

OS 24S Tutorial 2

Access UIC OS bcrab server (Optional)

Outline

- Access UIC OS bcrab server
- Change your bcrab password
- Transfer files between local and remote using FileZilla
- Edit program using vim
- Use Linux Commands to compile, link and run the program

UIC OS bcrab server

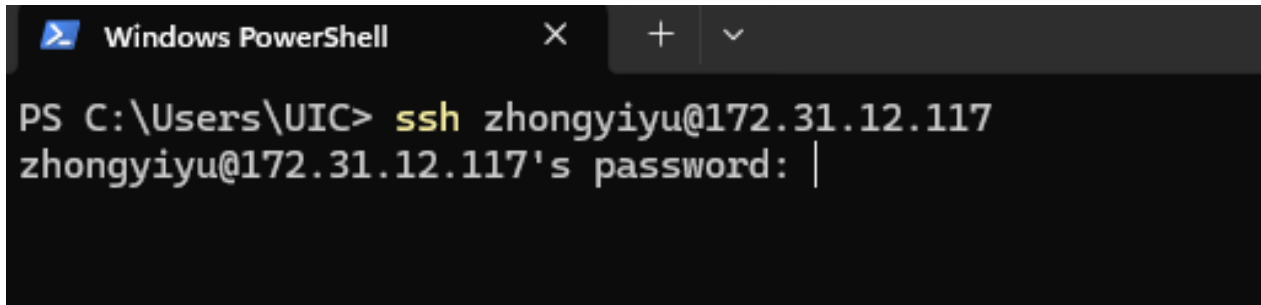
- You can choose to finish your assignments and projects on you own computer using VirtualBox, or you can finish them on the UIC OS bcrab server (optional).

Access UIC OS bcrab server

- access bcrab through intranet
- access bcrab through computer in CST Lab (students can install Ubuntu in the computers there)
- access bcrab in own computer (install the Virtualbox and Ubuntu in your own computer according to guideline in iSpace)

Access bcrab

- access Linux through intranet
 - in campus: cmd, shell
 - In your dormitory or out of campus: need to link to uic vpn first
<https://itsc.uic.edu.cn/UIC%20Campus%20VPN%20Service%20Guideline.pdf>
 - **Account**: Student ID start with letter (i.e. t33xxxxxxx)
 - **Password**: 123456 (Please change your password ASAP, using the `passwd` command)
 - **Usage**: “ssh [t33xxxxxxxxx@172.31.12.117](#)”

A screenshot of a Windows PowerShell terminal window. The title bar shows 'Windows PowerShell' with standard window controls. The terminal content shows the command 'ssh zhongyiyu@172.31.12.117' being entered at the prompt 'PS C:\Users\UIC>'. The next line shows 'zhongyiyu@172.31.12.117's password:' followed by a cursor, indicating the password prompt.

