

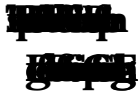
# ISP SERVER CONFIGURATION ON LINUX AND MIKROTIK PLATFORM

SUBMITTED

BY

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ID: 152-15-6213



Ms. Samia Nawshin



## APPROVAL

I hereby approve the “ISP Server Configuration on Linux and Mikrotik Platform”, by \_\_\_\_\_, ID# \_\_\_\_\_, 5 B \_\_\_\_\_

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# ABSTRACT

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f i n e h a l t v      i s t a b o g t a  
i s t a b o g t a  
E H S      i s t a b o g t a  
b   g n   p f o b t i n      - E H S      e M  
S   N   S      M      E      E      f l a v  
E      .   f l a s t i      t a b a d      s y  
f i n      j a n      p e      i s t a b o g t a      j a n      j a n  
b   a   j a n      a   g      n      E  
E H S  
P , H      i n      f l a s t i n  
p f o b t i n      t o      p f o b t i n  
E      f l a      i s t a b o g t a      i s t a b o g t a  
p      a      .      i n      i n      i s t a b o g t a  
i s t a b o g t a  
i s t a b o g t a  
i s t a b o g t a      - i n      - i n      i n

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## 1.2 Motivation

1.2.1 Introduction

The purpose of this report is to investigate the impact of the current economic environment on the financial performance of the company. The report will focus on the company's revenue, expenses, and profit margins. The data will be analyzed using statistical methods to determine the relationship between the economic environment and the company's performance. The findings will be used to provide recommendations for the company's management to improve its financial performance.

## 1.3 Internship Objectives

1.3.1 Introduction

The main objective of this internship is to gain practical experience in the field of business management. The objectives of the internship are to understand the company's operations, to learn about the company's financial performance, and to develop professional skills. The internship will be conducted over a period of six months. The findings of the internship will be used to provide recommendations for the company's management to improve its financial performance.





➤ IT Services

- **IT**
- **IT**
- **IT**
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- **IT**

➤ Professional Training Services

- **IT**
- **IT**
- **IT**
- **IT**
- **IT**
- **IT**
- **IT**
- **IT**

## 2.3 Target Groups

**IT**

**IT**

**IT**

**IT**

**IT**

**IT**

**IT**

**IT**

## 2.4 SWOT Analysis

Strengths

Weaknesses

Opportunities

Threats

Strengths

Weaknesses

Opportunities

Threats

### Strengths:

Difficult

to

✓ ~~MC~~

✓ ~~SC~~

✓ ~~MC~~

✓ ~~SC~~

### Weaknesses:

Difficult

to

✓ ~~MC~~

in

✓ ~~MC~~

✓ ~~SC~~

✓ ~~SC~~

### Opportunities:

✓ ~~MC~~

✓ ~~SC~~

✓ ~~MC~~

✓ ~~MC~~

✓ ~~MC~~

✓ ~~MC~~

to

➤ Threats:

- ✓ **High** **Abuse**
- High**
- ✓ **High**
- High**

## 2.5 Organizational Structure





# CHAPTER 3

## Tasks, Projects and Activities

### 3.1 Daily Task and Activities

➤ **M - 1 5 800000**

**18**

- **1800**
- **1800**
- **1800**
- **1800**
- **18**

➤ **M - 218000**

**1800**

**1800**

- **1800**
- **1800**
- **1800**
- **1800**
- **1800**
- **1800**

➤ **M 3180000**

**1800**

- **1800**
- **1800**
- **1800**
- **1800**

➤ **M 3180000**

**a**

**1800**

- **1800** **1800**
- **1800** **1800**
- **1800** **1800**

- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk

### 3.2 Events and Activities

- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk

### 3.3 Project Task and Activities

Centos Install

- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk
- **MC** -Tk



```

cat /etc/passwd | grep root
cat /etc/passwd | grep root | grep bash
cat /etc/passwd | grep root | grep bash | grep /bin/bash
cat /etc/passwd | grep root | grep bash | grep /bin/bash | grep root

```

➤ 3.4.4 User Create and Password Management

```

adduser
adduser --shell /bin/bash
adduser --shell /bin/bash --skeleton /etc/skel
adduser --shell /bin/bash --skeleton /etc/skel --gecos "John Doe"
adduser --shell /bin/bash --skeleton /etc/skel --gecos "John Doe" --disabled-password
adduser --shell /bin/bash --skeleton /etc/skel --gecos "John Doe" --disabled-password --expiry 30
adduser --shell /bin/bash --skeleton /etc/skel --gecos "John Doe" --disabled-password --expiry 30 --expiredate 2020-12-31

```

➤ 3.4.5 To Know About the Logged In User

```

w
tv
lin

```

➤ 3.4.6 To Copy or Move a File

```

cp /etc/passwd /tmp/passwd
cp /etc/passwd /tmp/passwd
cp /etc/passwd /tmp/passwd
cp /etc/passwd /tmp/passwd

```

➤ 3.4.7 Vi Editor

```

vi /etc/passwd
vi /etc/passwd
vi /etc/passwd
vi /etc/passwd
vi /etc/passwd
vi /etc/passwd

```

```

dnf install
dnf update
dnf remove
dnf erase
dnf reinstall
dnf downgrade

```

```

dnf install --setopt=install_weak_dependencies=False
dnf install --setopt=install_weak_dependencies=False
dnf install --setopt=install_weak_dependencies=False

```

➤ 3.4.8 Install/Update/Remove Packages iCentos

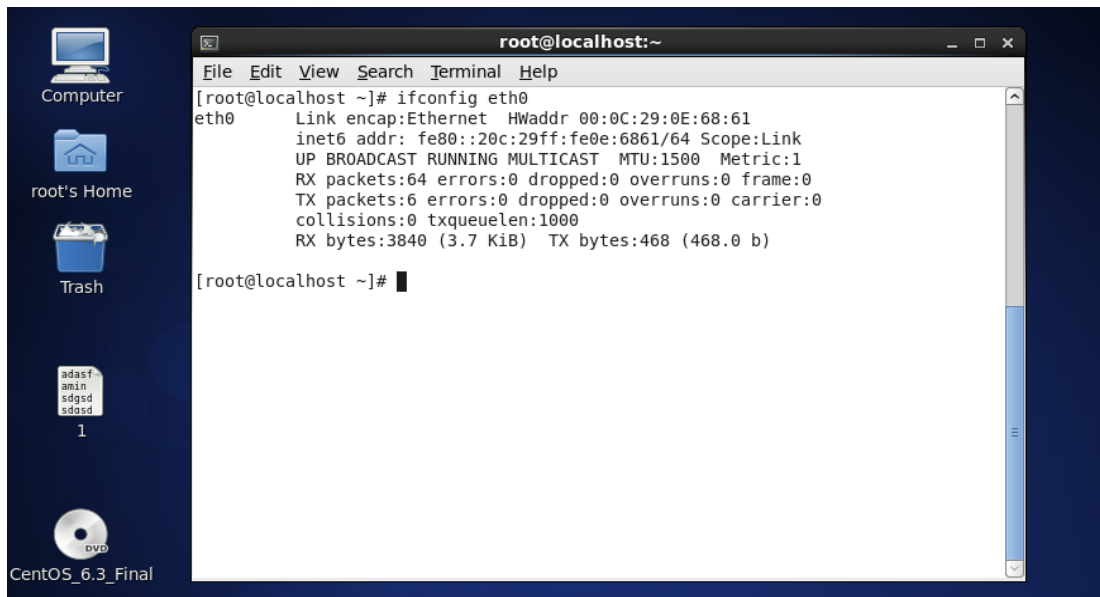
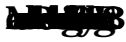
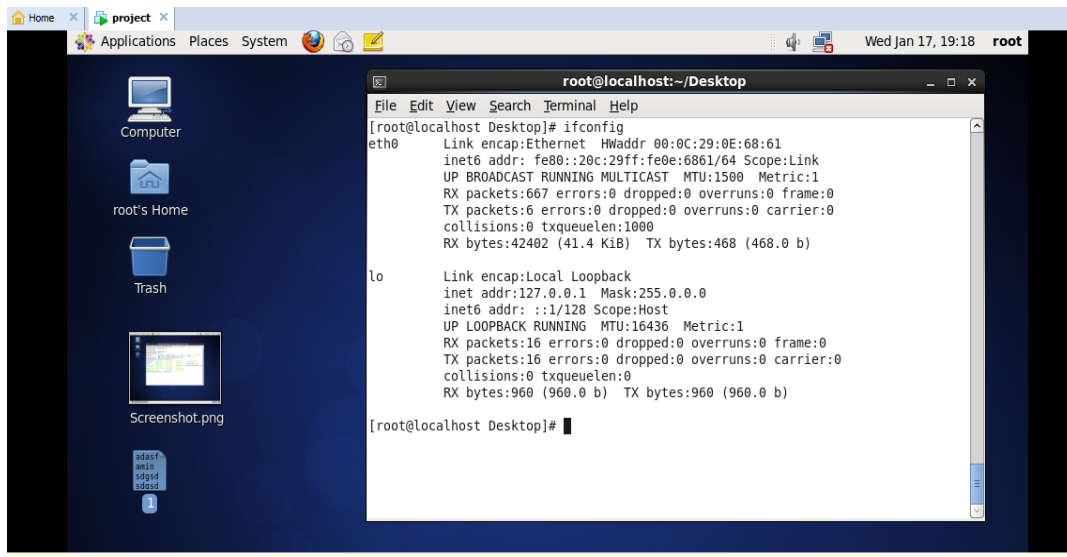
- `dnf install vim`
- `dnf update vim`
- `dnf remove vim`
- `dnf erase vim`
- `dnf reinstall vim`
- `dnf downgrade vim`
- `dnf install vim --setopt=install_weak_dependencies=False`
- `dnf update vim --setopt=install_weak_dependencies=False`
- `dnf remove vim --setopt=install_weak_dependencies=False`
- `dnf erase vim --setopt=install_weak_dependencies=False`
- `dnf reinstall vim --setopt=install_weak_dependencies=False`
- `dnf downgrade vim --setopt=install_weak_dependencies=False`
- `dnf install vim --setopt=install_weak_dependencies=False`

