

DATASHEET

LXD Cloud

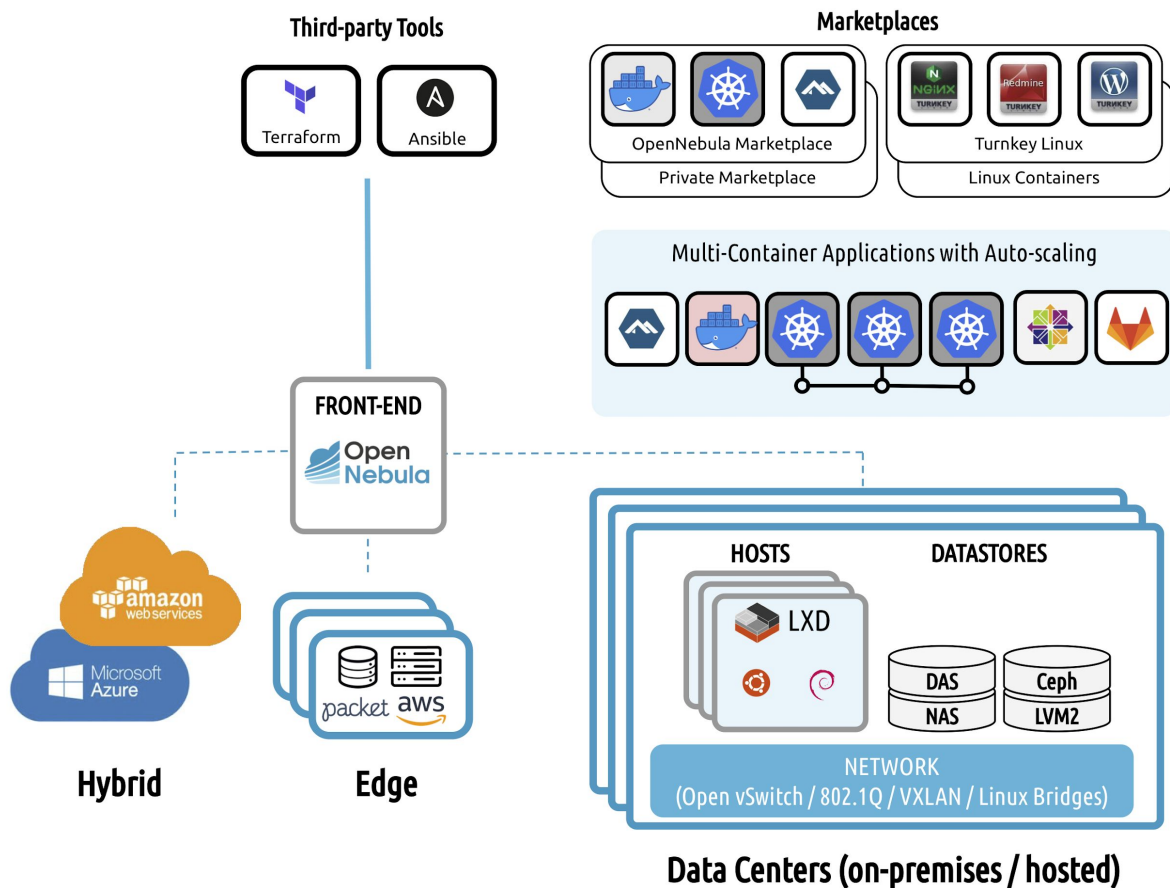


AT A GLANCE

LXD has recently become the next-generation system container manager in Linux. OpenNebula complements the lack of automation in LXD as a standalone hypervisor and opens up a new set of use cases, especially for large scale distributed deployments and cloud provisioning environments. You can build a LXD cloud infrastructure fully compatible with your KVM environment using the same images and the same network stack and storage backends.

KEY BENEFITS

- Advanced features for **capacity management**, **resource optimisation**, **business continuity** and **high availability**.
- **Multi-tenant**, **cloud self-service provisioning** including **virtual data centers**, **data center federation** and **hybrid cloud computing** to connect in-house infrastructures with public clouds.
- **Mixed hypervisor environments** with KVM and VMware.



SYSTEM REQUIREMENTS

- Front-end: 2 CPU (4 cores) with 8GB memory, 200GB disk and 2 NICs
- Hypervisors: Depends on the expected workload, recommended to have at least 1GB per core

SCALABILITY

- Scalability tested with 10,000 VMs on 2,500 servers.
- Horizontally scale your cloud by adding new OpenNebula zones within a federated deployment to grow the size of your cloud beyond these limits.

miniONE

TRY IT NOW! Go to <https://minione.openebula.io>

In just five minutes, use miniONE to deploy a fully functional implementation to evaluate just how simple OpenNebula is.



More details about OpenNebula and its features at OpenNebula.io

On-Demand Self-Service Provisioning

Application Containers	<input type="checkbox"/> Full support for Docker using lxd nested virtualization and Kubernetes for container orchestration
Service Auto-scaling	<input type="checkbox"/> Define and manage services as a group of related LXD containers, including their interconnection networks and elasticity rules
Service Insight	<input type="checkbox"/> Monitor service-specific performance metrics and set elasticity rules based on them
Private Marketplaces	<input type="checkbox"/> Build your own private marketplaces based on S3 and HTTP protocols
Public Marketplaces	<input type="checkbox"/> Integration with OpenNebula Public Marketplace with pre-built and certified appliances with popular OSS components and OS like k8s, WordPress, Gitlab, Centos or Ubuntu, and with LXD containers popular marketplaces: linuxcontainers.com and Turnkey Linux
APIs	<input type="checkbox"/> Ruby, Python, Go and JAVA or XML-RPC
CLI	<input type="checkbox"/> Fully featured UNIX-like command line tools
GUI	<input type="checkbox"/> Sunstone, a modern and simple Web-UI for admins and advanced users. Cloud View, a simplified provision portal for end users. Remote access through VNC is integrated in the GUI's

Resource Management

Authentication	<input type="checkbox"/> Built-in password-based, Active Directory, SSH, X509,LDAP, login tokens and 2FA
Multi-tenancy	<input type="checkbox"/> ACLs, users, groups, resource UNIX-like permissions and VDCs
Capacity Management	<input type="checkbox"/> Limit usage with user/group quotas. Fine-tune container allocation with dynamic placement constraints and affinity rules. Automatically schedule virtual networks and datastores.
Observability	<input type="checkbox"/> Monitoring, accounting, showback and auditing/traceability
Networking	<input type="checkbox"/> Virtual routers, NIC hotplugging, security groups and support for IPv6 and IPAM modules
Host	<input type="checkbox"/> CPU pinning and LXD profiles
Storage	<input type="checkbox"/> Disk resizing, hotplugging, persistency. Compatibility with multiple partition images.
Automation	<input type="checkbox"/> Hook system for tailoring and logging, programmable container operations, and context to further customize containers based on user input

Cloud Architectures

High Availability	<input type="checkbox"/> OpenNebula components HA-based on RAFT consensus and container/host failover
Elastic Private	<input type="checkbox"/> Resource provisioning on bare-metal AWS and Packet
Edge Distributed	<input type="checkbox"/> Dynamic geo-distributed private clouds on public cloud resources
Hybrid Cloud	<input type="checkbox"/> Cloud bursting of VMs on AWS and Azure
Federated Cloud	<input type="checkbox"/> Federation of multiple OpenNebula zones for scalability, isolation or multiple-site support
Mixed Hypervisor	<input type="checkbox"/> Support for multi-hypervisor environments that use VMware, KVM, LXD and Firecracker