Installation of Linux kernel packages

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

Mayuri Panchakshari

IIT Bombay
1 October 2019

- **Install the gcc compiler**

Learning Objective

- **Install the gcc compiler**
- **Install the kernel header files**

Learning Objective

- **Install the gcc compiler**
- **Install the kernel header files**
- **Check the installed kernel version**

Learning Objective

- Install the gcc compiler
- Install the kernel header files
- Check the installed kernel version
- Use Linux kernel commands

System Requirements

System Requirements

- **VirtualBox 5.2**

System Requirements

- **VirtualBox 5.2**
- **Ubuntu Linux 18.04 LTS Operating System**

System Requirements

- **VirtualBox 5.2**
- **Ubuntu Linux 18.04 LTS Operating System**
- **Linux kernel 5.0.0-31 generic**

Prerequisites

To follow this tutorial, you should be familiar with

Prerequisites

To follow this tutorial, you should be familiar with

- **C programming language**

Prerequisites

To follow this tutorial, you should be familiar with

- **C programming language**
- **Basics of Linux kernel**

Prerequisites

To follow this tutorial, you should be familiar with

- **C programming language**
- **Basics of Linux kernel**

Prerequisites

To follow this tutorial, you should be familiar with

- **C programming language**
- **Basics of Linux kernel**

If not, then go through the C/C++ and Linux spoken tutorials on https://spoken-tutorial.org

Virtual box Installation

- Go through the **Ubuntu Linux on VirtualBox** series on **https://spoken-tutorial.org**

Virtual box Installation

- Go through the **Ubuntu Linux on VirtualBox** series on **https://spoken-tutorial.org**

- Do the VirtualBox installation as per your system OS

What is Linux Kernel?

What is Linux Kernel?

- **The kernel is the main component of a Linux operating system**

What is Linux Kernel?

- **The kernel is the main component of a Linux operating system**
- **It bridges the hardware with the main programs that run on a computer**

Kernel Modules

Kernel Modules

- **It is a program that acts as translators between devices and the Linux kernel**

- **It is a program that acts as translators between devices and the Linux kernel**
- **Kernel modules need to be compiled with gcc options to make them work**

Kernel Modules

Kernel Modules

- **gcc contains the C compiler used to compile the Linux kernel**

Summary

Summary

- **Install the gcc compiler**
- **Install the kernel header files**
- **Check the installed kernel version**
- **Use Linux kernel commands**

1. **Type the below commands and see the output:**

   $>$ **ls -l /dev/tty2**

   $>$ **ls -l /dev/sda2**

- Watch the video available at
  https://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

The Spoken Tutorial Project Team

- **Conducts workshops using spoken tutorials**

- **Gives certificates on passing online tests**

- **For more details, please write to contact@spoken-tutorial.org**

Forum questions

- Questions in THIS Spoken Tutorial?
- Visit

  https://forums.spoken-tutorial.org/
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer

  You will have to register to ask questions

Forum questions

- **The Spoken Tutorial forum is for specific questions on this tutorial**
- **Please do not post unrelated and general questions on them**
- **This will help reduce the clutter**
- **With less clutter, we can use these discussions as instructional material**

Forum to specific questions

- Questions not related to the Spoken Tutorial?
- Do you have general / technical questions on the Embedded Linux Device Driver?
- Please visit the FOSSEE Forum
  https://forums.fossee.in/
- Choose the Software and post your question

Acknowledgements

Spoken Tutorial project is supported by

- **National Mission on Education through ICT (NMEICT)**
- **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching**

Initiatives of MHRD, Government of India

THANK YOU!

For more Information, visit our website
https://fossee.in/