



apachecloudstack[™]
open source cloud computing



Open-source Cloud Computing:
**A Turnkey Solution for Cloud
Builders and IaaS Providers**

About CloudStack

Apache CloudStack is a highly scalable IaaS cloud computing platform that provides an orchestration layer, automating the creation, provisioning and configuration of IaaS components. It turns existing virtual infrastructure into a cloud-based Infrastructure as a Service (IaaS) platform. Because CloudStack leverages existing infrastructure, the costs and time for the organization to build a multi-tenant IaaS platform are greatly reduced.

CloudStack is a turnkey solution for MSPs, cloud providers and telcos. It includes the entire "stack" of features you need: compute orchestration, Network-as-a-Service, user and account management, a full, open and stable native API, resource accounting, and a first-class User Interface.

CloudStack Use Cases

- Cloud Service Providers
- On-premise Cloud Management
- Telecom Cloud Services Provisioning
- Cloud-native Infrastructure
- Edge Computing
- Test and Dev environments
- High Performance Computing
- Big Data Analysis
- Global High Availability Cloud

CloudStack Solves Key Challenges for Cloud Providers and MSPs

CloudStack can manage tens of thousands of physical servers installed in geographically distributed data centers. It is a powerful IaaS management solution, but it is still easy to use and implement with a small team of people. Powered by a vibrant open-source community, Apache CloudStack eliminates the dependencies and allows you to follow your own cloud development plan, and use the hardware and software of your choice and business requirements.



Decrease TCO for your IaaS



Completely open-source



Powered by an active community



Easy to use



Quick to deploy



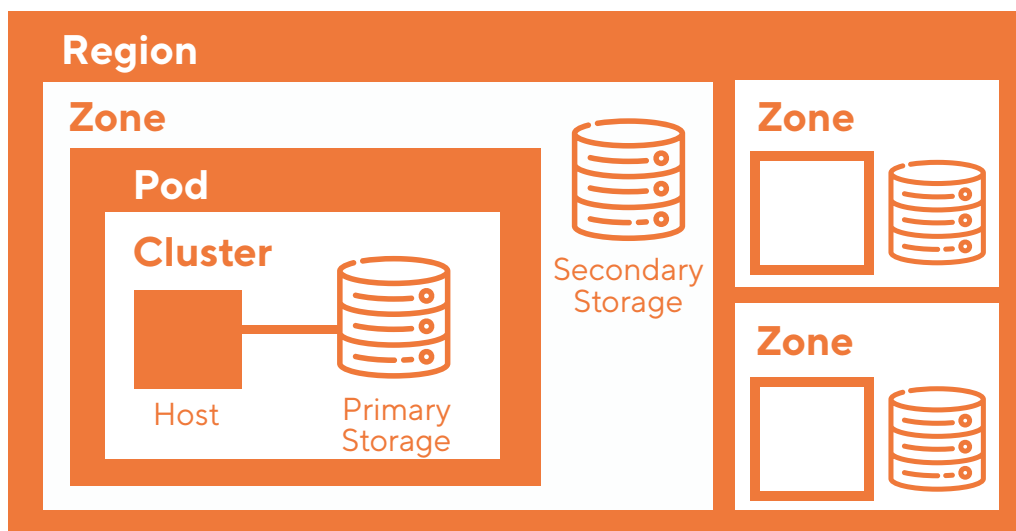
Strong vendor integrations

Take charge of your cloud management. Decrease operational costs and simplify cloud management with Apache CloudStack!

CloudStack Architecture

CloudStack is an IaaS cloud computing platform that pools computing resources to build public, private and hybrid Infrastructure as a Service (IaaS) clouds. CloudStack manages the network, storage, and compute nodes that make up a cloud infrastructure.

A CloudStack cloud has a hierarchical structure which enables it to scale to manage tens of thousands of physical servers, all from a single management interface.



Availability Zones - An Availability Zone is the largest organisational unit within a CloudStack deployment. Typically, a datacentre (DC) implementation will contain a single Zone, but there are no hard and fast rules, and a DC can contain multiple Zones. An Availability Zone consists of at least one Pod, and Secondary Storage which is shared by all Pods in the Zone.

Pods - A Pod relates to a discrete rack in a datacentre. Pods contain one or more Clusters and a Layer 2 switch architecture which is shared by all Clusters in that Pod. End users are not aware of and have no visibility of Pods.

Clusters - A Cluster is a group of identical Hosts running a common Hypervisor. Each Cluster has a dedicated Primary Storage array which is where the virtual machine instances are hosted.

Primary Storage - Primary Storage is usually unique to each Cluster (although it could also be used Zone-wide) and is used to host the virtual machine instances. CloudStack is designed to work with all standards-compliant iSCSI and NFS Servers supported by the underlying Hypervisor, but many other storage solutions are also supported (SDS like Ceph, StorPool and LINBIT).

Secondary Storage - Secondary Storage stores virtual machine Templates, ISO images and Volume Snapshots. The storage is available to all PODs in a Zone. Secondary Storage uses the Network File System (NFS) to ensure it can be accessed by any Host in the Zone. For cross-zone secondary storage, S3 storage can be considered.

Leading companies trust Apache CloudStack



KDDI



leaseweb
reliable hosting



CloudOps

NTT DATA



Telia

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Apache CloudStack supports a wide range of integrations. Its global community constantly develops new features and supports new technologies with a clearly defined, evolving roadmap guided by users and the community. There are no different levels of support or versions, and although there are vendor distributions available, no vendor has a dominant influence over the project and most organizations run the freely available, open-source version in production.

Being open-source ensures that CloudStack follows the needs of its user and enables them to build future-proof technology solutions.

<https://cloudstack.apache.org/>



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