

SERVER CONFIGURATION USING LINUX AND MIKROTIK

BY

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

MAY 2019

APPROVAL

This Internship titled “**Server Configuration Using Linux and Mikrotik**”, submitted by Md. Rafiul Islam, ID No: 151-15-4702 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 02 May, 2019.

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DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Fahmida Afrin**, Lecturer, Department of CSE and Daffodil International University. I also declare that neither this Internship nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ACKNOWLEDGEMENT

At First, I might want to express our true because of the Omnipotent ALLAH for the endowment of life, astuteness, and understanding he had given to us, a purpose behind our reality. In addition, to our families for the love furthermore, bolster they had given for an amazing duration.

In addition, Thanks to my beloved parents because they support us deeply Physically, Mentally and financially in the entire situation.

Secondly, we grateful and wish our profound our indebtedness to **Supervisor, Fahmida Afrin, Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of my supervisor in the field of “*Linux OS & networking*” to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stage have made it possible to complete this internship.

Thirdly, we also brightly appreciate to my respectable **Co-Supervisor, Nusrat Jahan**. Because her wisdom, intelligence, and idealness help my internship. He also provided necessary data. I believe that this good work of this result is total of his excellent guidance and good assistance. Thanks to his recommendation and remarks.

Fourthly, we would like to express our heartiest gratitude to **Dr. Syed Akhter Hossain**, Professor, and Head, Department of CSE, for his kind help to finish our Internship and to other faculty member and the staff of CSE department of Daffodil International University.

ABSTRACT

An Internet service provider is an organization or a company that provides services for internet access. At the present era, it plays a vital role for our communication system. Without internet we can't pass a single day. In our daily life it has made the communication easier and low cost for the common people. ISP includes distinctive sorts of servers (e.g., Ftp server, Nfs server, samba server and so forth) to help diverse sorts of need of the customers. In this Internship, a wide range of servers utilized in ISP have been arranged utilizing Linux working framework. After execution all things considered, the framework is tried in various stages and it works effectively as a model. It helped me gain the hand on ability to arrange these servers. By and by, this project report can be utilized as the manual for new ISP engineers.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Linux is a working framework that works simply like Windows and Mac OS X. As a working framework, Linux deals with your Linode's equipment and gives benefits your other program needs to run. Linux normally used in server computer. Linux is a very active working framework. In the event that running Windows resembles driving a programmed, at that point running Linux resembles driving a stick. It has various types of versions which make it very easier to the user and client. Linux is an open source working framework, so it is utilized broadly and the prescribed backings additionally get very effectively through the web. It deals with direction base however in new form it is transform into graphical mode.

The entry level position offers useful work inclusion and a preface to supporting PC Install, invigorate, keep up and give customer backing to hardware, programming applications, some framework issue.

1.2 Objectives

Have to understand the importance of the network and server management. Also understood the information of networking architecture. Some specific objectives needed for this internship.

- To prepare myself as an eligible one in the competitive job market.
- To gather some extra-ordinary quality
- To gather job experience
- To help myself to make the transition from classroom to job

1.3 Motivation

At present, I'm completing my Bachelors in Computer Science Engineering at Daffodil International University, I am able to understand that the value of gaining practical knowledge which will complement the textbook knowledge and it helps a student to gain a wider perspective of the subjects. By this time in internship I have already found that I am perfectly skilled in the details of Linux network and server management. As an internet service provider, I've getting my point across very well, communicating with people, understanding their needs and providing them better service. My skills lie in my ability to comprehensively read and understand the situation and act quickly and yet smartly.

1.4 Goals

After complete my internship I have to do something. And this is the main important after complete the internship.

- To Learn insights about the systems administration parts
- Setup Linux
- Network the board
- Server arrangement
- How to speak with customers
- How to give better administration to customers
- Control any kind of situation

1.5 Introduction of the Company

Janata Bank Ltd. is one of the most leading internet service provider in our country. They are the most experienced in ICT field where they are basic business ethics is long term relationship with their customers. If look at the last few years, they are improving day by day and achieved quality. They always support their customers and we are more excited about their outlook for an equally promising future.

We have already know that, they started their journey of the year 2002. During the last past year, they enlarged their operation and service portfolio according to their customer's demands and recommendation. They have already worked with different kinds of project and also they achieved their reputation. Nowadays they using latest technologies and upgrading their services when it is needed. They are always helpful and provide reliable service for their customers.

Table 1.1: Information of the company

Company Name	Janata Bank Limited
Type of Organization	Public Bank
Address	110, Motijheel Commercial Area Dhaka-1000, Bangladesh
Cell Phone	+88 02-9560000, 9566020, 9560039
Far	88 02-9564644
E-mail	jbcomp@janatabank-bd.com
Website	https://www.jb.com.bd/

1.6 Report Layout

Report Layout means specific information about every chapter of the Internship. As our Internship we will describe our intern in five chapter. The Five chapters are Introduction, Organization, Internship rules and responsibilities, Task and Activities and Conclusion and Future Scope.

In First Chapter, We just described the total view of our Intern including Objective, Motivation, Goal, and Introduction to the company and Report Layout.

In the Second Chapter, Illustrates information about the background of our Internship like that product and Market Situation, Target Group, SWOT Analysis and Organizational Structure.

In Third chapter, describes some rules and functionality of our Intern. We also described the virtual box and basic command of Linux.

In Fourth Chapter, in this chapter we described the different types of events task and activities

In the Fifth Chapter, Which is the last part of this intern including three sections- Conclusion, problems and Future Scope.

CHAPTER 2

ORGANIZATION

2.1 Introduction

In this part I will depict around an Organization where I finished my Internship. I'll additionally depict their working arrangement, showcase strategy, about the item. Programming strategy and how the handle their hierarchical structure and the procedure of work.

2.2 Product and Market Situation

We already know that, Janata Bank Limited. Is one of the most leading internet service provider in Bangladesh? Janata Bank Limited. Also provides different It Services and Professional training Services. These are given below-

It Services:

- Corporate Internet Solution
- Website Development
- Security Solution
- Domain registration and web hosting
- Area registration web hosting
- Network Access Supplier
- Open Source application solution
- Hi-speed Wi-Fi zone
- Data Connectivity, Data center and Co-location
- Bulk SMS Services
- Proxy and DNS server solution
- And All computer accessories

Professional Training Services

- ISP Setup and administration using Linux.
- Training Course on Certified Ethical Hacking (CEH).
- ISP Setup and Administration using MikroTik.
- Web site Development with Joomla.
- PHP and MYSQL for Website Development.
- E-commerce & Open source Joomla Virtue Mart.
- Red Hat Certified Security Specialist (RHCSS).

2.3 Target Group

An intended interest group is the target group or readership of a distribution, ad, or other message. In showcasing and publicizing, it is a specific gathering of purchasers inside the foreordained target showcase, distinguished as the objectives or beneficiaries for a specific commercial or message. [4]

The organization's client base incorporates all shoppers and all little to medium-sized organizations, including new companies. The organization intends to focus on SOHO customers, as these are ideal focuses for our new fast contributions, and hold the best development potential for the organization. Web Solutions feels that these market portions have unique estimating and administration needs, and make progressively devoted, solid clients.

2.4 Swot Analysis

SWOT analysis is a strategic planning technique used to help a person or associations qualities like that strength and weakness for identifying both the opportunities open to you and the threats your face. [3]

Strength:

- Good Communication Skill between two people
- Working from home with ease
- Setting up an online business

- Produce a good service
- Gathering an information

Weakness:

- Lack of experience
- Large sums of money required to set up business
- Competition for small resellers
- Lack of Management
- Numerous pricing tariffs and service options

Opportunities:

- Introduction of simpler tariffs
- Revision of regulatory framework
- Empowering by nearing business

Threats:

- The Economic Crisis - Householders less likely to increase their Broadband subscriptions Stock Market's lack of confidence in the digital communications market.
- It remains to be seen how far consumers can be persuaded to embrace Internet access.

Table 2.4: SWOT analysis of the company

<p>Strengths</p> <ul style="list-style-type: none"> • Good communication skill • Good position on market • It's a famous company • Produce good service 	<p>Weakness</p> <ul style="list-style-type: none"> • Lack of experience • Crisis of employ • Low assets • Lack of management
<p>Opportunities</p> <ul style="list-style-type: none"> • At the point when contenders are ease back to embrace new advancements. • Extending the business division with different future chances. • Empowering of nearby business. 	<p>Threats</p> <ul style="list-style-type: none"> • The Eco Crisis Householders less as increment their broadband membership's securities exchanges absence of trust in computerized correspondence showcase.

