vMedia-based operating systems on the managed UCS servers
Orchestration and workflow designer	• Cisco Intersight Cloud Orchestrator is a low/no-code framework to create and execute complex orchestrations across multiple infrastructure domains, applications, and external endpoints. • Intersight Cloud Orchestrator includes a library of out-of-the-box automation tasks supporting operations across Cisco and third-party compute, network, storage, integrated systems, virtualization, container, public cloud platforms, and other automation engines such as HashiCorp Terraform Cloud. • Use the custom task designer to create your own library of automated operations using open standards such as HTTP/API, Ansible, PowerShell, SSH, and more • Use out-of-the-box workflows or create your own workflows by assembling tasks along with logical controls and loops. Built-in data transformation features help you adapt the format and flow of information as it passes through different domain automation and tasks. • Both workflow designer and custom task designer provide a drag-and-drop UI to simplify authoring with a low/no-code user experience. • Share your creations with colleagues or communities with import and export features • All or any part of a workflow may be rolled back to simplify deprovisioning or to address individual issues.
Inventory information, status, and capacity planning	• Display and report inventory information for Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public cloud platforms • Use global search to rapidly identify systems based on names, identifiers, tags, and other information • Monitor alerts and health status for hybrid IT infrastructure and resources across data centers and remote locations • Monitor and proactively manage HyperFlex storage capacity • Track and manage firmware and platform software versions for Intersight-connected systems and across supported integrated infrastructures such as FlexPod • Track and manage software versions and automated patch updates for Cisco UCS Director software installations
Enhanced support and end-customer experience	• Raise service requests and proactively authorize Return Materials Authorizations (RMAs) • Get centralized alerts about failure notifications • Automate the generation, forwarding, and analysis of technical support files to the Cisco Technical Assistance Center (TAC) to accelerate the troubleshooting process • View the current support contact status across the portfolio of managed systems to ensure systems have the expected level of support

Feature	Benefits
REST API	• Provides a RESTful API to manage hybrid IT infrastructure and resources across multiple data centers and public cloud • Supports the OpenAPI Specification (OAS) to provide full programmability and deep integration • The Python and PowerShell SDKs enable integrations with Ansible, Chef, Puppet, and other DevOps and IT Operations Management (ITOM) tools. • ServiceNow integration provides inventory and alerts to the IT service management platform to show Intersight inventory and configuration details, elevating the ITSM experience.
Proactive notifications and advisories	• Cisco security advisories alert users about any endpoint devices impacted by Cisco advisories, providing the latest information on severity, impacted products, and available workarounds.
Hardware Compatibility List (HCL)	• Evaluate and mitigate the impact of service issues from running nonvalidated combinations of firmware, server model, processor, adapters, operating system, and driver versions • Use Cisco UCS tools, a host utility vSphere Installation Bundle (VIB), or OS discovery tool (an open-source script) to collect OS and driver information to evaluate HCL compliance
Seamless integration and upgrades	• Upgrade firmware/software for UCS domains, UCS servers, HyperFlex clusters, UCS Director, Cisco Application Policy Infrastructure Controller (APIC), and Analysis Service Elements (ASE). Installation is supported for Cisco HyperFlex Edge and HyperFlex with Fabric Interconnect (FI) clusters. • Upgrades to Cisco Intersight are delivered automatically without requiring the resources of traditional management tool upgrades and operational disruptions.
Mobile app (not available for virtual appliance or private virtual appliance)	• Access Intersight on Android and iOS devices providing a mobility-optimized connection to resources managed in your account • Stay up to date with the status of your environment and connect with members of your IT organization to address critical issues on the go • Open Cisco TAC cases • Multi-language support
Tunneled vKVM	• Capability to launch tunneled virtual Keyboard, Video, and Mouse (KVM) sessions for Cisco UCS C-Series standalone servers

Flexible deployment options

Cisco Intersight is a SaaS-delivered cloud operations platform with the flexibility of advanced deployment options. You can take advantage of new features as they become available from Cisco without the challenges and complexity of maintaining your management tools.

The majority of our users enjoy the benefits of full SaaS management, with directly-connected Cisco infrastructure and third-party systems connected through a Cisco Intersight Assist on-premises appliance (more details below); however, if you have data locality or security needs for managing systems that may not accommodate a fully SaaS model, you can leverage the on-premises Cisco Intersight Virtual Appliance to connect those systems.

Alternately, the Cisco Intersight Private Virtual Appliance provides an easy way to deploy a VMware Open Virtual Appliance (OVA), which can be configured, deployed, and run off-premises. The Private Virtual Appliance allows you to still take advantage of much of the SaaS functionality without connectivity back to Intersight.com. Both the Intersight Virtual Appliance and Private Virtual Appliance provide advantages over conventional on-premises management tools.

