

ISP SERVER CONFIGURATION ON LINUX AND MIKROTIK

SUBMITTED

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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APPROVAL

This internship titled “ISP Server Configuration On Linux And MikroTik”, submitted by Shoriful Islam, ID No: 162-15-8082 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 2nd May 2019.

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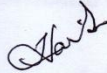
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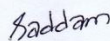
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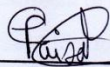
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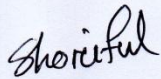
I hereby declare that Internship has been done by me under the supervision of **Fahad Faisal, Assistant Professor, Department of CSE, Daffodil International University** and I also declare that neither this Internship project nor any part of this Internship has been submitted elsewhere for the award of any degree.

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Finally, our parents will have to admit permanent support to the appropriate support.

ABSTRACT

If two and more computers are interconnected and able to exchange data or information then we call network. We want to increase the number of PC's and exchange data or information from one to another that time we need some special PC's are called Server. There is various type of work in the network that is why also different types of the server have. For Example- DSN Server, Web Server, Mail Server, Proxy Server, FTP Server, Firewall. Each of them works differently and without them, it is impossible to maintain a network. If the network is connected to the Internet and we want to secure your information they must setup server using Linux Operating System. That's why I choose this subject of my report is "Server Installation and Configuration on ISP (Linux Platform)". The report discussed the purpose of the specific server using on ISP, hardware requirement for the server, choosing software and installation process of the software, step by step server configuration process and simple troubleshooting of the server.

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CHAPTER 1

Introduction

1.1 Introduction

The internship offers practical working experience and an introduction to supporting computer Install and update and maintain and supporting user provide for hardware and software applications some network issue or this internship will involve challenging opportunity and real-life working ISP Server configuration Linux and MikroTik platform and this is a grateful opportunity to gain hands-on experience in the computer IT field. This internship provides an opportunity to gain experience with the ISP Server Configuration Linux & MikroTik of a Daffodil Online limited (DOL).

1.2 Motivation

I am currently pursuing my B.Sc. in CSE at Daffodil International University and I understanding the importance of gaining practical knowledge or the textbook knowledge and the helps a student and teacher gain a wider perspective of the subjects. During the Internship, I will found that and I am perfectly skilled in the details of Linux Network and server management and MikroTik. As an internet service provider and I live that getting my point across very good communication with peoples or Understanding their required and providing them very good service.

My skills and my ability to comprehensively read understand the situation and act quickly and smartly.

1.3 Objectives

The final objective of my internship program is to ready myself as a suitable one in the competitive job market. So this is very effective of skill development and I would like to collect some extraordinary quality to provide my skilled.

The internship in this computer science is planned to provide working experience while the student is still in school and to equivalent job experience with academic training and to help students to make the transition from this classroom into the job.

1.4 Introduction to the Company

Daffodil Online Limited, Proud itself as one of the leading International Internet Service Provider (ISP) in Bangladesh and The most experienced and oldest company in the ICT field and they are primary business ethics is Long Term Relationship with they are customers. As we look at the growth over the decade since our inception and they are extremely proud of what they have been achieved or even more excited about they are the outlook for an equally hopeful future.

In 2002, At the started by the journey. During the passing years and they extended they are operation portfolio service according to the customer's recommendation and considering demands.

1.5 Report Layout

The student has an opportunity to demonstrate maturity as a technical writer by presenting and analyzing and evaluating his or her own work on the job. I have described the objective of internship and Motivation of internship and Introduction to the company and I will be described the methodology of my internship. And this chapter give's the information about and where the internship has been attached to undertake this program.

Chapter-01: I will describe the Internship of Introduction, Motivation and Objective and Introduction to the company and Report Layout.

Chapter-02: I will describe the Organization Introduction then DOL IT Services Offered, and then Target Group and the describe SWOT Analysis and the Organization Structure that it.

Chapter-03: I will describe the daily working task & Activities and Events & Activities and project task & Activities.

Chapter-04: I will describe the daily working MikroTik and Release History and then Initial setup and configuration, then MikroTik OSPF configuration and My Challenging Work.

Chapter-05: I will describe the Competencies Earned.

CHAPTER 2

Organization

2.1 Introduction

Daffodil Online Ltd. (DOL) is the providing one-stop integrated ICT services and solution since July 2002 and DOL is going to conduct the all most challenging & demanding IT professional courses. Daffodil Online Limited (DOL) is one of the quick ISP's in Bangladesh to connect everybody anywhere at all the time to deliver high-quality Information Communication Technology (ICT), services at a reasonable price and DOL uses the latest technologies with the upgrading the services wherever it is required.

2.2 DOL IT Services Offered

DOL courses offered:

- The Certified Ethical Hacking (CEH) Course.
- The ISP setup or administration using Linux Course.
- The Web site development and Joomla Courses.
- The Red Hat Certified Engineer (RHCE) Course.
- The PHP & MYSQL for the Website Development Course.
- The Red Hat Certified Security Specialist (RHCSS) Course.

2.3 Target Group

- This goal is the core issue of a company. Fineness is very good for the company so you want to provide very good service to any client or any company.
- We can manage employees effectively to help meet the goals and to achieve the sustainable results of this company.
- One or more of the business targets are run by our company, education, hospitals, clinics, cement industries, wood industries, garments industries, real estate companies.
- We would like to increase our journey to higher levels - resources, skills, impact, and business of their clients
- We can try to increase the main goal of the high level in our country.

2.4 SWOT Analysis

An effective strategy for you opens these opportunities for you or the weaknesses of your face threats.

