ubuntu

Enterprise Kubernetes

Kubernetes is an open-source platform for automated deployment, scaling and management of containerised applications and workloads. Originally built by Google, it is currently maintained by the Cloud Native Computing Foundation.

Multi-cloud Kubernetes on Ubuntu

Ubuntu is the reference platform for Kubernetes on all major public clouds, including official support in Google's GKE, Microsoft's AKS and Amazon's EKS Kubernetes offerings. Canonical delivers a pure upstream Kubernetes, known as Charmed Kubernetes. Charmed Kubernetes is tested across the widest range of clouds — from public clouds to private data centres, from bare metal to virtualised infrastructure.

Like Ubuntu itself, Charmed Kubernetes is free to use, and Canonical backs it up with enterprise support, consulting and management services. Canonical makes it secure and easy to deploy, operate and upgrade.

Whether you want a development cluster on VMware, a production cluster on bare metal backed by GPUs for Artificial Intelligence and Machine Learning, or an easy to deploy and scale cluster in a public cloud, Ubuntu is your fast path to resilient enterprise Kubernetes with no lock-in.

Automated, reusable, scalable, secure

With full automation for initial deployments, lifecycle management, and ongoing operations, Charmed Kubernetes keeps you agile, supported, and secure. Automation reduces costs, increases agility, and empowers teams to operate their own Kubernetes clusters just about anywhere they choose, which gives them the ability to evolve at their own pace.

Our automation also allows your operations team to manage many independent Kubernetes clusters, in the cloud or on-prem, avoiding the gridlock associated with evolving a handful of clusters used across many teams. Charmed Kubernetes frees your developers and infrastructure teams to focus on what matters most, your business workloads and not infrastructure problems.

Upgrades, as soon as you want them

Kubernetes moves fast - the upstream project has a quarterly release cycle. Due to Charmed Kubernetes' flexible architecture, Canonical ensures you will be able to upgrade within a week of an upstream release.

Integrate Kubernetes into your environment and preserve the ability to get the latest features with these guaranteed upgrades, allowing your team to benefit from the latest innovations.

Spotlight on Canonical Kubernetes

- Built from upstream source, clean Kubernetes maximises compatibility with public container offerings

- Security updates by Canonical, makers of Ubuntu, cover everything from kernel to k8s

- Upgrades guaranteed, giving you the freedom to consume the latest k8s at your own pace

- Robust encryption with TLS for all control plane components

- Full confinement using kernel-level mandatory access controls

- Automatic acceleration of GPU-optimised workloads like AI and transcoding

- Wide variety of storage and networking options

- Consulting for custom storage, network, monitoring or other integrations

- AWS, Google, Azure, Oracle public clouds, VMware, OpenStack and bare metal substrates

- Training, certification, support and remote management available

Enterprise Kubernetes Packages

These packages provide a standard or advanced route to deploying Kubernetes. The standard packages, Kubernetes Explorer and Kubernetes Discoverer, include a predefined architecture, automated deployment and standard training to get Kubernetes up and running quickly.

The advanced package, Kubernetes Discoverer Plus, addresses more sophisticated requirements, including production-ready deployments on any cloud or bare-metal environments, with custom integrations and optional add-ons to meet your organisation's requirements.

Kubernetes Explorer	Kubernetes Discoverer	Kubernetes Discoverer Plus
Three-day training and onboarding on Kubernetes deployment and operations. Boost your team's Kubernetes skills and enable them to deploy on VMware and public clouds.	Three-day training workshop plus five days of deployment of a reference Kubernetes architecture on VMware, private and public clouds.	Three weeks of on-site training, co-design of a custom architecture and full enterprise production deployment across bare metal, virtual and cloud environments.

