SSH Monitor
Web development final project

atmatto

SSH Setup

Install the SSH server

```
sudo apt install openssh-server
```

Restart the system

```
shutdown -r now
```

Check if the server is properly installed and activated

```
systemctl is-active ssh
ssh localhost
```

Connecting to the VM

Check the IP address of the VM

```
$ nmcli
enp1s0: connected to Wired connection 1
        ...
        inet4 192.168.122.39/24
        ...
```

Connect to the VM from another system

```
ssh user@vm.ip.address
```

SSH Configuration
Setting the port number

Edit the configuration

```
sudo nano /lib/systemd/system/ssh.socket
...
[Socket]
ListenStream=2244
...
```

Reload the configuration

```
sudo systemctl daemon-reload
sudo systemctl restart ssh.socket
```

Connect

```
ssh user@vm.ip.address -p 2244
```

SSH Configuration

To set a message to be displayed before the login prompt:

```
sudo nano /etc/ssh/sshd_config
```

Uncomment and set the path

```
...
Banner /etc/ssh-banner
...
```

Set the message
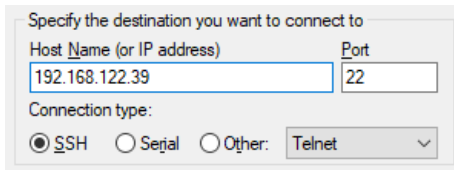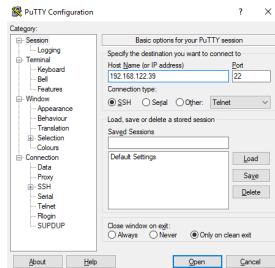
```
sudo nano /etc/ssh-banner
```

```
~ % ssh user@192.168.122.39 -p 2266
Welcome to my virtual machine
user@192.168.122.39's password: █
```
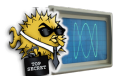
PuTTY

Check the IP address of the VM

```
$ nmcli
enp1s0: connected to Wired connection 1
        ...
        inet4 192.168.122.39/24
        ...
```


Connect from Windows to the VM using PuTTY

- A web app served on the network
- Displaying output of Linux commands in a graphical way, letting the user analyse the configuration

  service status and log, configuration, port number, connected users, network devices and IP addresses, key fingerprints

- Downloading manuals from the server

Web app
Front end

SSH Monitor

Server status | Network | Configuration | Security | Manuals

SSH Server status

Current status	Service configuration	Port number
active	socket-activated	2266

Active connections

No users connected

Log

```
sty 25 18:10:02 systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
sty 25 18:10:02 sshd[2282]: Server listening on :: port 2266.
sty 25 18:10:02 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
sty 25 18:10:05 sshd[2283]: Connection closed by authenticating user atmatto 192.168.122.1 port 55012 [preauth]
sty 25 18:13:49 sshd[2289]: Invalid user from 192.168.122.1 port 51624
sty 25 18:26:36 sshd[8971]: Invalid user from 192.168.122.1 port 56910
sty 25 18:26:36 sshd[8971]: Connection closed by invalid user user 192.168.122.1 port 56910 [preauth]
```

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Web app
Front end

- Multiple pages with a navigation bar

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks

```
sty 24 14:34:16 systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
sty 24 14:34:16 sshd[3328]: Server listening on :: port 2266.
sty 24 14:34:16 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
sty 24 14:34:18 sshd[3329]: Accepted password for atmatto from 192.168.122.1 port 60156 ssh2
sty 24 14:34:18 sshd[3329]: pam_unix(sshd:session): session opened for user atmatto(uid=1000) by (uid=0)
sty 24 14:34:19 sshd[3329]: pam_env(sshd:session): deprecated reading of user environment enabled
```

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks
- Text decorations

SSH Server status

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks
- Text decorations
- Borders

ssh(8) manual page

sshd_config(5) manual page

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks
- Text decorations
- Borders
- Tables

DEVICE	TYPE	STATE	CONNECTION
wlan0	wifi	connected	ife_stud
lo	loopback	connected (externally)	lo
virbr0	bridge	connected (externally)	virbr0
vnet0	tun	connected (externally)	vnet0
/net/connman/iwd/0	wifi-p2p	disconnected	—
enp6s0f1	ethernet	unavailable	—

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks
- Text decorations
- Borders
- Tables
- Lists

- 172.17.200.107/20 (wlan0)
- 127.0.0.1/8 (lo)
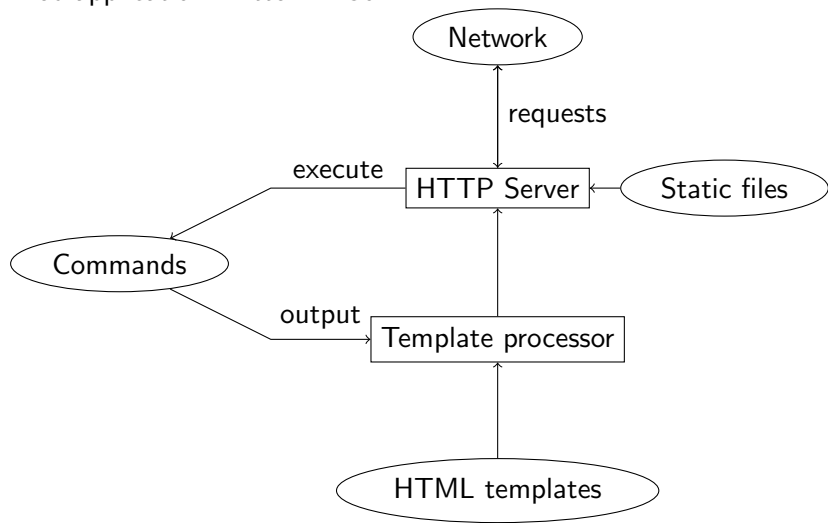- 192.168.122.1/24 (virbr0)

Web app
Front end

- Multiple pages with a navigation bar
- Code blocks
- Text decorations
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- Tables
- Lists
- Animations

Web application written in Go

Thank you for your attention