Show the figure here SWOT Analysis:

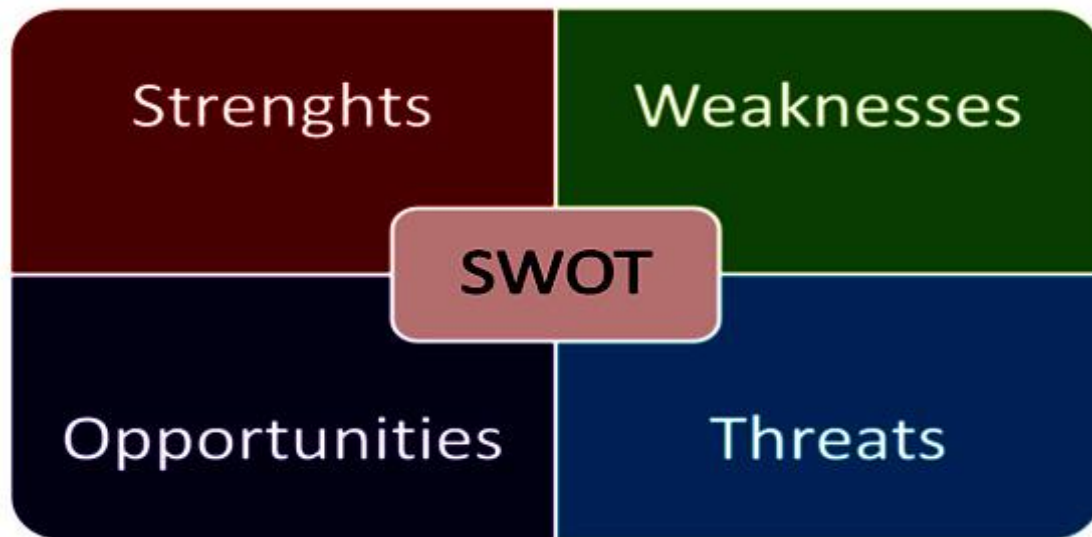


Figure 2.3: SWOT Analyses

Strengths:

- ✓ The Communication between people separated by Distance (at home and workplace), and the business Setting an online.
- ✓ In the other company very carefully give the batter business service and the company respected employers that our value its workforce is good services given.
- ✓ We can organization has very strong moral values and moral mission of the statement.
- ✓ We can organization has very strong moral values, and the moral mission of the statement.

Weaknesses:

- ✓ The large sums of the money needed and set up in the businesses.
- ✓ The IT Company sometime faces something a problem and the small competition for resellers.
- ✓ We will be a small staff and with shallow skills base of our company in some on area and the new entrants underestimate levels of expertise required in the markets.
- ✓ The something which means that these weaknesses might lead and serious problems in the company's strategic planning and might even lead to worse situations.

Opportunities:

- ✓ The structure in this population changing age and this simpler tariffs introduction.
- ✓ We will opponent maybe show or take up new technologies and our IT Company.

- ✓ Our IT Company sometimes offers good job opportunities for the other IT Company.

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.

2.5 Organizational Structure

Show the DOL Organizational Structure:



Figure 2.5: DOL Organization structure.

CHAPTER 3

Tasks, Projects, and Activities

3.1 Daily Task and Activities

I will learn in Daffodil Online Limited (DOL), and performed the Daily tasks:

One month:

- Instruction the understanding about networking components and understanding the basics of Linux Centos.
- Instruction to the understanding Linux centos Partition and Run level.
- How to the Installing Linux Centos.

One month:

- Basic commands for Centos.
- User and password management and file and directories accessing in the Linux Centos.
- Know about logged in users to the Linux Centos.
- To Copy & Move File Directories and File compressed and Decompressed in the Linux Centos.

One month:

- File and directory permissions command.
- Installing and Update & Remove package Used YUM.
- The idea of IP Addressing and configuring In Centos.

3.2 Centos Installing System

3.2.1 Creating Linux Partition

We need to install Linux in order to create at least 3 partitions:

- Root (/) Partition.
- Boot Partition.
- Swap Partition.

➤ **Root (/) Partition**

Root Partitions There are "/" root files (except boots) on the root directory and root partition then Require minimum 5GB of HDD space.

➤ **Root (/boot) Partition**

Boot partition (200 MB): This partition mounted on / boot / contains the operating system and the kernel that allows your system to boot Linux and with the files used during bootstrap processing. To maintain these files a local ext3 partition must be created and for most users, a 200 MB boot partition is sufficient.

➤ **Swap partition**

Root is used to support virtual memory and in other words or information written in the data is a swap partition and when there is not enough RAM to store and process information on your system. A virtual RAM, 2 GB and physical RAM to swipe up to a partition or any amount above 2 GB but it is not less than 32 MB.

3.2.2 Linux Run Level Used by Centos

Show the Linux Run Level command By Centos:

- # init 0 -(Shut Down).
- # init 1 -(Single User Mode).
- # init 2 -(Multi-User Mode).
- # init 3 -(Full Multi-User Move).
- # init 4 -(Unused).
- # init 5 -(X-Window or GUI Mode).
- # init 6 -(Reboot or Restart Mode).

3.2.3 The Basic Command of Linux Centos

Show the Basic Command by Linux Centos:

- Present Working Directory:- pwd
- Chang Working Directory:- cd /root/Desktop
- About the List Information File:- ls
- Create the Directory:- mkdirshorif (“shorif” is a directory name)
- Create the Blank File:- touch shorif (“shorif” is a file name).
- Shut Down:- init 0, Shutdown –h now, or poweroff.
- Reboot Or Restart:- init 6 or reboot.
- Logout:- The Current User off the system.
- Clear Display:- cal, Cal 2019 or cal 1 2019.
- Change The Display Date and time:- date.

3.2.4 User and password management create command by Linux

Show the Create the User and Password Management command:

- Adding a User:- addusershorif (“shorif” is a Username)
- Password Set to New User:- passwdshorif (“shorif” is a Username)
- Password Remove or Disable:- passwd –d shorif (“shorif” is a Username)
- Verify User Information:- finger shorif (“shorif” is a Username).
- Locking an account:- passwd –l shorif (“shorif” is a Username).
- Unblock and account:- passwd –u shorif (“shorf” is a Usernamr).
- User Nam Delete:- userdelshorif (“shorif” Username is Delet).
- Delete a User and Home Directory:- userdel –r shorif ("shorif" Directory is Delete).

3.2.5 The About of Logged in used by Linux command

Show the know about the logged in user command:

- W or Who or Who am i (This command used to all Information user.)

