

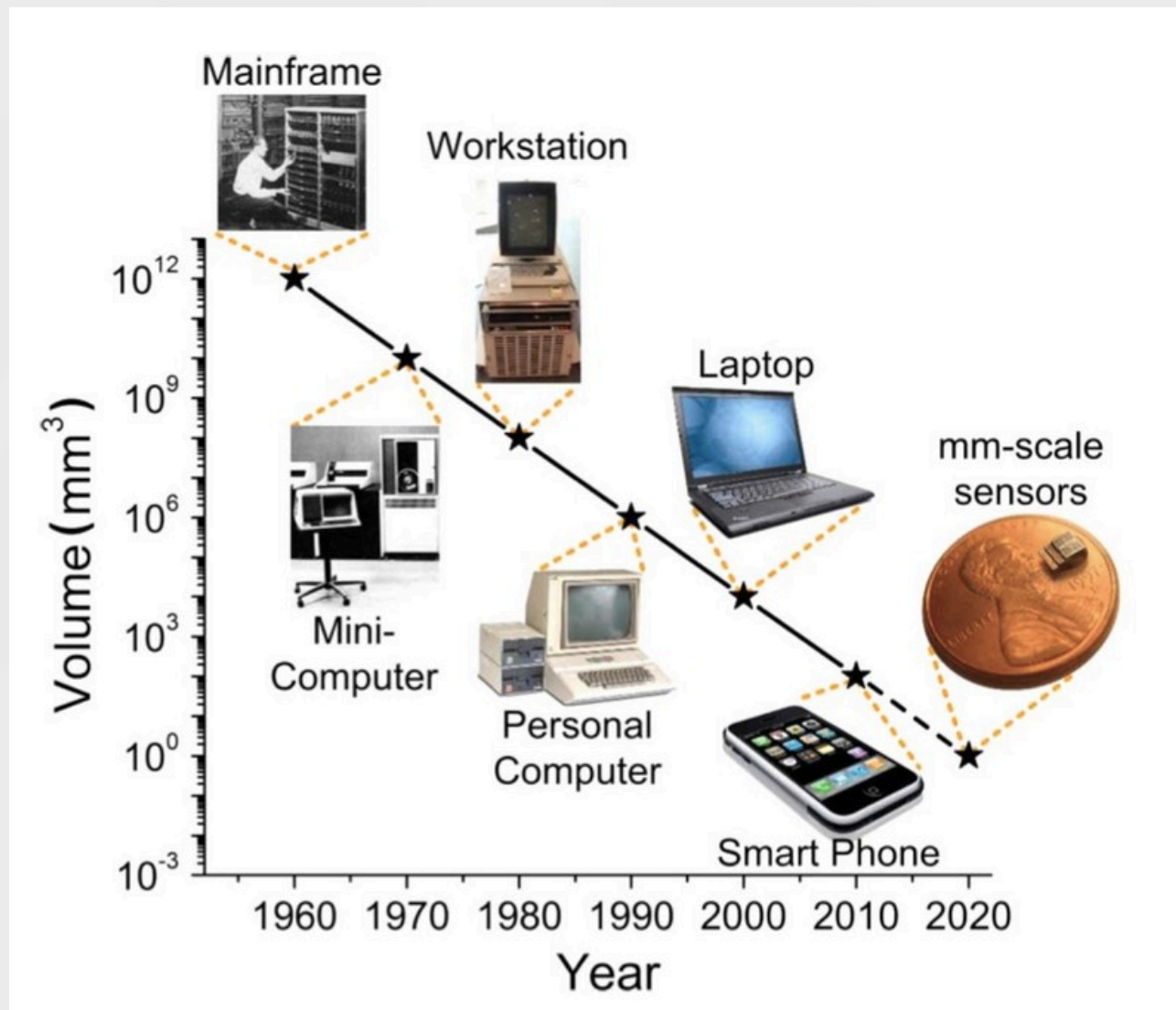
System Administrator

The role of an IT Professional



- Networks are no longer a luxury, but a requirement to keep the organization running.

Evolution of Networking





Network Services

- Telnet/FTP
- DHCP Service
- DNS Service
- Web Service
- Mail Service
- Dialin Service
- File Sharing/Samba
- Proxy
- Traffic Monitoring /MRTG/CACTI
- Security Service

Who are Responsible

- Computer Technician
 - Responsible for setting up and maintaining the users' computers.
 - Putting the computers together.
 - Adding new hardware: RAM, CD-ROM drive, Monitor, etc.
 - Installing software
 - Setting up accounts, email, and access to servers
 - Troubleshooting
- Network Technician
 - Connecting the computers to the network.
 - Setting up any wireless network access.
 - Configure the routers and switches.
 - Basic configurations
 - Security
 - Traffic flow
- System Administrator
 - Maintaining the “file servers”, the computers that store the software and data used by everyone.
 - Setting up usernames and passwords for controlling access to the network.
 - Setting up and maintaining the servers that control Email.
 - Keep the computers secure from viruses and hackers.

