

Cisco+ Hybrid Cloud Pre-defined Use Cases

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Cisco+ Hybrid Cloud overview

Cisco+ Hybrid Cloud delivers cross-portfolio solutions as-a-service providing you with the ultimate flexibility in designing and operating reliable, secure, efficient, and cost-effective hybrid cloud infrastructure through on-demand delivery of IT resources. With Cisco+ Hybrid Cloud, we simplify how our customers and partners consume, use, and operate hardware and software technologies, a paradigm shift from products and solutions to predictable outcomes. Cisco+ Hybrid Cloud provides all the benefits of Cisco, now as a service.

The Cisco+ Hybrid Cloud provides a framework for “intelligent consumption” that offers a holistic operating model to manage and optimize on-premises, edge, and cloud resources. Intelligent consumption is a hybrid approach that requires visualization, optimization, and orchestration of both applications and infrastructure across public clouds and on-premises sites. It will provide partners the opportunity to offer services to fully manage customer workloads in real time based on the customer’s business and technical requirements and the specific interdependencies of their individual workloads.

At present, Cisco+ Hybrid Cloud is Cisco’s pay-per-use consumption model offering. It simplifies the delivery model of on-premises compute, network, and storage resources for a partner’s managed services customers, allowing them to pay for only what they use through a flexible consumption approach with shared risk.

Flexible consumption model benefits

Line-Of-Business (LOB) teams are continually under pressure for faster time to market and new innovations. CIOs are increasingly viewing themselves as service providers to business teams, while CFOs continue to feel the pressure to reduce or eliminate capital expenditure and increase investment payback. Cisco understands that enterprises are looking to align “IT resources + spend” and “usage + biz demand.” As a result, Cisco+ flexible consumption models provide flexibility to scale, product-obsolescence protection, convenience, improved financial position, on-going innovation, and cloud-like simplicity. Cisco+ flexible consumption models were designed to address the following six business needs.

Table 1. Flexible consumption model benefits

Growth environment	Security and compliance	Cloud-like experience
Desire for consistent growth, where growth is anticipated but its timing is unknown or unpredictable	Prefer the privacy, security, regulatory, and compliance benefits of on-premise IT	Desire on-premise offering that combines physical infrastructure with the simplicity and flexibility of cloud-based pricing and management
Agility	Burst demand	Performance and low latency
Need to receive requested capacity in a timely manner, receive faster service upgrades, achieve faster time to value, deliver faster and better service to customers	Due to seasonal or periodic demand, there are occasional short term needs to use more capacity than what is consistently required to run business workloads	Need for high performance and low latency to achieve target outcomes for business workload

Cisco+ flexible consumption models benefit partners in the following ways:

- Simple purchase experience
- Ready-to-use on-premises buffer capacity
- Transparent prices
- Utility-based services
- Consumption analytics
- Cloud-like operations management dashboard
- Easy-to-expand capacity

How is a Cisco+ purchase different from a lease?

Table 2. Cisco+ Hybrid Cloud purchases are different than a lease

Purchase attributes	Traditional lease	Cisco+ flexible consumption
Flexibility to scale	<ul style="list-style-type: none"> • New purchase required to expand • No capacity planning and management offered by financing company 	<ul style="list-style-type: none"> • Elastic infrastructure that can flex with customer business needs • Per-use cost increase (or decrease) to expand (or shrink)
Product value	<ul style="list-style-type: none"> • Spread payments to lower the cost of entry into solution • Tech refresh directly tied to buying cycle 	<ul style="list-style-type: none"> • Per-unit monthly service charges lower the cost of entry into solution • Tech expansion, updates, and renewal decoupled from buying cycles • Product-obsolescence protection
Convenience	<ul style="list-style-type: none"> • Two negotiations: vendor (discounts) + financing (interest) • Two contracts to acquire solution • Get single invoices and make single payments for bundles of hardware, software, and services 	<ul style="list-style-type: none"> • Support services embedded in solution • Cloud-like procurement simplicity • No equipment disposal requirements • Get single invoices and make single payments of full-stack solution services
Financial position	<ul style="list-style-type: none"> • Conserve cash, while able to procure new solution • Custom payment arrangements (for example, defer payments, step up payments, ad-hoc contract terms) 	<ul style="list-style-type: none"> • Conserve cash, while able to procure new solution • Post-paid monthly service charges based on use • If customer chooses, treat as operating expense
Cost management	<ul style="list-style-type: none"> • Cost allocation model for IT infrastructure and operations loosely coupled with business use, often resulting in cost spreading among departments 	<ul style="list-style-type: none"> • Usage and cost analytics for IT to adopt a service-provider model, enabling tighter tracing of business use to cost of IT services for showback and chargeback

Predefined use-case solutions: benefits and plans

Save time and energy when it comes to building a hybrid-cloud solution to achieve your business outcomes. Start by identifying the Cisco+ Hybrid Cloud predefined use case (workload) that you're looking to implement. Cisco+ Hybrid Cloud predefined use-case solutions offer ready-made standard configurations in building-block style for popular workloads. It's a simple click to select standard configurations to assemble a full-stack solution consisting of hardware, software, and services with compute + network + storage technologies in minutes to handle the most popular workloads. You also get the benefits of instant pricing and better fulfillment lead times over custom build your own configurations.