➤ 3.4.9 How to Add Change Delete and Display Internet protocol Address on Centos

```

ip netns exec

```





### 3.4.10 Server Configuration

1. Install the required packages on the server.

```
sudo yum install httpd
```

- Web Server

2. Configure the web server to listen on port 80.

```
vim /etc/httpd/conf/httpd.conf
```

3. Restart the web server.

```
sudo systemctl restart httpd
```

- Centos 6.3 Web Server Configuration Requirements

1. The server must have a valid IP address.

2. The server must have a valid domain name.

3. The server must have a valid SSL certificate.

4. The server must have a valid DNS record.

5. The server must have a valid firewall rule.

6. The server must have a valid SELinux policy.





Ev iB in

```
-----  
"/etc/hosts" 4L, 196C written  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# hostname nfs.aminul.com  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# ping aminul  
PING nfs.aminul.com (192.168.50.200) 56(84) bytes of data:  
64 bytes from nfs.aminul.com (192.168.50.200): icmp_seq=1 ttl=64 time=0.120 ms  
64 bytes from nfs.aminul.com (192.168.50.200): icmp_seq=2 ttl=64 time=0.111 ms  
64 bytes from nfs.aminul.com (192.168.50.200): icmp_seq=3 ttl=64 time=0.044 ms  
^C  
--- nfs.aminul.com ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 2079ms  
rtt min/avg/max/mdev = 0.044/0.094/0.120/0.037 ms  
[root@localhost ~]# vi /etc/sysconfig/selinux _
```

iB in

## ➤ STEP: 2

iB in

iB in

\* y

iB in

Ev iB in

iB in

\* y

```
nfs login: root  
Password:  
Last login: Wed Mar 28 18:23:36 on tty1  
[root@nfs ~]#  
[root@nfs ~]#  
[root@nfs ~]# hostname  
nfs.aminul.com  
[root@nfs ~]#  
[root@nfs ~]#  
[root@nfs ~]# yum install nfs* -y  
Loaded plugins: fastestmirror  
base | 3.7 kB | 00:00  
base/primary_db | 4.7 MB | 00:04  
extras | 3.4 kB | 00:00  
extras/primary_db | 30 kB | 00:00  
updates | 3.4 kB | 00:00  
updates/primary_db | 7.0 MB | 00:06  
Setting up Install Process  
Resolving Dependencies  
--> Running transaction check  
--> Package nfs-utils.x86_64 1:1.2.3-75.el6_9 will be installed  
--> Processing Dependency: libtirpc >= 0.2.1-11 for package: 1:nfs-utils-1.2.3-75.el6_9.x86_64  
-
```

iB in

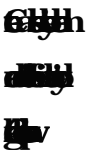
➤ STEP: 3



```
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]# /etc/init.d/rpc
rpcbind rpcgssd rpcidmapd rpcsvcgssd
[root@nfs ~]# /etc/init.d/rpcbind start
Starting rpcbind: [ OK ]
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]# service nfs start
Starting NFS services: [ OK ]
Starting NFS mountd: [ OK ]
Starting NFS daemon: [ OK ]
Starting RPC idmapd: [ OK ]
[root@nfs ~]#
[root@nfs ~]# chkconfig nfs on
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]# service nfs status
rpc.svcgssd is stopped
rpc.mountd (pid 1348) is running...
nfsd (pid 1363 1362 1361 1360 1359 1358 1357 1356) is running...
[root@nfs ~]# _
```



➤ STEP: 4



nfs share ~~initial~~



```
[root@nfs ~]#
[root@nfs ~]# mkdir /nfsshare
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]# cat /etc/passwd | grep nfs
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
[root@nfs ~]# ls -ld /nfsshare/
drwxr-xr-x 2 root root 4096 Mar 28 18:31 /nfsshare/
[root@nfs ~]# chown -R nfsnobody:nfsnobody /nfsshare/
[root@nfs ~]#
[root@nfs ~]#
[root@nfs ~]# ls -ld /nfsshare/
drwxr-xr-x 2 nfsnobody nfsnobody 4096 Mar 28 18:31 /nfsshare/
[root@nfs ~]# _
```



➤ STEP: 5

~~root@nfs ~#~~

~~ls~~

~~df -h~~

~~lv~~ ~~root@nfs ~#~~

```
root@nfs ~# exportfs -v /nfsshare 192.168.50.0/24(rw, sync)
-- INSERT --
```

~~root@nfs ~#~~

~~lv~~ ~~root@nfs ~#~~

```
root@nfs ~# exp
expand export exportfs expr
root@nfs ~# exportfs -vr
exporting 192.168.50.0/24:/nfsshare
root@nfs ~#
root@nfs ~#
root@nfs ~# showmount -e
Export list for nfs.aminul.com:
/nfsshare 192.168.50.0/24
root@nfs ~#
root@nfs ~#
root@nfs ~#
root@nfs ~# service nfs restart
Shutting down NFS daemon: [ OK ]
Shutting down NFS mountd: [ OK ]
Shutting down NFS services: [ OK ]
Shutting down RPC idmapd: [ OK ]
Starting NFS services: [ OK ]
Starting NFS mountd: [ OK ]
Starting NFS daemon: [ OK ]
Starting RPC idmapd: [ OK ]
root@nfs ~#
root@nfs ~#
root@nfs ~#
root@nfs ~#
```

~~root@nfs ~#~~



➤ STEP: 2

  \* y  
Start NFS service



```
...
...
"/etc/resolv.conf" 2L, 38C written
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# service network restart
Shutting down interface eth0: [ OK ]
Shutting down loopback interface: [ OK ]
Bringing up loopback interface: [ OK ]
Bringing up interface eth0: [ OK ]
[root@localhost ~]# ping google.com
PING google.com (172.217.194.113) 56(84) bytes of data:
64 bytes from 172.217.194.113: icmp_seq=1 ttl=44 time=54.1 ms
64 bytes from 172.217.194.113: icmp_seq=2 ttl=44 time=68.9 ms
64 bytes from 172.217.194.113: icmp_seq=3 ttl=44 time=53.6 ms
^C
-- google.com ping statistics --
3 packets transmitted, 3 received, 0% packet loss, time 2125ms
rtt min/avg/max/mdev = 53.642/58.988/68.948/7.184 ms
[root@localhost ~]# vi /etc/hosts_
```



