INT362:CLOUD ARCHITECTURE AND IMPLEMENTATION-I

L:2 T:0 P:2 Credits:3

Course Outcomes: Through this course students should be able to

CO1 :: define different cloud computing architectures, cloud models, understand Apache cloudstack and cloudstack architecture

CO2 :: describe cloudstack network architecture and deployment model of cloudstack

CO3 :: examine configuration of cloudstack like server console, dashboard, network, storage, etc.

CO4 :: articulate cloudstack infrastructure and configuring zone and creating template

CO5 :: outline network zone and zone type, physical networking and virtual network

CO6 :: summarize primary storage and secondary storage and adding primary and secondary storage

Unit I

Introduction to Cloud Computing : cloud computing concept, cloud computing models, deployment architecture

Apache Cloudstack : Introduction to Apache Cloudstack, features of cloudstack, Cloudstack architecture

Unit II

Cloudstack Network Architecture : Network Architecture overview, deployment model of cloudstack-basic mode, advanced mode, security groups, system VMs, virtual router

Unit III

Cloudstack Configuration : Management server console, dashboard tab, instance tab, storage tab, network tab, template tab, event tab, account tab, domain, infrastructure tab, project tab

Unit IV

Infrastructure set up : basic zone configuration, advanced zone configuration, creating template

Unit V

Cloudstack networking : zone, pods, cluster, hosts, Physical networking, Basic and advance zone, virtual network, creating a private cloud

Unit VI

Cloudstack Storage : System requirement and configuration, adding primary storage, secondary storage, adding secondary storage

List of Practicals / Experiments:

List of practicals

- Installation of Apache CloudStack Management Server

- Apache CloudStack Management Server Setup

- CloudStack NFS server Setup

- CloudStack KVM Setup

- Creating Systemvm template

- Creating virtual private cloud

- Creating Basic zones

- Managing template and ISO

References:

1. APACHE CLOUDSTACK DOCUMENTATION by APACHE, N.A.