Cisco Intersight Assist

The Cisco Intersight Assist enables you to claim third-party infrastructure, platforms, and other endpoints that are not directly SaaS-connected to Intersight, so they can become Intersight-managed. For example, you can use Intersight Assist to manage VMware, NetApp, Pure, Hitachi, and other on-premises infrastructure and platforms. Cisco Intersight Assist is deployed as a VM appliance running on premises, installed using an OVA that is available on Cisco.com. To learn more details about how Intersight Assist extends Intersight management to on-premises, third-party infrastructure and platforms, visit our help site. To learn how to install Cisco Intersight Assist, watch this video.

Monitoring and capacity planning

To support the complex environments created by modern applications and the dramatically increasing number of endpoints, enterprises require analytics integrated tightly with their operations management tools. To enable these analytics capabilities, every Cisco UCS server, Cisco HyperFlex system, Cisco network device, or Cisco UCS Director instance is configured to automatically connect and transmit to Cisco Intersight certain telemetry information over a secure channel (including serial numbers and IP addresses, the types of software installed on an endpoint, and feature use data). This telemetry information will be used to power the Cisco Intersight recommendation engine. The Cisco Intersight recommendation engine will use the telemetry information to proactively review customer metadata to identify potential issues in customers' environments to prevent problems and improve system uptime in the future.

As an example of monitoring and capacity planning within Intersight, the HyperFlex performance chart provides details of the cluster performance for HyperFlex clusters and a snapshot of the configurable amount of time, showing Input/output operations per second (IOPS), throughput, and latency data. Using the historical data of used storage capacity along with the predicted storage utilization per HyperFlex cluster, you can proactively scale the storage utilization on the HyperFlex clusters. When the storage utilization is predicted to exceed the recommended capacity limit, an alarm is raised.

Simplify application resource management with Cisco Intersight Workload Optimizer

Cisco Intersight Workload Optimizer (IWO) is an optional service that can be purchased with or without Cisco Intersight. It is a real-time decision engine that ensures the health of applications across your on-premises and public cloud environments while lowering public cloud costs. The intelligent software continuously analyzes workload demand, resource consumption, public cloud resource costs, and policy constraints to determine an optimal balance. IWO makes recommendations for workload placement and resource allocation by systems in your data center and the public cloud, and in many cases can automate real-time optimization.

The software can determine when, where, and how to move and resize workloads, taking advantage of the elasticity of public-cloud resources and ensuring that on-premises resources are fully utilized. By tracking historical data, Intersight Workload Optimizer can effectively model capacity planning and migration scenarios to determine how much infrastructure you will need and when you will need it, reducing risk and ensuring predictable performance and cost.

Enhanced automation and orchestration

Model-based deployment

Cisco Intersight provides model-based deployment for Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms. For example, a Cisco UCS C-Series rack server can be set up quickly and easily by replicating an existing server profile for rapid configuration. The model-based deployment works for a single system in a remote location or hundreds of systems in a data center to enable rapid, standardized configuration and deployment. Similarly, HyperFlex platforms can be sent to their destination, have basic internet connectivity established locally, and then be configured and set up remotely through the cloud-based HyperFlex installer.

Cisco Intersight Cloud Orchestrator

Cisco Intersight Cloud Orchestrator (ICO) is a low-code automation framework to create and execute complex workflows of operational tasks across Intersight-managed Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms. A central workflow engine sequences the steps in workflows and automates their execution. A workflow executes a set of tasks, each designed to automate specific operations (for example, create, read, update, or delete) on any infrastructure or platform element. Workflows can consist of one or more tasks arranged to execute sequentially, repeatedly, in parallel, or conditionally, or they can include sub-workflows to help organize or reuse automation.

ICO includes a library of prebuilt tasks that automate many popular operations across Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms. These prebuilt library tasks are preintegrated with access to infrastructure models, inventory, and configuration information managed within Intersight to simplify task configuration and workflow creation. For example, to automate configuration of a VM property, a preintegrated task can enable the author to select which VM to operate on from the existing inventory of VMs that user can access. The preintegrated modeling could allow a workflow author to easily traverse to that VM's parent hypervisor host for additional configuration, the parent server operating the hypervisor, networks attached to that server, etc. Preintegrated configuration information also allows the orchestration author to control automation by other criteria.

In addition to the preintegrated automation task library, you can create your own custom tasks with the ICO task designer using a variety of open integration methods like constructing HTTP-based API calls, executing Ansible playbooks, PowerShell, or SSH.