Table 3. Cisco+ Hybrid Cloud predefined use-case (workload) solutions

Workload	Solution benefits	Popular customer use cases
<p>Virtual Desktop Infrastructure (VDI)</p> <p>The world is changing rapidly. Your employees and customers are embracing new ways to get their work done. They expect you to deliver the environment they need to be successful. Cisco and our partners can provide secure and validated Virtual Desktop Infrastructure (VDI) solutions while delivering an excellent end-user experience.</p>	<ul style="list-style-type: none"> • Achieve lower cost per desktop with leading virtual-machine performance, simplified deployment, and reduced cabling • Have the assurance of a Cisco Validated Design that helps accelerate implementation and reduce risk • Achieve outstanding performance with guaranteed Quality of Service (QoS) on Cisco networks to deliver the best user experiences • Use one of the most pervasive, defense-in-depth security architectures in the industry • Achieve Intellectual property protection • Lower capital and operating expenses • Use centralized desktop management • Get immediate access to additional capacity for planned and unplanned growth 	<ul style="list-style-type: none"> • Remote workers • Temporary workforce • New desktop rollouts • End-user security
<p>Virtualization (VSI)</p> <p>Use world-class Cisco Unified Computing System™ (Cisco UCS®) servers or Cisco HyperFlex™ hyperconverged infrastructure to create virtual machines that allow your users to consume only the computing resources they need when they need it, with the ability to scale IT resources cost-effectively as business workloads grow.</p>	<ul style="list-style-type: none"> • Reduce capital and operating expenses with the consolidation of servers and disparate workloads plus applications on the same machine • Achieve fault tolerance and high availability to reduce the chances of unexpected downtime • Reduce time to provision for application development, testing, and rollout • Achieve more granular security protocols • Achieve better resource analytics across the entire virtual network without regard to OS or workload type • Get automated provisioning of compute nodes • Enable on-premises hybrid cloud infrastructure • Have a solution predesigned for VMware vSphere 7.x virtual machines • Easily scale virtualization infrastructure resource needs 	<ul style="list-style-type: none"> • Hybrid cloud / multicloud • Virtual machines • Hyperconverged infrastructure

Workload	Solution benefits	Popular customer use cases
<p>Edge compute</p> <p>Edge computing systems are deployed at the edge for low latency, fast processing, and storage of data created by edge applications. Bare-metal and/or VM configurations are made in remote and/or branch offices (ROBOs) or at edge locations. The customer only pays for resources that they consume.</p>	<ul style="list-style-type: none"> • Perform data analytics and computation at the edge so that network connectivity and bandwidth issues will not be significant • Facilitate moving large amounts of data back to the cloud or data center for processing and storage • Reduce the high cost of pushing large amounts of data between the cloud and the edge • Access big data analytics for Artificial Intelligence (AI), machine vision, and deep learning • Access edge location compute and storage resources when needed • Have advantages of easy deployment and management • Get scalability across multiple locations • Achieve increased uptime with full edge hardware lifecycle management 	<ul style="list-style-type: none"> • Remote office / branch office • Artificial intelligence / machine learning • Small business solutions • Hyperconverged edge infrastructure
<p>Bare-metal compute</p> <p>Bare-metal Cisco Unified Computing System (Cisco UCS) servers are delivered to customer premises for pay-per-use consumption. You only pay for the resources you consume, and the buffer capacity supports both steady growth and unexpected spikes in demand.</p>	<ul style="list-style-type: none"> • Avoid peak loads caused by one tenant consuming so many machine resources that it affects another tenant's VM • Eliminate load-balancing VMs across tenants • Have more isolation between VMs for better security • Improve application performance • Get flexible infrastructure choices • Build hardware based on your business needs • Get on-demand resource availability • Reduce hardware management operating expense 	<ul style="list-style-type: none"> • Containers • Cloud-native applications • Heterogeneous application needs • Converged infrastructure
<p>Data center switching</p> <p>High-performance switching with the Cisco Nexus® 9000 Series Switches and unified management with Nexus Dashboard for enterprises and cloud providers who rely heavily on virtualization and fulfillment of mission-critical data and storage applications.</p>	<ul style="list-style-type: none"> • Have high scalability, flexibility, availability, and security • Administer through intelligent buffer management and infrastructure • Ensure low latency and high performance • Accelerate provisioning from days to minutes and simplify deployments • Get graphical operational visibility for topology, network fabric, and infrastructure • Eliminate configuration errors with templated deployment models and automatic compliance remediation • Be provided with event analytics and event forwarding of switches using email or traps • Have operational simplicity with common policy, management, and operation models across application, network, and security resources • Get centralized network management and visibility with full automation and real- 	<ul style="list-style-type: none"> • Extend data center to edge / remote locations – new sources of network demand • Deliver cloud-like experiences for apps/data that must reside on-premises • Create a consistent integrated application environment for multi-cloud • Fabric backup and restore

Workload	Solution benefits	Popular customer use cases
	time network health monitoring <ul style="list-style-type: none"> Have open APIs and a programmable SDN fabric, with 65+ ecosystem partners 	
Storage area networking High-performance storage networking with Cisco MDS 9000 Series Multilayer Switches. Ideal for small fabrics to large, virtualized data centers powering stringent requirements around scale, security, analytics, performance, and high availability.	<ul style="list-style-type: none"> Have assurance of performance, reliability, and availability in all switches Be provided with NVMe enabled with low latency, high bandwidth storage network Get auto zoning, Dynamic Ingress Rate Limiting (DIRL) to enable slower and faster application servers to coexist in the same fabric without affecting each other, and Inter-VSAN Routing (IVR) for best-in-class ease of management Administer through centralized management with Nexus Dashboard SAN Controller Get Inline SAN Analytics: Full visibility into storage network latency, bandwidth, and other performance data Collect, visualize, and analyze data to resolve performance and availability issues before they cause downtime 	<ul style="list-style-type: none"> Detect slow-drain devices to avoid traffic congestion Protect sensitive data crossing the enterprise network Deep incoming / outgoing traffic inspection to facilitate reactive and proactive troubleshooting without compromising data confidentiality Consistent networking operations with a single point of management across data center LAN and SAN Automate management of storage networks

