

Jak łatwo stworzyć swój własny prywatny Cloud z SDN

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Mirantis today

- Pure-play OpenStack company
- Delivers all the technology, integration, training and support required for companies to succeed with production-grade open source cloud
- 400+ open source infrastructure experts helped make it one of top 5 contributors to OpenStack's upstream codebase



Mirantis customers





Agenda

- What is Mirantis OpenStack?
- What is FUEL?
- How do we integrate an SDN controller into OpenStack? Juniper Contrail as an example.



OpenStack architecture





Openstack with SDN controller in 30 minutes

Manual installation:

- Well, manual;)
- **Tedious** ٠
- Error prone •

Fuel based installation:

- Fully automated
- Routine
- Error proof •





Demo start

Mirantis and Juniper Contrail Proof of Concept live demo



Mirantis OpenStack–easy, flexible, reliable

Mirantis OpenStack[®]

OPENSTACK DEPLOYMENT AND MANAGEMENT [PROJECT FUEL]	Easy OpenStack deployment too complex? Starting with Fuel, the open source control plane pioneered by Mirantis makes it faster and easier. Learn More
OPENSTACK PACKAGES CORE KEY RELATED PLUG-INS AND OPENSTACK PROJECTS DRIVERS	Flexible Run the most progressive OpenStack distro, free from proprietary hooks or opaque bundling: Deploy on Red Hat, Ubuntu or CentOS Choose between Ceph or Swift Commercial support for Savanna and Murano Learn More
MIRANTIS SUPPORT SLA	Reliable Proven technical support and services, available 24/7/365, plus community advocacy and legal indemnification. Learn More





Fuel 4.x and Fuel-Contrail

- Open Source, available to everyone
- Latest Openstack release support (now Havana)
- Generic OpenStack
 networking

- Proof of Concept based on Fuel 3.21 (OpenStack Grizzly) release
- Not publicly available yet...
- Contrail SDN build in



What do you expect from your own Cloud?

- OpenStack
 - High availability of Cloud Controllers
 - High performance
 - o Reliability
- Network
 - Flexible
 - High availability for SDN Controllers (if any)
 - High availability for Network Node (or a Neutron server)
 - Reliable Cloud gateways
 - Additional services like: security policies, LoadBalancer etc.



Networking in Openstack





Open vSwitch with VLANs



- Max 4096 tenant networks
- Legacy L2 network with STP
- VMs MACs in switch CAM tables
- Not scalable



Open vSwitch with GRE





- Can work over L3 network
- Hardware independent
- OVS and GRE performance problem
- Still L2 as a tenant network

Advantages of SDN

- Flexible
- Can manage various components of the network
- Improved performance
- Additional services like: service chain, security policy
- Advanced monitoring and troubleshooting



Juniper Contrail SDN





Contrail SDN components





Contrail SDN components





High Availability of Openstack Cloud and SDN controllers





OpenStack Controllers HA





Keepalived







Contrail SDN Controllers HA





Contrail vRouter





Contrail Control Node





Contrail Configuration Node





Contrail Analitycs Node





Demo check the result

Mirantis and Juniper Contrail Proof of Concept live demo



What next with Mirantis Openstack?

- More SDN controllers support
- Vendor specific drivers for:
 - o LBaaS
 - o FWaaS
 - \circ VPNaaS
 - \circ Storage
 - 0 ...









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