

Introduction to Operating System Administration

Tasks of the Sysadmin

René Serral-Gracià¹

¹Universitat Politècnica de Catalunya (UPC)

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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 Sysadmin Ability levels
- 4 Administrator's ethical code
- 5 Personal work

Outline

- 1 Introduction
 - Goals
- 2 Sysadmin tasks
- 3 Sysadmin Ability levels
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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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 - Novice
 - Junior
 - Senior
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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
 - Penal Laws, 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`, `mke2fs`, `mkswap`, `mount`