➤ STEP: 3

'vi/etc/fstab' 



```
CentOS release 6.4 (Final)
Kernel 2.6.32-358.el6.x86_64 on an x86_64

nfsclient login: root
Password:
Last login: Wed Mar 28 18:37:45 on tty1
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]# mkdir /nfsserver

[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]# vi /etc/fstab _
```





```

UUID=47ed2368-a6e4-4fe5-a282-189a23514dc8 /home      ext4      default
ts 1 2
UUID=615faf99-e14a-43c8-98fc-5d8c51f738e6 /var        ext4      default
ts 1 2
UUID=ea7113a9-57c4-4df4-b9b8-c54cddfec607 swap        swap      default
ts 0 0
tmpfs /dev/shm tmpfs defaults 0 0
devpts /dev/pts devpts gid=5,mode=620 0 0
sysfs /sys sysfs defaults 0 0
proc /proc proc defaults 0 0
192.168.58.200:/nfsshare /nfserver  nfs      defaults 0 0

"/etc/fstab" 18L, 1869C written
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]# mount -a
mount: wrong fs type, bad option, bad superblock on 192.168.58.200:/nfsshare,
missing codepage or helper program, or other error
(for several filesystems (e.g. nfs, cifs) you might
need a /sbin/mount.<type> helper program)
In some cases useful info is found in syslog - try
dmesg | tail or so

[root@nfsclient ~]# _

```



➤ STEP: 4

~~keyutils-libs.x86\_64~~

~~keyutils-libs.x86\_64~~

> fl h k ~~keyutils-libs.x86\_64~~

~~keyutils-libs.x86\_64~~

~~keyutils-libs.x86\_64~~

~~keyutils-libs.x86\_64~~

a

```

keyutils-libs.x86_64 0:1.4-5.e16

Complete!
[root@nfsclient ~]# mount -a
[root@nfsclient ~]#
[root@nfsclient ~]#
[root@nfsclient ~]# df -Th
Filesystem      Type      Size      Used Avail Use% Mounted on
/dev/sda2        ext4      20G       703M   18G   4% /
tmpfs            tmpfs     1.2G       0 1.2G   0% /dev/shm
/dev/sda1        ext4      194M      26M  159M  14% /boot
/dev/sda3        ext4      20G      172M   19G   1% /home
/dev/sda6        ext4      157G     266M  149G   1% /var
192.168.58.200:/nfsshare
nfs           20G       700M   18G   5% /nfserver
[root@nfsclient ~]# df -h
Filesystem      Size      Used Avail Use% Mounted on
/dev/sda2        20G       703M   18G   4% /
tmpfs            1.2G       0 1.2G   0% /dev/shm
/dev/sda1        194M      26M  159M  14% /boot
/dev/sda3        20G      172M   19G   1% /home
/dev/sda6        157G     266M  149G   1% /var
192.168.58.200:/nfsshare
20G       700M   18G   5% /nfserver
[root@nfsclient ~]# cd /nfserver/_

```



iv ~~10/10/10~~

```
(root@nfsclient nfsserver)#  
(root@nfsclient nfsserver)#  
(root@nfsclient nfsserver)#  
(root@nfsclient nfsserver)# ls  
(root@nfsclient nfsserver)# ls  
26168664_1551315484960586_4517245288662109897_n.jpg  
(root@nfsclient nfsserver)# _
```

~~10/10/10~~

➤ STEP: Final

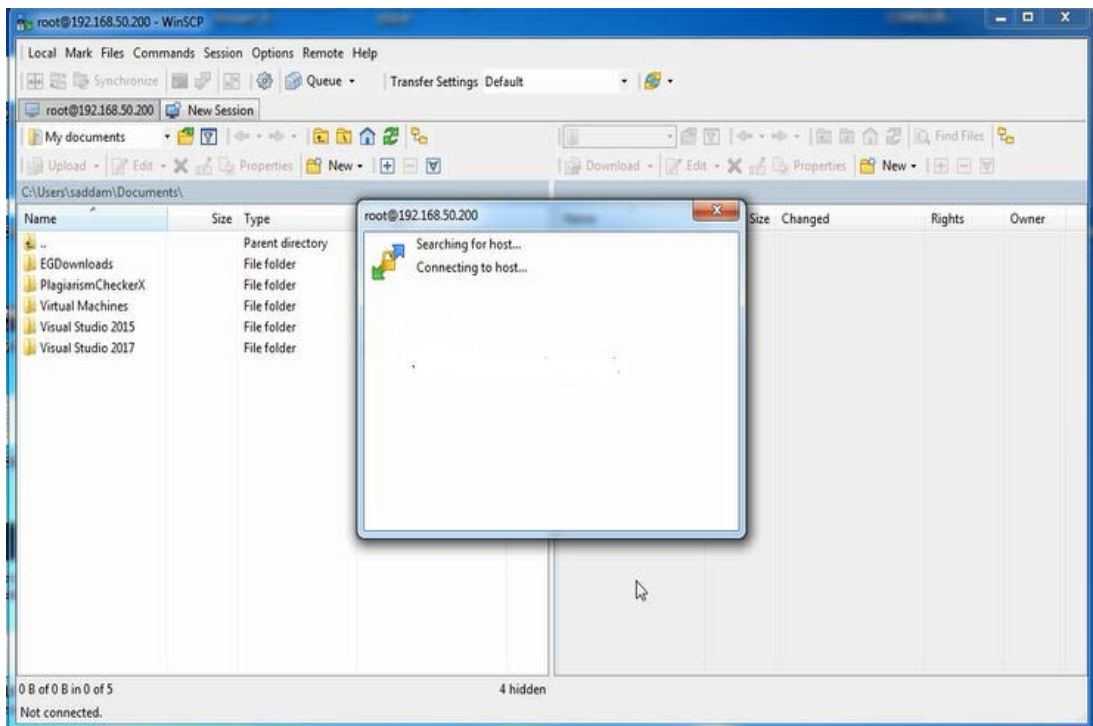
~~10/10/10~~

iv ~~10/10/10~~

~~10/10/10~~

~~10/10/10~~

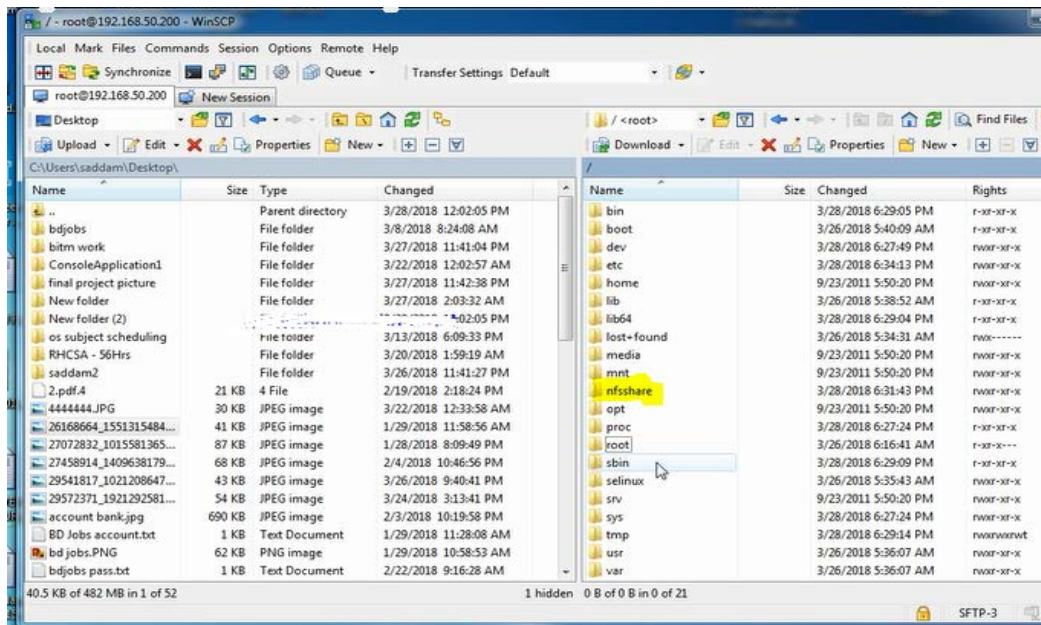
[5].



