

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 LXN.

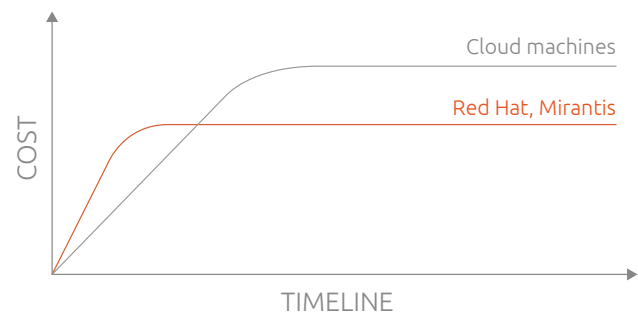
The cloud machine makes redeploying or cloning your cloud architecture easy and affordable. It also handles important changes to your infrastructure, including config modifications, OS and platform version upgrades, and deeper design revisions.

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 OpenStack¹, including:
 - Ceph block and object storage
 - KVM hypervisors
 - OpenVSwitch virtual networking



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.

- 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
- 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

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

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

| Package | Private Cloud Build | Private Cloud Build Plus | Add-ons |
|-------------------------------------|--|---|---|
| Cost | \$85,000 | \$165,000 | Starting at \$25,000 |
| 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) |

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|------------------------|---|---|--|
| Network Topology | NIC bonding, up to 4 segregated underlay L2 networks | NIC bonding, unlimited underlay L2 network segregation | |
| IPv6 Support | Tenant networks only | | |
| 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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