



**SUMMER SCHOOL**

**JUNE-JULY 2018**

**Networking & Cloud Computing**

**11th June to 21 July**

**Coordinator :**

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**Week 1**

**CCNA R&S :Introduction to Network**

- Describe router hardware.
- Explain how switching operates in a small to medium-sized business network.
- Design an IP addressing scheme to provide network connectivity for a small to medium-sized business network.
- Configure initial settings on a network device.

**Week 2**

**CCNA R&S : Routing & Switching**

- Determine how a router will forward traffic based on the contents of a routing table.
- Explain how switching operates in a small to medium-sized business network.
- Use monitoring tools and network management protocols to troubleshoot data networks.

**Week 3**

- Configure monitoring tools available for small to medium-sized business networks.
- Configure initial settings on a network device.
- Configure Ethernet switch ports.
- Implement VLANs.
- Implement static routing.
- Implement DHCP on a router.
- Implement network address translation (NAT).
- Implement access control lists (ACLs) to filter traffic

**Week 4**

**Cloud Computing**

- Introduction to Cloud Computing.
- Evolution of Cloud Computing

**Virtualization**

- Virtualization Technologies
- Hardware Virtualization.

**Week 5**

- Operating system Virtualization.
- Server Virtualization.
- Storage Virtualization.

- Role of Virtualization in Cloud Computing
- VPC (Virtual Private Cloud)

**Week 6**

**CLOUDSIM**

- CloudSim of large scale Cloud computing data centers
- CloudSim of virtualized server hosts,
- CloudSim simulation of application containers
- CloudSim of energy-aware computational resources
- CloudSim of data center network topologies
- Support for modeling and simulation of federated clouds
- Support for dynamic insertion of simulation elements
- Support for user-defined policies for allocation of hosts