2.5 Organizational Structure



Figure 2.5: Organizational Structure

CHAPTER 3

INTERNSHIP ROLES AND RESPONSIBILITIES

3.1 Daily Task and Activities

At the beginning time of entry level position period is the imperfect satisfaction for finishing my Bachelor of Science in Computer Science and Engineering. It is a Linux Administration course which need couple of months. It reduces a standout between most of the IT skilled preparing and courses on the day when I visited. So, I participate in this obligation for better preparing and termination of my periodic job program advanced comparison showcase.

Month 1

- In the time of my internship what I learned is given below their:
- How to install and run virtual machine.
- How win box perform.
- Introduce with mikrotik router
- How to configure isp in a mikrotik router
- Access control and upgrading firmware
- Creating Bridges (LAN)
- Creating multiple DHCP Servers
- How to create multiple SSIDs
- How to configure an NTP Server

Month 2

- How to manage configuration backup
- Bandwidth Management Using Simple Queue
- Full Bandwidth Management
- How to fix Simple Queue and Queue Tree issues
- How to enhance Mangle rules (Winbox, DNS, Google Paly Service) 4.Block Bit
Torrent & P2P traffic

- How to Configure VPN and Dynamic DDNS
- Try to create a simple project on isp server

3.2 Event and Activities

In the education sector efficient and skilled manpower is an important issue for the best quality training. Janata Bank Limited give the Best quality training for expert preparing and live based work for official work. Janata Bank Limited maintain an efficient methodology for Enrolment. At the starting time, the applicants firstly need to sit for a fixed test, and then a meeting is taken. Janata Bank Limited which has been working and give the opportunity for creating skilled Human Resources in various fields of instruction and preparing. Today Janata Bank Limited is exceptionally notable establishment for science, designing, expressions ponder and furthermore for expert and initiative advancement preparing programs. Janata Bank Limited is popular for as a prevalent name in Corporate Training Industry which already achieved worldwide affirmation in widely. Then again Janata Bank Limited given best quality expert preparing. Janata Bank Limited Provided the Training for Diploma Engineers, Corporate line proficient and Human Resource.

3.3 Project Virtualized by Oracle VM Virtual Box

Virtual Machine (VM) is basically a software where it support many different kinds of operating systems that's why I choose this machine for practice my project on that software system by using it. It is a Host operating system. Some of the operating system cannot run in that machine. By this software I can run other OS on this same time when my main system is running.

3.4 VM Virtual Box Setup

Virtual box is an open source based software where it can run many operating system. It is free for all. At first download the Virtual Machine from its website. It will be helpful if download the latest version. After completing download install it. It has a simple user interface. First go to file, give a Name and select the version of the windows. Select the memory size. Recommend memory size is 2048MB. Create a Virtual Marching Hard drive. Hard drive type is VDI. It's a dynamic allocated. Give the file location. Now it's ready. Go to the setting, make general-Advance make shared Clipboard and Drag 'Drop Bidirectional. Now it's ready to install OS.

