



# Mirantis OpenStack for Kubernetes

Ship code faster on a secure and scalable  
Kubernetes foundation



## Run OpenStack on Kubernetes

Mirantis OpenStack (MOS) for Kubernetes enables enterprises and service providers to accelerate digital transformation at scale with highly configurable private clouds that utilize cloud native application models for lifecycle management. Part of the Mirantis Cloud Native Platform, MOS for Kubernetes is based on open standards and deployed by Mirantis Container Cloud, a multi-cloud container platform that offers cloud choice, simplicity and security so enterprises can ship code faster anywhere. Providing a single pane of glass across public and private clouds, and bare metal, for container orchestration and IaaS, Mirantis Container Cloud enables you to replace multiple silos with unified infrastructure operations for both legacy and cloud-native workloads.

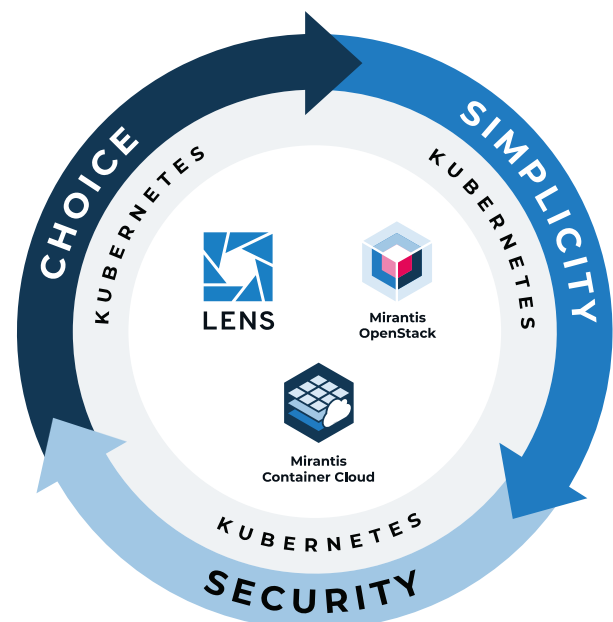
MOS for Kubernetes is a containerized edition of the open source Infrastructure-as-a-Service platform used by leading enterprises and service providers to power some of the largest open clouds in the world. By treating OpenStack as a cloud native application, MOS for Kubernetes provides the configurability, resilience, scalability and seamless updates of Kubernetes. It dramatically simplifies the delivery and management of IaaS, providing a simple self-service developer experience and consistent cluster architecture for application and DevOps portability.

Together, our industry-leading services expertise and flexible multi-cloud container platform provide a simple 'cloud' experience anywhere. You get the agility and convenience of public cloud with the security and control of enterprise infrastructure — without the overhead of proprietary storage, networking and virtualization vendors.

Whether you want Mirantis to manage your cloud for you, or you intend to manage it yourself, Mirantis provides a flexible Build, Operate, and Transfer delivery model to match the type of operations and support for your cloud to the needs of your business.

**Choice** - Provide choice at every level of the stack, so your organization can build on open standards and use your favorite tools and frameworks to ship code faster.

- Support for both container orchestration and OpenStack IaaS – Mirantis Kubernetes Engine (formerly Docker Enterprise Universal Control Plane) is the only platform that runs both Swarm and Kubernetes simultaneously on the same cluster, with the option to add OpenStack IaaS as a containerized workload
- Deploy on any virtualization platform and operating system – Break free from the complexity, constraints and cost of legacy PaaS platforms with the flexibility to deploy Kubernetes clusters on different virtualization platforms and operating systems, including KVM, Xen, bare metal and Ubuntu in our initial release of Container Cloud
- Deploy on any Infrastructure – Container Cloud is optimized and tested to easily manage clusters on OpenStack, bare metal, and leading cloud providers, including AWS in our initial release.
- Integrate with any Kubernetes pipeline or tool — Download the kubeconfig YAML for a cluster to attach it to your favorite Kubernetes pipeline or tool.