3.2.6 File Copy or Move by Linux command

Show the File copy or move command by Linux centos:

- File Copy: cp "Filename" "destination"
- File Move: mv "Filename" "destination"

3.2.7 VI Editor command for Linux Centos

Show the VI Editor command by Linux centos:

- File Edit: ci shorif ("shorif" is a Filename).
- Insert Text: I or a.
- Charter is the Delete: dd or x.
- Line Copy: Esc:5yy (Copy to 5 number line)
- Paste command: p
- Line Number Set: Esc: set nu
- Go To The Top line: Esc:0
- Go To The Bottom Line: Esc:\$
- Go To The Specific Line: Esc:30 (show cursor 30 number line).
- Line Number Delete: Set nonu
- Search keyword: /Islam (go to cursor Islam).
- Document Save command: Esc:wq or Esc:w or Esc:q

3.2.8 Install, Update & Remove Packages in Linux Centos

- Install a package using yum install or Yum install (package name) then e.g. yum insallmysql.
- Uninstall a package using yum and yum remove (package name), then e.g yum remove mysql.
- Update a package using yum, then yum update (package name), then e.g yum update Firefox.
- Search a package using yum and then yum search (package name), then e.g yum search Firefox.
- Display Additional Information about a Package, then yum info (package name), and then e.g yum info firebox.
- View All Available Package then show the yum list | less
- View Already Installed Package then yum list installed
- List of all available software group then show the yum grouplist.

3.2.9 Compress and Decompress A Directory Using Tar and Untar

Show the Packages Installing and Update and Remove by Linux Centos:

Shows the tar and untar command used:

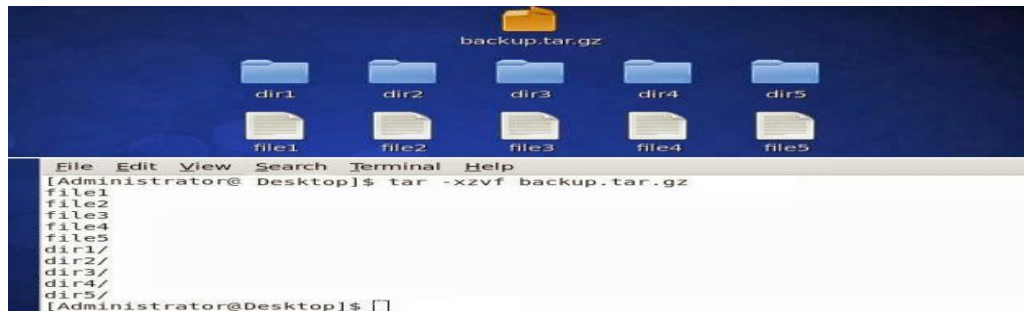


Figure 3.0: tar and untar using command.

First the create a text File:

Command: `cat > backup.txt` then second create a tar File:

Command: `tar -cvf backup.tar backup` or `tar -xvf backup.tar` and then the create tar.gz File:

Command: `tar -czvf backup.tar.gz backup` or `tar -xvf backup.tar.gz`

3.2.10 How to Add Change Delete and Display IP Address In Centos

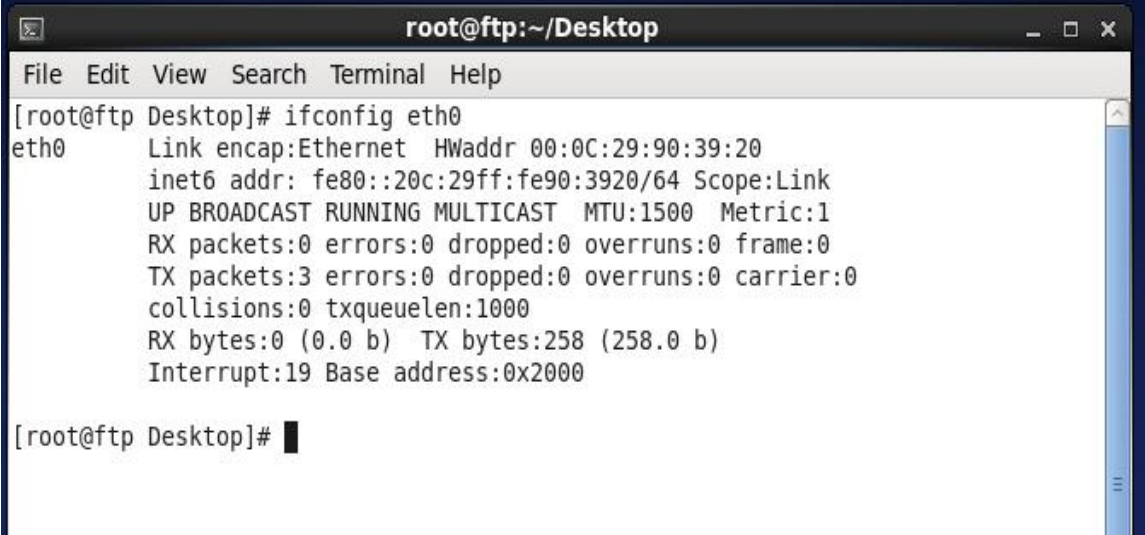
To see IP address: `ifconfig` or `ifconfig eth0` show the IP address



Figure 3.1 Shows IP address in Linux Centos Command mode.

Given The Command: `ifconfig` (show the inet6 add: `fe80::20c:29ff:fc90:3920/64`)
Scope: Link.