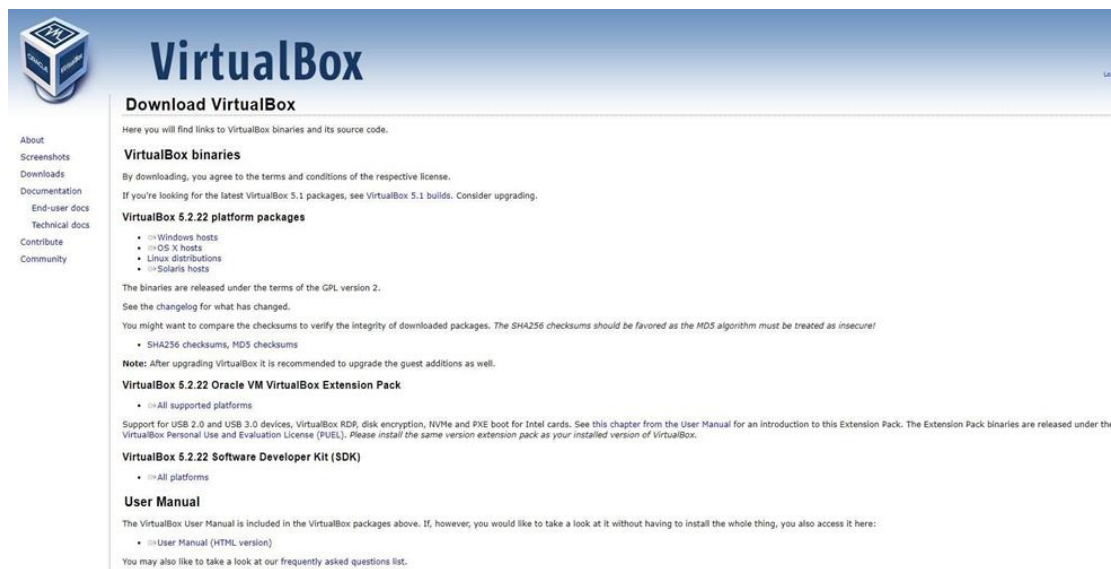


Figure 3.1: Downloading virtual Box

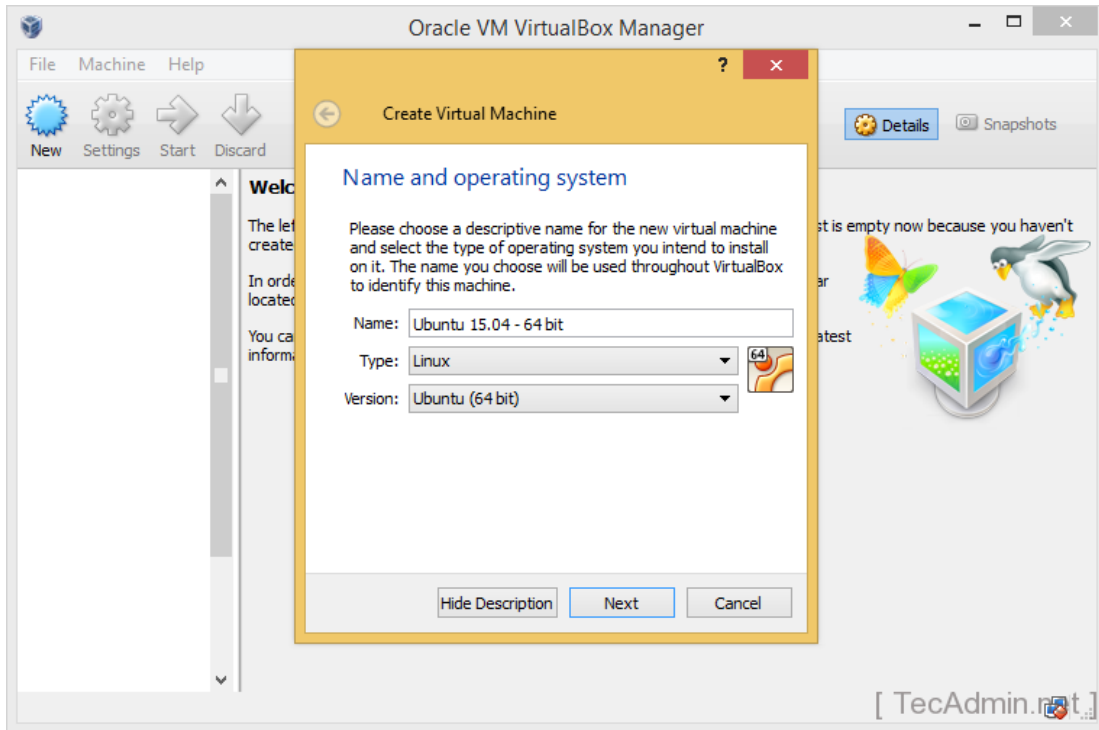


Figure 3.2: OS Version type

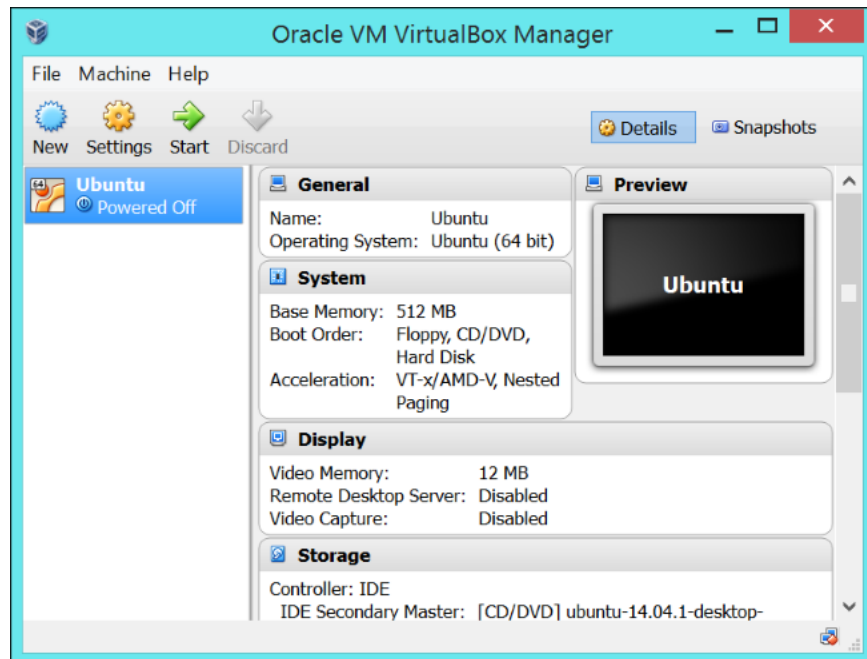


Figure 3.3: Virtual Box environment

3.5 Basic Command of Linux

Here is some basic command of Linux.

- Pwd- pwd command show directory.
- Ls- ls command to show all of the major directories
- Cd-cd command is used for go to the directory
- Mkdir-mkdir is used to create a folder.
- Rmdir-rmdir is used for deleting a folder.
- Rm- rm command is use for delete files and directories.
- Touch- the touch command is to use for create a file. For example, touch file. Text
- Man- man is used to show the manual of the inputted command
- Cp- cp command is used for copy a file.
- Mv- mv command is used for move a file.
- Locate-locate is used for locating a file in a Linux system.

CHAPTER 4

TASKS AND ACTIVITIES

4.1 Events and Activities

Mikrotik Operating System Installation

Firstly we have to download mikrotik operating system from the website of mikrotik router. Select which version you want to download for test.

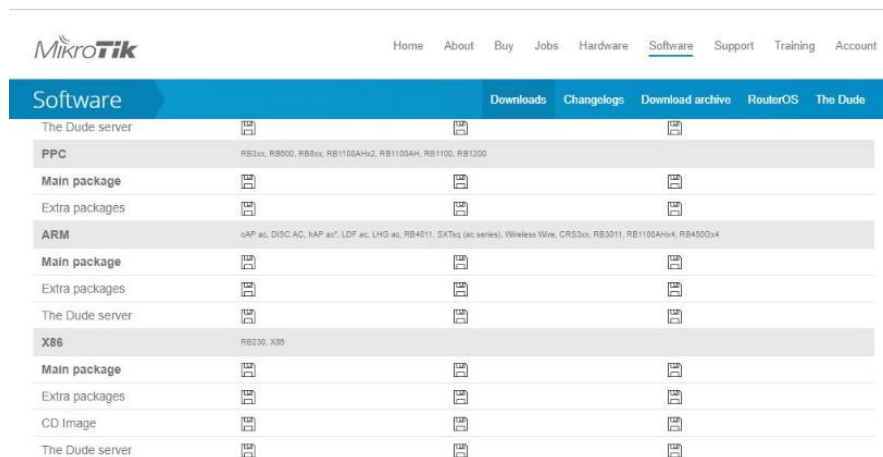


Fig 4.1.1: Download Mikrotik OS

Open virtual machine (VM) then file-new virtual machine-select custom then next-next-next-select installer disk image file-then browse the OS file where you save in your computer then select the OS. Now select the operating system (other) and version (other) because Mikrotik operating system is not listed in the virtual machine so that's why we have to select the guest operating system other and also version other. Then set the name of virtual machine like I have put Mikrotik-OS after given name then select the location where you want to keep all the data for your operating system. Give number of processor 1, number of cores 1, memory of the virtual machine 512mb, use bridge network, Bus logic, IDE, create a new virtual disk, maximum disk size 8GB. Before going to finish the installation we see that there has single network adapter. So we have to customize the hardware. Then select the network adapter. Now select the bridge connected directly to the physical network.

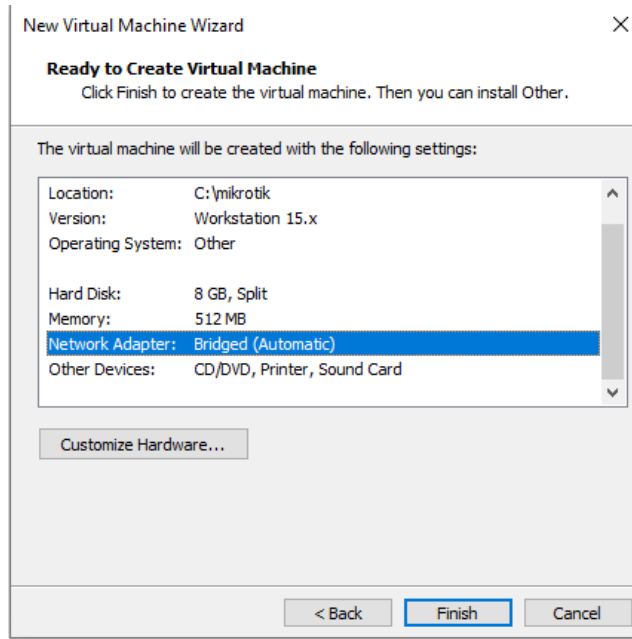


Fig 4.1.2: Customize hardware for network adapter

Power on the virtual machine and click on the terminal then press the [a] button from the keyboard. Press the enter button. After some moment it will want the Mikrotik login there would be default name admin and password will be null (no password will be putted).

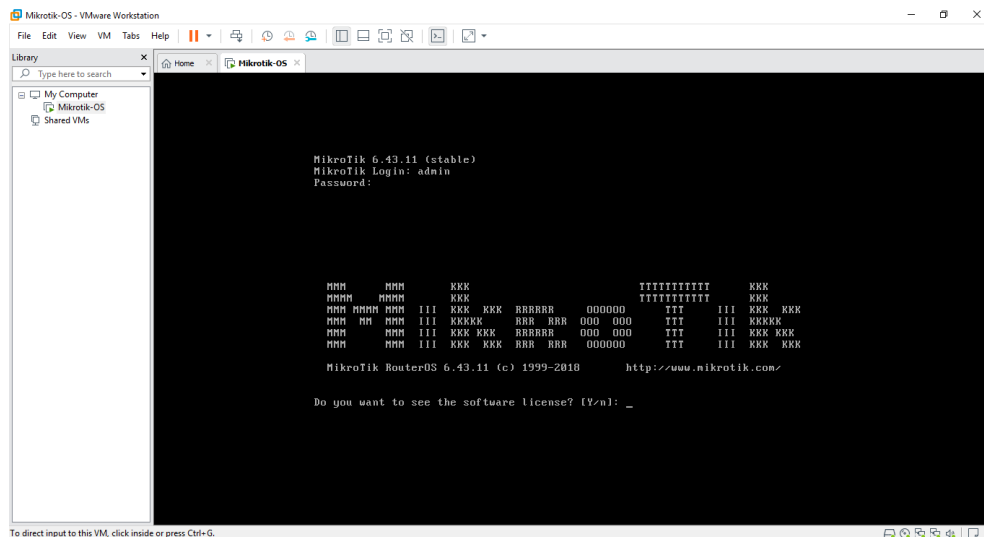


Fig 4.1.3: Username & password part

Winbox Installation

Go to the Mikrotik website and download the Winbox software. Open Winbox and refresh the neighbors and click on any MAC address then connect. Then a license tray box will come.

