

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT144	MANAGING VIRTUAL ENVIRONMENTS	3	0	0	3

MANAGING VIRTUAL ENVIRONMENTS

Pre requisite : 1151IT118- Cloud Computing

Unit I

Performance Management in a Virtual Environment: Management techniques, methodology and key performance metrics used to identifying CPU, memory, network, virtual machine and application performance bottlenecks in a virtualized environment.

Unit II

Configuration and Change Management: Configuration and change management goals and guidelines, tools and technologies in virtualized environments.

Unit III

Secure Virtual Networking: Configuration and change management goals and guidelines, tools and technologies in virtualized environments; Virtual network security architecture, network segmentation and traffic isolation to secure a virtual network configuration.

Unit IV

Protecting the Management Environment: Server authentication, authorization, and accounting, SSL certificates, server hardening; Protecting the host system: security architecture, controlling access to storage, hardening hosts, Hardening virtual machines; Virtual machine security architecture, security parameters; Protecting the host and virtual machine systems using server authentication, authorization, and accounting techniques.

Unit V

Troubleshooting Virtual Environments: Interpreting host, network, storage, cluster and virtual machine log files. Network troubleshooting, traffic sniffing, storage access problems, iSCSI authentication and digests. Virtual machine migration, cluster errors with shares, pools, and limits; Command line interfaces and syntax, interpreting host, network, storage, cluster, virtual machine log files and network traces.

TEXT / REFERENCES BOOKS

1. Massimo Cafaro (Editor), Giovanni Aloisio (Editor), Grids, Clouds and Virtualization [ISBN: 978-0857290489]
2. Chris Wolf and Erick M. Halter, Virtualization [ISBN: 978-1590594957]
3. Gaurav Somani, Scheduling and Isolation in Virtualization, VDM Verlag Dr. Müller [ISBN: 978-3639295139]
4. LatifaBoursas (Editor), Mark Carlson (Editor), Wolfgang Hommel (Editor), Michelle Sibilla (Editor), KesWold (Editor), Systems and Virtualization Management: Standards and New Technologies [ISBN: 978-3540887072]
5. Edward L. Haletky, VMware ESX Server in the enterprise [ISBN: 978-0132302074]