## Support Subscriptions Tailored to Your Business Needs



**Simplicity** - Reduce operational complexity and costs with an automated, easily scalable solution backed by leading open cloud experts

- Dramatically simplify day 2 operations through continuously delivered updates and upgrades with zero downtime
- Deploy resilient clusters that are easy to scale by adding compute nodes or horizontally scaling control plane components, with support for multiple tenants with proper isolation
- Streamline authentication and authorization, alerting, ticketing and other services with a single point of integration, so that Mirantis OpenStack clusters can be pre-provisioned with users, teams, tenants, SSH keys, and other settings for immediate use and secure access
- Shrink time to value with a complete private cloud solution ready to deploy with Ceph distributed storage, Tungsten Fabric or OvS virtual networking, and StackLight observability and analytics tooling and dashboards
- Swiftly provision or scale clusters for NFV, private IaaS, and other use cases using predefined, pretested profiles that ensure consistent, reproducible cloud infrastructure

**Security** - Continuously ensure secure governance and compliance across the full stack, without slowing down innovation

- Maintain granular control of infrastructure to comply with corporate and architecture standards, without impacting developer productivity
- Deploy Mirantis OpenStack using a fully-compliant Kubernetes distribution and FIPS-140-2 and DISA STIG compliant container runtime, via Mirantis Kubernetes Engine and Mirantis Container Runtime (formerly Docker Enterprise and Docker Engine - Enterprise)

- Centrally control access to cloud resources by directly integrating with your corporate directory
- Leverage our industry-leading expertise with hundreds of production deployments to enable security compliance and the best possible SLAs for the full stack

## A True Public Cloud Experience

MOS for Kubernetes provides the flexibility and convenience of a public cloud in your own datacenter.

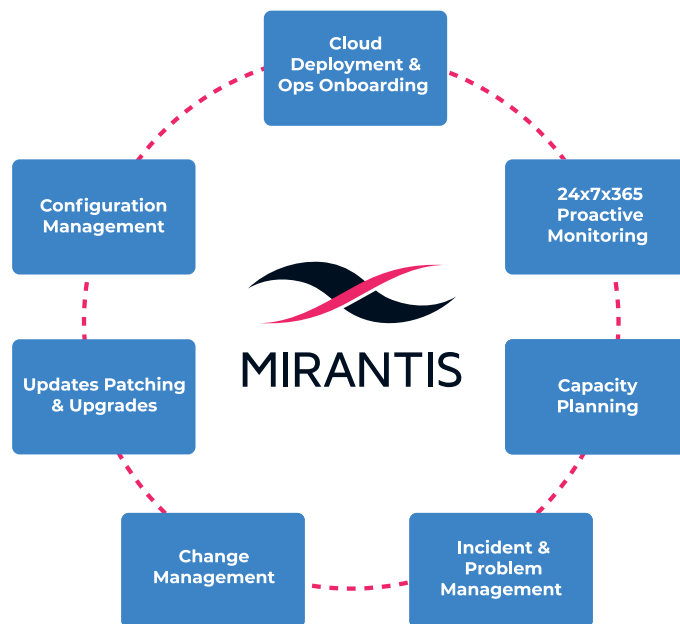
- Leave complex deployment and operations to us with OpsCare, so you can concentrate on delivering value to your customers
- Implement on premises or in a colocation facility of choice, always maintaining control of where your infrastructure is located
- Reduce the cost of manual steps and decrease the risk of delivering change quickly with our infrastructure-as-code approach

## Operations Team & Tooling 100% Focused on Your Open Cloud Success

More than just monitoring, Mirantis provides complete deployment, management and transfer services for your private cloud.

- With OpsCare, we resolve issues before you experience them with proactive monitoring, alerting, incident avoidance and remediation 24x7x365, optimized with StackLight logging, monitoring, alerting system
- Designated Customer Success Manager focuses on maximizing the success of your cloud deployment and operations (OpsCare only)

- Our support team is dedicated to operational excellence, complying with global IT service and security standards (ITIL, ISO 20000/27000, GDPR) and consistently earning superior NPS and CSAT customer ratings
- Initial cloud deployment includes hardware selection, creation of cloud operations runbook and operational onboarding aligned to your IT operations
- Track your cloud's performance and utilization through an online portal or monthly reports with KPI metrics, trending and capacity planning, along with quarterly business reviews
- If you wish to later transition ops to your own team, we provide a comprehensive transfer program including planning, services, training, shadow operations and support SLAs to ensure successful continuation of cloud operations



## Mirantis OpenStack for Kubernetes

MOS for Kubernetes is a containerized version of the MOS IaaS platform, deployed by Mirantis Container Cloud. It provides private cloud infrastructure with all the benefits of Kubernetes and containers, including configurability, resilience, scalability and seamless, in-service updates.

