

Uni Software Defined Infrastructure Notes

Felix Pojtinger

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Introduction

Contributing

Contributing

These study materials are heavily based on [professor Goik's "Software Defined Infrastructure" lecture at HdM Stuttgart](#).

Found an error or have a suggestion? Please open an issue on GitHub (github.com/pojointfx/uni-sdi-notes):



Figure 1: QR code to source repository

If you like the study materials, a GitHub star is always appreciated :)

License

License



Figure 2: AGPL-3.0 license badge

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User

User

```
ssh root@138.68.70.72  
adduser pojntfx  
usermod -aG sudo pojntfx  
su pojntfx
```

SSH

SSH

```
sudo apt update
sudo apt install -y openssh-server
sudo systemctl enable --now ssh
mkdir -p ~/.ssh
chmod 700 ~/.ssh
curl 'https://github.com/poijntfx.keys' | tee -a ~/.ssh/authorized_keys
chmod 600 ~/.ssh/authorized_keys
exit
```

UFW

UFW

```
ssh pojntfx@138.68.70.72
sudo apt update
sudo apt install -y ufw
sudo systemctl enable --now ufw
sudo ufw default deny incoming
sudo ufw default allow outgoing
sudo ufw allow OpenSSH
sudo ufw enable
```

APT

APT

```
sudo apt update
sudo apt install -y unattended-upgrades

sudo vi /etc/apt/apt.conf.d/50unattended-upgrades # Now re
Unattended-Upgrade::Origins-Pattern {
    "origin=*";
}
Unattended-Upgrade::Automatic-Reboot "true";
Unattended-Upgrade::Automatic-Reboot-Time "02:00";

sudo dpkg-reconfigure unattended-upgrades # Answer with yes
sudo systemctl enable --now unattended-upgrades
sudo unattended-upgrades --debug # Test the configuration;
sudo reboot # If required
```

Cockpit

Cockpit

```
echo 'deb http://deb.debian.org/debian bullseye-backports n
sudo apt update
sudo apt install -t bullseye-backports -y cockpit
```

Caddy

Caddy

```
curl -L 'https://dl.cloudsmith.io/public/caddy/stable/gpg.l
curl -L 'https://dl.cloudsmith.io/public/caddy/stable/debia
sudo apt update
sudo apt install -y caddy
sudo tee /etc/caddy/Caddyfile <<EOT
{
    email felix@pojtinger.com
}

cockpit.felixs-sdi1.alphahorizon.io {
    reverse_proxy https://localhost:9090 {
        transport http {
            tls_insecure_skip_verify
        }
    }
}
EOT
sudo systemctl enable --now caddy
```

DNS

Manager

Manager

```
sudo apt update
sudo apt install -y bind9 bind9utils
sudo systemctl enable --now named
```

```
sudo vi /etc/bind/named.conf.options # Now add the following
version "not currently available";
recursion no;
querylog yes;
allow-transfer { none; };
```

```
sudo tee -a /etc/bind/named.conf.local <<EOT
zone "example.pojtinger" {
    type master;
    file "/etc/bind/db.example.pojtinger";
    allow-query { any; };
    allow-transfer { 159.223.25.154; };
};
EOT
```

Worker

Worker

```
sudo apt update
sudo apt install -y bind9 bind9utils
sudo systemctl enable --now named
```

```
sudo vi /etc/bind/named.conf.options # Now add the following
version "not currently available";
recursion no;
querylog yes;
allow-transfer { none; };
```

```
sudo tee -a /etc/bind/named.conf.local <<EOT
zone "example.pojtinger" {
    type slave;
    file "db.example.pojtinger";
    allow-query { any; };
    masters { 138.68.70.72; };
};
EOT
```