IP Address and Mac Address command is ifconfig eth0:



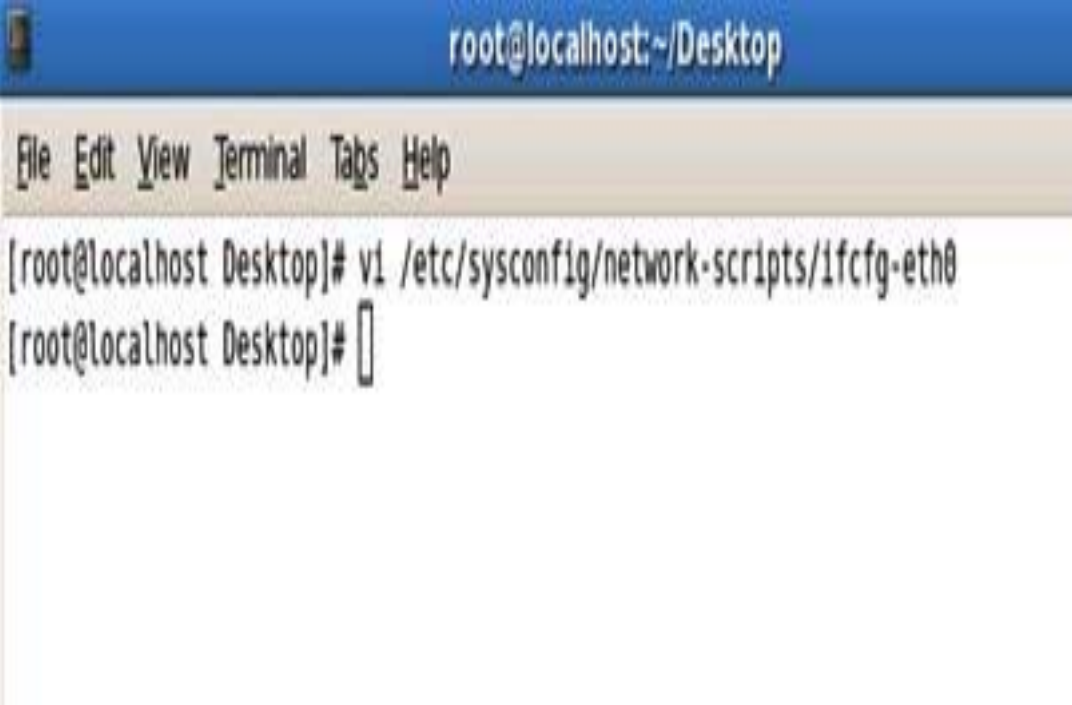
```
root@ftp:~/Desktop
File Edit View Search Terminal Help
[root@ftp Desktop]# ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:90:39:20
          inet6 addr: fe80::20c:29ff:fe90:3920/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:3 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 b)  TX bytes:258 (258.0 b)
          Interrupt:19 Base address:0x2000

[root@ftp Desktop]#
```

Figure 3.2: IP Address and Mac Address eth0 port Command mode.

Here is Given The Command: ifconfig etho0 (show the inet6 add: fe80::20c:29ff:fc90:3920/64) Scope: link.

Permanently IP Address Setup Command mode 01:

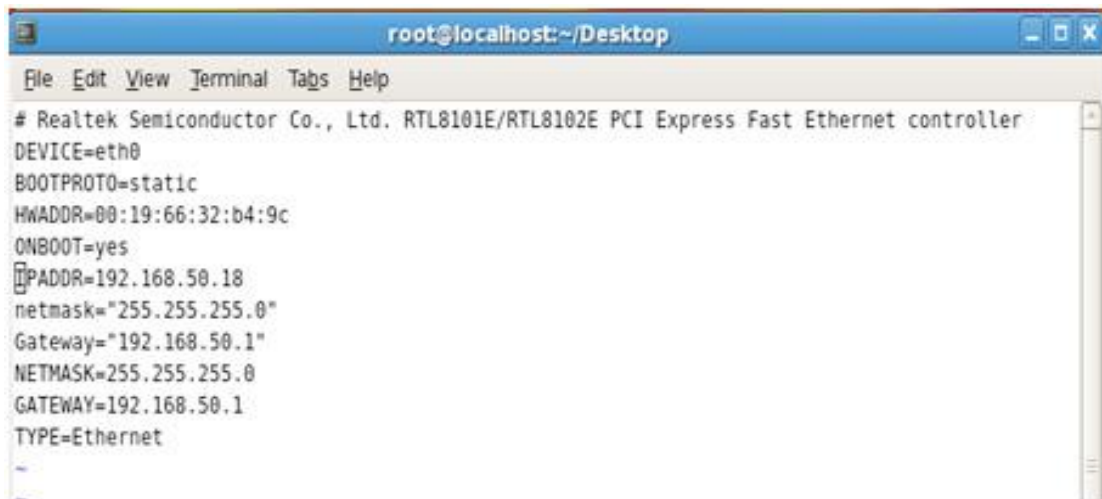


```
root@localhost:~/Desktop
File Edit View Terminal Tabs Help
[root@localhost Desktop]# vi /etc/sysconfig/network-scripts/ifcfg-eth0
[root@localhost Desktop]#
```

Figure 3.3: Permanently IP Address Setup command mode one.

Here is Show the IP Address Edit Command: vi /etc/sysconfig/network-scripts/ifcfg-etho0

Permanently IP Address Setup Command mode 02:



```
root@localhost:~/Desktop
File Edit View Terminal Tabs Help
# Realtek Semiconductor Co., Ltd. RTL8101E/RTL8102E PCI Express Fast Ethernet controller
DEVICE=eth0
BOOTPROTO=static
HWADDR=00:19:66:32:b4:9c
ONBOOT=yes
IPADDR=192.168.50.18
netmask="255.255.255.0"
Gateway="192.168.50.1"
NETMASK=255.255.255.0
GATEWAY=192.168.50.1
TYPE=Ethernet
```

Figure 3.3: Permanently IP Address Setup command mode two.

Here is show the IP Address all information in the computer screen, then show this picture is Devices is eth0, then Boot proto is Static, then HWADDR is address 00:19:66:32:b4:9C, then On Boot is yes and the IPADDR is the 192.168.58.18 then subnet mask is 255.255.255.0, and then Gateway IP is 192.168.50.1 and subnet mask is 255.255.255.0 and type is Ethernet.

CHAPTER 4

Configuring MikroTik

4.1 MikroTik Router

MikroTik Limited is internationally known as MikroTik and it is a Latin manufacturer's computer networking equipment and It sells wireless products and router and Founded in 1995, with the intention of the emerging wireless technology market or sales or The company has more than 100 employees by 2014 The company's products are known for low-priced alternatives to expensive router and Ethernet radio relay lines.

4.2 Release History of MikroTik Router

MikroTik will be published various versions of Router in various times and Some of them are given below.