Standard configuration plans for predefined use-case (workload) solutions

Table 4. Cisco+ Hybrid Cloud plans for popular workloads

Workload	Plan tier	Plan description	Product specifications
Edge	N/A	Hyperconverged infrastructure Customer flexibility to build hyperconverged infrastructure that supports virtualized edge workloads requiring high-performance-based local resources	Model: Two (2) HyperFlex Hybrid Edge 220 M5 CPU: Qty 1, Intel® Xeon® Gold 2.2GHz 12-core processors per node Total RAM: 384GB RAM Total integrated storage: Eight (8) 2.4TB SAS
VDI	Balanced	Converged infrastructure Configured for task workers or mixed-use end-user environments Cisco estimated number of concurrent users per node: Task workers = 250 Knowledge workers = 125 Power users = 62 Actual virtual desktop ratios may vary by organization and virtual desktop image resource requirements.	Model: Cisco UCS B200 M5 Blade Server CPU: Qty 2, Intel Xeon Gold 2.2GHz 24-core processors per node RAM: 768GB per node
		Hyperconverged infrastructure Configured to support environments with users requiring more power per virtual desktop and nonpersistent desktop	Model: Cisco HyperFlex HX240c M5 All-Flash or HX220C M5 SFF (compute only) node CPU: Qty 2, Intel Xeon Gold 2.2 GHz 24-

Workload	Plan tier	Plan description	Product specifications
		<p>images. Available choices include all-flash storage and small form factor server nodes for expanding existing Cisco+ Hybrid Cloud instances.</p> <p>Cisco estimated number of concurrent users per node:</p> <p>Knowledge workers = 250</p> <p>Power users = 125</p> <p>Actual virtual desktop ratios may vary by organization and virtual desktop image requirements.</p>	<p>core processors per node</p> <p>RAM: 768GB RAM per node</p> <p>Integrated storage:* Six (6) 3.8TB SSDs</p> <p>*Applicable to HX 240c all-flash configuration</p>
VSI	General purpose	<p>Converged infrastructure</p> <p>Configured for mixed-use virtualized environments</p> <p>Cisco estimated number of VMs per node:</p> <p>Small = 38</p> <p>Medium = 19</p> <p>Large = 9</p> <p>X-large = 4</p> <p>Classification of virtual machines may vary by organization and individual workload resource requirements.</p>	<p>Model: Cisco UCS B200 M5 Blade Server</p> <p>CPU: Qty 2, Intel Xeon Gold 2.2GHz 24-core processors per node</p> <p>RAM: 384GB per node</p>
	Performance	<p>Converged infrastructure</p> <p>Configured for mixed-use virtualized environments requiring greater density in VMs or VMs with higher performance resource requirements</p> <p>Cisco estimated number of VMs per node:</p> <p>Small = 76</p> <p>Medium 38</p> <p>Large = 19</p> <p>X-large = 9</p> <p>Classification of virtual machines may vary by organization and individual workload resource requirements.</p>	<p>Model: Cisco UCS B200 M5 Blade Server</p> <p>CPU: Qty 2, Intel Xeon Gold 3.0 GHz 24-core processors per node</p> <p>RAM: 768GB per node</p>
		<p>Hyperconverged</p> <p>Customer flexibility to build hyperconverged infrastructure that supports virtualized workloads requiring performance-based resources</p>	<p>Model: Cisco HyperFlex HX240c M5 All-Flash or HX220C SFF M5 (compute only) node</p> <p>CPU: Qty 2, Intel Xeon Gold 2.4GHz 24-core processors per node</p> <p>RAM: 1024GB RAM per node</p> <p>Integrated storage:* Six (6) 7.6TB SSDs</p> <p>*Applicable to HX240c all-flash configuration</p>

Workload	Plan tier	Plan description	Product specifications
Bare-metal	General purpose	Converged infrastructure Customer flexibility to configure based on general purpose nonvirtualized workload requirements	Model: Cisco UCS B200 M5 Blade Server CPU: Qty 2, Intel Xeon Gold 5220R / 2.2GHz 24- core per node RAM: 384GB per node
	Performance	Converged infrastructure Customer flexibility to configure based on workloads with nonvirtualized high resource demand requirements	Model: Cisco UCS B200 M5 Blade Server CPU: Qty 2, Intel Xeon Gold 6248R / 3.0 GHz 24- core per node RAM: 768GB per node