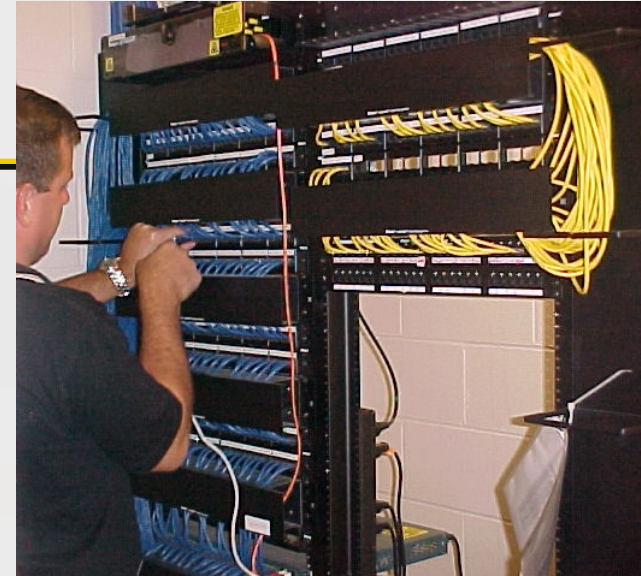
Computer Technician



- “Desktop” support
 - Responsible for setting up and maintaining the users’ computers.
 - Putting the computers together.
 - Adding new hardware: RAM, CD-ROM drive, Monitor, etc.
 - Installing software
 - Setting up accounts, email, and access to servers
 - Troubleshooting
 - *Helping users*

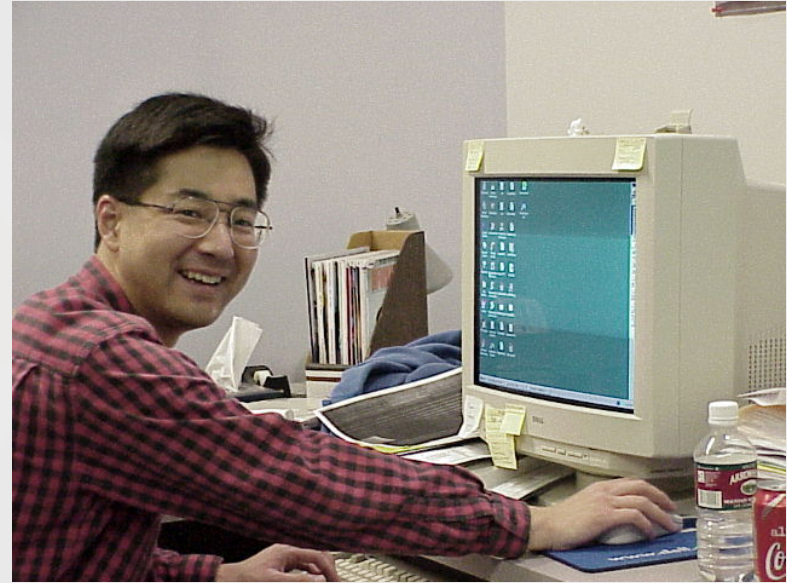
Network Technician

- Connecting the computers to the network.
- Install, manage, troubleshoot network infrastructure:
 - Routers, Switches, Cables, Wireless Access Points
- Issues:
 - Security
 - Quality of Service
 - Video On Demand
 - IP Telephony or Voice over IP
- Setting up any wireless network access.
- Configure the routers and switches.
 - Basic configurations
 - Security
 - Traffic flow



Syst. Administrator

- Maintaining the “file servers”, the computers that store the software and data used by everyone.
- Setting up usernames and passwords for controlling access to the network.
- Setting up and maintaining the servers that control Email.
- Keep the computers secure from viruses and hackers.



Sys Admin Handle

User

- **How many users are there?**
- The level of the user's expertise.
- What are the users trying to do?
- Are they responsible or irresponsible?
- Who do the users know?

Hardware Software

- **How many, how big and how complex?**
- Is there a network?
- Are the computers heterogenous or homogenous?

Sys Admin Handle

What System Administrator Do ?

- ensuring that the computing system runs correctly and as efficiently as possible, and
- ensuring that all users can and do use the computing system to carry out their required work in the easiest and most efficient manner

Conflict

- Management will wish to restrict the amount of money spent on computer systems.
- The users on the other hand will always want more disk space and faster CPUs.
- The System Administrator must attempt to balance these two conflicting aims

System Administrator Activity

- Fault Management
- device management
- Configuration Management
- performance management
- history management
- Accounting
- security
- Management Scope
- Maintenance and upgrade
- Remote access

What Syst. Administrators need to know

- programming,
Systems Administrators have to be able to program. They might have to write scripts that automate regular tasks or a Visual Basic program to help users perform certain tasks.
- hardware maintenance and installation,
This may range from installing new hardware to cleaning old hardware so that it continues to work.
- documentation and testing,
- Human Computer Interface,
- networks and computer communication,
- user education,
- diplomacy,
- legal issues and contracts,
- detective work,
- management and policy setting, and
- public relations.

Need another Skill

- Communicating with Users
- Communicating with management

Reference

- <http://Cisco.netacad.net>
- <http://www.cabrillo.edu>
- An Introduction to Linux Systems Administration by David Jones & Bruce Jamieson