- Last Relies Router OS Version 6: May 2013,
- Threat Relies Router OS Version 5: March 2010,
- Second Relies Router OS Version 4: October 2009, and
- First Relies Router OS Version 3: January 2008.

4.3 Initial step for MikroTik Configure

- Give Power to the MikroTik Router and Plugin UTP Cable in MikroTik LAN Port and the other port this PC.
- Browse with Win-box and Click to icon and hare show IP address & Mac Address.
- Click to Mac Address and Then write "Admin" in the login box and do not necessary to a given password.

Reset command in the MikroTik Router:

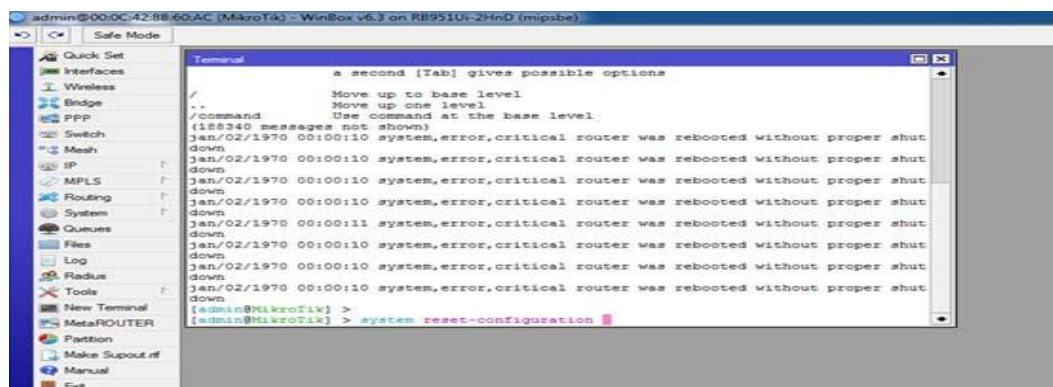


Figure 4.0: Show the Screen Command Reset MikroTik Router.

Here is a Command mode or terminal and given the reset configuration and this terminal is reset.

❖ Defining routes or Setting up Gateway:

Process:

IP then Route then “+” then Gateway, and Apply and Ok

IP Address Set in MikroTik Router:

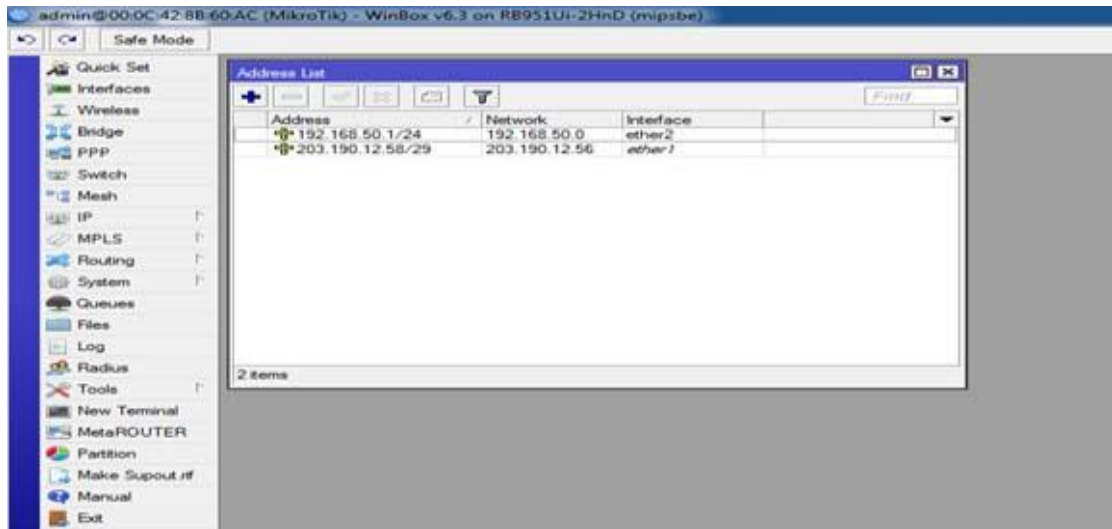


Figure 4.1: Show the Screen IP Address in MikroTik.

Here, firstly go to IP click then chose the Address List then click the Plus button. The ISP Service provider had given the IP, server IP and IP Getaway. The putting the ISP address IP and Server IP show ethernet1 and ethernet2.

Given the Setup IP Address in Route:

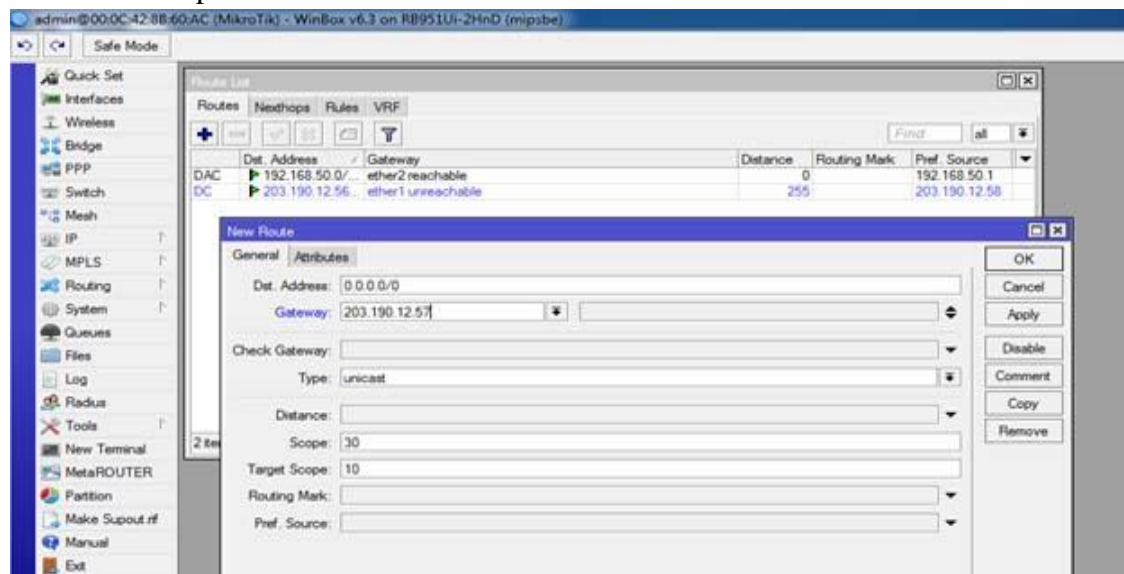


Figure 4.2: Show the Screen Gateway in MikroTik.

