Simplify Hyperconverged Cluster Management

Plan, size, and purchase

Deploy

Provision

Manage

Simplicity is the difference between difficult and easy.

When it comes to managing hyperconverged infrastructure, simplicity is the key. In many management platforms, the underlying infrastructure is inflexible and complex, and that complexity extends to the management experience. We believe that simplicity should be an explicit choice and that is the choice we have made.

With Cisco HyperFlex™ systems, we give you simplified management with a choice of tools so that you can use the ones that best fit your needs. Because we designed our systems to be deployed, provisioned, and managed through an API, our products are simpler, and so are our tools. Your choices include the following:

- **Cisco Intersight™** is cloud-based lifecycle management platform for your infrastructure, regardless of where it resides. You can manage your Cisco HyperFlex and Cisco Unified Computing System™ (Cisco UCS®) infrastructure— traditional, hyperconverged, edge, and remote and branch offices—through a single cloud-based GUI.

- **Cisco HyperFlex Connect** integrates with Cisco Intersight to deliver unified, intuitive, robust, and secure management and monitoring of your clusters from anywhere and at any time. A smart, insightful dashboard with metrics and trends supports your entire cluster management lifecycle.

- **Third-party management plug-ins** provide a seamless experience for those already administering clusters using VMware vSphere, Microsoft Hyper-V, and other tools.

"Cisco HyperFlex took 80 percent less time to deploy than our previous solution, and speed equals efficiency."

Derek DePasture
Senior network engineer
BluePearl Veterinary
Partners.
Read the story

Complete lifecycle management

Cisco Intersight and Cisco HyperFlex Connect work together to deliver a single interface that lets you manage hundreds of centralized and remote locations, with support for the entire IT infrastructure lifecycle (Figure 1).

Cisco HyperFlex Connect is hosted on your premises and helps you manage all the features of your Cisco HyperFlex clusters regardless of location. Cisco Intersight supports your Cisco HyperFlex systems and Cisco UCS servers, regardless of where they are installed. These tools simplify everything, from planning to ongoing management and redeployment of your resources.

Plan, size, and purchase

Our tools help you determine the best configuration for your needs by analyzing current and historical resource use. For example, if your application runs in a virtual machine and you are not sure what configuration would be optimal, the Cisco HyperFlex Profiler can help you determine its needs. If you know that you want to move to Cisco HyperFlex systems but don't know what the configuration should be, you can use the Cisco HyperFlex Sizer tool to define the best configuration. After you have a configuration plan, Cisco® Smart Licensing shows your license ownership and consumption. With these tools, it's easy to know what you own and how you are using it.

Configure

Our configuration process captures your intent so that when you deploy servers and clusters you get exactly what you ask for. You can use cluster profiles to specify everything about the cluster, including data platform settings and the entire
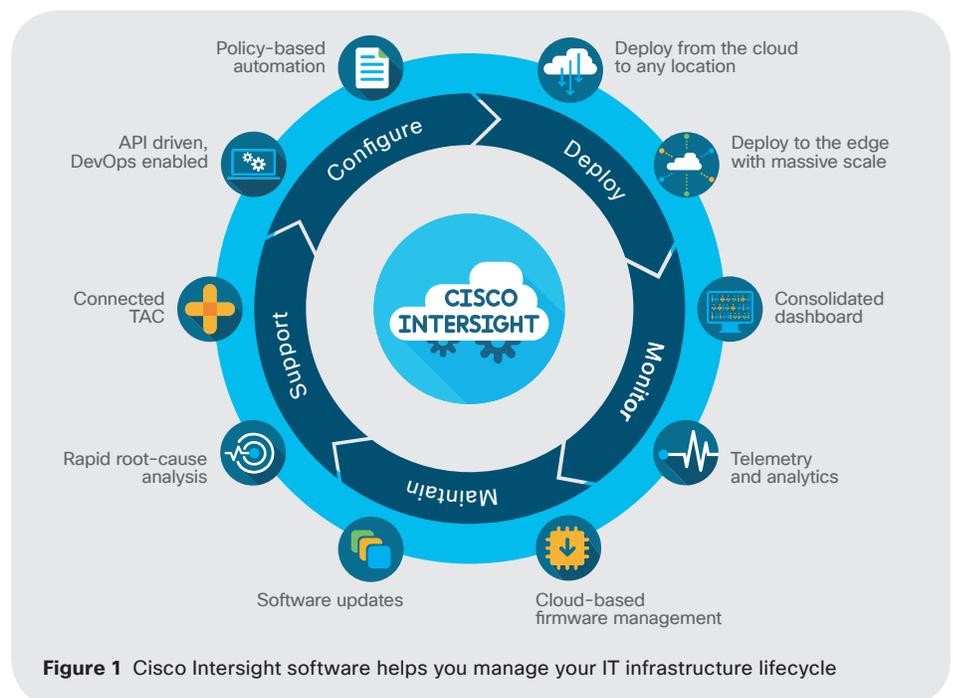

Figure 1 Cisco Intersight software helps you manage your IT infrastructure lifecycle

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> "With Cisco HyperFlex Systems, we can respond much faster to business and application needs because CPU, storage, and network resources are independently scalable."
>
> Paul Bauwens
> IT architect
> Meander Medisch Centrum
> Read the story

software stack—from firmware to the hypervisor. The Cisco Intersight recommendation engine checks the hardware compatibility list for any conflicts, such as an unsupported combination of software revisions, and alerts you to the issue so that you can adjust your configuration.