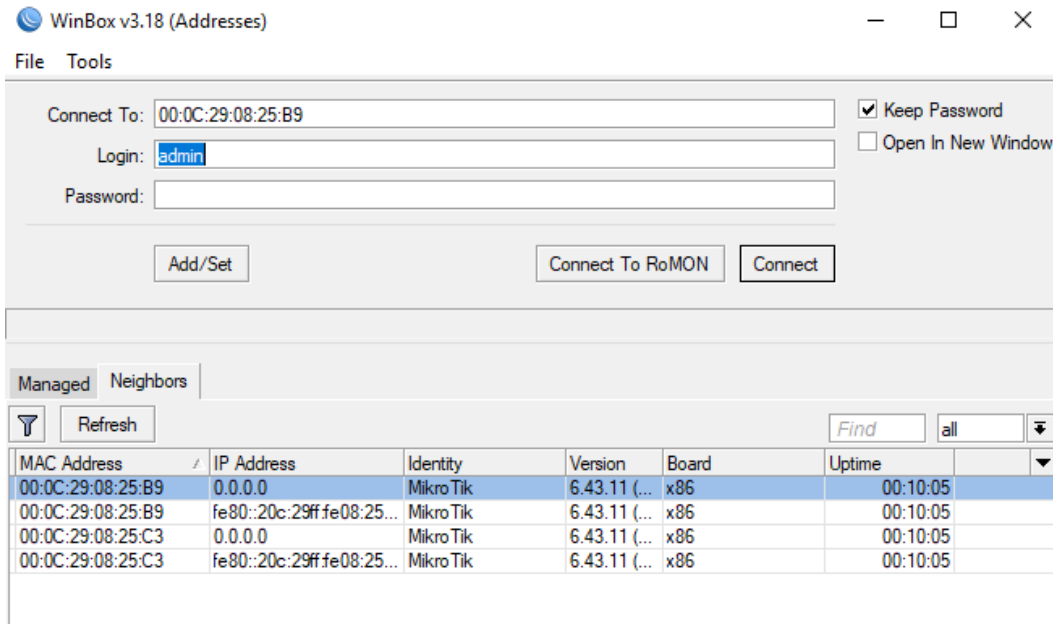


Fig 4.1.4: Mac address selection in Winbox.

Mikrotik OS Upgrading System

First of all go to the mikrotik software download website then find out the latest version of installed OS version and download it. Click files then a file list pop out. After that drag and drop the main package file of latest version of Mikrotik router and file will be updated after some time. After file uploaded then select the recent uploaded file and click on system on the left side then click on boot option then a boot option will be come. A reboot box will come and click on yes. Then the operating system will be updated after some time.

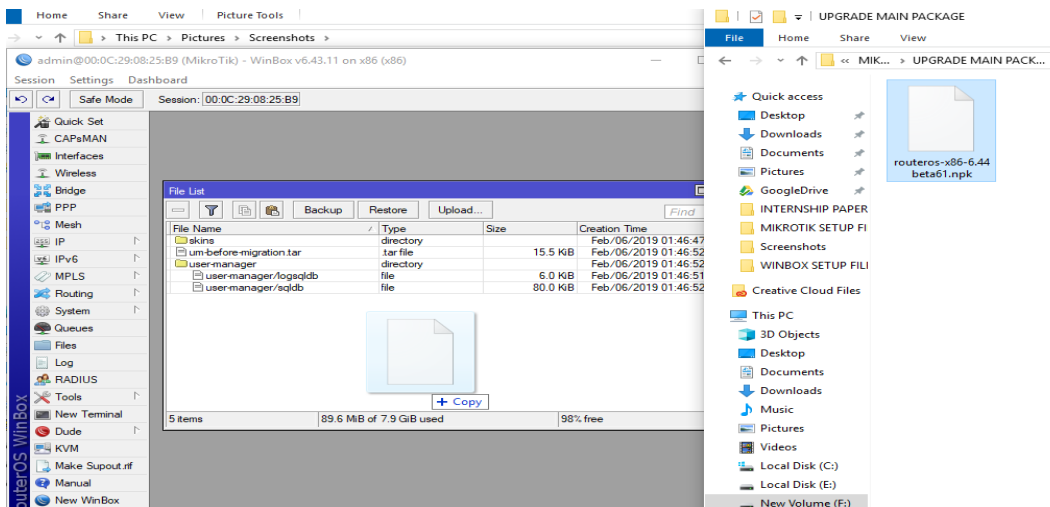


Fig 4.1.5: Package file loaded

Now click on the VM and open the operating system. We can find the latest version of Mikrotik OS.

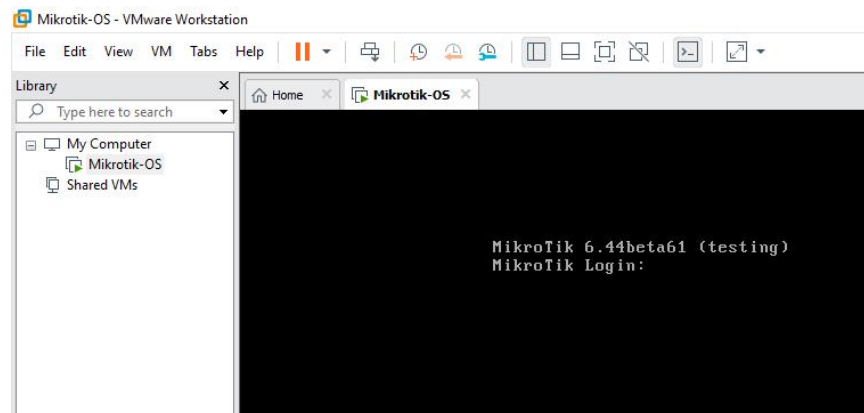


Fig 4.6: Updating operating version

Mikrotik OS Downgrading System

Download the backdated OS from the Mikrotik router website. Select files and a file list will pop out then find out the backdated version of OS. Now drag and drop the file into the file list. Now click on system then find the reboot option and click on it. After reboot option will come then select the yes option then wait sometime until the OS will be changed to backdated version. Operating system downgrade.

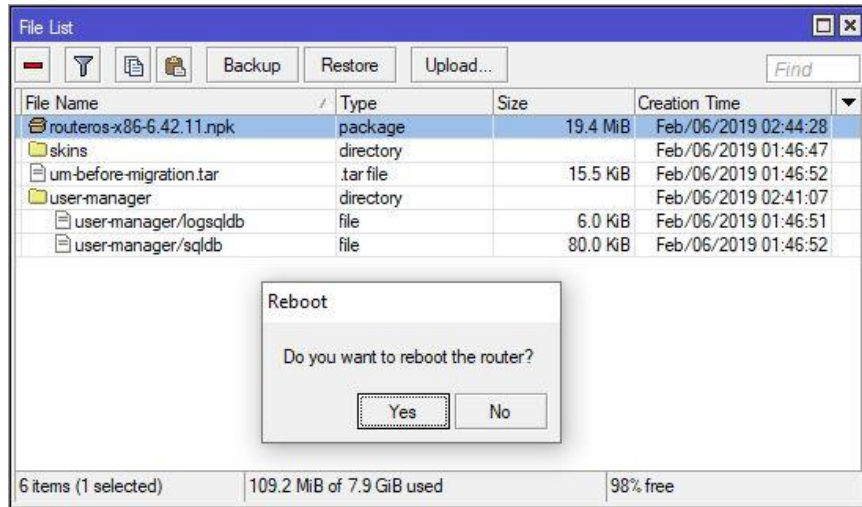


Fig 4.1.7: OS file rebooting

Package Installation

Go to the website and find out the extra packages of installed OS. Then download the file. Go to the folder where you download the extra packages file. Then unzip the zip file. Now system then package list and have to find which file need to install then go to the unzip file where extra packages file unzipped and drag & drop the files into the file list box. Then select the file which are now uploaded then go to system then reboot and click yes. After some time when the OS will be rebooted then we can see the file in the package list which is already installed.