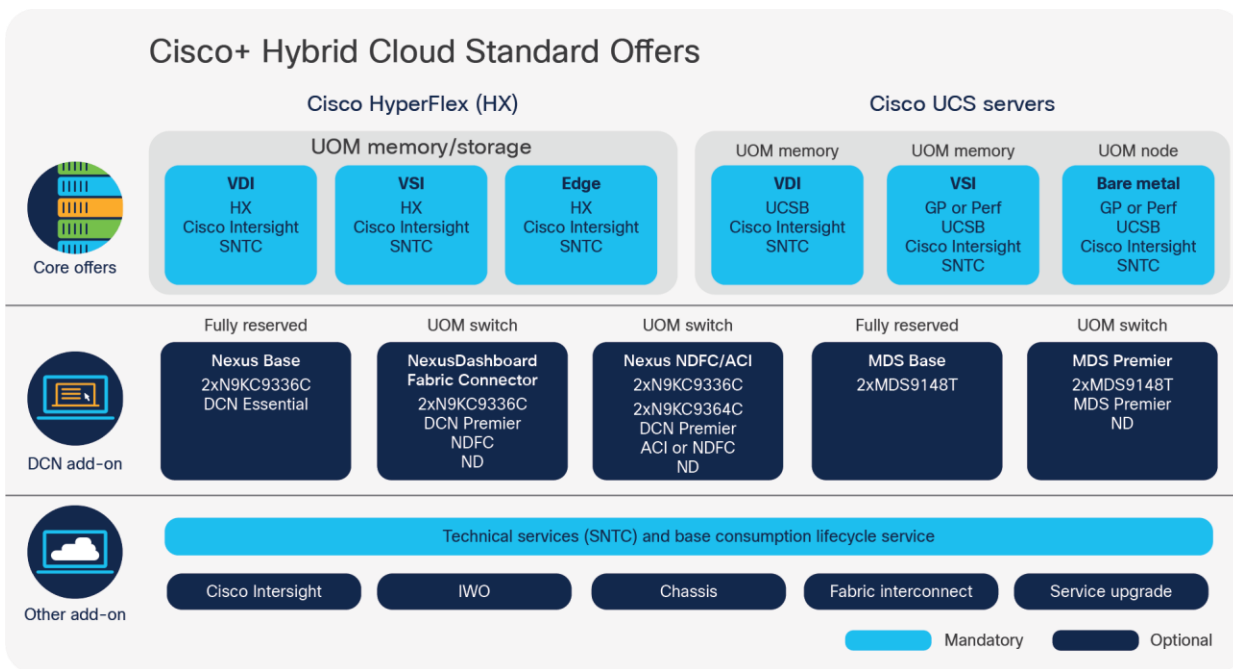


Figure 1.
Elements in predefined workload solution plans

Table 5. Add-ons to compute infrastructure networking plans

Workload	Plan tier	Plan description	Product specifications
Data-center switching	Cisco Nexus Base	This entry-level network switching plan contains the top-of-rack Cisco Nexus 9300 Series switches that can be added to the compute infrastructure. It is deployed with Cisco Data Center Networking (DCN) Essentials software and has no usage metering. This enables you to build a non-blocking, low-latency, high-availability network.	Model: Quantity 2 N9K-C9336C-FX2 36 ports @ 100 Gbps Software: DCN Essentials Other: No metered usage
	Nexus Dashboard Fabric Controller	This offer extends the top-of-rack Cisco Nexus 9300 Series functionality that is an add-on to the compute infrastructure. It can be managed by a Nexus Dashboard Fabric Controller (formerly DCNM). In addition, this plan supports usage metering with Nexus Dashboard and can be deployed using DCN Premier software. NDFC allows you to have a single point of management and visibility for your entire network.	Model: Quantity 2 N9K-C9336C-FX2 36 ports @ 100 Gbps Software: DCN Premier Other: NDFC controller + software Nexus Dashboard Metered usage Scale: Spine/leaf ratio @ 16:1 Nexus Dashboard @ 3 nodes per 50 switches Nexus Dashboard Fabric Controller 3 nodes per 80 Switches
	Nexus ACI or NDFC fabric	This offer extends the top-of-rack Cisco Nexus 9300 Series functionality along with Nexus Spines. This plan is an add-on to the compute infrastructure and can be managed by either a Nexus Dashboard Fabric Controller (formerly DCNM) or a Cisco Application Centric Infrastructure™ (Cisco ACI®) fabric. In addition, this plan supports metering with Nexus Dashboard and can be deployed using DCN Premier software. Cisco APIC allows you to have a single point of management and visibility for your entire network. Cisco Application Centric Infrastructure (Cisco ACI) is part of our intent-based networking framework to enable agility and resiliency in the data center. It captures higher-level business and user intent in the form of a policy and translates this policy into the network constructs necessary to dynamically provision the network, security, and infrastructure services.	Model: Quantity 2 N9K-C9336C-FX2 36 ports @ 100Gbps Quantity 2 N9K-C9364C-GX 64 ports @ 100Gbps Software: DCN Premier Other: Nexus Dashboard NDFC or ACI controller

Workload	Plan tier	Plan description	Product specifications
			<p>Metered usage</p> <p>Scale:</p> <p>Spine/leaf ratio @ 16:1</p> <p>Nexus Dashboard @ 3 nodes per 50 switches</p> <p>Nexus Dashboard Fabric Controller @ 3 nodes per 80 Switches</p> <p>APIC @ 3 nodes per 80 Switches</p>
Storage Networking	Cisco MDS Base	This offer includes Cisco MDS base-level fixed Fibre Channel switches that offer high performance, reliability, and high availability. The switches empower small, midsize, and large enterprises that are rapidly deploying cloud-scale applications using extremely dense virtualized servers, providing the benefits of greater bandwidth, scale, and consolidation.	<p>Model:</p> <p>Quantity 2</p> <p>MDS 9148T</p> <p>48 ports with 32Gbps optics</p> <p>Software:</p> <p>NX-OS</p> <p>Other:</p> <p>No metered usage</p>
	Cisco MDS Premier	This offer extends the top-of-rack Cisco MDS Fibre Channel switches with Nexus Dashboard SAN Controller for centralized configuration and management and SAN Insight for performance monitoring. In addition, this plan supports usage metering with Nexus Dashboard.	<p>Model:</p> <p>Quantity 2</p> <p>MDS 9148T</p> <p>48 ports with 32G optics</p> <p>Software:</p> <p>NX-OS</p> <p>MDS Premier</p> <p>Other:</p> <p>Metered usage</p>

Table 6. VDI, VSI, bare-metal, and edge predefined workload component product details

