

# **Chapter 13**

# **Account Management**

# Account Type

- **User Account**
  - Each user has an unique user name
  - Identified by UID
  - Must login to use system
- **Group Account**
  - Consists of one or more users
  - Each group has an unique group name
  - Identified by GID

# Group Type

- Primary Group
  - Each user must join at least one group
  - Inherited by process and new file
- Secondary Group(s)
  - More group(s) to join
- Private Group
  - Same name as user, only one member
- Public Group
  - Consists of many members

# ID Allocation

- 0
  - Root, the super user (privilege)
- 1-499
  - System users
- 500+
  - Regular users
- 65534
  - nobody / nfsnobody

# The /etc/passwd

- Contains user account information
  - User name
  - Password (encrypted, or x)
  - User ID
  - Group ID
  - Comments
  - Home directory
  - Login shell

# The /etc/group

- Contains group account information
  - Group name
  - Password (encrypted, or x)
  - Group ID
  - Members (other than primary group)

# The /etc/shadow

- Contains account aging information
  - User name
  - Encrypted password
  - Last day, since 19700101 of password changing
  - Minimum days, password could not be changed
  - Maximum days, password must be changed
  - Warning days, be warned before maximum days
  - Inactive days, disabled after maximum days
  - Expire day, since 19700101 of account closing

# Using useradd

- `useradd <new_user>`
  - Creates a new user account
  - Common options:
    - `-p password` : gives an encrypted password
    - `-u UID` : specifies UID
    - `-g GID` : specifies GID
    - `-G groups` : joins other groups
    - `-c comment` : sets comments
    - `-k skel` : specifies skeleton directory
    - `-s shell` : specifies login shell
    - `-e expire` : specifies expire day
    - `-m` : creates home directory

# Using usermod

- **usermod <user>**
  - Modifies an existing user account
  - Most of options are identical to useradd
  - Other options:
    - **-l new\_name** : changes user name
    - **-L** : locks an account
    - **-U** : unlocks an account

# Using userdel

- **userdel <user>**
  - Deletes an existing user account
  - Common options:
    - **-r** : removes home directory

# Using groupadd

- **groupadd <new\_group>**
  - Creates a new group
  - Common options:
    - **-g GID** : specifies GID
    - **-o** : allowed to use an existing GID
    - **-r** : creates a system group

# Using groupmod

- **groupmod <group\_name>**
  - Modifies an existing group
  - Common options:
    - **-g GID** : changes GID
    - **-n new\_name** : changes group name
    - **-o** : allowed to use an existing GID
    - **-r** : changes to a system group

# Using groupdel

- **groupdel <group\_name>**
  - Deletes an existing group
  - Group must be empty (no member)

# Using passwd

- **passwd <user>**
  - Changes password for an user
  - Only root can change password for others
  - Common options:
    - **-l** : locks account
    - **-u** : unlocks account

# Using gpasswd

- **gpasswd <group>**
  - sets or changes password for a group
- **gpasswd -r <group>**
  - removes password for a group
- **gpasswd -a <user> <group>**
  - adds a group member
- **gpasswd -A <user> <group>**
  - specifies a group administrator
- **gpasswd -d <user> <group>**
  - deletes a group member

# Using newgrp

- **newgrp <group>**
  - Temporally changes primary group
  - Must be a member of target group, or provides the group password

# Using chage

- **chage <user>**
  - Changes aging information for a user
  - Common options:
    - **-l** : lists aging status
    - **-d** : changes last day
    - **-m** : changes minimum day
    - **-M** : changes maximum day
    - **-w** : changes warning day
    - **-I** : changes inactive day
    - **-E** : changes expire day

# Using chsh

- **chsh**
  - Allows a user to change the login shell
  - Common options:
    - **-l** : lists all available shells
    - **-s shell** : specifies a new shell

# Using finger

- **finger**
  - Displays information of the current login
- **finger <user>**
  - Displays information of a specific user

# Using id

- **id <user | group>**
  - Displays all IDs of a user or group
  - Common options:
    - **-u** : lists UID only
    - **-g** : lists GID only
    - **-un** : lists user name only
    - **-gn** : lists group name only

# Using groups

- **groups**
  - Displays all group names the current login belongs to
- **groups <user>**
  - Displays group names of a specific user