Kubernetes Explorer

What's included:

- Kubernetes fundamentals
- Container development basics
- MicroK8s enablement
- Charmed Kubernetes enablement
- Monitoring and logging
- Kubernetes lifecycle management
- Security essentials

Kubernetes Discoverer

What's included:

- High availability Kubernetes, deployed on Public Cloud, VMware, OpenStack
- Logging, monitoring, alerting
- Custom Kubernetes architecture optimised for your workloads
- Storage & SDN basic options
- Security essentials
- Three-day training

Kubernetes Discoverer Plus

What's included:

- High availability production-grade Kubernetes, deployed on public cloud, VMware, OpenStack, or bare metal
- Logging, monitoring, alerting
- GPU acceleration
- Storage & SDN extensive option
- Custom networking options
- Third-party integrations
- Private Registry options
- Load balancers
- Application Catalog
- On-site knowledge transfer

Optional extras:

- Full remote management of your Kubernetes clusters by Canonical
- Enterprise phone support for Kubernetes and Ubuntu
- Kubeflow Machine Learning starter pack
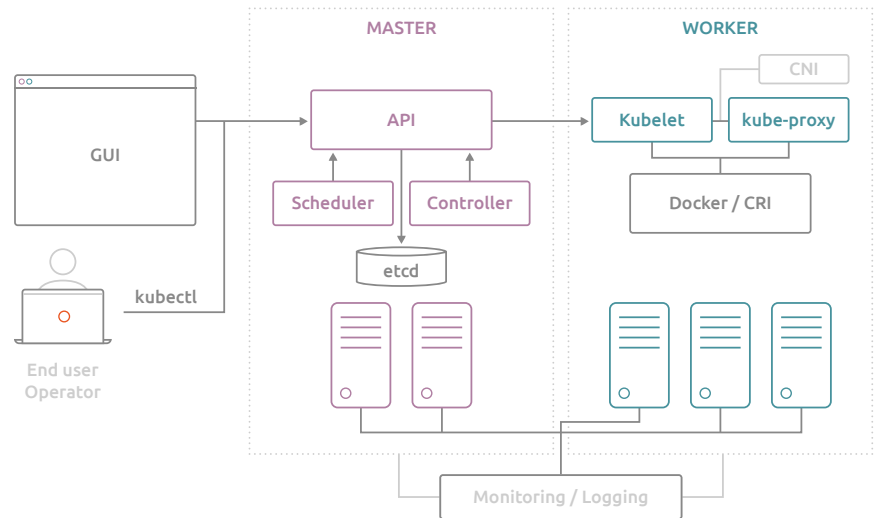
Details and Pricing

Kubernetes Explorer
$19,500

Training & onboarding package
A three-day classroom-style hands-on training at your premises for up to 15 people, that will give you the best introduction for setting up and running your own Kubernetes cluster.

Kubernetes Discoverer & Discoverer Plus

Design workshop and deployment of reference or custom K8s architecture across a variety of substrates

	Kubernetes Discoverer	Kubernetes Discoverer Plus
	$45,000	$95,000
Environments	AWS, Azure, Google Cloud, Oracle Cloud, VMware, OpenStack	AWS, Azure, Google Cloud, Oracle Cloud, VMware, OpenStack, Bare metal (with MAAS)
Scale	16-200 virtual machines	12-2,000 nodes
Storage	VMware, Cloud block, Ceph	Ceph, NetApp Trident* (OnTAP, SANtricity, SolidFire), Pure Storage flexVolume*, PortWorx*, StorageOS*, VMware native storage (VMDK), Cloud native block storage, Local disks, NFS, iSCSI
Networking	Canal, Calico, Nodeport, Flannel	Canal, Calico, Nodeport, Flannel, Juniper Contrail**
GPGPU acceleration	n/a	Physical CUDA GPUs on bare metal, Public Cloud GPU-enabled virtual machines
Authentication	Kubernetes RBAC	Kubernetes RBAC, Kubernetes OIDC, LDAP, Active Directory, OAUTH, SAML (through Keystone or OpenUnison)
Load balancer	Nginx ingress controller, HAProxy ingress controller	Nginx ingress controller, HAProxy ingress controller, F5 BigIP*, AVI Networks*
Private registry	n/a	Jfrog Artifactory*, Sonatype Nexus*, VMware Harbor*, GitLab*
CI/CD	n/a	Jenkins
Training	3-day classroom training	2-day hands-on knowledge transfer on deployed environment (classroom training purchased separately with Kubernetes Explorer)
Security	Security patches for entire stack, from kernel to Kubernetes, inc. CVEs and additional security improvements	Audit logging, Network policies, Namespaces, Pod Security Policies (PSP), AppArmor, PKI (EasyRSA and Hashicorp Vault), Ceph encryption at rest And through Aqua* or Prisma Cloud*: Image Assurance, Container firewall, Secure Secrets injection, Runtime Protection, Compliance and visibility
Upgrades	Latest distribution available within 7 days of upstream release	
Docs	Design overview, deployment guide	
Connectivity	Internet access required	Offline deployment possible
Architecture	Reference	Customised
Monitoring and Logging	Prometheus/Elasticsearch, Elasticsearch/FileBeat/Graylog	Prometheus/Grafana, Elasticsearch/FileBeat/Graylog, Custom monitoring integration possible