Component category and product name	Description
Converged infrastructure - Cisco Unified Computing System (Cisco UCS)	<p>Cisco UCS B-Series blade servers are based on Intel Xeon processors. They work with virtualized and nonvirtualized applications to increase performance, energy efficiency, flexibility, and administrator productivity.</p> <p>https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-b-series-blade-servers/index.html</p>
Hyperconverged infrastructure - Cisco HyperFlex (HX)	<p>Cisco HX systems are deployed as a pre-integrated cluster with a unified pool of resources that you can quickly provision, adapt, scale, and manage to efficiently power your applications and your business.</p> <p>https://www.cisco.com/c/en/us/products/collateral/hyperconverged-infrastructure/hyperflex-hx-series/datasheet-c78-2574068.html</p>
Full-stack observability -	Cisco Intersight is a full-stack observability platform powered by proactive support and

Component category and product name	Description
Cisco Intersight	enterprise-class security. It is an intelligent SaaS offering for teams to manage their Intersight-connected Cisco data center products such as Cisco UCS, HyperFlex, and converged infrastructure solutions, as well as third-party endpoints, such as storage and hypervisors. https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/intersight/solution-overview-c22-743992.html
Workload optimization - Intersight Workload Optimizer (IWO)	Cisco IWO breaks down operation silos and gives IT teams the visibility, insight, and actions they need to improve business outcomes. https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/workload-optimization-manager/intersight-workload-optimizer-aag.html
Data management platform - Cisco HyperFlex Data Platform (HXDP)	Cisco HXDP revolutionizes data storage for hyperconverged infrastructure deployments and makes Cisco HyperFlex systems ready for your enterprise applications. Available for data-center and edge configurations. https://www.cisco.com/c/en/us/products/collateral/hyperconverged-infrastructure/hyperflex-hx-series/white-paper-c11-736814.html

Table 7. Data-center switching predefined workload component product details

Component product name	Short description and component product specifications
Nexus Dashboard	Cisco Nexus Dashboard provides a single automation platform to access data center network operational services and tools. You can deploy Nexus Dashboard Orchestrator, Nexus Dashboard Insights, and Nexus Dashboard SAN Controller using the Nexus Dashboard platform. https://www.cisco.com/c/en/us/products/data-center-analytics/nexus-dashboard/index.html
Cisco Nexus 9300-FX2 Series Switches (leaf)	The Cisco Nexus 9300-FX2 Series switches belong to the fixed Cisco Nexus 9000 platform based on Cisco Cloud Scale technology . The platform enables cost-effective cloud-scale deployments, an increased number of endpoints, and cloud services with wire-rate security and telemetry. The platform is built on modern system architecture designed to provide high performance and meet the evolving needs of highly scalable data centers and growing enterprises. https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/datasheet-c78-742282.html
Cisco Nexus 9300-GX Switches (spine)	Based on Cisco Cloud Scale technology , the Cisco Nexus 9300-GX switches are the next generation of fixed Cisco Nexus 9000 Series Switches capable of supporting 400 Gigabit Ethernet (GE). With the increase in use cases for applications requiring Artificial Intelligence (AI) and Machine Learning (ML), the platform addresses the need for high-performance, power-efficient, compact switches in the networking infrastructure. https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/nexus-9300-gx-series-switches-ds.html

Component product name	Short description and component product specifications
Cisco Application Centric Infrastructure	<p>The Cisco Application Centric Infrastructure (Cisco ACI) is part of our intent-based networking framework to enable agility in the data center. It captures higher-level business and user intent in the form of a policy and translates this into the network constructs necessary to dynamically provision network, security, and infrastructure services.</p> <p>https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/application-policy-infrastructure-controller-apic/datasheet-c78-739715.html</p>
Cisco Nexus Dashboard Fabric Controller	<p>Cisco Nexus Dashboard Fabric Controller (NDFC), formerly DCNM, is the network management platform for all NX-OS-enabled deployments. It spans new fabric architectures, storage network deployments, and IP Fabric for Media.</p> <p>https://www.cisco.com/c/en/us/products/cloud-systems-management/prime-data-center-network-manager/index.html#~benefits</p>

Table 8. Storage networking predefined workload component product details

Component product name	Short description and component product specifications
Cisco MDS 9000 Series Multilayer Switches	<p>Cisco MDS 9000 Series Multilayer Switches offer a high-performance storage networking solution with the industry's highest port density, NVMe over Fibre Channel, and industry's first in-line analytics capability, powered by Cisco Data Center Network Manager and SAN Insights. MDS 9000 series switches are widely deployed from small fabrics to large, virtualized data centers powering the most stringent requirements around scale, security, analytics, performance, and high availability.</p> <p>https://www.cisco.com/c/en/us/products/storage-networking/index.html#~products</p>
Cisco Nexus Dashboard SAN Controller	<p>Cisco Nexus Dashboard SAN Controller provides an easy-to-use, centralized console to manage, configure, and troubleshoot all the MDS Fibre Channel switches. Cisco Nexus Dashboard SAN Controller provides centralized capacity to manage storage switches, view storage topology, and use powerful automation to reduce time to configure and troubleshoot.</p> <p>https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/prime-data-center-network-manager/at-a-glance-c45-741113.html</p>
SAN Insight	<p>Cisco SAN Insight is a simple, affordable, and scalable SAN performance monitoring solution that helps with keeping the storage network running optimally, alerts of performance issues, and helps in troubleshooting. SAN Insight provides real-time visibility in performance data, such as network latency and bandwidth, to keep applications running optimally.</p> <p>https://www.cisco.com/c/en/us/products/collateral/storage-networking/mds-9700-series-multilayer-directors/solution-overview-c22-740197.html</p>

Cisco+ Hybrid Cloud consumption models

Cisco+ Hybrid Cloud is offered as a usage-based flexible consumption model. A Cisco+ Hybrid Cloud monthly subscription payment is inclusive of hardware, software, management tools, technical support, software updates, and lifecycle services. Cisco+ Hybrid Cloud is a full-stack solution where Cisco owns the assets and the customer is entitled to use the stack during the subscription term. The customer can acquire core predefined workload-based offer plans through a “Pay As You Use” (PAYU) or “Pay As You Grow” (PAYG) flexible consumption licensing model.

