System Administration and Maintenance (BACS10A)

LOCF 2022

Guidelines

Basics of operating system, services, features and functions of different operating systems, Kernel, IPv4, IPv6 API, CLI, GUI, devices and device drivers,	Chapter 2 Ref. [1] Use suitable Online resource
Introduction to Linux/Unix based operating systems, introduction to Windows based operating systems, difference between Linux/Unix and other operating systems, introduction to server based operating systems, difference between desktop based (Windows 10) and server based operating systems like Windows server 2003/2008.	Chapter-4 Ref. [3] Chapter-1 Ref. [1] https://www.javatpoint.com/linux-vs-windows pp:69-83 Ref. [2] https://www.howtogeek.com/404763/whats-the-difference-between-windows-and-windows-server/
Configuring desktop environment and desktop settings, installing and configuring software and hardware, exploring file structure, terminal, shell, basic Unix Commands like cat, ls, cd, date, cal, man, echo, pwd, mkdir, rm, rmdirps, kill etc.	Pp:268-287 Ref.[3] PP:26-47 Ref.[3] PP:200-232 and PP: 238-261 Ref.[3] Chapter-5 complete Ref.[3]
Configuring desktop environment and desktop settings, installing and configuring software and hardware, explore system configuration using control panel, creating users, add/ delete users, difference between workgroup and domain, concept of user profiles – creating and roaming, concept of Active Directory, process and disk management, Windows task manager, exploring file structure and file properties,	PP: 123-153 Ref.[4] CHAPTER-2 Ref.[4] PP:155-192 Ref.[4] PP:232-242 Ref.[4] PP:242-255 Ref.[4] https://docs.microsoft.com/en-us/windows-server/storage/folder-redirection/deploy-roaming-user-profiles PP: 262 Ref.[4] Chapter-4 complete Ref.[4] PP:539-552 Ref.[4]

backup and recover	PP: 558-562 Ref.[4]
Examine network settings using commands like ipconfig/ifconfig, hostname, net, netstat, whoami etc.,	Chapter-21 Ref.[5]
troubleshoot network connectivity issues using commands like: ipconfig, ping, tracert, route etc.,	https://www.utilizewindows.com/network-troubleshooting-using-ping-tracert-ipconfig-nslookup-commands/
sharing resources (files, printers etc.) on the network,	https://windows.tips.net/T012210_Sharing_Resources_on_a_Network.html
Accessing a system remotely using remote desktop.	Chapter-7 Ref.[4]

Practical's based on System Administration and Maintenance

1. Installation of LINUX operating system.
2. Installation of WINDOWS operating system
3. Installation of office productivity software (MS Office/ Open Office) .
4. User Management
    a. Graphical tools
    b. Command line tools include commands like useradd, userdel, passwd, etc.
    c. Edit the local configuration files directly using vi editor.
5. Directory management commands
    a. Write a syntax and usage the directory management commands with all options.
        i. Ls command
        ii. cd command
        iii. pwd command
        iv. mkdir command
        v. rmkdir command
6. Process management commands and their execution.
    a. Ps
    b. Kill
    c. nice
7. Study the Firewall Configuration in Windows in detail.
8. Study the Firewall Configuration in Linux.
9. Study the Networks tools like ipconfig/ifconfig, netstat, whoami , trace route , Ping etc.
10. Start-up and shutdown scripts on Linux

References:

1. Burges, M. (2003). Principles of Network and System Administration. John Wiley & sons Ltd.
2. Limoncelli, T.A., Hogan, C., & Chalup, S. R. (2007). The Practice of System and Network Administration. Addison-Wesley.
3. Sobell, M.S. (2014). A Practical Guide to Ubuntu Linux (Fourth edition). Prentice Hall.
4. Panek, W., & Wentworth, T. (2010). Mastering Windows 7 administration. Wiley Publishing Inc
5. Snyder, G., Hein, T. R., & EviNemeth, B. W. (2018). UNIX and Linux System Administration Handbook (Fifth edition). Pearson