System Administration & Maintenance
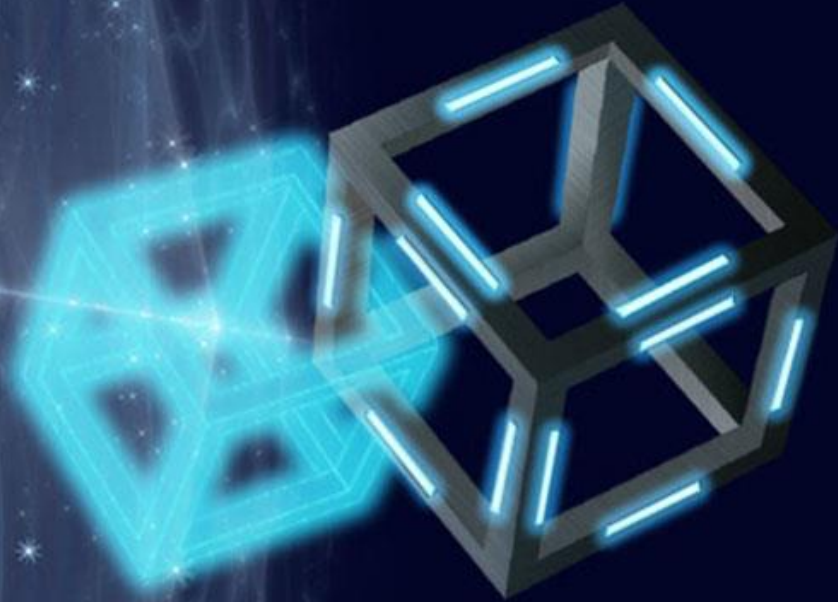
Introductions

01	**System Administration?**
02	**History of System Administration.**
03	**User Management & Hardware Management**
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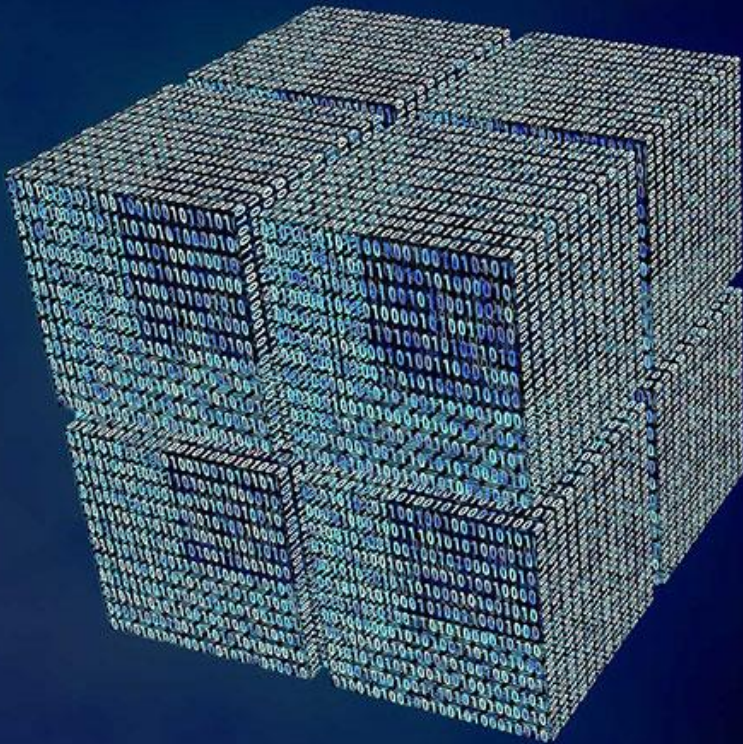
System Administration

❖ System administration refers to the management of one or more hardware and software systems.

❖ The task is performed by a system administrator who:
- Monitors system health
- Monitors and allocates system resources like disk space, performs backups, provides user access, manages user accounts
- Monitors system security and performs many other functions.

System Administrator

❖ A system administrator (SA) is responsible for managing, overseeing and maintaining a multiuser computing environment, such as a local area network (LAN). SA responsibilities vary, depending on an organization's requirements. SAs should possess strong technical knowledge and skills, as well as expertise in personnel management.

❖ SA is also known as a systems administrator, sys admin or sysadmin. A small organization may have only one SA on staff, while an enterprise usually has a full SA team.

Types of Administrators

❖ Types of system administrators based on their roles and responsibilities:

- **<u>Database Administrators</u>** (Set up and maintain databases used in an organization. They may also be required to integrate data from an old database into a new one or even create a database from scratch).
- **<u>Network Administrators</u>** (Manage the entire network infrastructure of an organization. They design and install computer systems, routers, switches, local area networks (LAN), wide area networks (WAN), and intranet systems.)
- **<u>Security Systems Administrators</u>** (Monitor and maintain the security systems of an organization. They develop organizational security procedures and also run regular data checkups - setting up, deleting and maintaining user accounts.)