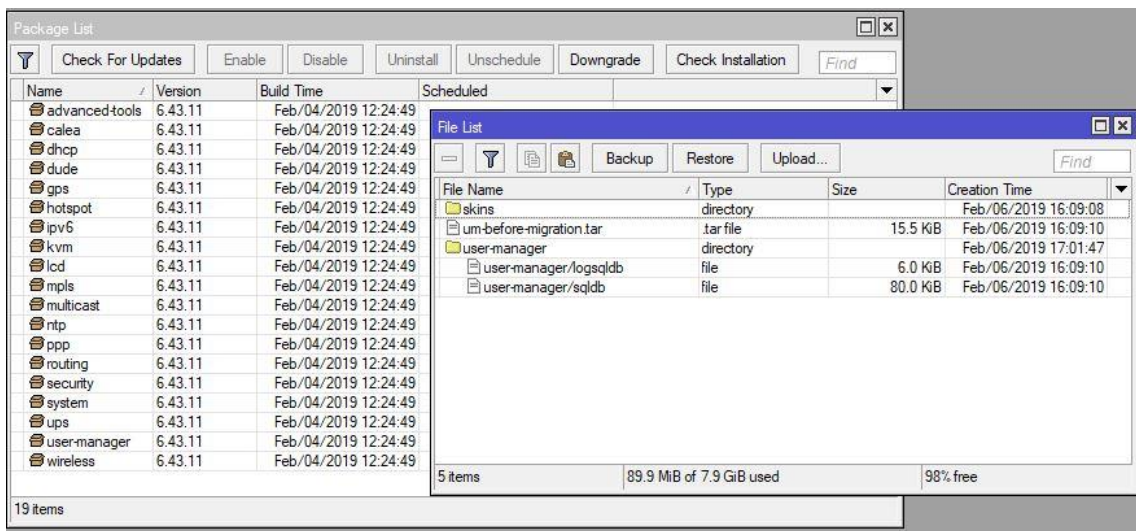


Fig 4.1.8: Package file installation

Mikrotik Router Basic Configuration with CLI and GUI

Open new terminal and write this command **ip address add address=192.168.1.1/24 interface=ether1** then LAN IP CONFIGURATION COMPLETE then write the 2nd command for WAN IP CONFIGURATION **ip address add address=103.100.0.2/30 interface=ether2** then press enter button from the keyboard. Then to show the ip address assigning perfectly there has two command. Write **ip address** and **print** to show that ip address is assigned or not. Now to go back in the previous mode write / **then** press enter. Now to assign DEFAULT ROUTE CONFIGURATION we have to write a command. The command is **ip route add gateway=103.100.0.1** so ip route is assigned. Then write **ip address** and **print** to show the default gateway is assigned or not then press enter to show that.



```
Terminal
ROUTER HAS NO SOFTWARE KEY
-----
You have 22h12m to configure the router to be remotely accessible,
and to enter the key by pasting it in a Telnet window or in Winbox.
Turn off the device to stop the timer.
See www.mikrotik.com/key for more details.

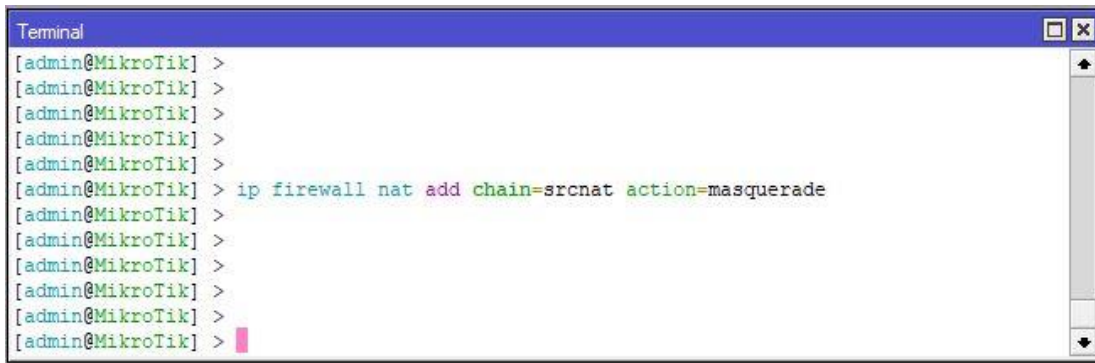
Current installation "software ID": OXYZ-CFZR
Please press "Enter" to continue!

[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] > ip address add address=192.168.1.1/24 interface=ether1
[admin@MikroTik] >
[admin@MikroTik] > ip address add address=103.100.0.2/30 interface=ether2
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
```

Fig 4.1.9: LAN ip configuration

Nat [srcnat] configuration

To configure srcnat we have to write the command **ip firewall nat add chain=srcnat action=masquerade**.



```
Terminal
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] > ip firewall nat add chain=srcnat action=masquerade
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
```

Fig 4.1.10: Nat/ srcnat configuration

DNS Server configuration

To configure the dns server we have to write this command. `IP dns set servers=8.8.8.8 allow-remote-requests=yes` the press enter button from the keyboard. After putting this command we can make a mikrotik as a dns server.



```
Terminal
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] > ip firewall nat add chain=srcnat action=masquerade
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] > ip dns set servers=8.8.8.8 allow-remote-requests=yes
[admin@MikroTik] >
[admin@MikroTik] >
[admin@MikroTik] >
```

Fig 4.1.11: DNS server configuration

Router Configuration with GUI

At first go to `ip>>>addresses>>address list>>click on add button>>type LAN ip address in the address box>>select ether1>>aply>>ok`. Now again click on add button and write the WAN ip address into the address box then select ether 2 then apply then ok done. Now go to `ip>>routes>>new route box will come>>write ip in gateway>>apply>>ok done`.

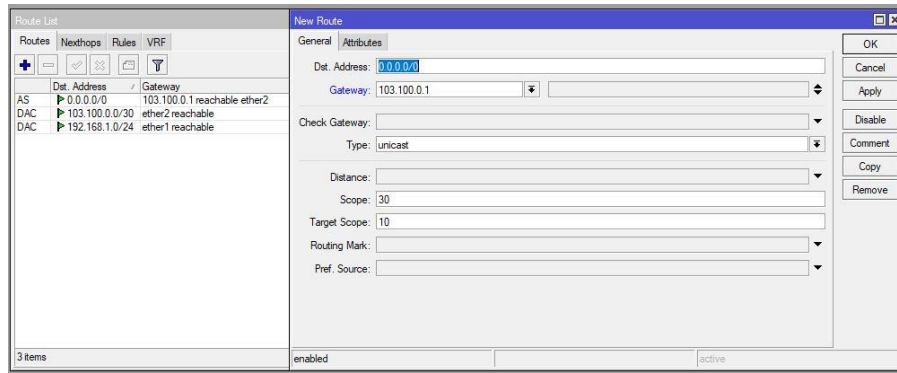


Fig 4.1.12: IP assigned in Gateway

Next to setup NAT (srcnat) configuration go to ip>>firewall>>add button click>>action>>masquerade select>>apply>>ok. To configure DNS servers go to ip>>DNS>>servers>>8.8.8.8>>check allow remote requests>>apply>>ok.

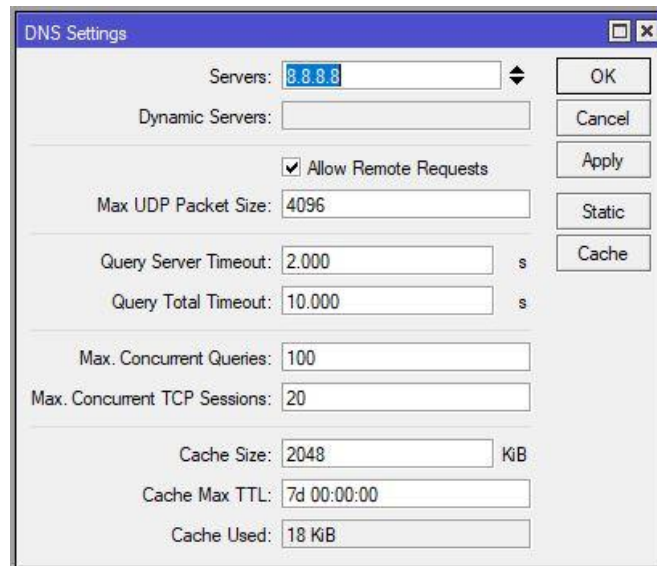


Fig 4.1.13: DNS server configuration with GUI

DHCP Server Configuration

Go to ip>>DHCP server>>click add button>>DHCP setup>>DHCP server interface = ether1>> DHCP address space = 192.168.1.0/24 >>gateway for DHCP network = 192.168.1.1 >> address to give out = 192.168.1.100-192.168.1.254 >> apply >> first DNS server box = 192.168.1.1 >> second DNS server box = 8.8.8.8 >> Lease time = 3d 00:10:00 >> next. Check the IP address is come or not. The ip is not shown so that's why we have to disable and enable network adapter then.

