Cisco HyperFlex Systems for Agile Development and DevOps

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Support All Development Phases
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- Cisco HyperFlex™ Systems can support your development and production environments.
- Rapid infrastructure provisioning supports development and testing,
- This high-performance platform with independent resource scaling supports your production environments.

The Support You Need for Every Phase
- Quickly provision and take down development and test environments.
- Quickly iterate from development to test to production environment.
- Quickly scale the environment.
- Easily clone your hardware.

What if you could use the same environment for test, development, and production? Cisco HyperFlex™ Systems give you both with a simple unified management system.

Cisco UCS with
Intel® Xeon®
Processors

Both agile software development processes and DevOps methodologies embody a process of continuous integration (Figure 1). Agile development processes get software created quickly, and DevOps methodologies take them to production.

- **Agile software development processes** have transformed the way that we create new applications. Rapid sequencing through development, deployment, and testing phases has accelerated the application lifecycle, allowing organizations to deploy applications sooner and iteratively improve them over time. Agile development needs the support of new multitier application environments that can be created and taken down sometimes several times per day.

- **DevOps methodologies** structure and automate the process of bringing applications into production. They automate system administration processes so that applications can come into production in controlled, repeatable ways. They codify performance and security requirements so that, after you've deployed an application, you can count on it to behave the same way from release to release.

Cisco HyperFlex Systems

Cisco HyperFlex Systems combine computing, storage, and networking in a simplified, easy-to-use platform. This solution supports both your development and deployment processes with the agility, flexibility, performance, and efficiency that you need, all controlled through a single point of management.

Quickly provision and take down environments: You can quickly create new environments by cloning existing ones to support both agile development processes and DevOps. The Cisco HyperFlex HX Data Platform is integrated into the cluster and quickly creates space-efficient clones by manipulating only metadata. Virtual machine creation is accomplished through the familiar VMware vSphere interface, interconnected through a unified fabric that carries all cluster traffic—IP networking, management, and storage traffic—through a redundant fabric with high throughput and consistent, low latency. This solution accelerates your development and deployment processes. And when you are finished with an environment, you don't have to worry about stranded resources, because they are returned to the cluster's single pool of storage.

Quickly iterate from development to test to production environment: Nothing tests your software better

than working with a real data set. You can clone your operational data, use it when testing your applications, and then release it and start again during the next development-test iteration. Running test, development, and production processes on the same system saves storage space—and the data platform saves you more through always-on inline data deduplication and compression.

Quickly scale the environment: If you need to test your application at a larger scale, you can simply create more space-efficient virtual machines with thin-provisioned volumes. If you need more computing power or storage space in your production environment, you can add more nodes for storage or add blade servers that expand CPU capacity, thereby tuning your cluster to deliver exactly the performance characteristics that your workload demands. Scaling has never been easier, because Cisco HyperFlex HX-Series nodes come with

your hypervisor preinstalled to make integration quick and easy.

Easily clone your hardware: If you are developing applications that need to run in multiple locations, you can develop and test on one Cisco HyperFlex cluster, and deploy on multiple clusters worldwide. Cisco Unified Computing System™ (Cisco UCS®) service profiles make cloning hardware configurations accurate and easy. And with Cisco UCS management, you can manage your clusters in local, remote, and branch-office environments from a single point.

A Single Management Platform

With Cisco HyperFlex Systems, you can quickly move through development, testing, and deployment to bring applications to market quickly and easily. When you choose Cisco HyperFlex Systems, you have a single management platform for all your Cisco® server infrastructure. The Cisco UCS management ecosystem includes tools that integrate with your cluster to cover the entire management lifecycle, from service orchestration through deployment and configuration, and on to monitoring and analysis. You can preserve your existing investment in management tools as you evolve your procedures and implement greater automation and efficiency as you transition to DevOps methodologies.

For More Information

For more information on Cisco HyperFlex Systems, visit: http://www.cisco.com/go/hyperflex.
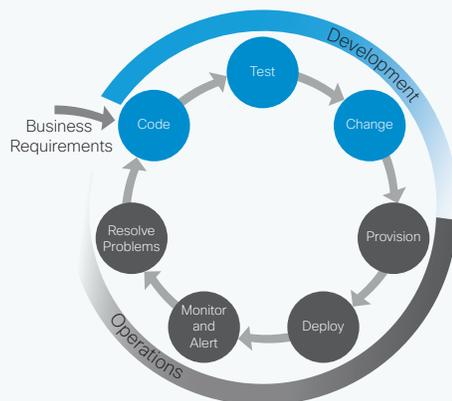
Figure 1. Cisco HyperFlex Systems Support Both Your Agile Programming and Your DevOps Methodologies with a Single Management Platform