Access bcrab

- If successful, you'll see:

```
PS C:\Users\UIC> ssh zhongyiyu@172.31.12.117
zhongyiyu@172.31.12.117's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-131-generic x86_64)

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

System information as of Thu Feb 13 07:27:46 UTC 2025

System load:  0.00927734375   Users logged in:      0
Usage of /:   40.6% of 96.73GB IPv4 address for br-34062cd50bd8: 172.18.0.1
Memory usage: 2%             IPv4 address for br-d2e6c3176331: 172.19.0.1
Swap usage:   0%             IPv4 address for docker0:      172.17.0.1
Processes:    185            IPv4 address for ens3:      10.20.3.95

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

113 updates can be applied immediately.
1 of these updates is a standard security update.
To see these additional updates run: apt list --upgradable

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

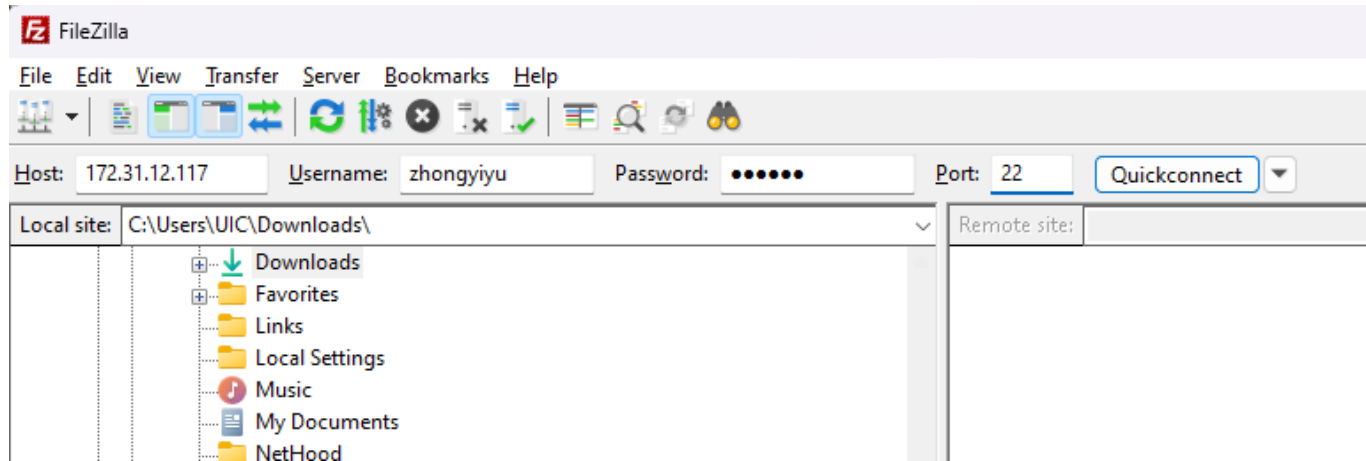
6 updates could not be installed automatically. For more details,
see /var/log/unattended-upgrades/unattended-upgrades.log

*** System restart required ***
Last login: Thu Feb 13 07:16:38 2025 from 172.16.162.37
zhongyiyu@OS-CST:~$ |
```

Change your bcrab password

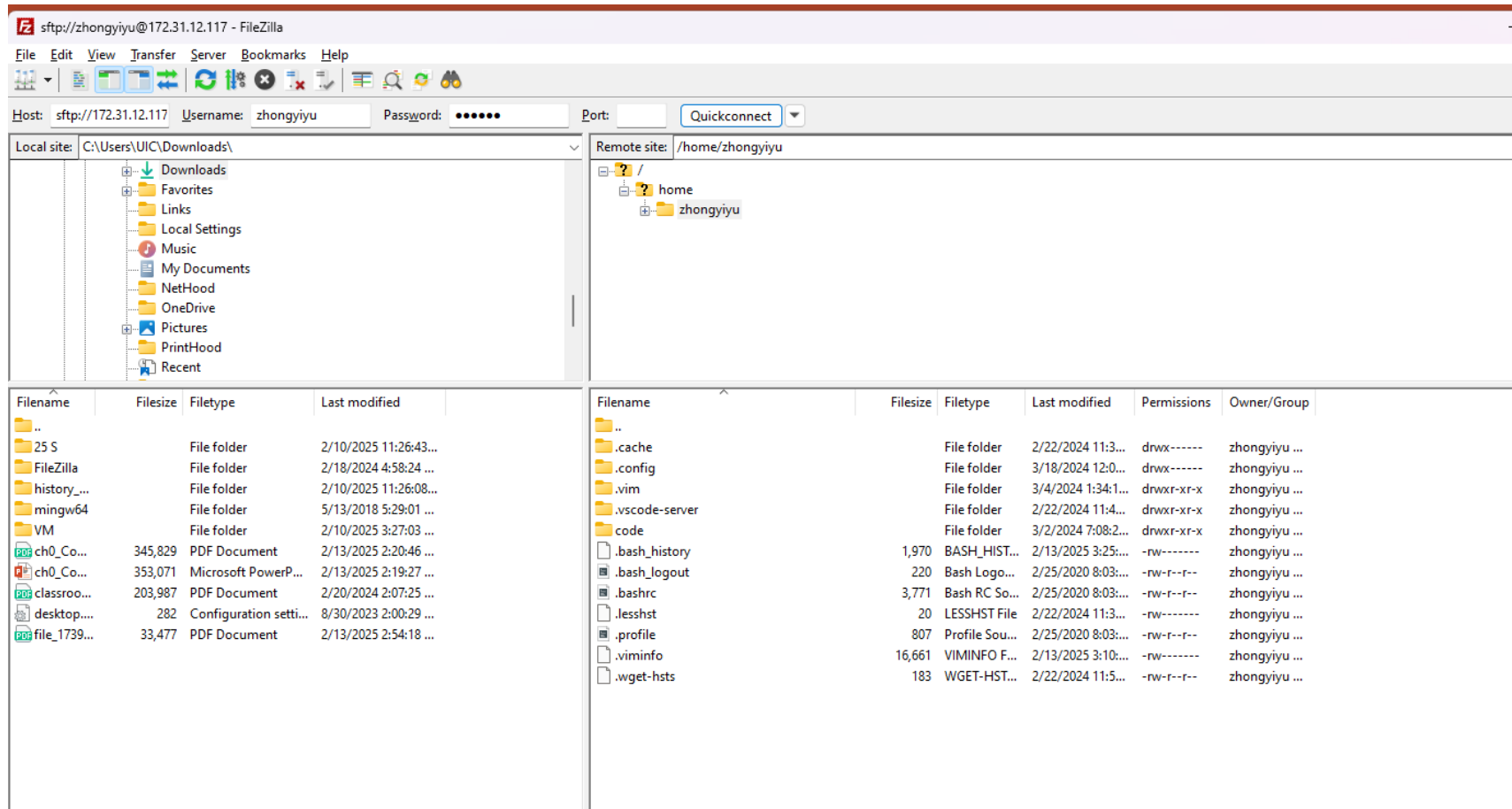
```
zhongyiyu@OS-CST:~$ passwd  
Changing password for zhongyiyu.  
Current password:  
New password:  
Retype new password:  
passwd: password updated successfully
```

