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| Virtualization | |
| **SOURCE: 01** | **Introduction to Virtualization** |
| 01 | [Virtualization Introduction](https://www.youtube.com/watch?v=CaDQuYKxYFU&list=PLf7QeYWBebsdlJguAzRR8I1bUIxCHujNo&index=1&pp=iAQB) |
| 02 | VMs Hosts and Hypervisors |
| 03 | Types of Hypervisors | Hypervisors |
| 04 | VM Files and Live Sate | Hypervisors VM |
| 05 | CPU Virtualization | Virtual Machine | Cloud |
| 06 | Memory Virtualization | Virtual Machine |
|  | Virtual Networking | Network Virtualization |
|  | Storage Virtualization | Vm ESXI | Virtual Machine |
|  | Virtualization Benefit Efficiency | Virtualization |
|  | Virtualization Benefit Mobility | VMWARE | Virtualization |
|  | Converting Physical Servers to VMs | Covert Physical Server to VMs | Virtual Machine |
| **SOURCE: 01** | **Introduction to Virtualization** |
|  | [Overview of Virtualization](https://www.youtube.com/watch?v=pFK3PZTM1Oo&list=PLgVdi-j-61jn6-rc5gM3Glsn_QvlYeQma&index=1&pp=iAQB) |
|  | VMware VSphere A-Z – Getting Started with Virtualization |
|  | Licensing Overview of VMware VSphere |
|  | VMware VSphere Overview |
|  | Architecture of Server Virtualization |
|  | Describe The Software Defined Datacenter (SDDC) |
|  | Introduction to VMware ESXi (Hypervisor) |
|  | Installing and Configuring VMware ESXi |
|  | Introduction to VMware VCenter Server |
|  | Installing VMware VCenter Server |
|  | Using VSphere Client to Access VCenter Server |
|  | Understanding of VCHA (VCenter High Availability) |
|  | Overview of Virtual Standard Switch |
|  | Creating and Configuring Virtual Standard Stitches |
|  | Network Policies – Security , Traffic Shaping, NIC Teaming and Failover |
|  | Overview of Storage Concept |
|  | Understanding of Different Types of Data-stores |
|  | Thin vs Thick Disk Type |
|  | Create and Manage VMFS Data Store |
|  | Understanding of Virtual Machine and Files |
|  | Creating Virtual Machine |
|  | Understanding of VMware Tools and Virtual Hardware |
|  | Day to Day Operations Related to Virtual Machine |
|  | Creating Resource Pools and VApp |
|  | Understanding of VSphere High Availability (HA) |
|  | Configuring VSphere HA |
|  | Migrating Virtual Machines Using VMotion |
|  | Migrating Virtual Machines Using Storage VMotion |
|  | Understanding of VSphere Fault Tolerance |
|  | Understanding of VSphere Distributed Resource |
|  | Configuring VSphere DRS |
|  | Understanding of VSphere Update Manager |
|  | Understanding of SSphere Replication |
|  | Understanding of VSphere Data Protection |

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| Cloud Computing | |
| **SOURCE: 01** | **Cloud Computing** |
| 01 | [Cloud Computing Introduction | Basic Structure of Cloud Computing](https://www.youtube.com/watch?v=RmuVkB3siYY&list=PLV8vIYTIdSnaKSiSGvJf2QquSN4lEzGob&index=1&pp=iAQB) |
| 02 | Cloud Computing Working Models | Deployment and Service Models |
| 03 | Cloud Computing Benefits | Risks, Limitations, Components | Types of Cloud Environment |
| 04 | Cloud Computing Characteristics |
| 05 | Public Cloud Model | Introduction | Advantages, Disadvantages |
| 06 | Private Cloud Model | Introduction | Advantages, Disadvantages |
|  | Hybrid Cloud Model | Introduction | Advantages, Disadvantages |
|  | Community Cloud Model | Introduction | Advantages, Disadvantages |
|  | Cloud Computing Architecture | Font End and Back End |
|  | Cloud Computing Infrastructure | Hypervisor Introduction |
|  | Cloud Computing Technologies | Virtualization, SOA, Grid Computing and Utility Computing |
|  | SaaS – Cloud Computing | Software as a Service | Application, Characteristics, Benefits, Issues |
|  | Pass – Cloud Computing | Platform as a service | Types, Characteristics, Benefits, Issues |
|  | IaaS – Cloud Computing | Infrastructure as a Service | Characteristics, Benefits, Issues |
|  | Cloud Computing Client Server Technology | Advantages, Disadvantages |
|  | Cloud Computing Peer to Peer Computing | Advantages, Disadvantages |
|  | Cloud Computing Distributed computing | Advantages, Disadvantages |
|  | Cloud Computing GRID Computing | Advantages | Evolution of Cloud Computing |
|  | Autonomic and Parallel Computing | Architecture |
|  | Cloud Computing Applications | Business, Data Storage and Backup, Management, Social etc |
|  | Cloud Computing Challenges | Cost, Reliability, Downtime, Security, Privacy, Lock-In |
|  | Cloud Computing Operations | Cloud Computing Providers |
|  | Cloud Computing Virtualization, Hardware Virtualization | Characteristics |
|  | Types of Hardware Virtualization | Reference Model, Advantages |
|  | Cloud Computing Security | Boundaries, Protecting Data Mechanism, Brokered Cloud Storage Access |
|  | Cloud Computing Security Concerns | Threats in Cloud Computing Security |
|  | IMA (Identify and Access Management) | Cloud Computing Security Mechanism |
|  | PKI (Public Key Infrastructure) | Cloud Computing Security Mechanism |
|  | Encryption (Symmetric vs Asymmetric) | Cloud Computing Security Mechanism |
|  | Single Sign On (SSO) | Cloud Computing Security Mechanism |
|  | Direct I/O Access Architecture | Specialized Cloud Architecture |
|  | Load Balanced Virtual Switches Architecture | Specialized Cloud Architecture |
|  | Multipath Resource Access Architecture | Specialized Cloud Architecture |
|  | Federated Cloud | Introduction, Advantages |
|  | Cloud Mobility | Introduction, Advantages, Benefits |
|  | Cloud Based ERP Software | Introduction, Advantages, Benefits |
|  | Cloud Based CRM Software | Introduction, Advantages, Benefits |
|  | Cloud Based Supply Chain Management (SCM) Software | Introduction, Benefits |
|  | Mobile Cloud Computing (MCC) | Architecture, Advantages, Issues, Applications |
|  | Virtual Machine Provisioning | Life Cycle, VM Provision Process |