

## SREENIVASA INSTITUTE of TECHNOLOGY and MANAGEMENT STUDIES

II MCA - II Sem

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### **16MCA223                    CLOUD INFRASTRUCTURE AND SERVICES**

#### **Course Objectives:**

- To explore the Basics of Cloud Computing
- To Learn how to Build Cloud Networks
- To Explore Federation presence, Identity, privacy in the cloud-security
- To Learn Common Standards in Cloud Computing
- To Explore Cloud Service Providers

#### **Syllabus:**

##### **UNIT I :            Cloud Computing Basics**

Cloud Computing Overview – What is Cloud Computing, Cloud Components, Infrastructure-Grid Computing, Full Virtualization, Para virtualization, Services-Software as a service, Platform as a Service, Hardware as a Service, First Movers in the Cloud, When you can use cloud computing, Benefits, Limitations, Security Concerns.

##### **UNIT II :            Building Cloud Networks - Virtualization Practicum**

The evolution from the MSP Model to cloud computing and software-as-a-service, The cloud Data Center, Service-Oriented Architecture as a step toward Cloud computing, Basic approach to a Data center-based SOA. Downloading sun xVM virtualBox, Installing Sun xVM VirtualBox, Adding a Guest Operating System to VirtualBox.

##### **UNIT III :            Federation Presence, Identity and Privacy in the cloud-Security in the cloud**

Federation in the cloud, Presence in the cloud, Privacy and its relation to cloud based information system, Security in the Cloud, Cloud security challenges, Software-as-a-service security

##### **UNIT IV :            Common Standards in Cloud Computing - End user access to cloud computing**

The open cloud consortium - The distributed management task force - Standards for application developers - Standards for messaging - Standards for security - YouTube - Facebook –what is smartphone- - Smartphone - Mobile operating systems for smart phones - Mobile platform virtualization.

## **UNIT V : Cloud Computing with the Titans**

Google-Google APP Engine, Google Web Toolkit, Microsoft-Azure Services Platform, Windows Live, Exchange Online, Sharepoint Services, Microsoft Dynamics CRM, Amazon-Amazon Elastic Compute Cloud( Amazon EC2), Amazon SimpleDB, Amazon Simple Storage Service(Amazon s3),Amazon Simple Queue Service( Amazon SQS), Salesforce.com-Force.com, Salesforce.com CRM, AppExchange

### **Course Outcomes:**

- Know the Basics of Cloud Computing.
- Know to Build Cloud Networks using Virtualization Practicum
- Understand Fedaration presence, Identity, privacy in the cloud-security
- know Common Standards in Cloud Computing
- Explore Cloud Service Providers

### **TEXT BOOKS:**

1. “Cloud Computing implementation, management and security”, 1/e, 2009, John W. Rittinghouse, James F. Ransome, CRC Press, Taylor & Francis group, US.
2. “Cloud Computing: A practical approach”, 1/e, 2009, Anthony T.velte, Toby J.velte Robert Elsenpeter, Tata Mc Graw Hill edition, India.

### **REFERENCE BOOKS:**

1. “Cloud Computing: Principles and Paradigms “, 1/e, 2013, Rajkumar Buyya, James Broberg and Andrzej Goscinski , Wiley Pvt. Ltd., India.
2. “Cloud Computing: Concepts, Technology & Architecture “, 1/e, 2013, Thomas Erl, Ricardo Puttini and Zaigham Mahmood , PHI, New Delhi.
3. “Cloud Application Architectures”, 1/e, 2009, George Reese, Oreilly publishers, California.
4. “Cloud Computing and SOA convergence in your enterprise”, 1/e, 2010, David S. Linthicum, Addison- Wesley, Boston, US.
5. “Cloud Computing: SaaS, PaaS, IaaS, Virtualization, Business Models, Mobile, Security and More”, 1/e, 2013, Kris Jamsa , Jones & Bartlett Learning, Massachusetts, US.