



# FlexPod XCS

One automated platform for all your modern applications, data, and hybrid-cloud operations

**Applications are the face of your company. Deploying them at the speed of your business is difficult with traditional siloed infrastructure and management. The best option is to simplify with greater visibility, full lifecycle automation, and pay-as-you-go economics to gain the scalability and operational productivity you need to better serve your business needs.**

## We support your hybrid-cloud journey

- Full-stack visibility
- End-to-end automation
- Infrastructure as a service
- Choice of consumption models
- Natively integrated with three cloud service providers

You need to take bold steps to prepare your data center for the future and gain the agility to move at the pace of your business.

You need modern infrastructure and operations to support a hybrid-cloud future. You need operational infrastructure that can be deployed wherever your workloads and data need to reside.

## Introducing next-generation converged infrastructure

A next-generation FlexPod® infrastructure solution from Cisco and NetApp, FlexPod XCS introduces a new level of visibility and automation that can help propel your journey to hybrid cloud. The Cisco Intersight™ cloud operations platform with a data fabric powered by NetApp® ONTAP® helps your workloads span on-premises and cloud deployments. You gain the

operational model and seamless data experience required to meet the scale and agility that today's applications demand.

FlexPod XCS builds upon Cisco and NetApp's operational and management capabilities to enhance full-stack visibility. This visibility gives you the insight that you need in order to optimize cost and performance, make intelligent deployment decisions, and maintain supported configurations across your FlexPod infrastructure. We further integrate compute, storage, network, and management to simplify day 0 through day N automation, key to responding quickly to the demands of your business. The solution supports FlexPod as a Service with cloudlike consumption models that increase flexibility to choose those that best suit your business.

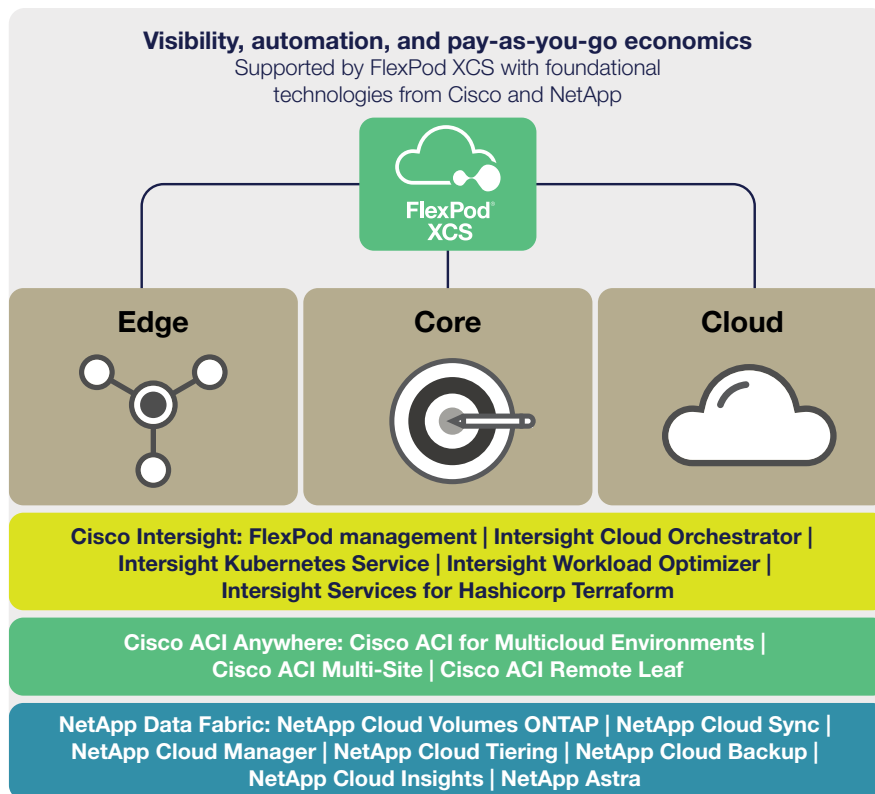
## New operational model

The core of FlexPod XCS is the Cisco Intersight™ platform with ONTAP software integration. This cloud-based, software-as-a-service lifecycle management platform integrates FlexPod components so that a single user interface can give you full visibility and operational control over your infrastructure.

With a set of innovative capabilities you gain consistent, policy-based automation across all of your FlexPod deployments. With FlexPod-specific dashboards and workload optimization capabilities, you gain the visibility you need to bridge applications and infrastructure. Better yet, you can gain the visibility benefits

### Driven by ONTAP

FlexPod, driven by NetApp's ONTAP data management software, provides high-performance shared storage for file and block workloads and integrates NetApp's cloud file services into each of the major public clouds.



of the next-generation FlexPod infrastructure for your existing FlexPod infrastructure just by adopting the Intersight platform. All of this helps you change the way you manage applications and infrastructure to reach the scale and velocity your stakeholders demand.

