

ME424 Modern Control and Estimation

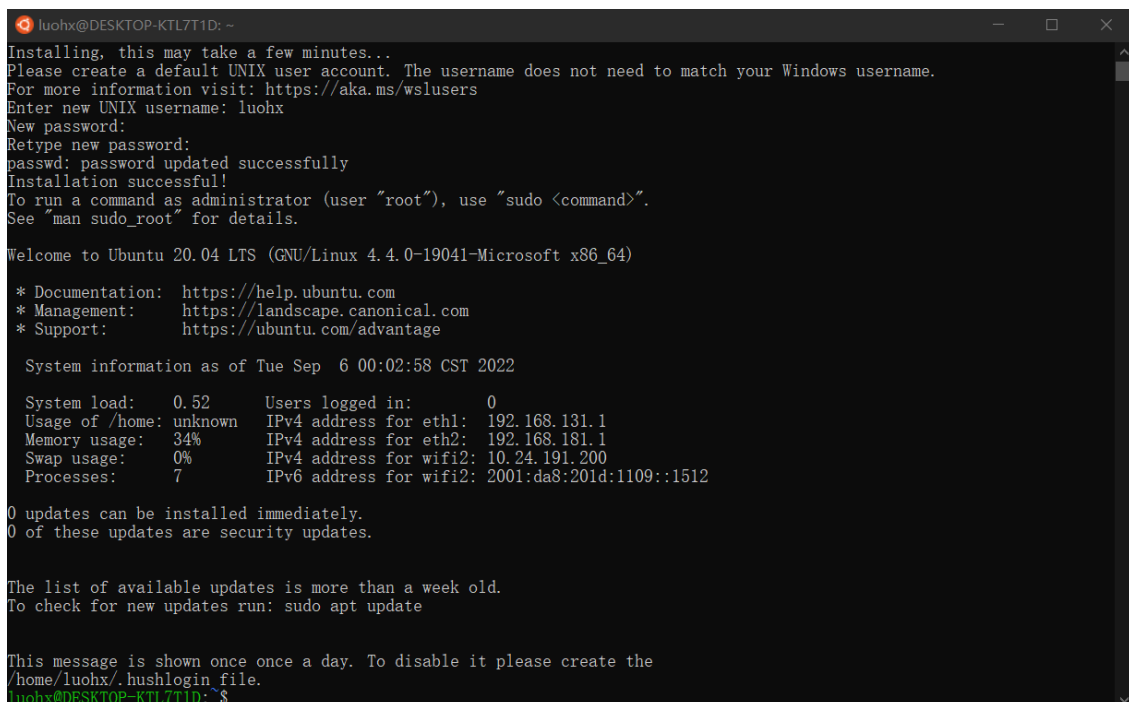
Tutorial #2 Install Linux on Windows with WSL

WSL enables you to use Linux tools, like Bash or Grep, completely integrated with Windows tools, like PowerShell or Visual Studio Code, with no need to dual-boot. Microsoft officially gave a [detailed tutorial](#) . The latest installation method is very easy.

1. **Open Windows PowerShell as administrator.** Use the commands below to download WSL and install the specified Linux distribution. For this course, we specify installing Ubuntu 20.04 LTS.

```
wsl --install -d Ubuntu-20.04
```

2. If you haven't installed WSL before, this command will also install it on your computer. After the above command is executed, please **restart**.
3. You need to create a user account and password for the newly installed Linux distribution. Then, you will enter the following interface. This is the Linux system environment in WSL.



```
luohx@DESKTOP-KTL7T1D: ~
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: luohx
New password:
Retype new password:
passwd: password updated successfully
Installation successful!
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Welcome to Ubuntu 20.04 LTS (GNU/Linux 4.4.0-19041-Microsoft x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Tue Sep  6 00:02:58 CST 2022

System load:  0.52      Users logged in:  0
Usage of /home: unknown  IPv4 address for eth1: 192.168.131.1
Memory usage: 34%      IPv4 address for eth2: 192.168.181.1
Swap usage:   0%        IPv4 address for wifi2: 10.24.191.200
Processes:   7           IPv6 address for wifi2: 2001:da8:201d:1109::1512

0 updates can be installed immediately.
0 of these updates are security updates.

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

This message is shown once once a day. To disable it please create the
/home/luohx/.hushlogin file.
luohx@DESKTOP-KTL7T1D: ~$
```

4. Enter the following command in the terminal to update the software source.

```
sudo apt update
```

Several suggestions for improving efficiency:

1. [Install Windows Terminal](#): Using Windows Terminal supports as many command lines as you would like to install and enables you to open them in multiple tabs or window panes and quickly switch between multiple Linux distributions or other command lines (PowerShell, Command Prompt, PowerShell, Azure CLI, etc).
2. [Install Visual Studio Code Remote - WSL extension](#): This extension lets you use the WSL as your full-time development environment right from VS Code. You can develop in a Linux-

based environment, use Linux-specific toolchain and utilities, and run and debug your Linux-based applications all from the comfort of Windows. [Details here](#).