

# BROCADE AND MIRANTIS OPENSTACK DATA CENTER SOLUTION FOR CLOUD SERVICE PROVIDERS



## HIGHLIGHTS

**Turnkey solution:** *Mirantis and Brocade scale your business needs in days, not months, with OpenStack.*

**Vendor-agnostic:** *This open source solution allows you to choose your preferred vendors and platforms with zero lock-in.*

**Commercial support:** *Both Mirantis and Brocade allow customers to select the level of support they desire.*

**Automation:** *This solution provides the highest possible level of automation to support rapid scaling while reducing operational expenses.*

**Scalability:** *Designed for rapid scaling without disruption, this solution builds on its core network automation to provide auto-scaling capabilities as well as subscription options that eliminate many of the complexities associated with scaling.*

Mirantis and Brocade have partnered to provide a turnkey, OpenStack-based, On-Demand Data Center solution for service providers. Brocade builds on the proven Mirantis OpenStack<sup>®</sup> platform and Fuel deployment automation by adding network management integration, functionality, scalability, and automation suitable for cloud service provider's complex needs.

## OPENSTACK DEPLOYMENT AND MANAGEMENT

Pioneered by Mirantis, Fuel automatically discovers any bare-metal nodes configured to boot from the network. Once they are identified and bootstrapped, Fuel presents a complete picture of nodes ready for allocation, so you can assign roles and resources across your cloud network. Fuel then runs pre-flight validations to ensure your network is configured properly. The network is integrated using a series of Mirantis-certified Brocade<sup>®</sup> OpenStack plugins.

## FUNCTIONALITY

Mirantis offers several key OpenStack benefits, including:

### Mirantis OpenStack with Fuel:

- **Hardened, production-ready configurations:** Mirantis OpenStack offers hardened configurations of core OpenStack packages, deployed automatically in proven reference architectures and including full HA support, without the penalties of lock-in.
- **End-to-end automation:** Fuel automates configuration and deployment, end-to-end, letting you custom-build your network from the broad range of infrastructure components, operating systems, hypervisors, and packages that OpenStack supports, faithful to upstream code.

### Brocade OpenStack Plugins:

- **Fuel integration:** Plugins for the Brocade VDX® Switch, the Brocade ADX® Application Delivery Switch, the Brocade Virtual ADX, and the Brocade Vyatta® vRouter enable seamless network orchestration through the Fuel interface.
- **Mirantis certification:** The Brocade VDX plugin is currently certified. The Brocade ADX Application Delivery Switch, the Brocade Virtual ADX, and the Brocade Vyatta vRouter are planned for future certifications.
- **ML2 Neutron plugin:** Brocade plugins are based on the new Neutron ML2 framework.

### Brocade VDX Switches:

- **Network fabric:** A fully distributed, deterministic, low-latency network architecture with advanced multipathing enables optimal service provider traffic performance.
- **Auto-configuration:** Automatic switch configuration and management simplifies operations and immediately adds capacity.
- **Auto-scaling:** Brocade VDX Switch seamlessly scales additional 10/40/100 GbE capacity with zero configuration, providing bandwidth on demand with no traffic disruption.
- **Automated VM port-profile migration:** VMs remain undisrupted as the Brocade VDX Switch automatically moves the network configuration with the VM.

### Brocade ADX Series:

- **ADX application delivery:** The Brocade ADX Switch efficiently and flexibly accelerates and scales applications in the world's most demanding data centers.
- **Virtual application load balancing:** Brocade enables an on-demand service delivery model and extends application delivery service as an elastic Network Functions Virtualization (NFV) component through the Brocade Virtual ADX.

### The Brocade Vyatta vRouter:

- **Platform independence:** Provides an NFV solution for virtualized routing and security solution for VMware, Microsoft Hyper-V, Citrix Open Xen/Xen/XenServer, and Red Hat KVM hypervisors.
- **Elasticity and scalability:** Removes the limitations of appliance bound network devices, allowing the initiation of new network scale and performance in seconds.
- **Auto-provisioning:** Enables simple button-click deployment and auto-configuration of complete network connectivity and security.
- **Multitenant support:** Brocade Vyatta vRouter can present all the networking directly inside a tenant, allowing for a more complex tenant with multiple routed subnets.

## SCALABILITY

Mirantis and Brocade understand that scalability is key for cloud service providers given their rapid growth curve and have designed their solution to meet this need. For example, Brocade VCS Fabric technology enables cloud service providers to build automated networks that scale without disruption. Coupled with Brocade Network Subscription, a pay-as-you-go acquisition model, Brocade can help you meet your networking challenges with financial flexibility.

## AUTOMATION

This cloud service provider solution offers unmatched automation and is built to support scale-out infrastructure, making it ideal for cloud infrastructures that must scale outward rather than upward. The included technologies are built on three core design principles:

- Simplicity and automation
- Efficiency and resilience
- Interfaces built for the cloud