Pay As You Use (PAYU)

With the “pay as you use” model, you get the flexibility to grow and shrink capacity utilization on demand. If you choose this consumption option, Cisco ships both reserved (committed) and on-demand buffer capacity to your site. You’ll make monthly recurring payments for reserved capacity. You only pay for the on-demand buffer capacity when you use it. Cisco does not charge for on-demand capacity not in use. Use Cisco’s usage portal to monitor utilization and add more capacity based on your business needs. Cisco deploys a new tranche of reserved and on-demand capacity when you need more.

Pay As You Grow (PAYG)

With the “pay as you grow” model, you get growth capacity that ensures the business performance you need, without continuously over-provisioning. If you choose this consumption option, Cisco ships both reserved (committed) and on-demand buffer capacity to your site. You’ll make monthly recurring payments for reserved capacity. Once you use the on-demand buffer capacity, Cisco converts the on-demand capacity once used to reserved and continues to charge for it over the subscription term. Use Cisco’s usage portal to monitor utilization, and add more capacity based on your business needs. Cisco deploys only on-demand buffer capacity for your growth needs.

Additional capacity added later will be placed on the same subscription ID for the same location as the previous deployment. However, the new deployment of capacity will have its own subscription start and end dates. For example, a previously deployed capacity of ten and a newly added capacity of five will not be co-terminated. Adding more capacity on day 2 will result in a new deployment with a new term duration.

Table 9. Cisco+ Hybrid Cloud consumption models

Ideal-fit customer situation	Customers who understand their minimum capacity utilization needs and need flexibility to pay for what they use for unpredictable demand	Customers who need preinstalled extra capacity readily available for anticipated demand and to better align timing of revenues with expenses	
Ship reserved + on-demand capacity on first deployment	Yes	Yes	
Customer commits to recurring payments for	Yes	Yes	

reserved		
On-demand capacity is installed, ready to use.	Yes	Yes
Customer only pays for on-demand capacity when used.	Pay only for units of capacity in use	Pay only for units of capacity in use
Customer stops use of the on-demand capacity.	Cisco does not charge for on-demand capacity not in use over the deployment term.	Cisco converts on-demand unit once used to reserved and continues to charge over the deployment term.
Capacity expansion deployment(s)	Cisco deploys new tranche of reserved and on-demand for capacity expansion.	Cisco deploys only on-demand buffer capacity for capacity expansion.
Minimum reserved capacity	70%	80%

For predefined workload offer types VDI, VSI, bare metal, and edge, you can include optional add-on data center networking packages and complementary third-party (non-Cisco) software. Optional add-ons for unmetered data-center networking and third-party software are 100 percent reserved (committed) monthly subscription payments for the duration of your subscription term.

Cisco+ Hybrid Cloud reserved capacity is priced per unit per month. On-demand capacity is priced per unit per day. The unit of measure used for pricing, or charging, for the utilization of IT resources is as follows:

Table 10. Cisco+ Hybrid Cloud reserved capacity

Offer type	Technology type	Unit Of Measure (UOM)
Virtual Desktop Infrastructure (VDI)	Compute blade	Per GiB of memory
Virtual Server Infrastructure (VSI)	Compute blade	Per GiB of memory
Bare-metal computing	Compute blade	Per node
Virtual Desktop Infrastructure (VDI)	Hyperconverged infrastructure	Per GiB of memory + per GiB of storage
Virtual Server Infrastructure (VSI)	Hyperconverged infrastructure	Per GiB of memory + per GiB of storage
Edge computing	Hyperconverged infrastructure	Per GiB of memory + per GiB of storage
Data-center switching	Networking	Per switch
Data-center storage networking	Networking	Per switch

Ordering information

Country availability

Cisco+ Hybrid Cloud is currently offered in the United States, Canada, the United Kingdom, Germany, the Netherlands, and Australia.

Partner eligibility

If you do not purchase directly from Cisco as an end customer, you must contact a qualified Cisco+ Hybrid Cloud partner to quote and order. Partners eligible to sell Cisco+ Hybrid Cloud meet the following criteria:

1. Partner is a Tier 1 partner that can transact directly with Cisco.
2. Partner has a Cisco Powered Hybrid Cloud / IaaS designation
OR
Partner has a Cisco Data Center Master or Advanced specialization.
3. Partner is enrolled into the Cisco+ Hybrid Cloud program.

How to quote and order

If you are an existing Cisco direct end customer, please contact your Cisco account manager to quote and order.

Partners enrolled to sell Cisco+ Hybrid Cloud can use the following URL to get instant pricing for the predefined configuration offer types and place orders:

<https://apps.cisco.com/PDR/rest/quoting/specialoffers>

Cisco+ Hybrid Cloud does not require enrolled partners to know SKUs to quote and order. No SKUs are required to quote and order predefined workload offer types. Instead, enrolled partners use step-by-step clicks to select a wizard in the new Cisco+ Cisco Commerce user interface to guide them to receiving instant prices. A partner ordering guide with step-by-step screenshots and process flows are available to Cisco+ Hybrid Cloud partners.

