

# Introduction to Operating System Administration

## Tasks of the Sysadmin

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# Subject Topics

- 1 **Operating System Administration Introduction**
- 2 Operating System installation
- 3 User management
- 4 Application management
- 5 System monitoring
- 6 Filesystem Maintenance
- 7 Local services
- 8 Network services
- 9 Security and Protection
- 10 Virtualization

# Outline

- 1 Introduction
- 2 Sysadmin tasks
- 3 Administrator's ethical code
- 4 Personal work

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- 1 Introduction
  - Goals
- 2 Sysadmin tasks
- 3 Administrator's ethical code
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# Goals

- Understand what a Sysadmin is
  - Tasks
  - Responsibilities
  - Necessary knowledge
- Understand and honor the Sysadmin ethical code

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# Exercise

## Sysadmin tasks

- **Individually**
  - List the sysadmin tasks
    - Which of those activities are you able to perform?
- **In group**
  - Gather the task list
    - Sort them by importance

# Solution

- Check system's security
- Perform regular backups
- Solve incoming issues
- Assist end-users in their daily work
  - Related to their systems
- Keep local documentation
- Install and manage software
- Manage users
- Add/update hardware
- Monitor the system and ensure it works properly



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# Exercise

## In group

- Has the Sysadmin the right to read e-mails from other users?
- And to monitor which web pages they visit?

## Exercise

### In group

- Has the Sysadmin the right to read e-mails from other users?
- And to monitor which web pages they visit?

### Example

An employee is fired from a company because he/she spent too much time sending personal e-mails to his/her friends irrelevant to the company.

- Which is the role of the Sysadmin in this situation?

# Administrator ethical code

## Solution

- The Administrator ethical code forbids to access the information contained in the users e-mails  
He/she is not allowed to monitor by his/her own, it must be “company policy” and the users must be informed that their data might be monitored
- Has provided the information as requested by any of his employers
- If employee contracts say that the Intellectual Property generated in the company belongs to them. Then the company can legally act against an employee using company's resources for personal benefit

# Administrator ethical code

- Seriousness
  - Keep separated personal and professional aspects
- Personal integrity
  - Honesty, able to be aware of his/her own limitations and errors
- Privacy
  - Keep the confidentiality of others' data
  - Access privileged information only when it is absolute necessary

# Administrator ethical code

- Education, laws and usage policies
  - Be up-to-date in terms concerning ethical norms used in this/her work, share the knowledge with others
    - Criminal code, LOPD, LSSI
- Communication
  - Inform the users about important data
- Ethical responsibility
  - Profficiency, coherency, integrity and honesty

# LOPD (Data protection and Organic law)

- Determines the treatment of data files (databases)
  - Name/surname, ID, direction, bank accounts, credit card numbers, . . .
- The company must inform about the presence of files to the Data Protection Agency
- The company must adopt determined security measures depending on the privacy of the data file
- The company must write a document clearly stating the taken security measures
- The employees contracts must be coherent with the law in terms of the kept private information

**You must keep up-to-date!!**

## More Laws

- LSSICE – Ley de Servicios de la Sociedad de la Información y de Comercio Electrónico (LSSI)
  - It regulates the web pages (and other electronic media) with economical purposes
  - Direct such as sells, . . . , or indirect such as advertisement, . . .
  - Communicate to the public registries about the domain name used
  - Clearly state the price of the offered goods
  - Forbidden to deliver electronic communications without previous consent (Spam)
  - . . .
- LISI – Ley para el Impulso de la Sociedad de la Información



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# Personal work

- UNIX knowledge at user level
  - `ls`, `cd`, `mkdir`, `rmdir`, `cp`, `mv`, `rm`, `cat`, `more`
  - Shell, redirection operators (`<`, `>`, `> &`), and pipes (`|`)
  - `apropos`, `man`
  - `grep`, `find`
  - `vi`
- Hard disk preparation and partitioning
  - `fdisk`, `mk2fs`, `mkswap`, `fsck`, `mount`