Here, is the putting the Subnet mask in Gateway. And the click Apply then ok.

❖ NAT Network IP Address Rules:

Process:

IP then Firewall then NAT Then "+" and General.

Chain: srcnat and Src. Address: IP with Subnet Mask in the network.

Action:

Masquerade then Apply and OK.

Local network IP Address NAT Rules:

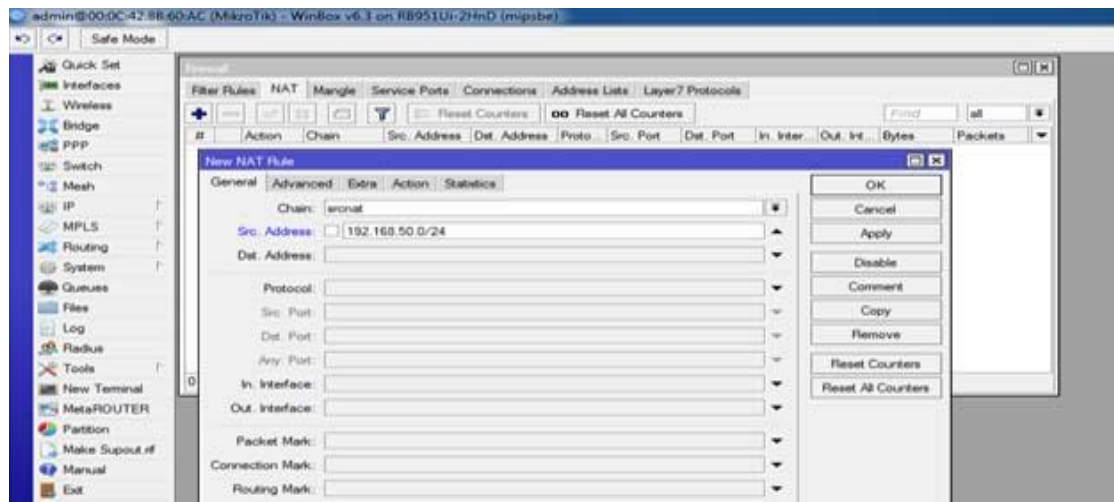


Figure 4.3: Show the Screen NAT Rules in MikroTik.

Here, is a screen show the NAT Networking and putting the host IP Address. This IP is service the customer computer used.

Firewall configuring System:

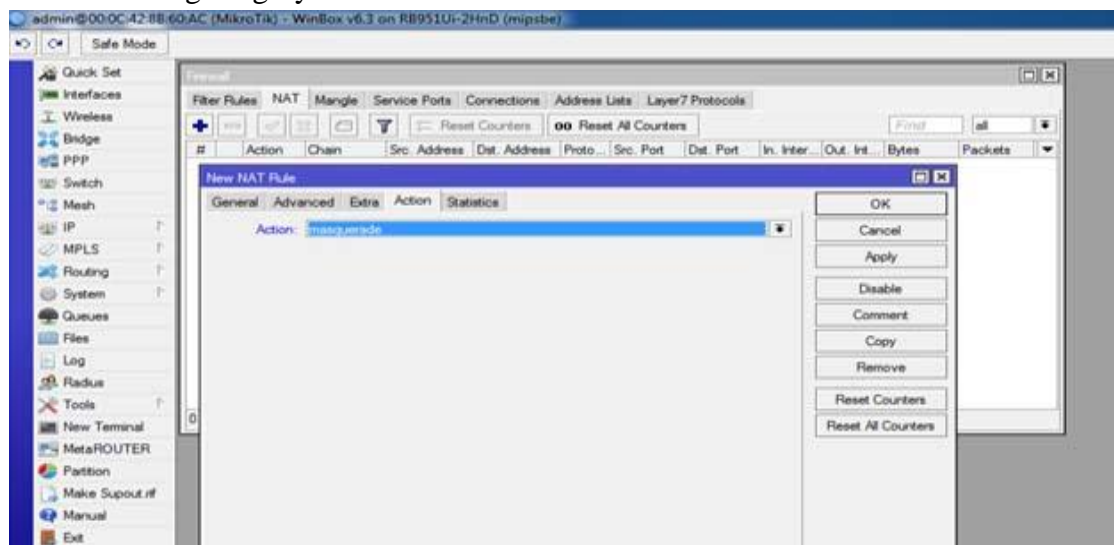


Figure 4.4: show the Screen Firewall in MikroTik.

Here is the Protecting your network, and select the Action: masquerade, using Firewall.

❖ **Bridging the related ports with each other:**

Process:

Bridge then “+” then go to Settings three Options to Tick mark Then OK.

Bridge Setting System:

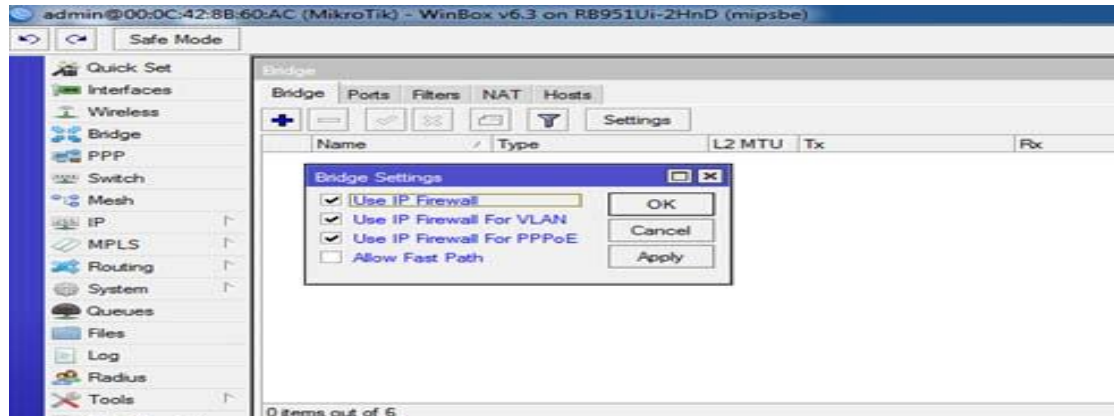


Figure 4.5: Show the Screen Bridge Settings in Mikrotik.

