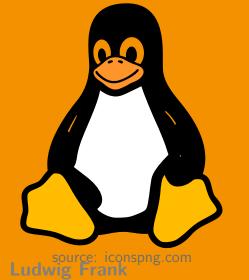


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OS 14 – User Management



The lecture is based on the work and the documents of Prof. Dr. Ludwig Frank

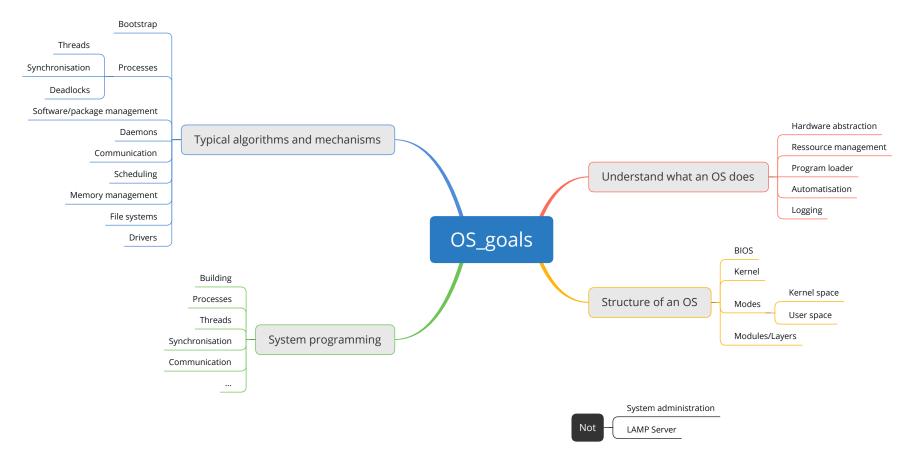
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Summary

Goal

Goal







OS::User Management

- User Management
- Group Management



Intro

The management of users and groups are important tasks of an operating system.



Summary

User management

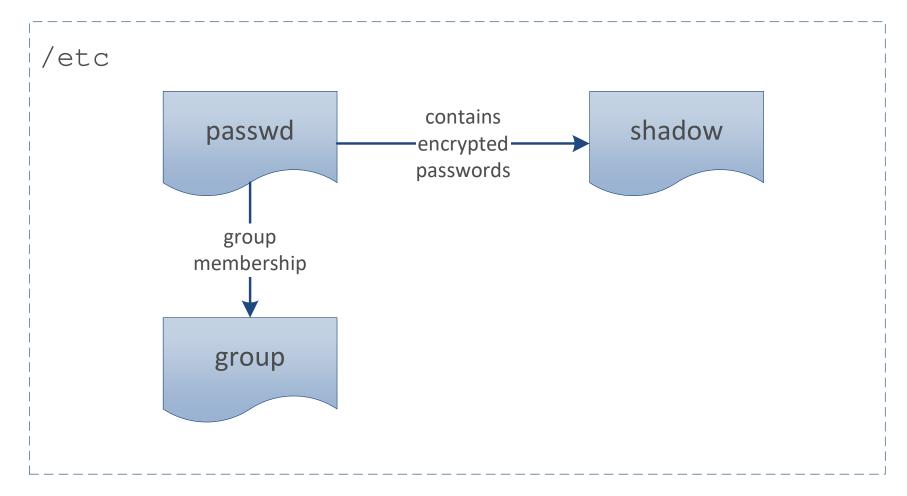
Use cases for user management?

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Summary

File overview



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Summary

/etc/passwd

Syntax

1 USER: PW: UID: GID: INFO: HOME: SHELL

Example

```
1 root:x:0:0:root:/root:/bin/bash
```

2 . .

3 dev:x:1000:1000:dev,,,:/home/dev:/bin/bash

Field Description

USER Name of the user.

PW Encrypted password of the user. **x** means the password is stored in

/etc/shadow

UID Id of the user.

GID Primary group id. Every user has one primary group.

INFO Text information about the user.

HOME Path to the home directory of the user.

SHELL Path to the shell that is used when the user logs in.

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Summary

/etc/shadow

Syntax

1 USER: PW: CHANGED: MIN: MAX: WARN: INACTIVE: END: RESERVED

Example

dev:\$6\$JpyBXRPX\$GDgqFSSg8xSns6dSKB:17749:0:99999:7:::

Field	Description
USER	Name of the user.
PW	Encrypted password of the user. Algorithm: \$1\$ is MD5, \$2a\$ is Blowfish, \$2y\$ is
	Blowfish, \$5\$ is SHA-256, \$6\$ is SHA-512
CHANGED	Last password change. Days since 01.01.1970.
NAINI	The minimum number of days left before the user can change its password

MIN The minimum number of days left before the user can change its password.

MAX The maximum number of days until the password expires.

WARN The number of days before the user is warned that his password is about to expire.

INACTIVE The number of days after the user's password has expired and is therefore disabled.

EXPIRE Days since 01.01.1970 on that the user is disabled.

RESERVED Reserved field (for future).



Summary

User management: Linux commands

Command Description

useradd Creates the user information in /etc/passwd.

adduser User friendly **frontend** for useradd.

usermod Modifies the user information in /etc/passwd.

userdel Deletes the user information in /etc/passwd.

deluser User friendly **frontend** for userdel.

passwd Change password of user.



Group management

Use cases for group management?

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Summary

/etc/group

Syntax

1 GROUP:PW:GID:USER

Example

1 root:x:0:

vboxsf:x:999:dev,homer

3 dev:x:1000:root

Field Description

GROUP Name of the group.

PW Encrypted password of the user (not explained in this lecture).

GID Id of the group.

USER Comma separated list of members (users) of the group. Unfortunately,

groups can't be members of other groups.



Group management: Linux commands

Command Description

groupadd Creates the group information in /etc/group.

addgroup User friendly **frontend** for adduser --group.

groupdel Deletes the group information in /etc/group. delgroup User friendly **frontend** for deluser --group.

groups Print group memberships of a user.

On Linux, the group membership is evaluated at login.

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Summary

- User Management
- Group Management

Outlook

File systems