~~10/10/10~~



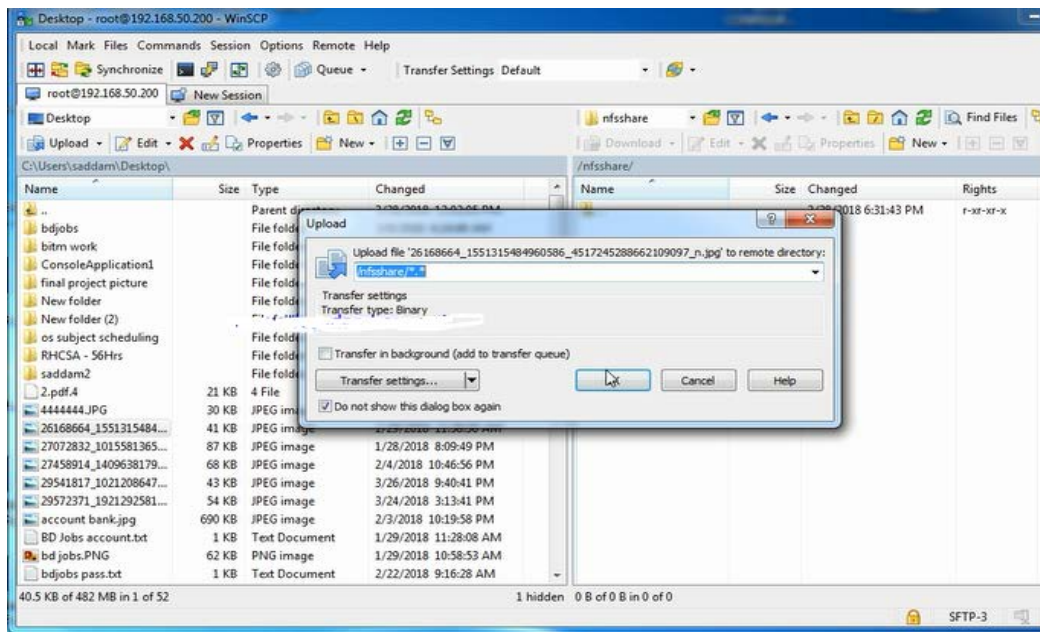
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[REDACTED]

Ev [REDACTED]

B



[REDACTED]



✓ Step 3: ~~hgn~~

yh

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✓ Step 5: ~~hgn~~

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✓ Step 8: ~~hgn~~

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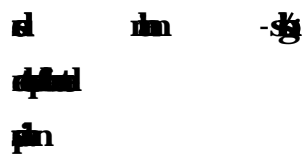
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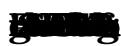
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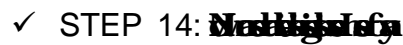
✓ Step 12: 








✓ STEP 13: 





✓ STEP 14: 



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### 3.5 Mikro -Tik Router





### 3.8 Release history

#### M - The History of the 66

1970

- 1941.3:11
- 1941 : 11
- 1937. 1: 11
- 19 : 11
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- 19 : 11
- 19 : 11

### 3.9 Router Board

1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

lv nB C M



U 2M TR C

### ❖ 3.10 Cloud Core Router

ROh UR SH

tkh F HOSD

T H6 R M )Sh

ih sh d ylv p tkh

lv -H [ 1 ]

lv iGM -HOS

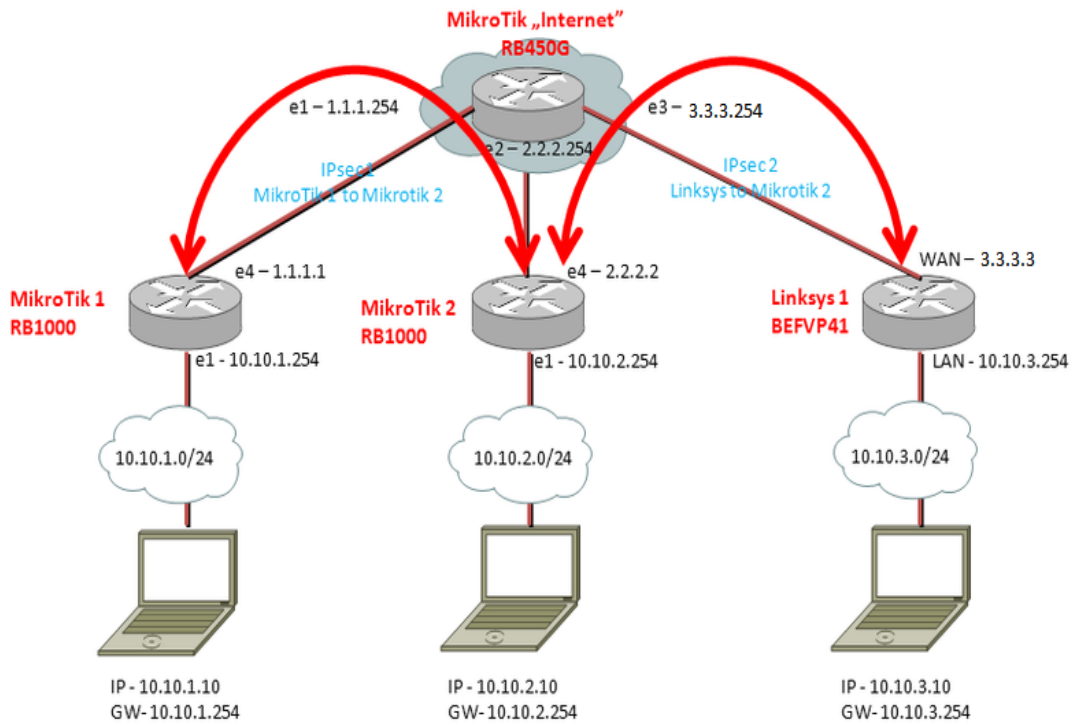


U HOS

### 3.11 Propose Network Diagram (Mikro-Tik Configuration)

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The SAs

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#### ➤ 3.11.1 Initial Step

- MikroTik 1 - The SAs
- MikroTik 2 - The SAs
- Linksys 1 - The SAs
- MikroTik 1 - The SAs





