ubuntu

Private Cloud Build

OpenStack consulting, design and delivery on Ubuntu, by Canonical

A highly available production cloud, implemented on-site with Canonical's expert delivery team in the shortest possible time.

We build the machines.
The machines build your cloud.

Automation drives optimal cloud economics. Every cloud Canonical builds is delivered and maintained using a cloud machine that uses a description of the environment and architecture to deploy and fully configure your cloud platform – be it OpenStack, Kubernetes or LXD.

The cloud machine makes redeploying or cloning your cloud architecture easy and affordable. It also handles important changes to your infrastructure, including config modifications, OS and platform version upgrades, and deeper design revisions.

Four steps to a Private Cloud Build

1. **Requirements gathering**
   We work through your requirements to build your cloud architecture definition

2. **Implement cloud machine**
   Our delivery team implements our cloud machine to deploy your production cloud

3. **Acceptance testing**
   We run cloud acceptance testing to ensure the build delivers to your requirements

4. **Ongoing operations and support**
   Delivered 24/7 by our world-class customer success organisation

What's Included
- A production-grade OpenStack[1], including:
  - Ceph block and object storage
  - KVM hypervisors
  - OpenVSwitch virtual networking

- The cloud machine
  - MAAS physical automation
  - Juju service modeling
  - Containerized control plane
  - Cloud monitoring with Canonical Landscape, Elasticsearch and Nagios
  - Resource usage trending and metrics with Prometheus and Grafana
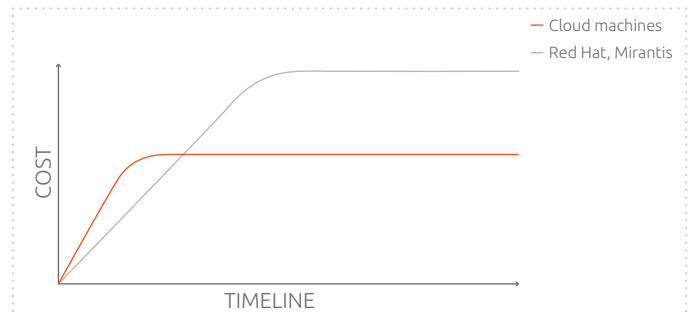
The upfront cost of building a cloud with a cloud machine is short-lived. Once built, your costs drop dramatically and stay low in the long-term.

- Approved and tested hardware specs for Dell, HP, Lenovo, Cisco and Supermicro

- A workshop to engineer requirements and a tenant onboarding plan

- Design documentation for cloud architecture, network and infrastructure

Service Option Highlights
- Three cloud architecture variations: Converged, Hyperconverged and Disaggregated

- Active directory, LDAP and SAML integration

- Multiple virtual networking designs with OpenVSwitch, DVR, VxLAN/GRE tunnelling and partner SDNs

- Hardware automation package for Canonical approved and Ubuntu Certified hardware

Service Requirements
- At least 12 nodes meeting documented cloud infrastructure requirements

- Networking configured according to Ubuntu Cloud Network Guidelines, including Internet access from all physical nodes in cloud, including MAAS and Landscape

Contact us

For more information about Private Cloud Build or more custom options visit ubuntu.com/openstack or call direct (EMEA) +44 203 656 5291 or (US) +1 737 204 0291

[1]No additional OpenStack components (i.e. Murano, Trove, Magnum, Sahara, etc.) or third-party OpenStack components can be integrated in this offering

Package	Private Cloud Build	Private Cloud Build Plus	Add-ons
Minimum node count	12 (Hyperconverged) or 15 (Converged) from Approved BOMs	Architecture-dependent	
Containerised Control Plane	Included		
High Availability	Full L2-based OpenStack HA including MAAS, Juju & Landscape infrastructure		
Monitoring and performance trending	Nagios, Prometheus, Grafana		Integration with custom monitoring systems
Security updates	Landscape	Landscape and optional offline updates	
Log Aggregation	Included, powered by Elasticsearch and Greylog		Custom log integration
Upgrades	Included with Managed Service		OpenStack and OS upgrade services available
Disaster Recovery	Guaranteed Control Plane rebuilds included with Managed Service		Full DR Plan with automation
Workshop	Included (remote)	Included (on-site)	
Architecture	Hyperconverged or Converged	Custom Architecture (standard components only) with optional offline deployment	Custom bundle with add-on components
Hypervisors	KVM	KVM	
Live migration	Yes		
Identity	Keystone	Keystone with LDAP or Active Directory backends	SAML federated identity services
Core Block Storage	Ceph RBD with 3x replication and bcache acceleration		
Additional Storage Options	RADOSGW Object Storage	RADOSGW or Swift Object Storage	Other third-party SAN and NAS integration
Virtual Networking	Neutron/OVS with VxLAN & GRE tunneling	Adds Provider Networks, Neutron BGP, Neutron DVR	Third-party SDN Integration (CPlane, Juniper Contrail, Cisco ACI)
Network Topology	NIC bonding, up to 4 segregated underlay L2 networks	NIC bonding, unlimited underlay L2 network segregation	
IPv6 Support	Tenant networks only		

Package	Private Cloud Build	Private Cloud Build Plus	Add-ons
Tuning Options	As standard	CPU Pinning Huge Pages	SR-IOV DPDK-enabled OVS GPU passthrough Infiniband and more
Encryption	No encryption	Control Plane & Storage (Ceph, at rest)	HSM support (via OpenStack Barbican)
Load Balancing	None	Octavia layer-7 Application Load Balancer as a Service	
Secrets Management	None	Barbican with Vault	
Security Extensions	Apparmor MAC-based	Apparmor MAC-based	
Handover Documentation	Design Overview Tenant Onboarding Plan Charm Bundle Deployment Guide	Design Overview Tenant Onboarding Plan Charm Bundle Low Level Design Deployment Guide	
OpenStack Services	Nova KVM Neutron Gateway/API CEPH OSD/MON Nova Cloud controller Keystone Rabbit MQ Cinder Glance Designate Ceilometer Aodh Gnocchi Heat MySQL Horizon	Nova KVM Neutron Gateway/API CEPH OSD/MON Nova Cloud controller Keystone Rabbit MQ Cinder Glance Designate Ceilometer Aodh Gnocchi Heat MySQL Horizon Octavia Barbican Vault	

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