History of System Administration

1940 to 1979		1980 to 1990		2000 to beyond
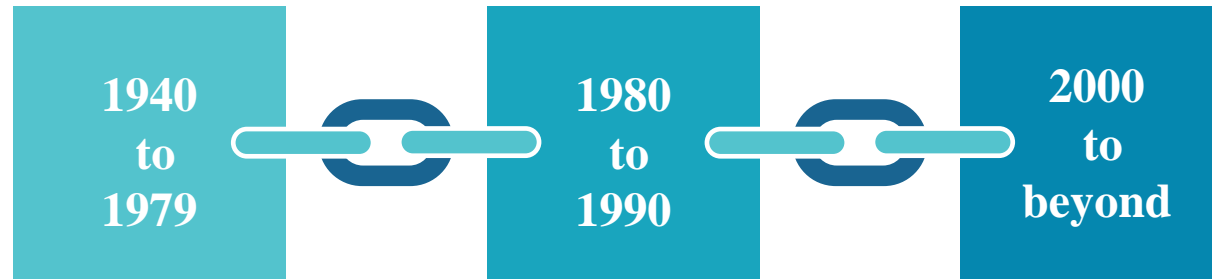
- **Supercomputer**
- **Mainframes**
- **Minis**
- **Micros**

- **Networks**
- **Client / Server**
- **Programmers**
- **Operators**

- **Area of computing**

User Management

❖ Describes the ability for administrators to manage:

- Devices
- Systems
- Applications
- Storage Systems
- Networks
- SaaS Services
- User access to other various IT resources

Hardware Management

❖ Hardware management system is a detailed information on all the computer hardware assets used.

❖ It can view and check configuration of each computer, server and laptop on the network.

❖ It can tag each asset and assign that to employees.

❖ It can also track which software is installed in each computer.
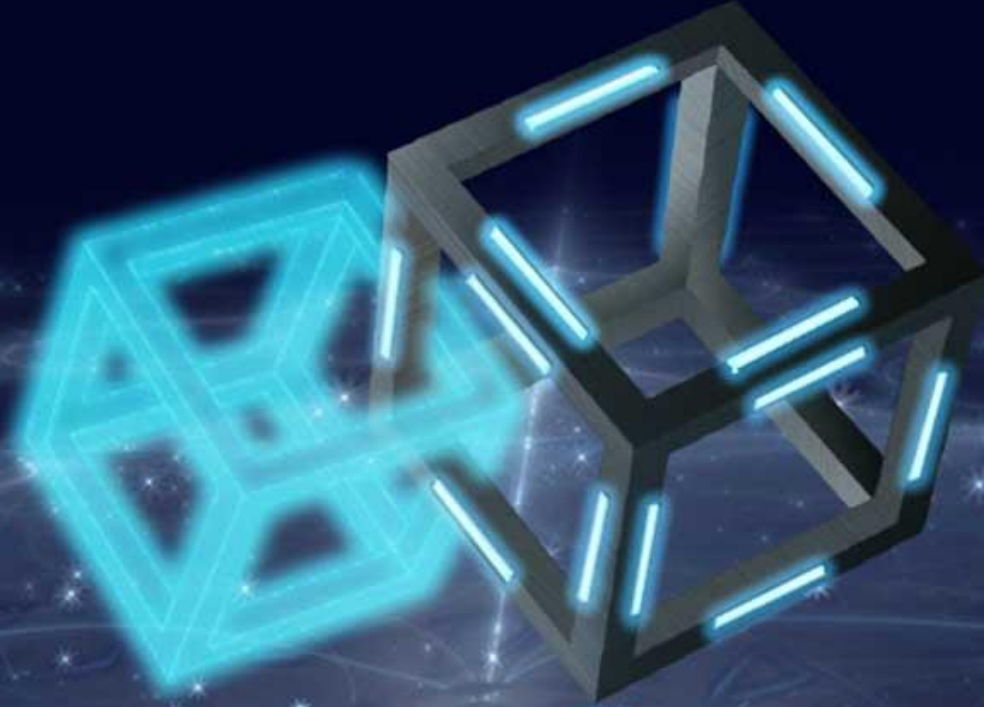
Benefits of Hardware Management

- Track hardware in employees system

- Identify theft and loss

- Eliminate spending on unused hardware's

- Track and report on all hardware purchases

- Manage hardware inventory

- Reduce maintenance cost

- Monitor repairs under warranty

Data Backup

❖ Data backup is the practice of copying data from a primary to a secondary location, to protect it in case of a disaster, accident or malicious action.

❖ Backup refers to the copying of physical or virtual files or databases to a secondary location for preservation in case of equipment failure or catastrophe

Data Backup Options

- Removable media.

- Redundancy.

- External hard drive.

- Hardware appliances.

- Backup software.

- Cloud backup services.

THANK YOU