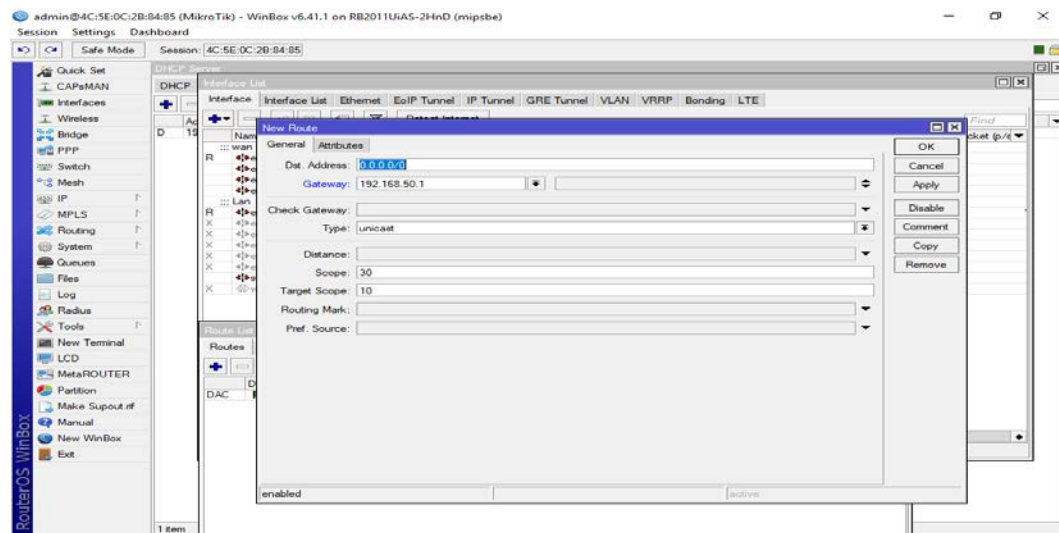
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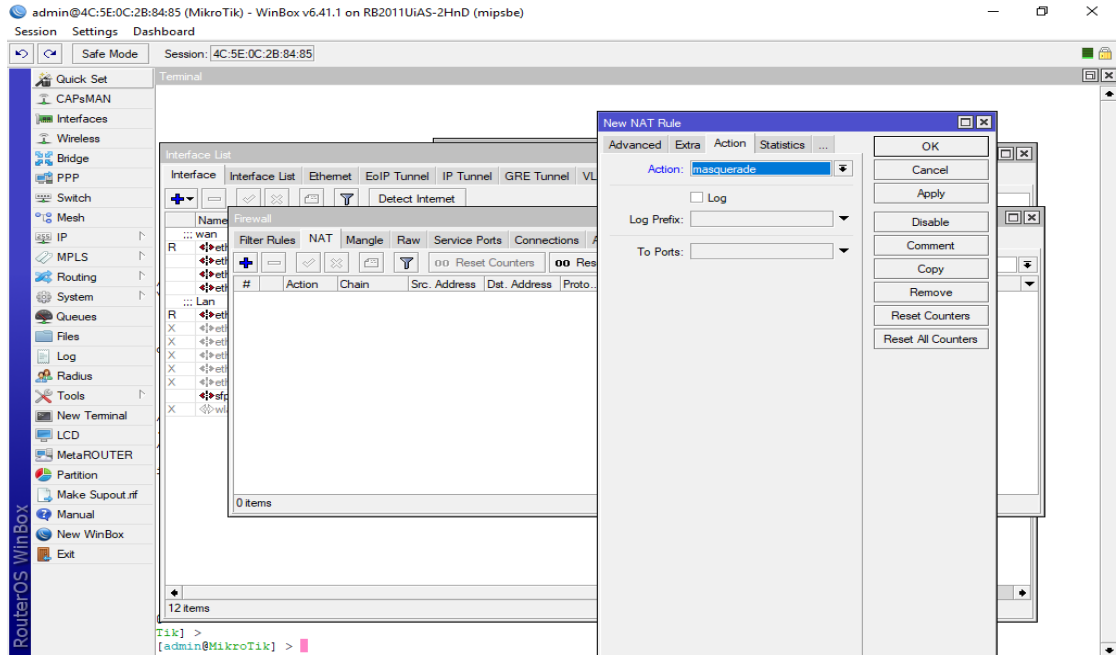
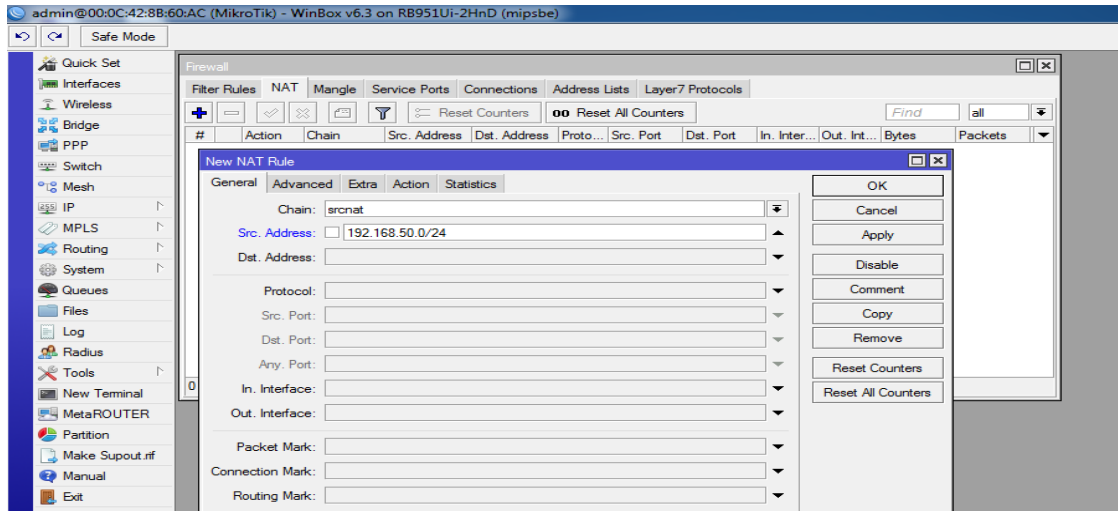
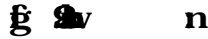
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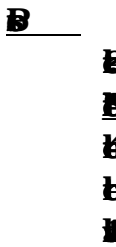
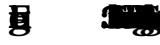
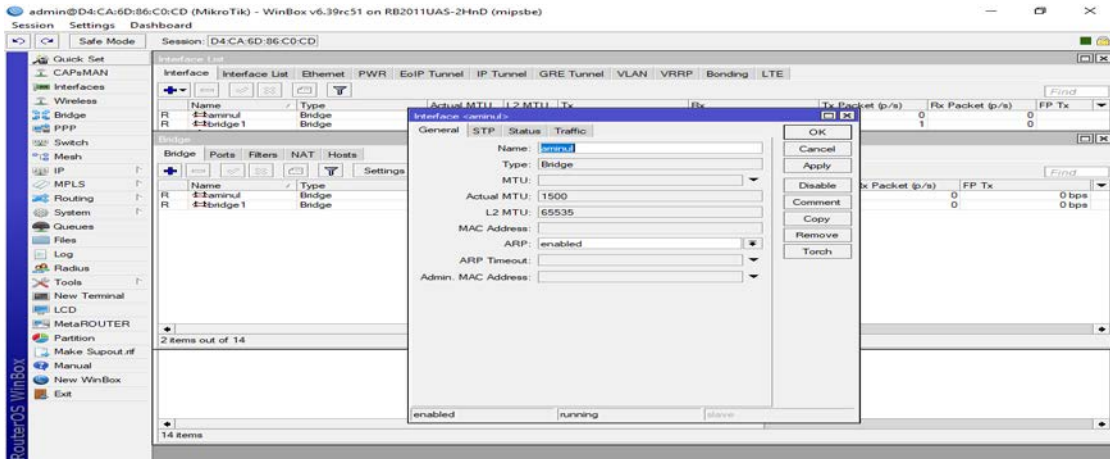
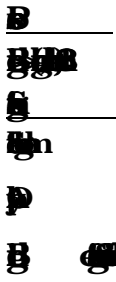
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✓ Step 3

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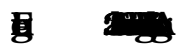
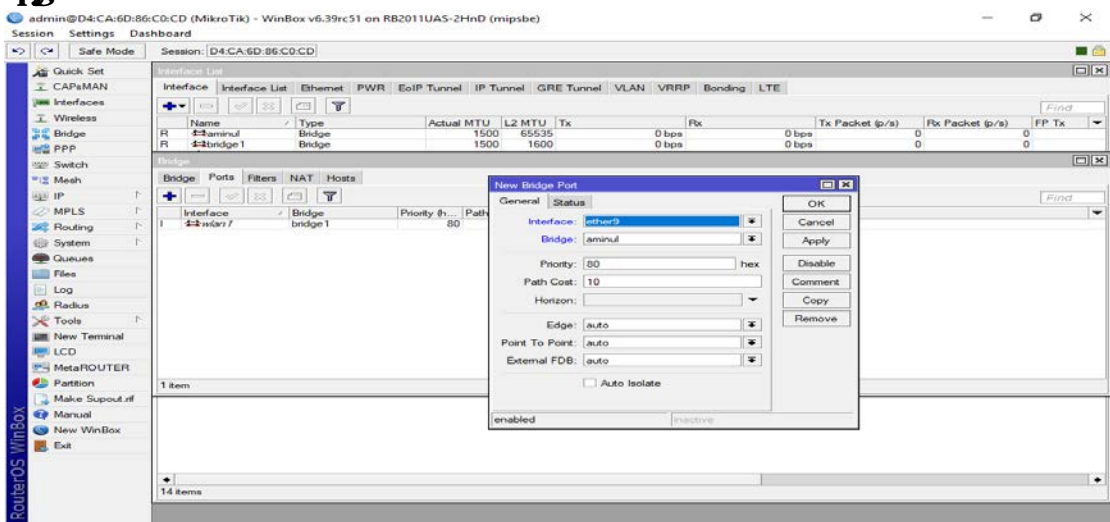