Some workloads must be deployed in your own physical infrastructure, whether in the core data center or at the network edge. These include:

- **Performance-sensitive workloads** that may need to be placed close to users at the network edge, or placed

in the data center to deliver predictable performance to users.

- **Data-sensitive workloads** that have large amounts of data colocated with applications, or data that must be under your control to manage data sovereignty requirements.

FlexPod XCS is the first and only converged infrastructure solution that is natively integrated into the three major cloud service providers extending capabilities beyond the core and edge. Now you can reach into hybrid cloud with the level of automation, visibility, and data services that you have with your on-premises

infrastructure. The Intersight Kubernetes Service can deploy cloud-native applications locally or in the cloud. Cisco® Application Centric Infrastructure (Cisco ACI®) can extend your data center networks into the cloud with secure, Layer 2 connectivity as though all of your infrastructure were colocated. Features such as a data fabric powered by NetApp make data

### FlexPod with Intersight Benefits

- Day 0 to day N automation
- Full-stack lifecycle management for increased efficiency
- Consistent operations with visibility and control for next-generation applications
- Common policy abstraction, governance, and compliance
- Server, network, and storage resource elasticity
- Hybrid-cloud workload migration
- Business continuity and disaster recovery
- Unified data experience

available on your premises or in the cloud by moving it to where it's needed and making sure that your data is at the right location. Capabilities provided by NetApp Cloud Volumes ONTAP, Cloud Manager, Cloud Sync, Cloud Tiering, and Cloud Backup all help you manage and protect your data seamlessly between your cloud, data center, and edge locations.

### Visibility for infrastructure optimization

You need to deliver the best experience to every one of your customers. That requires being able to see everything from infrastructure alerts and alarms to application performance. Intersight is your single point of visibility for your compute, network, storage, hypervisor, and container environments. It supports:

- **FlexPod-specific views** provide operational status of your existing and new FlexPod units, including inventory, health status, alerts, and lifecycle advisories. Direct connectivity to Cisco Technical Assistance Center (Cisco TAC) proactively supports problem resolution. Recommendations are given based on Cisco

and NetApp configuration compatibility matrices, and you are advised if you need to upgrade component firmware to maintain compliance with supported configurations.

- **Correlated insights** into the relationship between application and infrastructure components help you to optimize your workloads so that infrastructure never stands in the way of application performance.

### Automation puts agility in reach

With the staff you have today, it's almost impossible to embrace the future without automation. Responding to daily demands with manual processes can put agility out of reach when you need to deploy a Kubernetes cluster or host a new enterprise application. With a next-generation FlexPod solution, you can automate your day 0 to day N processes, making it straightforward to evolve your infrastructure with scale and simplicity.

For hybrid-cloud operations, FlexPod with Intersight:

- **Provides** day 0 automation through configuration of

- server, storage, and network infrastructure
- **Automates** day 1 (day-to-day) operations through predefined operations such as configuring storage for use by virtual machines or custom workflows.
- **Evolves** your infrastructure with day 2 operations to add and remove servers and storage; and day N lifecycle management.
- **Deploys** containers as a service on bare metal servers, in virtualized clusters, or in the cloud through a 100% upstream Kubernetes environment. Gain the advantages of Cisco-curated enhanced services including persistent storage on NetApp storage volumes through the container storage interface. Deploy virtualization clusters with automated compatibility checks for server, firmware, and hypervisor version compatibility.
- **Speeds up** iterative DevOps processes. Deploy infrastructure as code through Intersight Service for HashiCorp Terraform, the Cisco Intersight API, Kubernetes pod

- files, and bindings to a variety of preferred scripting languages for DevOps practitioners.
- **Supports** Cisco Validated Designs and corresponding Ansible playbooks to automate while reducing cost and risk.

## Ready for the future

While your new and existing FlexPod infrastructure can take advantage of cloud-based management, FlexPod XCS with the Cisco UCS X-Series Modular System is exclusively cloud managed and delivers a unified data experience.

Equipped with the latest NetApp storage solutions and the Cisco UCS X-Series Modular System with Intersight, FlexPod XCS enables you to define servers and their I/O configuration at a granular level. A single platform can support and optimize a wider range of workloads, reducing the cost of having a large number of server types in your data center. With this even more flexible and adaptable converged infrastructure solution, you can:

- **Simplify** your data center environment with cloud-based management as a service
- **Adapt** to the unpredictable needs of hybrid-cloud applications
- **Provide** for traditional scale-out infrastructure and enterprise applications

### Prepare for the future



- **Take Intersight for a test drive**—visit [cisco.com/go/intersight](https://www.cisco.com/go/intersight)
- **Incorporate** the next generation of FlexPod with Intersight into your plans