## Mirantis Container Cloud: Multi-Cloud Container Management

Mirantis Container Cloud is the fastest way to deploy and manage Kubernetes clusters anywhere, with one consistent cloud experience for developers and operators across public and private clouds.

- Automated rapid deployment of OpenStack and dependencies (Kubernetes and bare metal)
- Full stack lifecycle management and bare metal management
- Zero-touch / zero-downtime automation for Day 2 lifecycle management for OpenStack and supporting components, including updates, scale-out, and failover
- Single point of integration for Keycloak Identity and Access Management

## Mirantis Kubernetes Engine: Container Management

Mirantis Kubernetes Engine (formerly Docker Enterprise Universal Control Plane) provides a simple, as-a-service experience and central point of collaboration across dev and ops to use containers and Kubernetes at scale.

- Run Mirantis OpenStack or other cloud native applications on a certified Kubernetes distribution that delivers sensible secure defaults out of the box
- Rapidly deploy, manage and update production-ready Kubernetes environments, without requiring deep expertise
- Consistently deploy applications through the UI or CLI and get an overview of what containers are running where
- Automate workflows with CI/CD integration using Mirantis Secure Registry (formerly Docker Trusted Registry)
- Securely store and manage images with granular access to repositories and implement image signing, scanning, and vulnerability monitoring with Mirantis Content Trust (formerly Docker Content Trust) and Mirantis Secure Registry

## StackLight:

### Logging, Monitoring, Alerting

Prometheus	Alerta	Grafana	Telegraf
Kibana	Elasticsearch	InfluxDB	Fluentd

StackLight offers continuous monitoring of open cloud software stacks via unified software services and dashboards integrated throughout the Mirantis Cloud Native Platform.

- The StackLight toolchain enables up to 99.99% uptime service level agreements (SLAs) with OpsCare
- StackLight avoids lock-in by including best-of-breed open source software for proactive monitoring and analytics
- StackLight and Mirantis Container Cloud work together so you can catch problems early and use pre-configured triggers to auto-scale or adjust infrastructure before problems arise

## Open Cloud Software

Kubernetes	Tungsten Fabric SDN	CoreDNS	OpenStack
Neutron + OVS SDN	MetalLB	Calico SDN	Ceph SDS

MOS for Kubernetes provides a complete cloud solution that includes:

- Industry-leading Mirantis OpenStack software for VM-based and bare metal IaaS

- Support for next-generation applications through rich dataplane acceleration features such as DPDK, OVS-DPDK, SR-IOV, NUMA and CPU-pinning and Huge Pages
- Best-in-class open source software-defined networking (SDN), including Tungsten Fabric and Neutron with Open vSwitch
- Ceph persistent storage can be configured for new or pre-existing Ceph clusters
- OpenStack Ironic for bare metal provisioning
- Additional OpenStack services include LBaaS (Octavia), DNSaaS (Designate), Secrets Management (Barbican), and Workload auto-scaling (Ceilometer)

## Shrink Time-to-Value for your Private Cloud

### Professional Services

Our services experience is built off years of open cloud focused deployments to many Fortune 100 companies and industry leaders worldwide. We offer a range of service offerings designed to optimize adoption of your cloud, including tenant onboarding, platform visibility, and workload mobility. If you wish to eventually transition cloud operations to your own team, we also offer an operations transfer program that includes transfer services, training, and support SLAs.

### World-Class Training

Through expertly led, hands-on training, Mirantis has helped over 10,000 world-class IT professionals around the globe advance their skills in OpenStack, Kubernetes, and related technologies for over 8 years both virtually and across 85 locations around the globe. Our training team also offers Mirantis OpenStack training for customers who want to keep cloud operations within their own team.

Mirantis Customers:



Schedule a live demo at [www.mirantis.com/mos-demo](http://www.mirantis.com/mos-demo)

#### US

+1-650-963-9828

[mirantis.com/contact](http://mirantis.com/contact)

#### EMEA

[emea@mirantis.com](mailto:emea@mirantis.com)

#### Japan

+81-3-6635-6355

[info.jp@mirantis.com](mailto:info.jp@mirantis.com)

#### China

[china@mirantis.com](mailto:china@mirantis.com)