Here is the Picture the bridge settings, first three cheek box select. Then not allow fast path cheek, not cheek mark. Then Ok.

❖ **The Router Pot In Graphically in MikroTik:**

Ports:

ether2 and ether3_LAN and ether4 and ether5 and wlan1

Show the Router interface port in graphically:

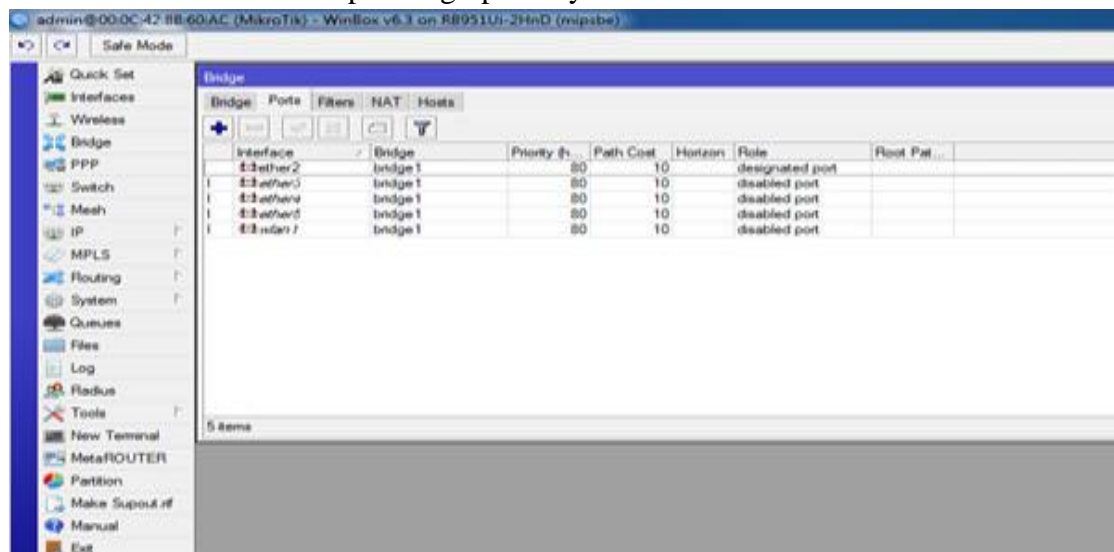


Figure 4.6: Router interface port in graphically in MikroTik.

Here, is the show picture interface port graphically and all information in the Computer screen.

❖ **Know the bridge profile with the DHCP server:**

Process:

IP then DHCP Server then interface: bridge 1 select
Then go to the Next button.

Show the computer screens:

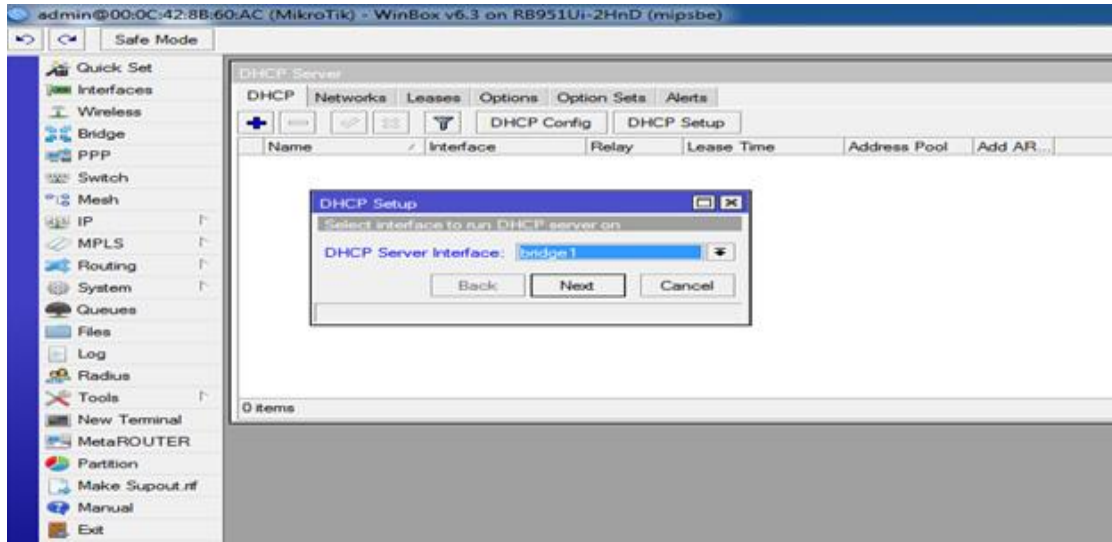


Figure 4.7: Show the DHCP server bridge Profile set up in MikroTik.

DHCP means Differentiated Services Code Point, is a means of classifying the managing network traffic and of the providing quality of Services in modern Three IP networks layer.

