Comprehensive FlexPod Management with Cisco UCS Director

What You Will Learn

Today's strategic discussion with chief information officers (CIOs) and IT managers is about business agility and data center responsiveness. Organizations are shifting from siloed IT architecture models to converged infrastructure solutions that preintegrate computing, network, and storage components. This approach can reduce costs while enhancing an IT department's flexibility and agility.

FlexPod is a data center solution jointly developed by Cisco and NetApp. Built on the Cisco Unified Computing System™ (Cisco UCS®), Cisco Nexus® fabric, and NetApp FAS storage, FlexPod was designed to deliver solutions for both IT and business applications that reside in virtualized and nonvirtualized environments. It can also support multiple workloads on all protocols to deliver long-term investment protection.

Challenge

FlexPod is a prevalidated solution, based on best practices, that helps reduce risk and engineering time while supporting predictable service-level agreements (SLAs). Each infrastructure layer scales up or out to accommodate workloads such as VDI, SAP, Oracle, and Microsoft without architectural changes. It also supports secure multitenancy that adjusts to application or business isolation requirements in converged, virtualized, and nonvirtualized environments.

According to a recent Forrester report[1], the FlexPod platform did reduce risk, delivered a potential ROI of nine months, and contributed to cost savings. However, FlexPod alone cannot deliver the full measure of flexibility and agility sought by today's dynamic data centers. The challenge is to find a way to increase flexibility and agility while containing costs. The answer is a centralized automation and management solution that can further reduce operational and capital costs and improve team collaboration, all of which enhances IT operating efficiency.

Solution

Cisco UCS Director is a integral companion for FlexPod because it allows holistic management through centralized automation and orchestration from a single, unified view (Figure 1). When FlexPod and Cisco UCS Director are combined, IT can shift time and focus from managing infrastructure to delivering new service innovation. Used together, FlexPod and Cisco UCS Director deliver:

- Enhanced IT agility with a prevalidated, unified architecture that easily scales up or out to large data-center environments without design changes
- Dramatically reduced capital and operating expenses through end-to-end management of the FlexPod platform with real-time reporting of utilization and consumption based on trends set to customer-specific time frames
- Enhanced collaboration between computing, network, storage, and virtualization teams, allowing subject matter experts to define policies and processes that are utilized when resources are consumed

[1] The Total Economic Impact of NetApp's and Cisco's FlexPod Data Center Platform, January 2013.

- Support for multiple infrastructure stacks in a single data center, as well as across multiple data centers globally

Figure 1. Single-View Portal for Managing FlexPod and Related Components
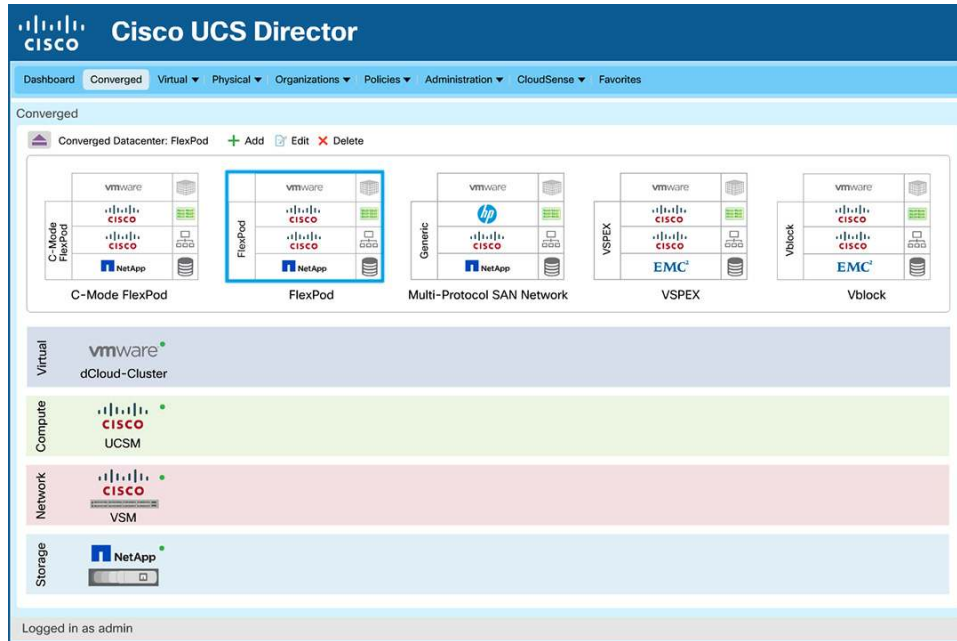
The extensive Cisco UCS Director task library lets you quickly assemble, configure, and manage workflows for FlexPod, Clustered ONTAP, and ExpressPod. You can use the workflows immediately or publish them in an infrastructure catalog. Specific workflows can be assigned to the entire organization or specific groups based on your organizational structure, which can be imported from Lightweight Directory Access Protocol (LDAP). The drag-and-drop workflow designer tool eliminates the need for service engagements or the need to bring together multi-product solutions or third-party adapters.

During installation of Cisco UCS Director, its model-based orchestration conducts an infrastructure discovery that maps the physical and logical relationships of each component layer within FlexPod. This information is stored in a Microsoft SQL Server or Oracle database. One of the essential uses of this information is to validate workflows before they go into production. It is also used to deliver detailed status, utilization, and consumption reporting.

Simplicity in the data center is rare as IT is faced with complex applications and challenging expectations. Cisco UCS Director and FlexPod allow IT departments to add more value to their organization quickly, so they can increase efficiency and better support business goals.

For More Information

To learn more about FlexPod, visit: http://www.netapp.com/us/solutions/flexpod/index.aspx.

Find out more about Cisco UCS Director at: http://www.cisco.com/go/ucsdirector.