ICO includes a variety of workflows for popular orchestration use cases. You can also modify existing workflows or create your own using the ICO workflow designer, using a drag-and-drop palette to assemble preintegrated tasks, custom tasks, and sub-workflows along with conditional statements and loops to construct any end-to-end orchestration you need across Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms. For more information on Intersight Cloud Orchestrator, visit our [help site](#).

Cisco HyperFlex cluster deployment

Cisco Intersight provides an installation wizard to install, configure, and deploy Cisco HyperFlex Edge and HyperFlex with fabric interconnect clusters. The wizard constructs a preconfiguration definition of your cluster, called a HyperFlex cluster profile. This definition is a logical representation of the HyperFlex nodes in your HyperFlex cluster. HyperFlex cluster profiles are built on policies that define sets of rules and operating characteristics, such as node identity, interfaces, and network connectivity. After gathering the node configuration settings to build a HyperFlex cluster profile, the installation wizard validates and deploys the HyperFlex cluster profile. More information is available on our help site.

REST API

Cisco Intersight includes an API based on the OpenAPI specification, a powerful definition format to describe RESTful APIs. Support for the OpenAPI specification provides users with access to an interoperable REST API with tools that automate the generation of the Intersight API documentation, API schemas, and SDKs. The Intersight API includes fully functional Python and PowerShell SDKs.

The API is an integral part of the broader open connector framework Cisco has established to enable the Intersight ecosystem to evolve. We currently support a ServiceNow plug-in to view Intersight inventory and configuration detail in the ServiceNow interface. The ecosystem will be expanded to eventually support a wide range of Cisco and third-party DevOps software.
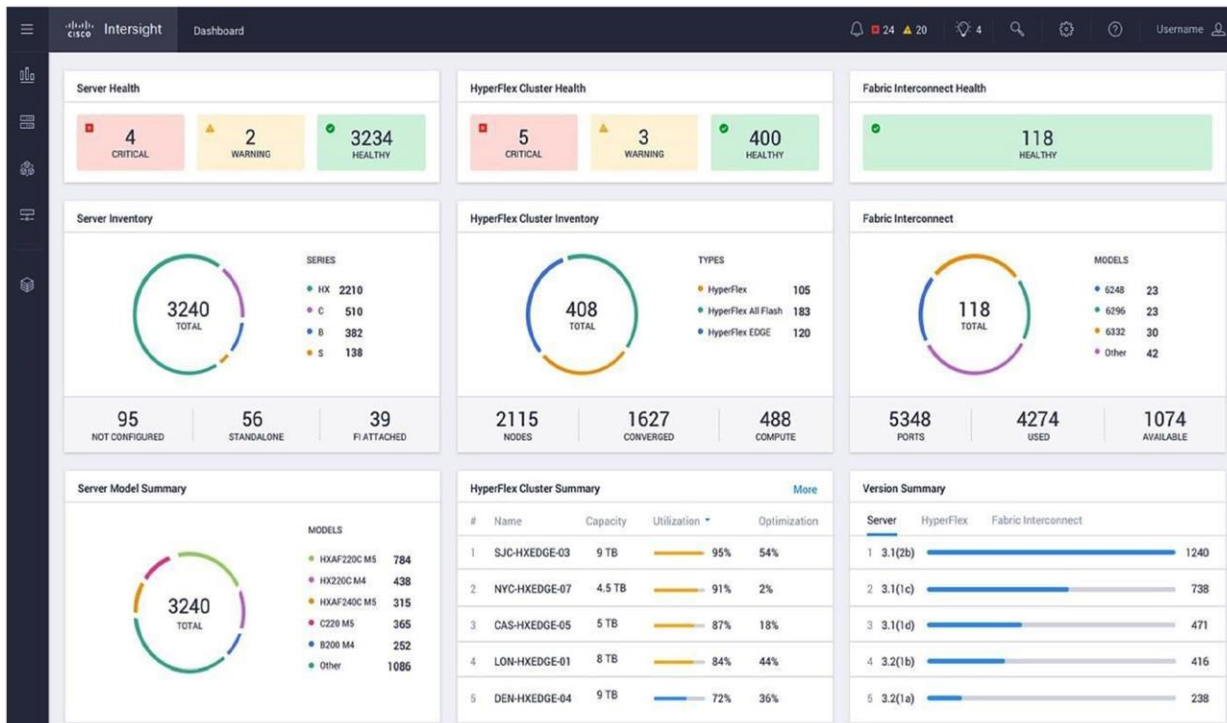

Figure 1.
Cisco Intersight dashboard

Customizable dashboard and mobile app

Cisco Intersight provides a dashboard (Figure 1) that spans Cisco UCS, Cisco HyperFlex, and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms. The dashboard is user-customizable, allowing you to focus on the information and tasks that are relevant to your needs. You can create, customize, rename, and manage multiple dashboard views by adding, removing, or rearranging widgets on the dashboard. Intersight supports the display of up to 30 widgets per dashboard. This global dashboard includes features such as:

- Global inventory. Get information about inventory across supported systems, whether they are in the data center or at remote locations.

