

HARDWARE & NETWORKING

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COMPUTER HARDWARE

INTRODUCTION TO DOS

- Types of Operating Systems
- Introduction to DOS • DOS Commands

HARDWARE DEVICES

- Identifying Hardware devices
- Input/Output/Commn./Storage devices
- Identify components of motherboard
- SLOTS (ISA, EISA, PCI, AGP, AMR, PCIE)
- Expansion boards / Cards • NIC, Modem
- Multi-user, multi-port serial controller
- SCSI, SATA, USB
- External connectors
- Identifying & connecting Ports
- AT, ATX power ports
- CPU - Types of CPUs
- CPU companies, terminology
- SOCKETS - AIF, PGA, LGA
- ORTS - COM, IDE, FDC, LPT, USB
 - VGA, Sound, SCSI, PS/2, SATA
- BANKS (SIMM -SIMM 32, SIMM 70)
- DIMM (SDR, DDR, DDR2, DDR3)
- SMPS - mini molex, moles
- SATA • AT & ATX connectors • Voltages
- ROM types - ROM, PROM, EPROM etc.
- IDE bus - Connecting devices
- Hard drive & CDROM jumper settings
- FDC bus • Connecting floppy drives
- Front Panel connections

ASSEMBLING

- Branded Vs Assembled systems
- Placing motherboard
- Placing processor in socket
- Placing processor fan
- Types of system cases
- Placing other devices
- IDE & FDC connections
- Front Panel connections

BIOS, CMOS

- POST steps
- CMOS Setup - Standard & Adv.
- Integrated peripherals
- PC health status
- Introduction to Bootable, Partitions
- Using FDISK
- Drive letters assignment
- Types of File systems
 - FAT, FAT 16, FAT 32
 - NTFS, CDFS, HSFS, EXT
- Formatting partitions
- Transferring system files
- Managing hard disks
- Disk manager
- Installation of Operating systems
- Win 98, Win XP, Win 2003, Vista, Win 2008

DUAL BOOTING

- Introduction to Linux
- Installation of RHEL 4.0
- Linux commands

S/w installation

Device drivers installation

TROUBLE SHOOTING

- Beep codes
- Numerical/System errors
- Using restore points in Win XP

SECURING THE SYSTEM

- Windows Updates
- Firewall Settings
- Virus detection & removal

CD / DVD Writing

Password Breaking

COMPUTER NETWORKING

Introduction to Network

- What is a Network?
- What is networking?
- What is LAN, WAN, MAN?

Establish a Network

- Systems
- Media
- Network Devices
- Network components
- Operating Systems
- Communication devices
- Protocols
- Address

Types of Network

- LAN
- MAN
- WAN

Modes of Communication

- Simplex
- Half Duplex
- Full Duplex

Types of Communication

- Unicast
- Multicast
- Broadcast

Cables

- Coaxial cable
- Twisted pair cable
- Optical Fiber

Types of connectors

- BNC connector
- RJ45, RJ11
- ST & SC connector

Types of crimping

- Straight over
- Cross over
- Roll over

Topology

- Mesh
- Star
- Bus
- Ring

Hub

Switch

Router

NIC card

MAC address

IP address

OSI Reference Model

- Introduction
- Structure of OSI Reference Model
- Working of OSI Reference Model

Assigning IP address

Checking the connectivity between the devices

Changing the system name

Network Environment

- Workgroup or peer to peer
- Client/Server or Domain

Introduction to Workgroup or Peer to Peer

- What is workgroup?
- Advantages of workgroup
- Disadvantages of workgroup

User administration

- What is user account?
- Different types of user accounts
- Local user account
 - Creating, managing and deleting

Group administration

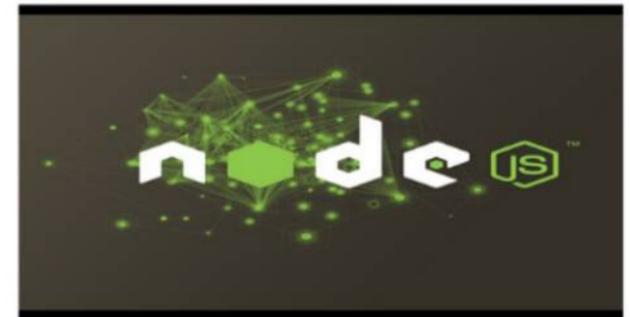
- What is a group?
- Different types of groups
- Groups
 - Creating, managing and deleting
- Users membership to groups
 - Adding and Removing



JAVA / PYTHON / .NET
FULL STACK



DATA SCIENCE



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