Table 11. Cisco+ Hybrid Cloud usage-based consumption billing SKUs

Predefined configuration workload type	Technology type	Meter type	UOM for quantity	Charge type	Item name	Item description
VSI General Purpose	Compute	vMemory	GiB	Recurring	PLHC-VSIGPCI-RES	Cisco+ Hybrid Cloud Reserve for VSI General Purpose
VSI General Purpose	Compute	vMemory	GiB	Usage	PLHC-VSIGPCI-OND	Cisco+ Hybrid Cloud On-demand for VSI General Purpose
VSI Performance	Compute	vMemory	GiB	Recurring	PLHC-VSIPCI-RES	Cisco+ Hybrid Cloud Reserve for VSI performance
VSI Performance	Compute	vMemory	GiB	Usage	PLHC-VSIPCI-OND	Cisco+ Hybrid Cloud On-demand for VSI performance
VDI Balance	Compute	vMemory	GiB	Recurring	PLHC-VDIBCI-RES	Cisco+ Hybrid Cloud Reserve for VDI Balance
VDI Balance	Compute	vMemory	GiB	Usage	PLHC-VDIBCI-OND	Cisco+ Hybrid Cloud On-demand for VDI Balance
Bare-metal General Purpose	Compute	Node	Node	Recurring	PLHC-BMCOCI-RES	Cisco+ Hybrid Cloud Reserve for BM General Purpose

Predefined configuration workload type	Technology type	Meter type	UOM for quantity	Charge type	Item name	Item description
Bare-metal General Purpose	Compute	Node	Node	Usage	PLHC-BMCOCI-OND	Cisco+ Hybrid Cloud On-demand for BM General Purpose
Bare-metal Performance	Compute	Node	Node	Recurring	PLHC-BMPOCI-RES	Cisco+ Hybrid Cloud Reserve for BM performance
Bare-metal Performance	Compute	Node	Node	Usage	PLHC-BMPOCI-OND	Cisco+ Hybrid Cloud On-demand for BM performance
VSI HyperFlex AF	HyperFlex	vMemory	GiB	Recurring	PLHC-HXMAVSI-RES	Cisco+ Hybrid Cloud HX VSI AF Reserve for Memory
VSI HyperFlex AF	HyperFlex	vMemory	GiB	Usage	PLHC-HXMAVSI-OND	Cisco+ Hybrid Cloud HX VSI AF On-demand for Memory
VSI HyperFlex AF	HyperFlex	vStorage	GiB	Recurring	PLHC-HXSAVSI-RES	Cisco+ Hybrid Cloud HX VSI AF Reserve for Storage
VSI HyperFlex AF	HyperFlex	vStorage	GiB	Usage	PLHC-HXSAVSI-OND	Cisco+ Hybrid Cloud HX VSI AF On-demand for Storage
VSI HyperFlex Compute	HyperFlex	vMemory	GiB	Recurring	PLHC-HXMCVSI-RES	Cisco+ Hybrid Cloud HX VSI Compute Reserve for Memory
VSI HyperFlex Compute	HyperFlex	vMemory	GiB	Usage	PLHC-HXMCVSI-OND	Cisco+ Hybrid Cloud HX VSI Compute On-demand for Memory
VSI HyperFlex Compute	HyperFlex	vStorage	GiB	Recurring	PLHC-HXSCVSI-RES	Cisco+ Hybrid Cloud HX VSI Compute Reserve for Storage
VSI HyperFlex Compute	HyperFlex	vStorage	GiB	Usage	PLHC-HXSCVSI-OND	Cisco+ Hybrid Cloud HX VSI Compute On-demand for Storage
VDI HyperFlex AF	HyperFlex	vMemory	GiB	Recurring	PLHC-HXMAVDI-RES	Cisco+ Hybrid Cloud HX VDI AF Reserve for Memory
VDI HyperFlex AF	HyperFlex	vMemory	GiB	Usage	PLHC-HXMAVDI-OND	Cisco+ Hybrid Cloud HX VDI AF On-demand for Memory
VDI HyperFlex AF	HyperFlex	vStorage	GiB	Recurring	PLHC-HXSAVDI-RES	Cisco+ Hybrid Cloud HX VDI AF Reserve for Storage
VDI HyperFlex AF	HyperFlex	vStorage	GiB	Usage	PLHC-HXSAVDI-OND	Cisco+ Hybrid Cloud HX VDI AF On-demand for Storage
VDI HyperFlex Compute	HyperFlex	vMemory	GiB	Recurring	PLHC-HXMCVDI-RES	Cisco+ Hybrid Cloud HX VDI Compute Reserve for Memory
VDI HyperFlex Compute	HyperFlex	vMemory	GiB	Usage	PLHC-HXMCVDI-OND	Cisco+ Hybrid Cloud HX VDI Compute On-demand for Memory
VDI HyperFlex Compute	HyperFlex	vStorage	GiB	Recurring	PLHC-HXSCVDI-RES	Cisco+ Hybrid Cloud HX VDI Compute Reserve for Storage
VDI HyperFlex Compute	HyperFlex	vStorage	GiB	Usage	PLHC-HXSCVDI-OND	Cisco+ Hybrid Cloud HX VDI Compute On-demand for Storage
HyperFlex-Edge	HyperFlex	vMemory	GiB	Recurring	PLHC-HXMAE-RES	Cisco+ Hybrid Cloud HX Edge AF Reserve for Memory
HyperFlex-Edge	HyperFlex	vMemory	GiB	Usage	PLHC-HXMAE-OND	Cisco+ Hybrid Cloud HX Edge AF On-demand for Memory
HyperFlex-Edge	HyperFlex	vStorage	GiB	Recurring	PLHC-HXSAE-RES	Cisco+ Hybrid Cloud HX Edge AF Reserve for Storage
HyperFlex-Edge	HyperFlex	vStorage	GiB	Usage	PLHC-HXSAE-OND	Cisco+ Hybrid Cloud HX Edge AF On-demand for Storage
Nexus DCNM Fabric	Networking	Switch	Switch	Recurring	PLHC-N9336-2-RES	Cisco+ Hybrid Cloud Reserve for Nexus 9336 Switch
Nexus DCNM Fabric	Networking	Switch	Switch	Usage	PLHC-N9336-2-OND	Cisco+ Hybrid Cloud On-demand for Nexus 9336 Switch
Nexus ACI or DCNM Fabric	Networking	Switch	Switch	Recurring	PLHC-N9364C-3-RES	Cisco+ Hybrid Cloud Reserve for Nexus 9364C Switch
Nexus ACI or DCNM Fabric	Networking	Switch	Switch	Usage	PLHC-N9364C-3-OND	Cisco+ Hybrid Cloud On-demand for Nexus 9364C Switch

