

INTRODUCTION TO SYSTEM ADMINISTRATION

WHAT IS A SYSTEM ADMINISTRATOR?

- No definite job description – It's basically the behind-the-scenes person who

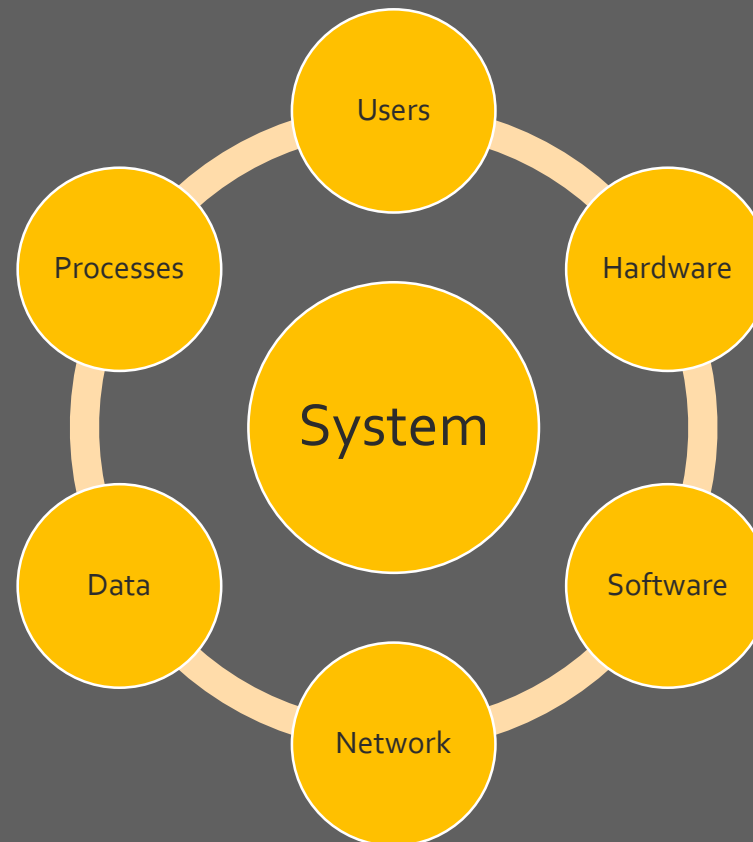
“makes things run”

WHAT IS A SYSTEM ADMINISTRATOR?

- In a “small company” the Sysadmin may be the entire information technology staff.
 - The Sysadmin may do everything from telephone, to fax, to computer management.
 - Sysadmin may have to order equipment, deal with users, develop software and repair hardware
- In a large company the Sysadmin may be one member of a large group and manages an aspect of data center operations.
 - Programmers
 - Database Administrators
 - Network Administrators
 - Operators

WHAT IS A SYSTEM??

- “A group of interacting elements that function together as a whole to achieve a common objective”
- In the IT context



IN GENERAL, A SYSTEM ADMIN'S DUTIES INCLUDE:

- Adding and removing hardware
- Installing and upgrading software
- Provisioning accounts
- Performing backups
- Maintaining documentation
- Monitoring security vigilantly
- Troubleshooting Issues
- Answering questions

TO BE A SUCCESSFUL SYSADMIN...

You must be:

- Able to function as a customer service agent!
- Able to communicate with technical and non-technical users.
- Be patient, and have a sense of humor.
- Able to solve difficult technical problems.
- Able to work in a group setting.
- Able to document activities in order to reproduce the results.

WHAT IS THIS CLASS ALL ABOUT?

Learning Outcomes

LO1. Perform basic system administration including operating system installation, configuration, and maintenance

LO2. Implement a server system with the necessary services according to specifications

LO3. Perform systematic diagnosis and troubleshooting of network services on a server system

WHAT WILL YOU LEARN IN THIS COURSE?

- Install and maintain operating system software, application software, and patches.
- Configure and maintain connectivity between hosts
- Create and maintain user accounts
- Manage disk space and file permissions
- Enable and configure common network services
- Configure / maintain system backups, and perform system restores

OUR LEARNING PLAN

LO	Topics	Week
	Course Orientation <ul style="list-style-type: none"> Discussion of course syllabus 	1
LO1	System and Administration Concepts <ul style="list-style-type: none"> System Administrator Role Computing Hardware Services Documentation Ethics 	1
LO1	Unix/Linux CLI Basics <ul style="list-style-type: none"> Basic Commands Working with Files and Directories Utilities, Redirection and Pipes Text Editor Unix Shells and Shell Scripts 	2-3
LO1	Linux Installation <ul style="list-style-type: none"> Choosing and installing the OS The root user Package managers and software installation Shutting down 	4-6
	Midterm Exam	7

LO	Topics	Week
LO1, LO3	Managing the System <ul style="list-style-type: none"> Network Configuration Runlevel and Processes System Utilities (Date, System Information Disk Management 	8-9
LO1, LO3	User and File Administration <ul style="list-style-type: none"> User and Group Administration Root Privileges File Permissions 	9-10
LO1	Change Processes and Maintenance Concepts <ul style="list-style-type: none"> Fixing and Debugging Service Changing, conversions and Upgrading Maintenance Windows Centralization and Decentralization 	11
LO2- LO3	System Services <ul style="list-style-type: none"> File Sharing SSH DNS / DHCP HTTP E-mail 	12
	Practical Exam and Case Study Presentation	13
	Final Exam	14

GRADING SYSTEM

Assessment Task	Max Points
Midterm Exam	15
Final Exam	15
Practical Exam	20
Laboratory Activity Reports	20
Case Study	30
TOTAL POINTS	100