Transfer files between local and remote using FileZilla



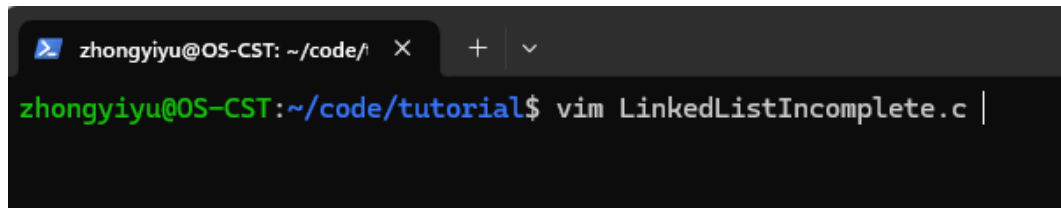
Transfer files between local and remote using FileZilla

- If successful, you'll see:



Edit program using vim

- Enter `vim` in Terminal, then try the commands in the following instruction:
- <https://www.runoob.com/linux/linux-vim.html>



```
zhongyiyu@OS-CST: ~/code/
zhongyiyu@OS-CST:~/code/tutorial$ vim LinkedListIncomplete.c |
```



```
* File      : main.c
*
* Purpose   : Console mode (command line) program.
*
* History   : Date      Reason
*            00/00/00    Created
*
*****/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
typedef struct record{
    char name[20];
    int score;
    struct record *next;
} Node;
Node* createList(char fileName[]);
Node* insertARecord(Node *pHead);
Node* deleteARecord(Node *pHead);
Node* saveLinkedList(Node* pHead, char fileName[20]);
void printLinkedList(Node* pHead);

Node* createList(char fileName[])
{
    FILE *fp;
```

Use Linux Commands to compile, link and run the program

- Enter ``vim`` to edit the C program
- Save the program and exit vim editor (command `:wq`)
- Enter the location of the C program (for example, `hello.c`)
- Compile the program: `gcc hello.c -o hello`
- Enter `ls` to see whether the executable file `hello` exists
- If `hello` exists, enter `./hello` to run the program