Predefined configuration workload type	Technology type	Meter type	UOM for quantity	Charge type	Item name	Item description
MDS Premier	Networking	Switch	Switch	Recurring	PLHC-C9148T-2-RES	Cisco+ Hybrid Cloud Reserve for MDS Premier Switch
MDS Premier	Networking	Switch	Switch	Usage	PLHC-C9148T-2-OND	Cisco+ Hybrid Cloud On-demand for MDS Premier Switch

Table 12. Cisco+ Hybrid Cloud subscription-based billing SKUs

Other add-on subscriptions	Technology type	Unit type	UOM for quantity	Charge type	Item name	Item description
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WO-ES-RES	Cisco+ Hybrid Cloud Reserve for WO VM Essentials
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WO-AD-RES	Cisco+ Hybrid Cloud Reserve for WO VM Advantage
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WO-PR-RES	Cisco+ Hybrid Cloud Reserve for WO VM Premier
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WOD-ES-RES	Cisco+ Hybrid Cloud Reserve for WO VDI Essentials
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WOD-AD-RES	Cisco+ Hybrid Cloud Reserve for WO VDI Advantage
Intersight Workload Optimizer (IWO)	3 rd party software	Licenses	Each	Recurring	DC-MGT-WOD-PR-RES	Cisco+ Hybrid Cloud Reserve for WO VDI Premier
Nexus Base	Networking	Switch	Switch	Recurring	PLHC-N9336-1-RES	Cisco+ Hybrid Cloud Reserve for Nexus 9336 Switch
MDS Base	Networking	Switch	Switch	Recurring	PLHC-C9148T-1-RES	Cisco+ Hybrid Cloud Reserve for MDS Base Switch

End user terms

To review Cisco+ end-user program terms and Cisco+ Hybrid Cloud end-user offer-specific terms, please visit Cisco's cloud and software terms web page: <https://www.cisco.com/c/en/us/products/collateral/nb-06-plus-as-a-service/hybrid-cloud/end-user-terms-conditions.html>.

Warranty and support services information

Cisco+ Hybrid Cloud equipment and licensed software are covered by Cisco's standard warranties. The standard warranties for hardware and software product components within each configuration are described here: <http://www.cisco.com/go/warranty>.

In addition, Cisco+ Hybrid Cloud plans include technical support coverage through the Smart Net Total Care[®] (SNTC) program. Smart Net Total Care technical support tiers are described at the following at-a-glance: <https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/smart-net-total-care/at-a-glance-c45-743939.html>.

If you opt for premium support through the Cisco Solution Support program, please see the at-a-glance URL below for more service details: https://www.cisco.com/c/dam/en_us/services/portfolio/documents/solution-support-service-at-a-glance.pdf.

Table 13. Cisco+ Hybrid Cloud predefined use case standard configurations are offered with two tiers for SNTC and one tier of Cisco Solution Support

Technical support program	Tier	Description
Smart Net Total Care	24x7x4OS	<ul style="list-style-type: none"> • Four-hour advance hardware replacement • 24 hours a day, seven days a week, including holidays • Includes an on-site support option
Smart Net Total Care	8x5xNBD	<ul style="list-style-type: none"> • Next-business day, local business hours, based on depot time hardware replacement • Five days a week, no holidays • RMA tickets approved by cutoff times
Solution Support	8x5xNBD	<ul style="list-style-type: none"> • Additive to SNTC • Support for multiproduct, multivendor solution • Customer receives support across the deployment as a whole • Addresses software plus hardware from both Cisco and Solution Support alliance partners

Important details of and exceptions to both SNTC levels are available in the service descriptions referenced in the SNTC at-a-glance cited above. This includes cutoff times for ticket creation, heavy and oversize equipment, plus onsite support details. Detailed service descriptions are also available for review at the URLs below:

Smart Net Total Care service description:

https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/cisco-smart-net-total-care.pdf

Cisco Onsite Field Services description:

https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/cx-onsite-field-engineer-duties-description.pdf

Customer success

When a Cisco+ Hybrid Cloud solution is purchased, Cisco includes consumption lifecycle services with the solution. A Cisco Portfolio Activation Specialist (PAS) is assigned to the Cisco+ Hybrid Cloud Partner to provide basic customer success. Cisco will assist the partner with customer onboarding, usage monitoring, periodic reporting, and ad-hoc outreach. The PAS will assist the partner with metering activation and validation of customer acceptance of solution availability and readiness. The PAS will monitor and report consumption anomalies, support Quarterly Business Reviews (QBR) with the partner and customer, report utilization trends and benchmarks, and take ad-hoc outreaches to log cases for billing disputes and escalations, delays, and special support requests.

Cisco professional services and partner services

In addition to Smart Net Total Care and Solution Support options from Cisco, our certified partners can help you transform experiences and accelerate business innovation and growth. Cisco and its certified partners have the depth and breadth of expertise to create a clear, replicable, optimized hybrid cloud deployments. Planning and design services align technology with business goals and can increase the accuracy, speed, and efficiency of your deployment. Technical services can help you improve operational efficiency, save money, and mitigate risk. Optimization services are designed to continuously improve performance and help your team succeed with new technologies. For more information, please visit <https://www.cisco.com/go/services>.

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