

Canonical OpenStack

2024.1 LTS

Offering summary

Canonical OpenStack is an opinionated version of the OpenStack open source project. Beyond what is included from the upstream project, it delivers additional functionality including model-driven orchestration (Juju) coupled with hardware automation (MAAS). The offering's advantages include long term support (LTS), which provides security maintenance through April 2039 when combined with Canonical's Ubuntu Pro with Legacy add-on.

Although OpenStack delivers a broad range of functionality¹, enterprise interest has declined due in large part to concerns about complexity, a steep learning curve (and the rise of Kubernetes). These factors are mirrored in Virtified's sentiment analysis². Despite these challenges, concerns about Broadcom's acquisition of VMware may generate renewed interest (specifically for the enterprise data centre). Virtified's analysis shows competitive capabilities across our technical evaluation criteria for this use case.

A key factor when considering Canonical is choosing the provider's most appropriate VHCI offering. Beyond its OpenStack distribution, Canonical offers:

- Canonical MicroCloud: a modern, cloud-inspired infrastructure stack based upon LXD, Ceph and OVN.
- Canonical Kubernetes: a lightweight, opinionated Kubernetes distribution.

Another possibility is Canonical's managed offering, where Canonical engineers design, deploy, and continuously operate the OpenStack environment.

Strengths

1. **Track record:** OpenStack has been deployed at scale (primarily among telecommunications, government institutions and service providers).
2. **Broad infrastructure support:** OpenStack provides a unified platform for physical, virtual and container workloads (and bare metal management).
3. **Frictionless buying:** pricing is clearly listed on website (and is part of the broader range of options under Ubuntu Pro).

Challenges

1. **Learning curve:** Complexity is a key factor that must be evaluated (overall and in the specific context of internal skills).
2. **Technology risk:** Although LTS somewhat reduces exposure, Kubernetes and the cloud-native ecosystem has surpassed OpenStack in community contribution, focus and adoption).



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Canonical

Data centre use case

Compute	S
Containers & Cloud-Native Integration	A
Core	S
Data Protection & Resiliency	S
Hardware Acceleration & Offload	L
Identity and Access Management (IAM)	S
Management and Administration	L
Memory	S
Network	S
Security	L
Software-Defined Networking	L
Software-Defined Storage	L
Storage Interconnect	L
Storage Services	S
Virtual Resource Management	A
Customer Sentiment (Offering)	?
Documentation	/

Provider

Financial Viability	?
Corporate Governance	?
Environmental Sustainability	?
Customer Sentiment (Provider)	+
Customer Sentiment (Support)	+
Partner Sentiment (Provider)	+
Value	+

Legend

L	Leader	+	Positive
A	Advanced	/	Neutral
S	Standard	?	Unclear
B	Basic	-	Negative

The Virtified Loops for VHCI evaluate over 100 technical criteria and a specific set of business metrics. Different weightings are applied to each use case. Virtified Loops are an independent and objective review of the provider and offering, which has been undertaken by Virtified Pty Ltd on a best-effort basis and in the interests of supporting improved decision-making. Virtified Pty Ltd does not receive any financial compensation for the analysis contained therein. Put simply, Virtified Loops are not 'cash for comment'.

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Recommendations

1. Consider Canonical OpenStack when a proven open source solution is a key requirement and where enterprise-grade support is essential.
2. Investigate the suitability of Canonical OpenStack in the context of your data centre use case. Among the provider's multiple infrastructure offerings, this VHCI offering is best suited for the conventional requirements of the data centre use case.
3. Evaluate your organisation's level of confidence in the longevity of the OpenStack project whilst noting the ability to offset some of your technology risk when using Canonical's LTS offering.
4. (Re)assess the potential of Canonical OpenStack to deliver a proven multi-platform VHCI offering that spans data centre uses that range from bare metal to containers.
5. Compare and contrast the suitability of Ubuntu MicroCloud, which may be a suitable offering for smaller data centre use cases and where there is a preference for modern, 'cloud-inspired' capabilities.
6. Calculate the full cost-benefit of migrating from your existing data centre VHCI solution. Compare and contrast the investment relative to establishing a modern infrastructure platform (example: local cloud use case).

Key considerations

1. **Complexity:** OpenStack has been plagued by concerns about complexity.
2. **Suitability:** OpenStack was architected upon the paradigm of delivering a private alternative to public cloud. It uses a conventional approach to managing virtual and physical infrastructure.
3. **Acquisition target:** Founder and CEO Mark Shuttleworth has stated that Canonical is likely to become a publicly-traded company. Given the provider's position in the open source ecosystem, it is likely to be an attractive acquisition target.
4. **Kubernetes integration:** Multiple initiatives enable OpenStack to integrate with Kubernetes, to varying degrees.

Provider summary

Canonical is best known for Ubuntu, which is one of the most popular Linux distributions - both on premises and in the cloud. European organisations may favour the location of Canonical's headquarters due in part to geopolitical considerations.

Canonical is privately-owned and therefore has fewer reporting obligations than publicly-traded companies. However, it discloses annual revenue in the UK and most estimates indicate rising profit and revenue during the period since 2018. The majority of revenue comes from subscription-based support services (Ubuntu Pro). Less than 20% of revenue comes from Canonical's managed services.

Virtified does not penalise private companies; however, it cannot formally assess Canonical's approach to corporate governance or environmental sustainability. Balancing this, the provider does report a range of certifications³.

- Website: canonical.com
- Headquarters: UK
- Ownership: Private
- Employees: 1,175
- Total revenue: US\$292M (CY24)

Note 1: Components include block storage (Cinder), object storage (Swift), file services (Manilla), network (Designate, Neutron and Octavia) and bare metal (Ironic). For more information see openstack.org

Note 2: Virtified's market sentiment of Canonical OpenStack comprises more than 400 mentions.

Note 3: See trust.canonical.com

For more information go to virtified.com

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