Deploy

All you have to do to deploy your clusters is to connect power and network cables and claim the servers in the user interface. Apply a cluster profile to a HyperFlex cluster and your systems or clusters are configured automatically in minutes. Because we built our servers to be 100 percent programmable, you can bring up infrastructure from the moment it is powered on. This is especially important because you can deploy hyperconverged clusters worldwide without requiring specialized technicians to configure them.

Provision

You can customize your cluster for your workloads with Cisco HyperFlex Connect, Cisco Intersight

services, or third-party plug-ins, all of which use the Cisco HyperFlex API. Not every administrator wants to use a GUI, so we also offer a command language interface (CLI) and representational state transfer (REST) APIs. Our APIs have also been incorporated into higher-level automation and workflow platforms such as Cisco UCS Director.

Analyze, monitor, and maintain

After applications are operational, you can analyze, monitor, and maintain the systems to make sure they are running optimally. Detected configuration drift is highlighted by Cisco Intersight so that you can identify issues before systems become noncompliant. Out-of-the-box alarms automatically alert you to any impending problems.

Single-click software upgrades can be initiated by cross-launching the Cisco HyperFlex Connect interface (Figure 2). With this interface, you can update the cluster to the revision levels you specify, and the software performs immediate or rolling cluster upgrades based on your policies and preferences.
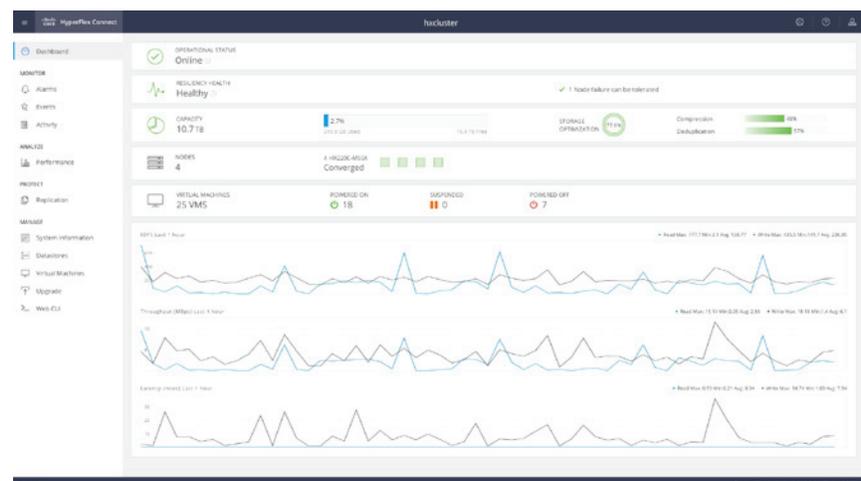
Figure 2 The Cisco HyperFlex Connect dashboard delivers visibility across your HyperFlex systems within a cluster

Manage smarter

- Simplify by managing your infrastructure regardless of where it is installed.
- Deploy in the data center and at the edge with massive scale.
- Automate updates to Cisco HyperFlex software to reduce complexity and manual tasks.
- Use best practices to enable faster, more proactive IT operations.
- Gain actionable insight for ongoing improvement and problem avoidance.
- Integrate with third-party tools.
- Improve productivity and quickly respond to problems before they affect operations.

For more information

- [Cisco HyperFlex](#)
- [HyperFlex Connect video](#)

Integrate DevOps processes

If you use DevOps processes, you can use the Cisco HyperFlex API to manipulate the infrastructure from scripts and from tools such as Puppet, Chef, and Ansible.

Support

Regardless of vendor, problems occur at one point or another. Getting support typically involves recognizing a problem, opening a support case, creating and sending log files for troubleshooting, and working with a technical support engineer to resolve the problem. The Cisco Intersight platform does this all automatically through the Cisco Connected Technical Assistance Center (TAC). If telemetry data reveals errors that indicate a hard failure, the platform can automatically upload diagnostic information to the Cisco TAC for rapid root-cause analysis.

Manage security and disaster recovery

HyperFlex systems provide data protection at every layer—within the system, at the network edge, in the cloud, and across your data centers and disaster recovery sites.

- **Data-at-rest encryption** helps you comply with regulations that require the use of security best practices. Hardware-accelerated cryptographic modules in the data stream help ensure that your data is automatically protected without affecting performance.

- **One-click disaster recovery** allows you to easily take snapshots and transmit them to your disaster recovery (DR) site. And we provide one-click workflows to recover the virtual machines on your DR site for improved system, application, and data availability.

- **Stretch clusters** allow a Cisco HyperFlex cluster to reside in a single location or stretch across short geographic distances. An active-active stretch cluster synchronously replicates data between the two sites and has a very short recovery time objective (RTO) and zero data loss. You can stretch a cluster across two sites for immediate recovery from disasters. Or you can distribute clusters geographically and replicate data between primary and backup sites.

- **Native replication** synchronizes data from a primary to a secondary site to support traditional disaster recovery strategies, such as policy-based remote replication for disaster recovery and virtual machine migration purposes. Through Cisco Intersight or Cisco HyperFlex Connect software, you create replication policies that specify the RPO for your data. Test recovery, planned migration, and failover can be scripted through PowerShell cmdlets available from powershellgallery.com.

Next steps

Call your Cisco representative or visit the [Cisco Partner Locator](#) to find your closest Cisco partner.