- Fault monitoring. Manage faults and set up alerting for all managed systems.

- Firmware status. Monitor and manage firmware versions.

Cisco Intersight allows you to monitor systems from a single management tool. However, if you need to look more deeply into a specific platform, Cisco Intersight provides:

- Cross-launch capabilities for virtual Keyboard, Video, and Mouse (KVM) sessions.

- Tunneling capabilities for Cisco UCS Manager, Cisco UCS Director, Cisco IMC software, and Cisco HyperFlex Connect to allow secure access to the manager, whether you are inside or outside the corporate network.

The Cisco Intersight mobile app provides visibility on the go with its intuitive view of Intersight-connected systems. You can conveniently keep an eye on your data center–anywhere, anytime. The mobile app is an Apple and Android application to monitor inventory, tasks, and alerts. You can also take actions, such as turning on LED locators and opening Cisco support cases.

Proactive support

The telemetry data and incidents collected from the Cisco Intersight-installed base are transmitted using secure communication mechanisms, and this information is available for use by the Cisco® Technical Assistance Center (TAC) to provide insights and more proactive support. When combined with Cisco Smart Call Home, TAC cases can be automatically opened for certain faults. No matter how a TAC case is opened, if the system is connected to Cisco Intersight, the log files are automatically read from the system, attached to the TAC case, and automatically analyzed for known issues. For certain types of hardware failures, Return-Materials-Authorization (RMA) cases are automatically opened. The Cisco Intersight and TAC integration speeds case resolution, limits the impact on IT personnel, and ultimately increases system uptime.

Cisco Intersight also enables users to provide more direct feedback to our products. In addition, the tight integration with the TAC extends the solution scope by enhancing continuous delivery to further speed up fixes and future development.

Platform compliance

Cisco Intersight evaluates your hardware and firmware compatibility to help ensure that your system is compliant with the Cisco Hardware Compatibility List. This process identifies unsupported configurations and alerts you to any potential problems that may arise from unknowingly running unsupported configurations.

Supported software

Cisco Intersight supports Cisco UCS and Cisco HyperFlex platforms with the software versions listed in Table 2.

Table 2.   Supported software

Platform	Versions supported
Cisco UCS Manager	Release 3.2(1) and later
Cisco IMC Software	Release 3.0(4) and later
Cisco HyperFlex	Release 2.5.1 and later
Cisco UCS Director	Release 6.6 and later
Pure Storage FlashArray	Purity version 4.8 (API version 1.7) and later
VMware vCenter	6.0, 6.5, 6.7, and later

See the product documentation for a more detailed list of supported versions and caveats.

Virtual appliance system requirements

The Cisco Intersight Virtual Appliance and Private Virtual Appliance OVAs can be deployed on VMware ESXi 6.0 and higher. Table 3 describes the minimum system requirements. For additional information see the Getting Started Guide.

Table 3.   Minimum system requirements

Item	Requirement
Supported hypervisors	VMware ESXi 6.0 and higher
Storage	500 GB
RAM	32 GB
vCPUs	16

See product documentation for more details and sizing guidelines.

Licensing

Cisco Intersight is licensed on a subscription basis with multiple license editions to choose from. Capabilities increase with the different license types. Customers can purchase a subscription duration of one, three, or five years and choose the Cisco UCS server volume tier they need for the selected subscription duration.

Each Cisco UCS server, Cisco HyperFlex system, or Cisco UCS Director software product automatically includes Cisco Intersight core functionality at no additional cost when the customer accesses the Cisco Intersight portal and claims their devices. In addition, customers can purchase Cisco Intersight Essentials, Cisco Intersight Advantage, or Cisco Intersight Premier tiers using the Cisco ordering tool (Table 4). Cisco Intersight core functionality is accessed through a portal that delivers centralized systems health monitoring, Cisco Technical Assistance Center (TAC) support, a basic inventory of managed systems, a customizable dashboard, tagging and search, and the ability to launch native endpoint management interfaces, including Cisco UCS Manager and others.

Note: The Cisco Intersight Virtual Appliance and the Cisco Intersight Private Virtual Appliance require an Essentials, Advantage, or Premier license to access Intersight core functionality.