✓ Step 4



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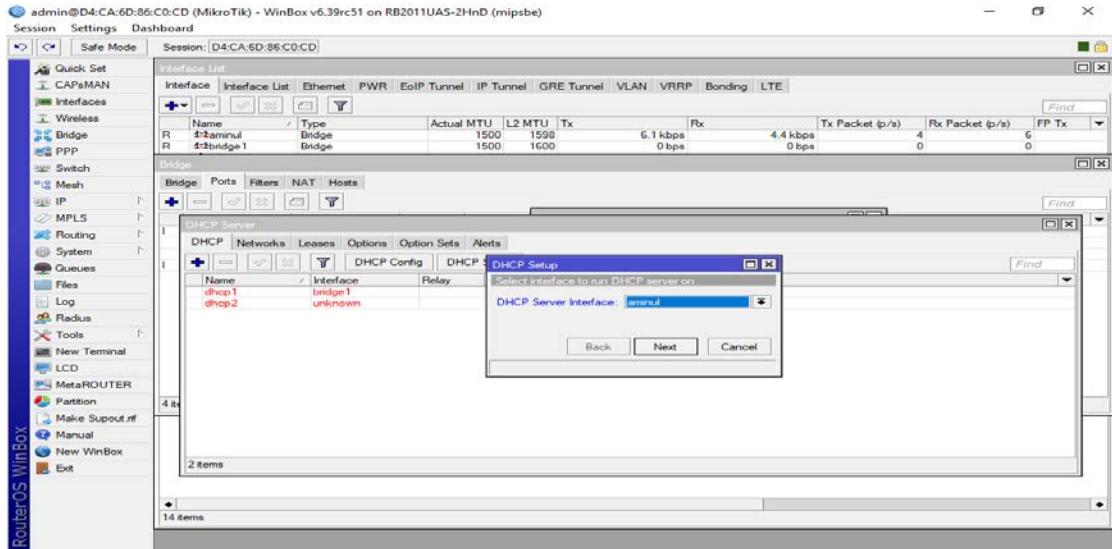


✓ Step 5:

**B**

**BRIDGE**

**BRIDGE**



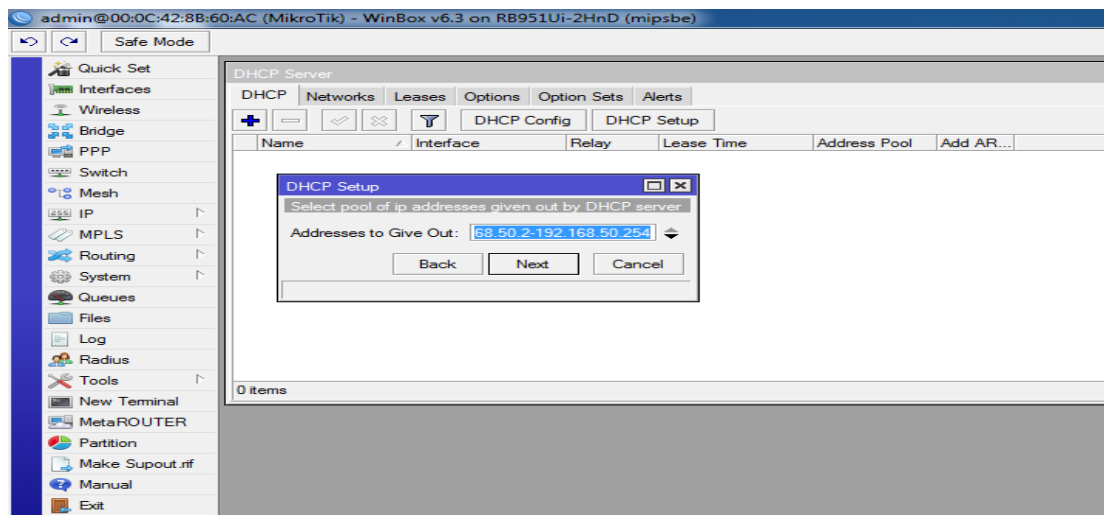
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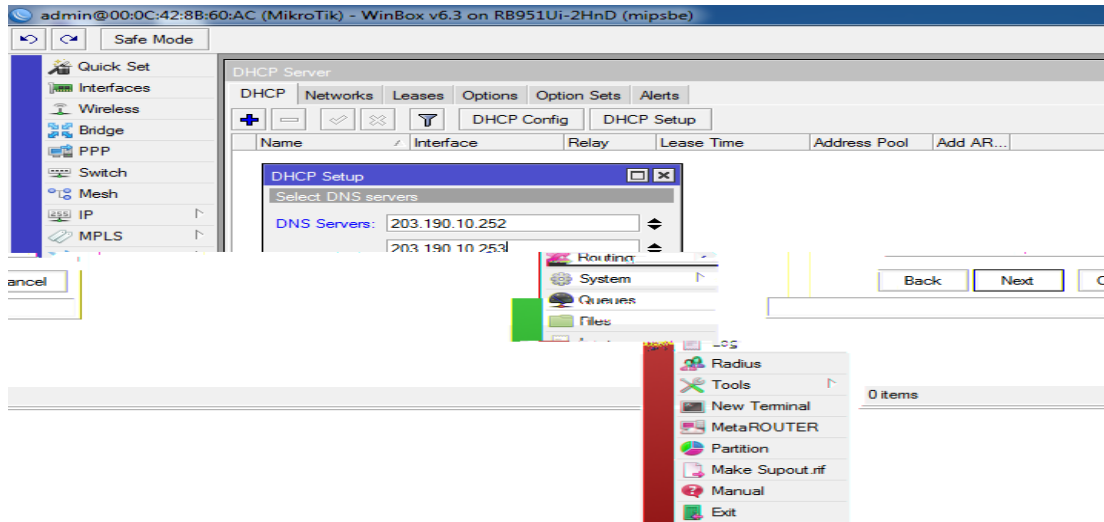
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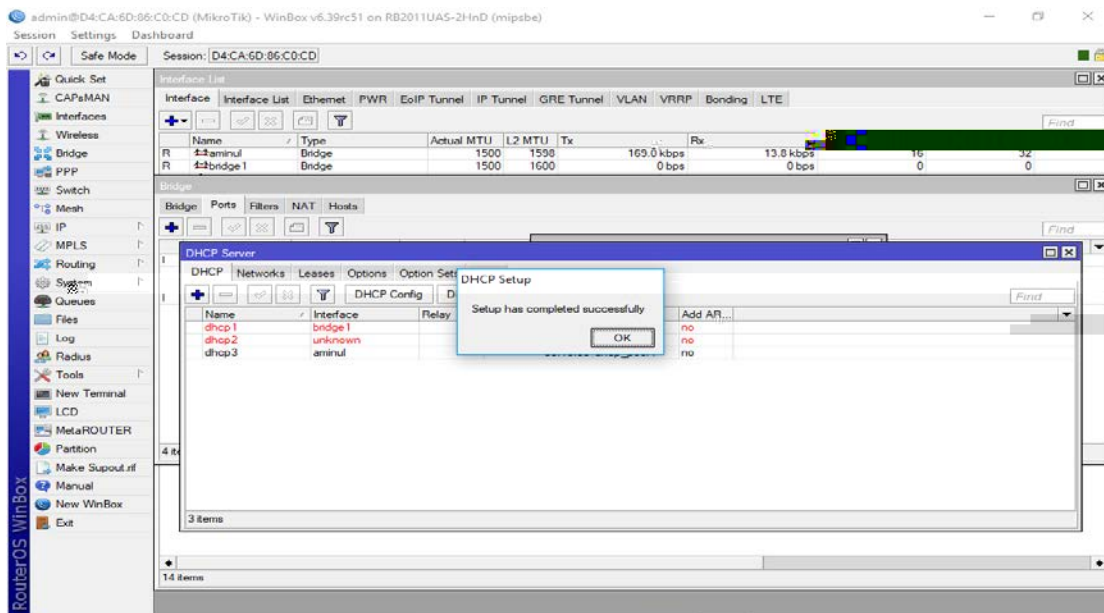
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**BRIDGE**