We can find the ip address. To show all DNS server information type ipconfig /all then it will show all information of DNS server.

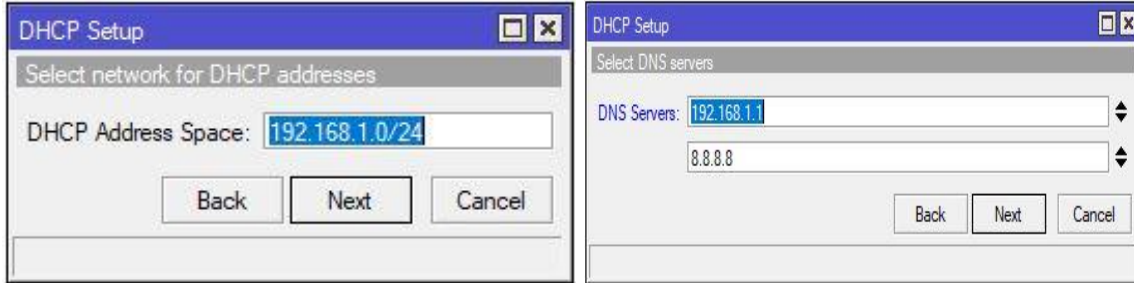


Fig 4.1.14: DHCP address space box

DHCP Client Configuration

ip >> DHCP client >> add button >> interface = ether2>> uncheck USER peer DNS and USER peer NTP >> apply >>ok

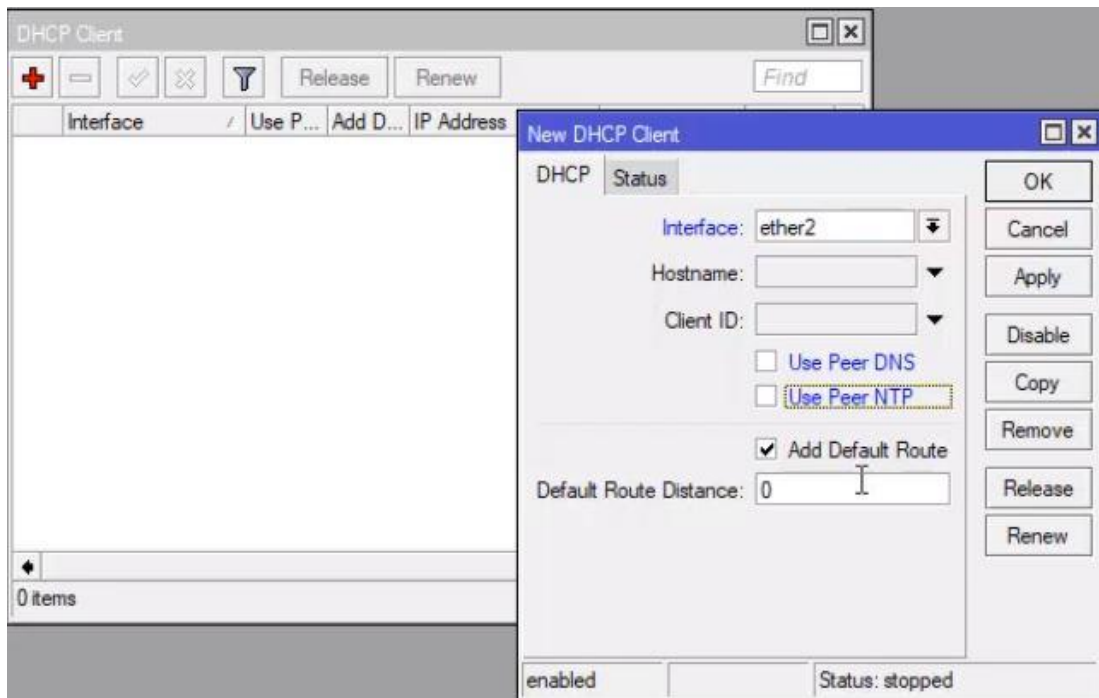


Fig 4.1.15: DHCP client tray box

IP>> routes>> then show the ip and it is DAS not manually it's dynamically.



	Dst. Address	Gateway	Distance	Routing Mark	Pref. Source
DAS	0.0.0.0/0	192.168.0.1 reachable ether2	0		
DAC	192.168.0.0/24	ether2 reachable	0		192.168.0.100
DAC	192.168.1.0/24	ether1 reachable	0		192.168.1.1

Fig 4.1.16: Default route check

Creating Multiple SSIDS

For creating multiple ssid go to wireless tables>>virtual. New Interface select Wireless=> SSID =>guest. And in another WLAN which is WLAN2. Select WLAN2=>Wireless make SSID name kids and apply and ok. Now I am assigning security profile to each of these access point so clicks on the security profile tab and I am going to click the plus sign and I am going to creating a security profile which name is guest. And the authentication type mark WPA PSK, WPA2 PSK. Now give a WPA Pre-Shared Key: and also WPA2 Pre-Shared Key now apply and ok. Now create another one and I am give this name is my kids. And I set a password for it. Now select wlan2 and change the security profile default to change. After that select wlan3. Change the security profile default to my kids. In the wlan2 go to the general tab change the name to guest and ok. And the another wlan3 change the name. Now go to the bridge. Add new bridge port and change the Interface name to guest AP. Add another new bridge port and change the Interface name is kids AP. Now we can see there is a network one is kids and another is guest. Now the configuration of the mikrotik router is done.

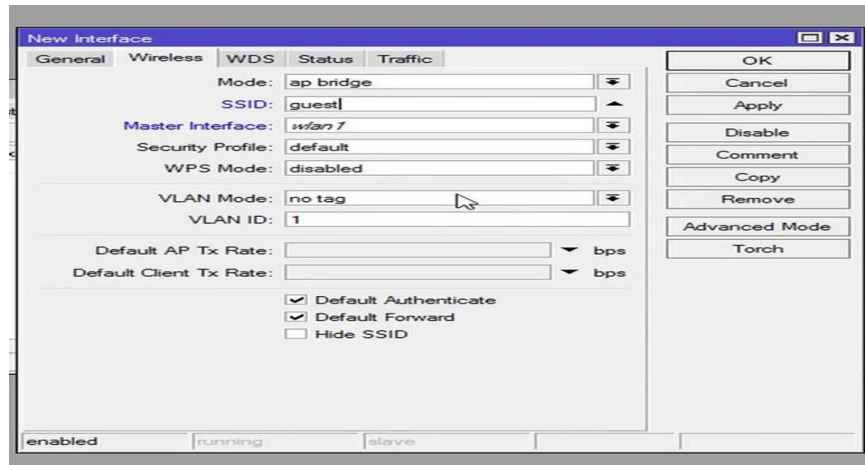


Figure 4.1.17: SSID profile creation

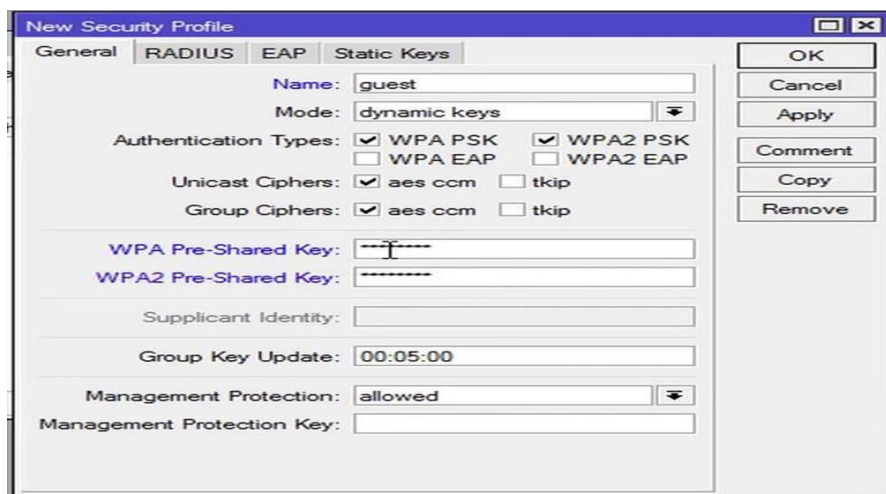


Figure 4.1.18: SSID Authentication

Managing Configuration Backups

I have to first go to the Winbox and open it. Go to the Files. Click Backup, give a name and password. I use name 1st_backup. And I am not using any password for it. Now click backup and them create a backup. After that go to the terminal, write.