Table 4.   Cisco Intersight tier

License tier	Description
Essentials	The Cisco Intersight Essentials offering includes all of the Intersight core functionality.
	Intersight Essentials includes centralized setup and configuration capabilities through a policy engine, firmware management, compliance tool integration, access to the mobile app, and other features.
	It also includes a ServiceNow plug-in to view Intersight inventory and configuration details in the ServiceNow interface, elevating the IT Service Management (ITSM) experience.
	This license tier also includes configuration management through a unified policy engine. Customers can determine compliance with the Cisco UCS Hardware Compatibility List (HCL) and initiate firmware updates.
	Cisco Intersight Essentials also includes subscription entitlement for Cisco IMC Supervisor and Cisco UCS Central software products at no additional cost. Refer to Cisco IMC Supervisor data sheet and Cisco UCS Central data sheet for more details.
	Note: This is available for both the SaaS version on Intersight.com, the Cisco Intersight Virtual Appliance, and the Cisco Intersight Private Virtual Appliance. See ordering information in the next section.
Advantage	The Cisco Intersight Advantage tier provides all of the Intersight core functionality and the Essentials tier functionality.
	It includes widgets, inventory, capacity, and utilization features for third-party storage (for example, NetApp, Pure, Hitachi, etc.) and cross-domain inventory correlation across physical compute, network, storage, VMware virtualization, and AWS public cloud. It also includes OS installation for supported Cisco UCS platforms and the automated solution deployment of Cisco HyperFlex with SD-WAN.
	It further includes the Cisco Security Advisory service where customers can receive important security alerts and field notices about impacted endpoint devices.
	Note: This is available for the SaaS version on Intersight.com, the Cisco Intersight Virtual Appliance, and the Cisco Intersight Private Virtual Appliance. See ordering information in the next section.

License tier	Description
Premier	In addition to the capabilities provided in the Advantage tier, Cisco Intersight Premier offers Intersight Cloud Orchestrator (ICO) for Cisco and third-party compute, network, storage, integrated systems, virtualization, container, and public-cloud platforms.
	Additionally, Cisco Intersight Premier bundles full subscription entitlement for Cisco UCS Director at no additional cost. Refer to Cisco UCS Director data sheet for more details.
	Note: This is available for the SaaS version on Intersight.com, the Cisco Intersight Virtual Appliance, and the Cisco Intersight Private Virtual Appliance. See ordering information in the next section.

Ordering information

The Cisco Intersight core functionality is automatically included with every Cisco UCS server purchase at no extra cost, including Cisco UCS servers purchased in the past. There is no orderable part number for the core functionality. Cisco UCS and Cisco HyperFlex customers can simply go to https://www.intersight.com. Users log in using their Cisco Connection Online (Cisco.com) user ID and claim their Cisco UCS servers and Cisco HyperFlex devices to start using the Cisco Intersight core functionality. The Cisco Intersight Virtual Appliance and the Cisco Intersight Private Virtual Appliance require an Essentials license or higher tier license to access the core functionality.

Cisco Intersight paid tiers can be ordered in one-year, three-year, and five-year subscription periods. In addition, volume discounts are available for customers ordering more than 1000 server subscriptions at the same time. Separate license options are detailed in Table 5 for the SaaS version on Intersight.com and the virtual appliance.

Cisco Smart Accounts and Smart Licensing are mandatory for Cisco Intersight. In addition, a Cisco Connection Online (CCO) user account is mandatory to use the Cisco Intersight user interface.

Table 5.   Ordering information

Part number	Description
DC-MGT-SAAS	Product family – Cisco Intersight
DC-MGT-SAAS-EST-C	Cisco Intersight SaaS – Essentials
DC-MGT-SAAS-AD-C	Cisco Intersight SaaS – Advantage
DC-MGT-SAAS-PR-C	Cisco Intersight SaaS – Premier
DC-MGT-ONPREM-EST	Cisco Intersight Connected Virtual Appliance – Essentials
DC-MGT-VAPP-AD	Cisco Intersight Connected Virtual Appliance – Advantage
DC-MGT-VAPP-PR	Cisco Intersight Connected Virtual Appliance – Premier
DC-MGT-PVAPP-EST	Cisco Intersight Private Virtual Appliance – Essentials
DC-MGT-PVAPP-AD	Cisco Intersight Private Virtual Appliance – Advantage
DC-MGT-PVAPP-PR	Cisco Intersight Private Virtual Appliance – Premier

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 Table 6.

Table 6.   Environmental sustainability

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 Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® financing 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.

For more information

For additional information, visit Cisco Intersight at: cisco.com/go/intersight.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

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Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at https://www.cisco.com/go/offices.