Documenting
Operating systems I800

Edmund Laugasson
edmund.laugasson@itcollege.ee

The charm and pain of documenting

- IT system administrators quite often would not like to create a documentation. Sometimes there is a lack of time.
    - Anyway, it was painful to get things to work and this has yet to be documented as well?
    - Often remain undocumented workaround, but which later turned out to be most resilient …
    - Other problems are faster and documenting work remains undone

Estonian Information Technology College

Documenting

- We document our actions, because:

  - Man forgets

  - Another admin must ensure that systems are in operation in your vacation or leave time

  - In a crisis, the existence of a good disaster recovery is essential as you need to ensure that the OLA/SLA enforcement

  - Reduces a Truck Factor number (information concentrated in one person's hands)

  - Provides an opportunity to simplify the system, since the old fragments can be removed

Estonian Information
Technology College

Context

- Documentation for a specific target group
- There cannot be a universal and comprehensive documentation created:
  - It would be too large, and contain a lot of information about what each administrator knows and interfere with its execution
  - It would be difficult to create and update
  - Not usable in times of crisis
- Writing a documentation there should be preconditions and skills of readers, followers kept in mind

Estonian Information
Technology College

Prerequisites

- Written instructions will always be valid in certain cases

- for example

    - Certain software version - the operating manual applies to a particular version of Ubuntu, etc.

    - Required skills from the guide followers - must be familiar with the basics of the Linux command line and be able to cope with

- Requirements to do before following these instructions

    - For example, make a backup of the data files and configuration files

Estonian Information
Technology College

Teamwork

- Please divide yourselves into two groups:
  - First group will put together of good documentation properties
  - Second group will put together of bad documentation properties
  - Both groups elect a person who will present the result

Estonian Information
Technology College

Good documentation

- Based on a good documentation there can be **install and set up the same system** in accordance with the rules described there

- Does not contain redundant information

- Includes the list of prerequisites and requirements, by which fulfilling the given guidance can be applied

- Is readable and understandable

- Can be followed

- Is valid (also includes the latest changes)

Estonian Information
Technology College

Bad documentation

- **The document is not sufficient for the installation and restore of the initial system**

- Does not contain the list of restrictions in case the document works

- Contains a misleading information

- Is outdated (all changes are not reflected in the document)

- Volatile style (the same things differently labeled)

Estonian Information
Technology College

Requirements to the report

- It consists of at least the following elements
- Data of the composers and the date
- **Introduction**
  - About which system the documentation is
- **Prerequisites** the documentation comply
  - For example, must have a working Ubuntu Server version X
  - must be fluent in LAMP environment, etc.
- **The general description of service** (e.g. an overview when in case of multiple machines)
- **The installation and setup guide** (does not contain a definition explanations)
- **Backup Guide**
- **Restore Guide**
- **Service monitoring and firewalling recommendations**
- **Description of service testing**

Estonian Information
Technology College

Requirements for installation instructions

- Variables (e.g. hostname) must be highlighted

  - e.g.
    ping <your IP>

- It should not contain redundant information

- e.g.
  bash# ping <your IP>
  bash# ls -la
  Adding prompt interferes with copying and pasting.

  - e.g.
    ping 10.0.0.1 – *using ping command helps to ensure that server is online.* For sysadmin there is no need to explain that ping does.

The commands used in command-line must be separated (why not also highlighted) from the rest of the text

Estonian Information
Technology College

Backup plan

- Specifies a list of files and folders to backup

- Determines the frequency and type of backup (*incremental, differential, full*)

- Provides a rules of regular backup control

- Does not need to include a backup method, and program description, as it is usually done by another administrator

Estonian Information
Technology College

Disaster recovery guide

- Lists the various recovery scenarios in case of emergencies

- Must include instructions on how to restore the service

- It should be quickly accessible!

- Disaster recovery will not be kept on the server (Services), to which it relates. If the server service is down, you can not access the recovery plans ...

- It should be updated when the service infrastructure upgrades

- Rapid changes often tend to forget, and backup/recovery plan is outdated

Estonian Information Technology College

Questions?

Thank you for your attention!