- export file=1st_export
- ip pool> add name=drop ranges=192.168.5.2-192.168.5.254

Now it's done.

```

Terminal
MMMM  MMM  KKK          TTTTTTTTTT  KKK
MMMM  MMMM  KKK          TTTTTTTTTT  KKK  KKK
MMMM  MMMM  III  KKK  KKK  RRRRRR  OOOOOO  TTT  III  KKK  KKK
MMMM  MM  MMM  III  KKKKK  RRR  RRR  OOO  OOO  TTT  III  KKKKKK
MMMM  MMM  III  KKK  KKK  RRRRRR  OOO  OOO  TTT  III  KKK  KKK
MMMM  MMM  III  KKK  KKK  RRR  RRR  OOOOOO  TTT  III  KKK  KKK

MikroTik RouterOS 6.38.1 (c) 1999-2017      http://www.mikrotik.com/

[?]          Gives the list of available commands
command [?]  Gives help on the command and list of arguments

[Tab]       Completes the command/word. If the input is ambiguous,
            a second [Tab] gives possible options

/           Move up to base level
..         Move up one level
/command   Use command at the base level

[admin@MikroTik] > /ip pool
[admin@MikroTik] /ip pool> add name=dhcp ranges=192.168.5.2-192.168.5.3
failure: pool with such name exists
[admin@MikroTik] /ip pool> add name=dhcp2 ranges=192.168.5.2-192.168.5.3
[admin@MikroTik] /ip pool>

```

Figure 4.1.19: Configuration Backup settings



Figure 4.1.20: Backup file Identification

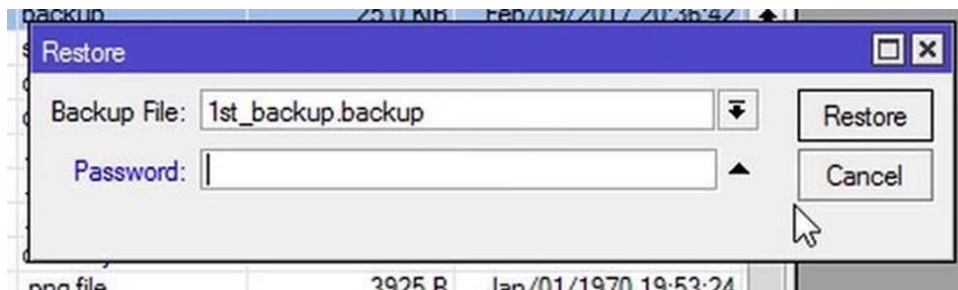


Figure 4.1.21: Backup file restoring

Static Configuration

In the time of making the static configuration, first I have to go in the Interface list. There is 10 interface. I am choosing ether1, go to the ether1 and make it ether1Wan. And after that make ether2

To ether2Lan. Then go to Address List add new address 192.168.50.201/24 And select the interface to ether1Wan and network 192.168.50.0. And add another address 10.10.101/24 network 10.10.10.0 and ether2Lan than ok. Then go to ip => Route List add new router gateway is 192.168.50.1. Now I have to go ip => DNS. Given an ip address on Servers 203.190.10.252 and 8.8. 8.8 apply ok. Then go to firewall add new Nat rule select action masquerade. Now go to the terminal ping 8.8.8.8 now its work. After doing this given a ip address on network and internet setting. Given ip address 10.10.10.2 subnet mask is 255.255.255.0 and default gateway is 10.10.10.1 and ok. Now internet connection is ok. For the connecting testing go to cmd and check ping 8.8.8.8.