* Deployment only, Canonical does not provide support

** Included at extra cost

Fully Managed Kubernetes

Canonical offers a remote-managed Kubernetes service, on your choice of cloud or data centre. Optionally, for compliance purposes, you can have use of staff resident solely in the US or Europe. This service enables your teams to focus on consumption of Kubernetes as a service on-premise. As a build-operate-transfer offering, take the keys at any time. The fastest path to production. For pricing please visit ubuntu.com/pricing/infra.

Price per node*	Physical	Physical, on BootStack**	Virtual
	$4,380/year	$2,190/year	$1,460/year

- 24x7 Phone and web ticket support
- Industry-leading cloud operations tooling (Ubuntu, MAAS, Juju, LXD)
- Deploy, run, scale, upgrade K8s
- Monitoring and logging
- Landscape management

- Livepatch
- Knowledge Base
- High availability (HA) support
- Remote operations, smart alerts and proactive monitoring
- Disaster recovery

*Minimums apply

** BootStack is the Canonical offering for fully managed OpenStack. BootStack pricing is in addition to the managed Kubernetes price of $2,190. You can run an unlimited number of virtual Kubernetes nodes on top of each OpenStack physical node.

4 Steps to Your Kubernetes Cluster

1. **Choose your package**
   For virtual environments, choose Discoverer. For bare metal, you want the Discoverer Plus, which also includes consulting to determine the optimal architecture based on your workloads and available hardware. That architecture will be reusable if you want to scale up or duplicate the cluster later. You may also wish to integrate your K8s cluster with existing monitoring systems, storage or networking.

2. **Implementation and workshops**
   Our delivery team runs a workshop to define your Kubernetes environment, and then stands up your cluster to ensure it meets its purpose. They will leave you with the ability to recreate the cluster from scratch automatically, as well as the skills to backup, scale and operate the cluster daily. The Discoverer package includes deployment of a starter Kubernetes cluster and a 3-day classroom-style training on Charmed Kubernetes and tooling, while the Discoverer Plus focuses on cluster deployment with production features around storage, networking, private registry, CI/CD, management platform and more.

3. **Conformance testing**
   We run joint Kubernetes acceptance testing to ensure the build meets requirements and passes upstream Kubernetes compliance tests.

4. **Ongoing support or remote management**
   We provide ongoing phone support, or full remote management, 24x7

Enterprise Support

For ongoing enterprise support, Canonical's Ubuntu Advantage for Infrastructure provides kernel live patching to avoid reboots, Landscape systems management and telephone support for the full stack from kernel to Kubernetes. For pricing please visit ubuntu.com/pricing/infra.

Resource Requirements

- The minimum infrastructure requirement is access to a public cloud

- VMware and OpenStack are supported for private infrastructure

- With Discoverer Plus, you can deploy on Ubuntu-certified bare metal servers

- Internet access from all nodes in cluster, including MAAS & the optional Landscape. Completely offline deployments are possible with the Discoverer Plus package.

- Fully converged deployment can use all nodes for compute. Custom placement of components can separate compute and administration

Contact Us

For more information about Charmed Kubernetes, contact us or call direct (US Central) +1 737 204 0291 or (UK) +44 203 656 5291

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