

Chapter 11

A Tutorial on CloudStack: CloudStack

Srinivasa K. G.

*CBP Government Engineering College,
India*

Akshay K. Kallianpur

*M. S. Ramaiah Institute of Technology,
India*

Nishal Ancelette Pereira

*M. S. Ramaiah Institute of Technology,
India*

Subramanya E. Naligay

*M. S. Ramaiah Institute of Technology,
India*

ABSTRACT

CloudStack is an Apache open source software that designed to install and handle large virtual machine (VM) networks, designed by Cloud.com and Citrix. This application is written in Java and was released under the terms of Apache License 2.0. This chapter discusses the easy availability and effortless scalability of CloudStack, which is an Infrastructure-as-a-service (IaaS) cloud computing platform software. We explore how CloudStack can either be used to setup public cloud services, or to provide a private cloud service.

WHY CLOUDSTACK?

A proficient Cloud Computing platform must help its users to achieve scalability, cost savings, flexible operations and provide with resources that are accessible at any time. After years of development and collaboration by the Cloudstack development team, the tool now provides some of the salient features elucidated as follows:

1. **Flexibility:** Cloud Stack's design provides significant flexibility to support the continuum of workload styles, also supports easy integration of non-cloud-

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based applications with environments running in the cloud. CloudStack gives its users freedom to choose from a range of hypervisors. Which include KVM, vSphere and Citrix XenServer for their workload.

2. **Simplicity:** CloudStack simplifies the management of the infrastructure of the cloud and facilitates convenient interaction with a user interface which is feature rich that is implemented onto the CloudStack API. It is fully AJAX-based and compatible with most popular web browsers. A real-time view of the aggregated storage, IP pools, CPU, memory and other resources in use gives better lucidity and control over the cloud.
3. **Scalability:** The need for intermediate cluster – level management servers is eliminatd if CloudStack is used and this is linearly scalable, centralized management servers instead. This increases the server/admin ratio comprehensively.
4. **Reliability:** It Provides standardization of workload by ensuring consistency with application and service delivery. Only industry-standard APIs are implemented on CloudStack and on top of a low-level CloudStack API retaining the uniqueness and innovative features of the latter.
5. **Service:** CloudStack offers speedy service delivery. It is beneficial in terms of saving cost and time of laborious IT operations. SunGard AS has teams working on the project, who constantly work towards the betterment of the product based on the feedback of the user community

Notable Users of CloudStack

Datapipe deploys its global Cloud Infrastructure on CloudStack, which included 6 data centers in the USA, Britain, and Asia.

Some of the other important users of CloudStack are:

1. Apple
2. Dell
3. Juniper networks
4. SAP
5. Verizon
6. Tata
7. Nokia
8. InMobi
9. Citrix Systems
10. Huawei

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