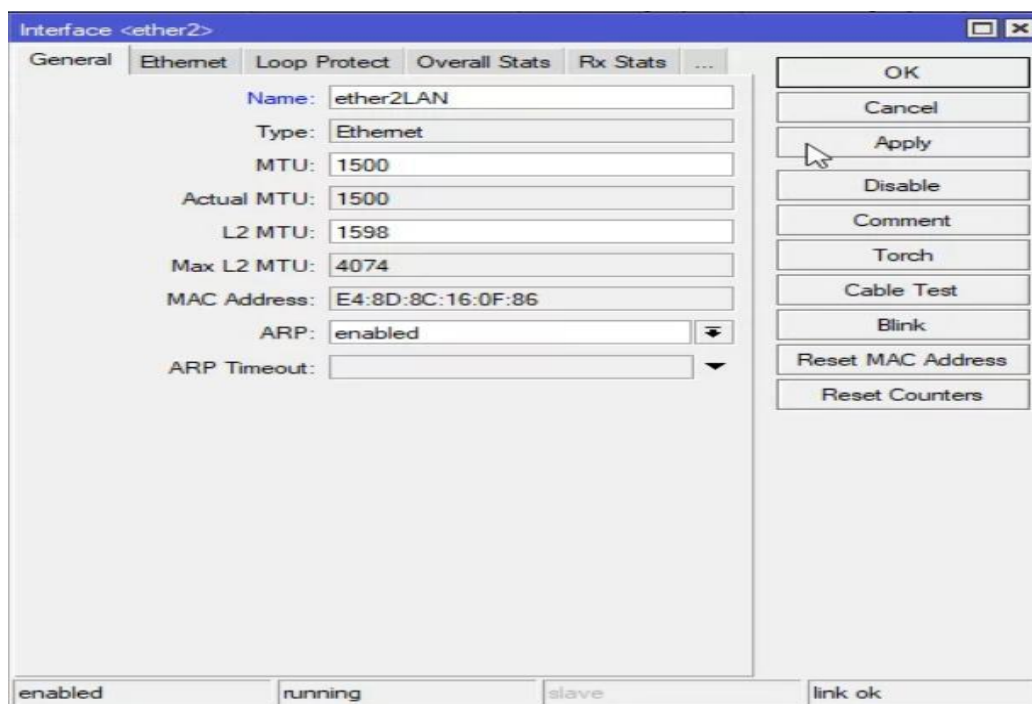


Figure 4.1.22: Given the name of the ether

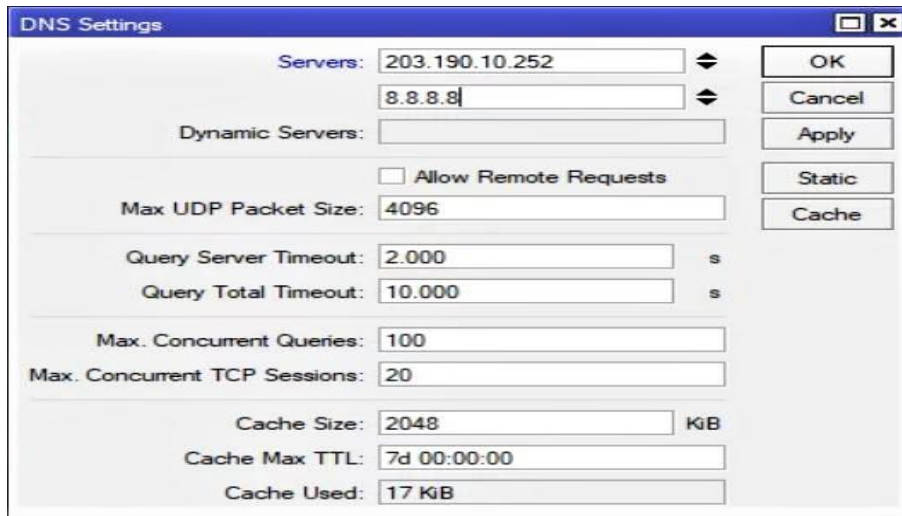


Figure 4.1.23: Servers ip address assign

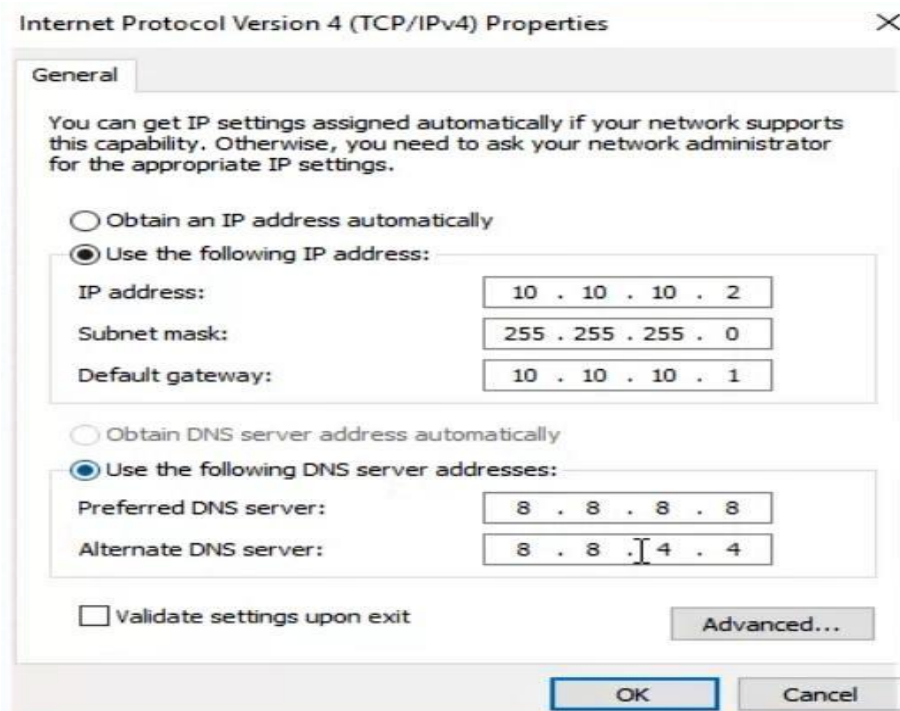


Figure 4.1.24: Connecting the internet by assign ip address

Mikrotik PPPoE concept

Step 1: PPPoE server configuration: In PPPoE server there has some user ID and Password. This is a dial up protocol. When a client provide user ID and password to the server for authentication the server will provide IP information. Then the user will configure all information to its network card. Then the user will be connected to the server and user will get internet connection. PPPoE >> PPPoE servers >> click on + sign >> Service name – PPPoE Server >> interface – ether 1 >> then follow the pic for other instruction.

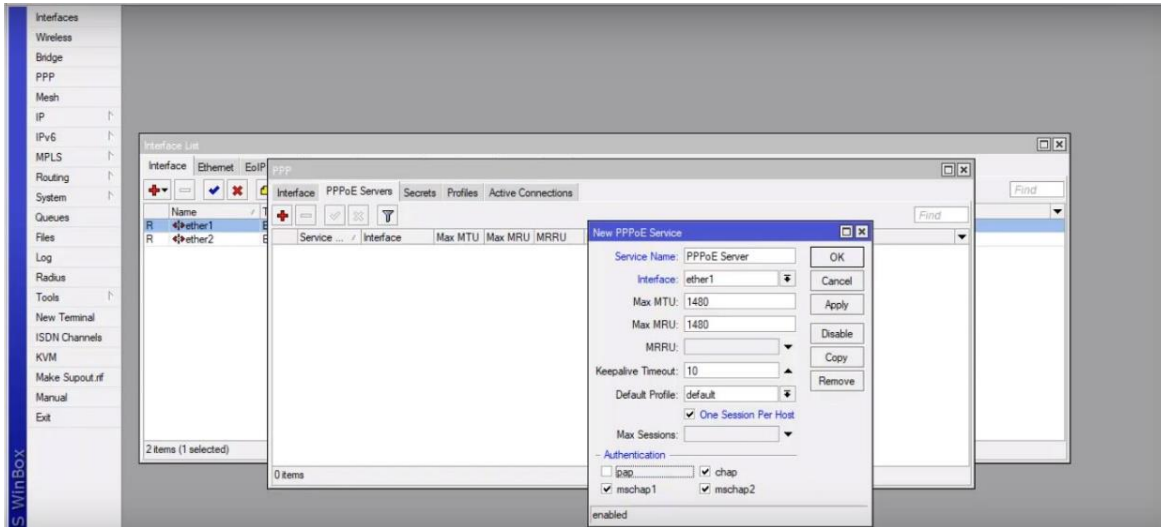


Fig 4.1.25: PPPoE server configuration

User creation: PPPoE section box >> secrets >> click on + sign >> name – test user >> password – 1234 >> service – PPPoE >> local address- 192.168.1.1 >> Remote address- 192.168.1.2 the apply >> ok. Dns server configuration for user: Go to PPPoE >> Profile>> PPPoE profile <default> >> DNS server – 8.8.8.8 then add another dns server – 4.2.2.2 apply >> ok.

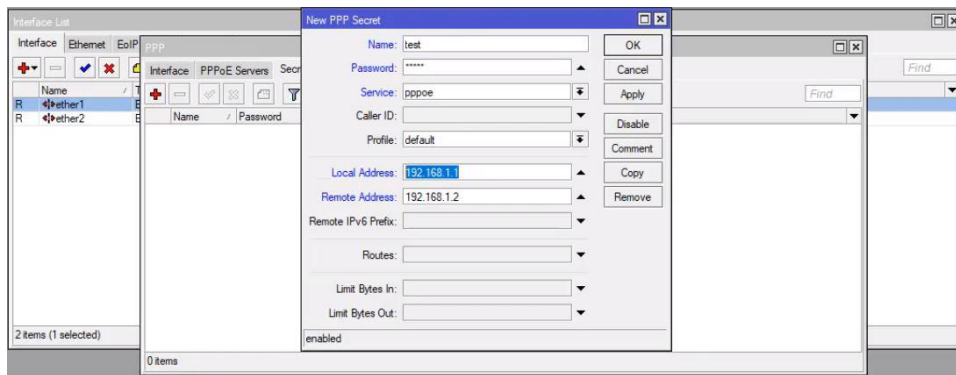


Fig 4.1.26: User creation box

Dns server configuration for user: Go to PPPoE >> Profile>> PPPoE profile <default> >> DNS server – 8.8.8.8 then add another dns server – 4.2.2.2 apply >> ok.

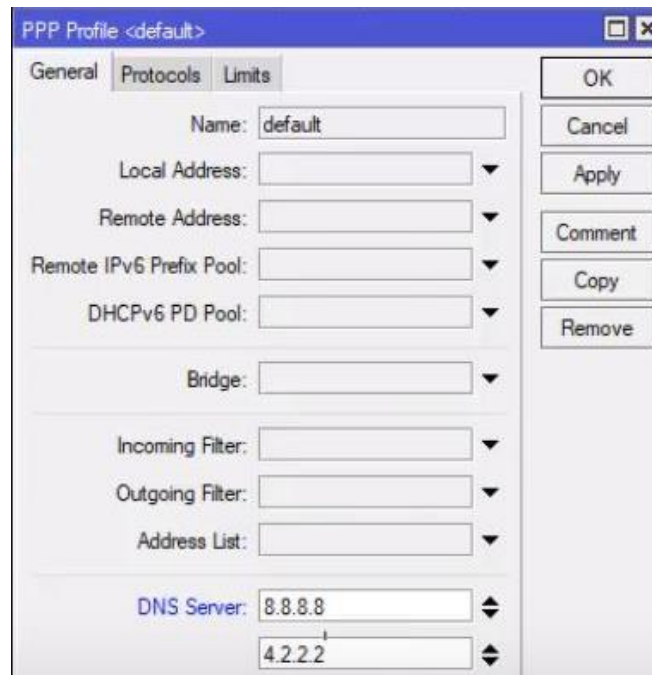


Fig 4.1.27: DNS server configuration for user

CHAPTER 5

Conclusion and Future Career

5.1 Conclusion

We gather an operative measure experience and this make an excellent clear door for us to finish this kind of short time job on the Linux. In this short time we can considered to realize and experiment the working framework by the VM (virtual machine). Now we can create or can save up different types of servers that can highly serviceable for our future work. It permit us to fulfill the original systems administration framework that is highly durable for us in future.

5.2 Problems

- There are particular types of issues must be overserve amongst the Installation and kept up the virtual machine. Generally, normally
- The server computer stay different types of causes between the server improvements.
- The form doesn't perform validly between the bundle improvements.
- The energy has Exanimate a few moment among the improvement and act with the server system.
- In VM workstation variant small of code does not work validly.
- We have to careful in our work, on the floor that the directions are awfully case fine.

5.3 Future Scope

Any separate can design DHCP and DNS servers easily and also can easily check server system along server reinforcement that is certified in this book.

- Configuration and upkeep almost all the Linux servers for our reality.
- Can work in ISP level
- Network executive into the current situation.

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