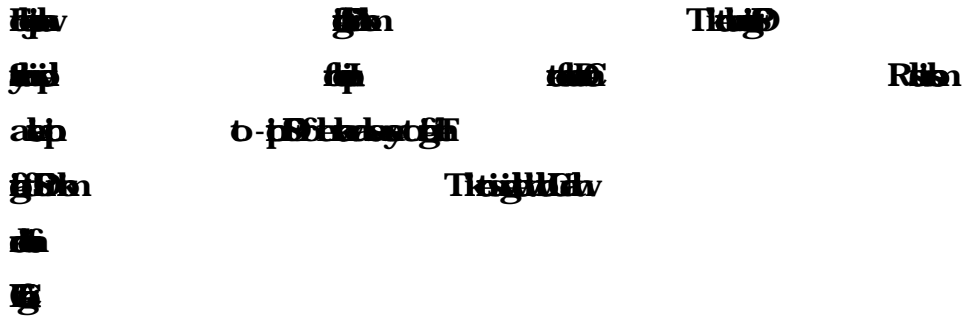
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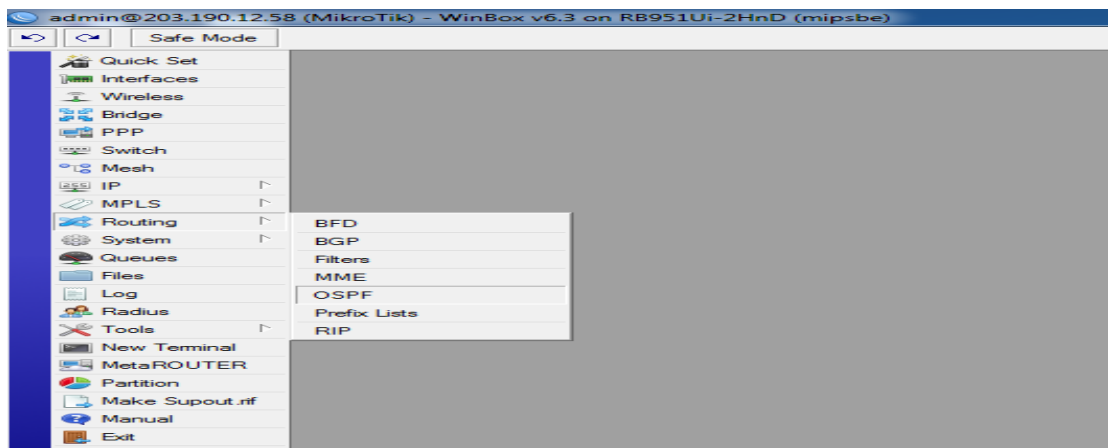
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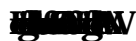
### 3.12 OSPF Configuration



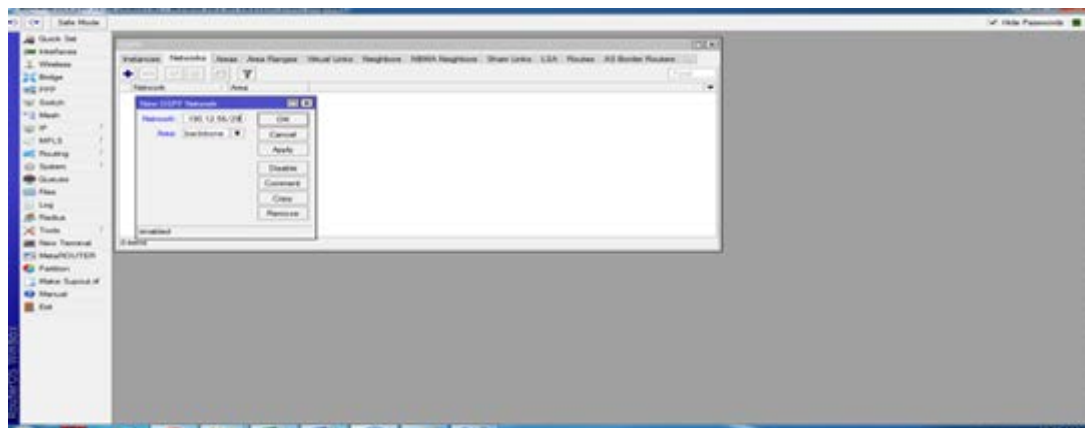
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✓ SETP 2:

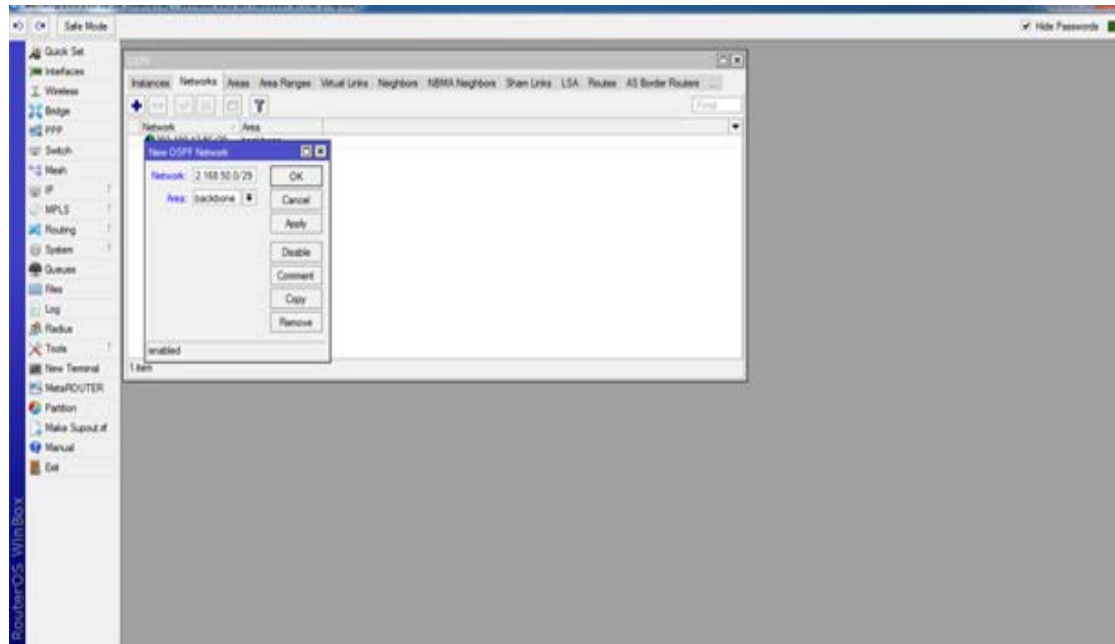


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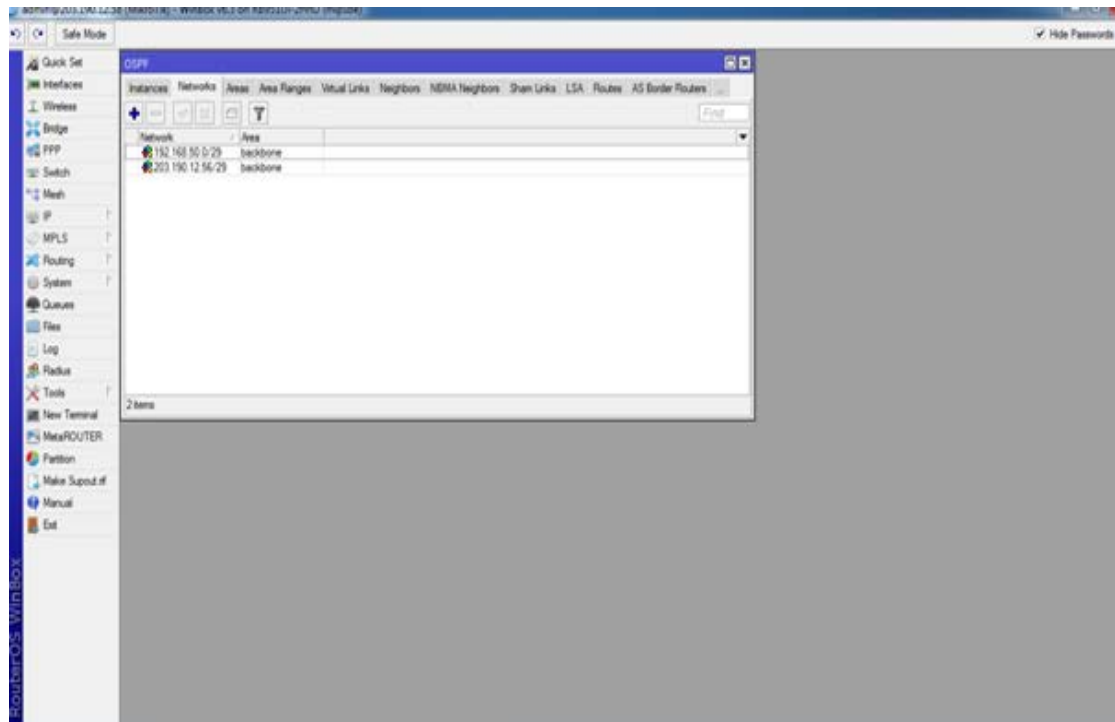
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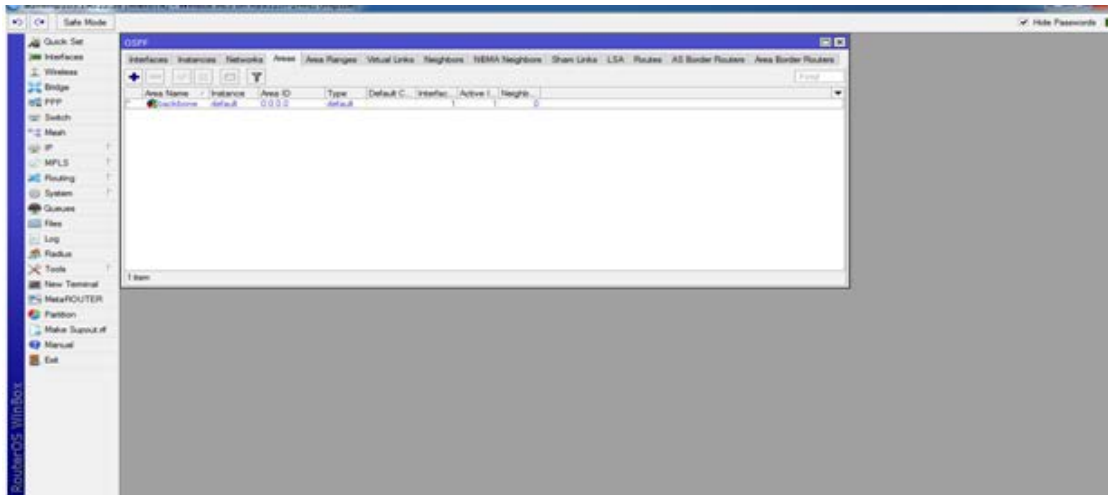


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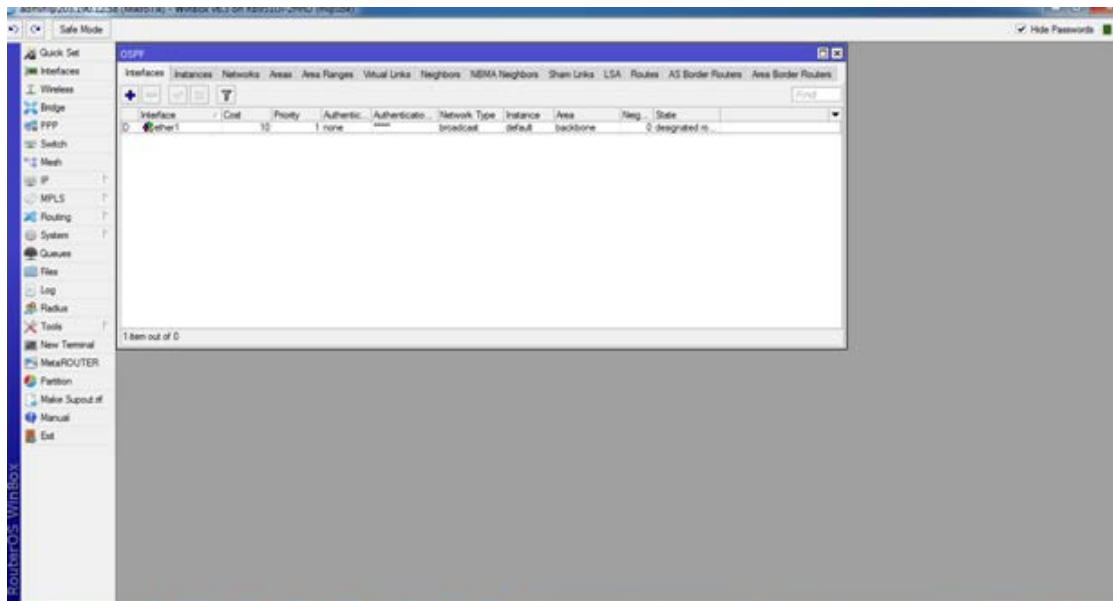
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✓ STEP 3:



✓ STEP 4:



### 3.13 Challenges

1. The first challenge is to identify the main components of the system. This involves understanding the different parts and how they interact with each other.

2. The second challenge is to determine the requirements for the system. This includes identifying the needs and expectations of the users and stakeholders.

3. The third challenge is to design a solution that meets the requirements. This involves creating a detailed plan for the system's architecture and components.

4. The fourth challenge is to implement the solution. This involves building the system and testing it to ensure it works as intended.

5. The fifth challenge is to maintain the system. This involves monitoring the system's performance and making updates as needed.

## CHAPTER 4

### 4.1 Competencies Earned

1. **Identify** the **components** of a **business plan**.

2. **Explain** the **importance** of a **business plan**.

3. **Describe** the **different** types of **business plans**.

4. **Develop** a **business plan** for a **small business**.

5. **Evaluate** the **effectiveness** of a **business plan**.

6. **Communicate** the **value** of a **business plan**.

7. **Apply** the **principles** of a **business plan**.

8. **Integrate** the **concepts** of a **business plan**.

9. **Analyze** the **impact** of a **business plan**.

10. **Synthesize** the **information** from a **business plan**.

### 4.2 Smart Plan

1. **Identify** the **components** of a **smart plan**.

2. **Explain** the **importance** of a **smart plan**.

### 4.3 Reflections

Daffodil Online Ltd. 2002.

1. **Identify** the **components** of a **smart plan**.

2. **Explain** the **importance** of a **smart plan**.

3. **Describe** the **different** types of **smart plans**.

4. **Develop** a **smart plan** for a **small business**.

5. **Evaluate** the **effectiveness** of a **smart plan**.

6. **Communicate** the **value** of a **smart plan**.

7. **Apply** the **principles** of a **smart plan**.

8. **Integrate** the **concepts** of a **smart plan**.

9. **Analyze** the **impact** of a **smart plan**.

10. **Synthesize** the **information** from a **smart plan**.

# CHAPTER 5

## Conclusion and Future Career

### 5.1 Discussion and Conclusion

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### 5.2 Scope for Further Career

The following text is a series of garbled characters, likely representing a corrupted or illegible scan of a document. It contains no meaningful information.

## References

- [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11]

## Appendices

- Appendix A: Internship Reflection

**1.1.1.1**

**1.1.1.2**

**1.1.1.3**

**1.1.1.4**

**1.1.1.5**

**1.1.1.6**

**1.1.1.7**

**1.1.1.8**

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**1.1.1.12**

**1.1.1.13**

**1.1.1.14**

**1.1.1.15**

**1.1.1.16**

**1.1.1.17**

**1.1.1.18**

➤ Appendix B: Company Detail



Head Office

En	En	En
A	En	En
F	En	En
H	En	En
E-h	En	En
W	En	En
En	En	En
En	En	En