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# Cisco Data Center Services for OpenStack

PILOT, DESIGN, DEPLOY, AND EVOLVE YOUR OPENSTACK CLOUD ARCHITECTURE



#### What Is OpenStack?

OpenStack<sup>™</sup> is an open source cloud operating system for building highly scalable public and private clouds. The OpenStack distribution includes core service components including "**Nova**" and "**Glance**" for compute, "**Neutron**" for networking, and "**Swift**" and "**Cinder**" for storage.

As an OpenStack Foundation Gold Member, Cisco has committed to further OpenStack development. OpenStack is one part of a Cisco® broader strategy to create open, programmable networks.

Cisco has developed the OpenStack core networking service ("Neutron", formerly called "Quantum"). Given this, coupled with Cisco's leadership position in cloud, cloud orchestration, and associated services, Cisco Services are best placed to help adapt and extend OpenStack to integrate tightly with your Cisco infrastructure and cloud architecture.

#### What Is Cisco Domain Ten<sup>SM</sup>?

Cisco Domain Ten<sup>SM</sup> is a framework to guide any data center transformation project. This comprehensive approach guides Cisco Services consultants in how they evaluate the requirements for your OpenStack projects to make sure no key area is left unconsidered.



### **Strategy Service**

As part of the Cisco Cloud Strategy Service, Cisco consultants help you assess, devise and evaluate your cloud strategy options, using the Cisco Domain Ten framework. Our experts will help you investigate whether OpenStack is a viable option for your business, and perform a gap assessment of your cloud management platform requirements in order to identify customization requirements upon OpenStack standard capabilities.

#### Assessment and Validation Service

The first step in many OpenStack developments is to establish a baseline or pilot installation for validation testing and integration of future components. With the Cisco Data Center Assessment and Validation Service for OpenStack, Cisco experts guide your team in deploying a full OpenStack distribution on a Cisco UCS-based cloud architecture. They lead your team through a set of tests, enabling you to validate the OpenStack distribution in your data center environment. This enables your team to experiment with a basic OpenStack-based cloud operating system, and to learn more about the production requirements and implications of this technology.

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### **Design and Deployment Service**

OpenStack as an architecture is designed to be extensible in order to meet each individual customer's requirements. This demands in-depth understanding of the operation of the underlying cloud infrastructure and the integration interfaces of selected management and orchestration tools.

In order to extend and integrate OpenStack with these goals, Cisco offers Cisco Data Center Design and Deployment Service for OpenStack. This service is recommended for all customers who wish to deploy OpenStack in a production environment.

This service is available in two variants. First, for customers who want to deploy their selected OpenStack standard distribution into a production environment with a number of Cisco-recommended pre-defined enhancements, for example integration of OpenStack with specific Cisco Nexus 2000, 5000 and 7000 switches, Cisco MDS (SAN) and Cisco Unified Computing System (UCS) products.

Alternatively, or as a "phase 2" project, this service enables the customer to specify a range of requirements for custom design, implementation, testing, and deployment. This may include integration of OpenStack with specific third-party management and Operational Support System (OSS) products that are part of the customer's existing management environment. The service may also be customized to cater for production test and readiness requirements.

#### **Optimization Service**

The Optimization service is targeted towards growing, maintaining and evolving your OpenStack environments as well as additional cloud application development assistance, and OpenStack API integration.

Portfolio	Problems Solved	Key Deliverables	Key Benefits
Strategy and Assessment*	<ul> <li>Is OpenStack the correct platform for my business?</li> <li>What are my key requirements for OpenStack?</li> </ul>	<ul> <li>✓ Strategy Assessment high level roadmap and architecture</li> <li>✓ Prioritization of use cases</li> </ul>	<ul> <li>Understand role of OpenStack in your DC/Cloud strategy</li> </ul>
Assessment and Validation	<ul> <li>Rapid deployment</li> <li>Experimentation &amp; learning</li> <li>"Where next" steps outlined</li> </ul>	<ul> <li>✓ Pre-defined design</li> <li>✓ Test plan</li> <li>✓ Knowledge Transfer</li> <li>✓ (Optional) Assessment Report</li> </ul>	<ul> <li>Experiment with OpenStack installation in your data center environment</li> </ul>
Design & Deployment+	<ul> <li>How to create or add production safety, availability and scale to my OpenStack deployment</li> </ul>	<ul> <li>✓ Network Scale and High availability design</li> <li>✓ Storage Integration</li> <li>✓ Cell deployment design</li> </ul>	<ul> <li>✓ Accelerate production readiness</li> <li>✓ Optimally deployed on Cisco hardware</li> </ul>
Optimization+	<ul> <li>✓ Ongoing custom application assistance</li> <li>✓ Topology and requirements evolution</li> </ul>	<ul> <li>✓ Design review</li> <li>✓ Software upgrade procedures</li> <li>✓ Day 2 Support for customized deployments</li> </ul>	<ul> <li>Ensure deployment evolution</li> <li>Targeted support expertise for your customized solution</li> </ul>

#### Cisco OpenStack Services - Portfolio At A Glance

\*Part of Cisco Cloud Strategy Service

#### Why Cisco Services for OpenStack?

Realize the full business value of your technology investments with smart, personalized services from Cisco and our partners, including Red Hat for OpenStack. <u>Cisco Services</u> enable you to successfully plan, build, and manage your network as a powerful business platform.

As the world's leading provider of cloud infrastructure platforms (Source: Synergy 2012) and leading provider of professional services for cloud (Source: IDC 2013), Cisco Services is best placed to address the myriad of infrastructure and orchestration requirements for your OpenStack-based cloud operating system. Cisco consultants have extensive expertise in designing data center infrastructures globally. With Cisco Data Center Services for OpenStack, Cisco consultants leverage these insights to make sure your OpenStack platform is fully integrated with the cloud infrastructure platforms and products, via the OpenStack Neutron core service.

#### Next Steps

Cisco Data Center Services for OpenStack are available in the Americas now and will be available globally in 2014. Learn about the broad array of Cisco Services for your data center: Visit <u>www.cisco.com/go/dcservices</u> or contact your local Cisco account manager or Cisco channel partner.