

# Assigning Groups on User Creation

**Spoken Tutorial Project**

<http://spoken-tutorial.org>

**National Mission on Education through ICT**

<http://sakshat.ac.in>

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# Learning Objectives

**We will learn about**



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We will learn about

- **Creating a user group**



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We will learn about

- Creating a user group
- `/etc/group` file



# Learning Objectives

We will learn about

- Creating a user group
- /etc/group file
- Assigning groups to users at the time of account creation



# System Requirements



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- **Ubuntu Linux 16.04 OS**



# Pre-requisites

- Please go through earlier Linux System Administration **tutorials** on **<http://spoken-tutorial.org/>**





# Pre-requisites

- Please go through earlier Linux System Administration **tutorials** on **<http://spoken-tutorial.org/>**
- You must have root access to your computer



# What is a group in Linux?



# What is a group in Linux?

- **Collection of users**



# What is a group in Linux?

- Collection of users
- **Example:**



# What is a group in Linux?

- Collection of users
- Example:
  - Departments:  
CSE, Electrical, etc.



# What is a group in Linux?

- **Collection of users**
- **Example:**
  - **Departments:**  
CSE, Electrical, etc.
  - **Clubs:**  
music club, sports club,  
literature club, etc.



# Two Types of Groups



# Two Types of Groups

- **Primary group**





# Two Types of Groups

- Primary group
- Supplementary group



# Primary Group

- Every user must belong to **one and only one** primary group



# Primary Group

- Every user must belong to **one and only one** primary group
- **Default group for the user when the user logs in**



# Primary Group

- Every user must belong to **one and only one** primary group
- Default group for the user when the user logs in
- **Example: Department for a student**



# Supplementary Group

- User can be a member of more than one group



# Supplementary Group

- User can be a member of more than one group
- Those groups are called supplementary groups



# Supplementary Group

- User can be a member of more than one group
- Those groups are called supplementary groups
- Assigned to the user, to provide him additional access to resources



# Example





# Example

- **User radha belongs to CSE department**



# Example

- **User radha belongs to CSE department**
- **Member of music club and sports club**



# Example

- **User radha belongs to CSE department**
- **Member of music club and sports club**
- **Primary group - CSE**



# Example

- **User radha belongs to CSE department**
- **Member of music club and sports club**
- **Primary group - CSE**
- **Supplementary groups - music club and sports club**



# addgroup -gid

- **Mention GID of your choice**



# addgroup -gid

- Mention GID of your choice
- Use **-gid** option along with the **addgroup** command



# addgroup -gid

- **Mention GID of your choice**
- **Use -gid option along with the addgroup command**
- **GIDs 0-999: Reserved for system users**



# addgroup -gid

- **Mention GID of your choice**
- **Use -gid option along with the addgroup command**
- **GIDs 0-999: Reserved for system users**
- **Always choose a number greater than or equal to 1000 as GID**





# /etc/group file

**groupname:password:GID:list of usernames**

- **First field: Name of the group**



# /etc/group file

**groupname:password:GID:list of usernames**

- **First field: Name of the group**
- **Second field: Encrypted password for the group**



# /etc/group file

groupname:password:GID:list of usernames

- First field: Name of the group
- Second field: Encrypted password for the group
- Third field: GID as a number



# /etc/group file(Cont.)

**groupname:password:GID:list of usernames**

- **Fourth field: list of users that belong to that group separated by commas**



# /etc/group file(Cont.)

**groupname:password:GID:list of usernames**

- **Fourth field: list of users that belong to that group separated by commas**
  - **This list Contains all users who have this group as a secondary group**



# /etc/group vs /etc/passwd

- /etc/passwd shows  
primary group ID for a user



# /etc/group vs /etc/passwd

- /etc/passwd **shows primary group ID for a user**
- /etc/group **file shows list of usernames who have the group as a supplementary group**



# id command output

**Command** `id username` **shows the details of:**

- **Primary group**
- **Supplementary group(s)**





# Summary

**We learnt about**

- **Creating primary group**
- **Assigning user to the primary group**
- **Assigning user to the supplementary group**



# Summary(Cont.)

## We learnt about

- `/etc/group` file
- **Assigning groups to users at the time of account creation**



# Assignment

## Create two groups:

- cultural
- literature



# Assignment(Cont.)

**Now create a user ajay with**

- **Home directory as** `/home/ajay_dir`
- **User id as** 1090
- **Primary group as** cultural
- **Supplementary group as**  
literature
- **Add comments as** "Native:  
Mumbai"



# Assignment(Cont.)

- Use command `id` to check user details
- Check the details of user `ajay` in `/etc/passwd` and `/etc/group` files



# About the Spoken Tutorial Project

- Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Forum for specific questions

- Do you have questions in THIS Spoken Tutorial?
- Please visit <http://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from our team will answer them





# Acknowledgements

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- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at:

<http://spoken-tutorial.org/NMEICT-Intro>



# Thank You

**Thanks for joining**  
**<http://spoken-tutorial.org>**