Local IP pool address in the network:

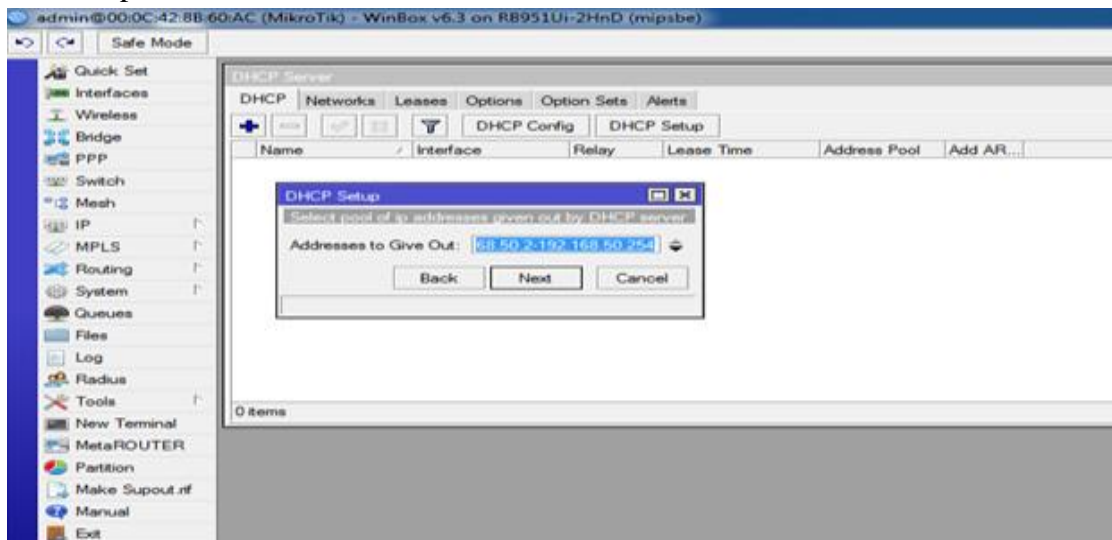


Figure 4.8: Show the local IP pool address in the MikroTik.

Here the picture is IP pool address in select the Next button click.

DNS IP Address Setup In the MikroTik:

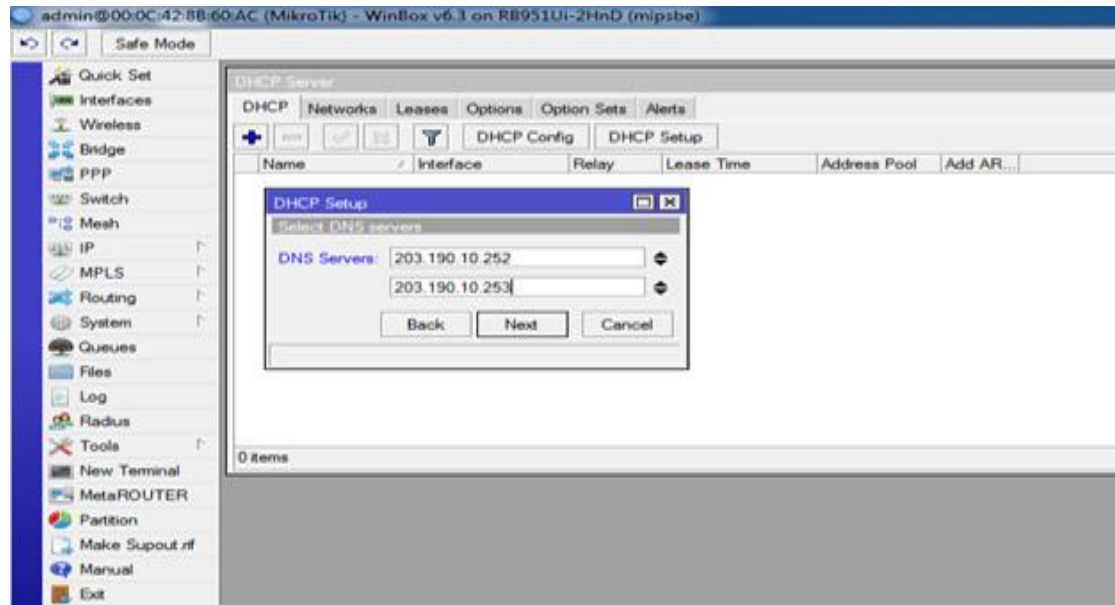


Figure 4.9: DNS IP Address Setup in the MikroTik.

Here, is the show the DNS Servers setup windows. Then the putting the IP address and go to the Next button click.

❖ Wireless LAN Configuration in the MikroTik

Process:

Wireless then wlan1 then Mode: ap bridge. And then Ok

Show the Wireless SSID Mode sitting:

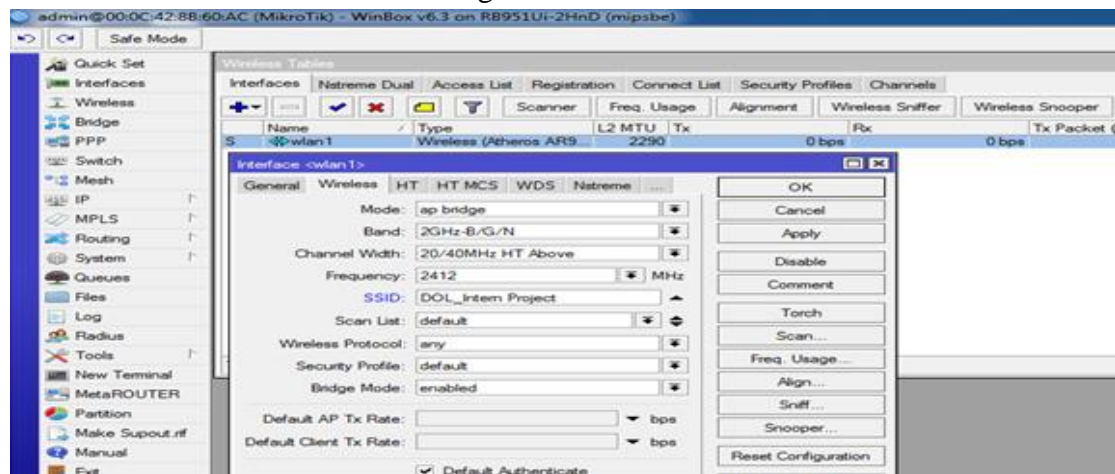


Figure 4.10: Wireless SSID mode sitting in the MikroTik.

Here, is the show the SSID Wireless interface setup window. Given the mode ap bridge then Band is 2GHz-B/G/N then Channel Width: 20/40MHz HT Above, then Frequency is 2412 and the main SSID DOL Intern Project. Then scan list is Default and or some on the figure.

Show The Wireless pass work setting:

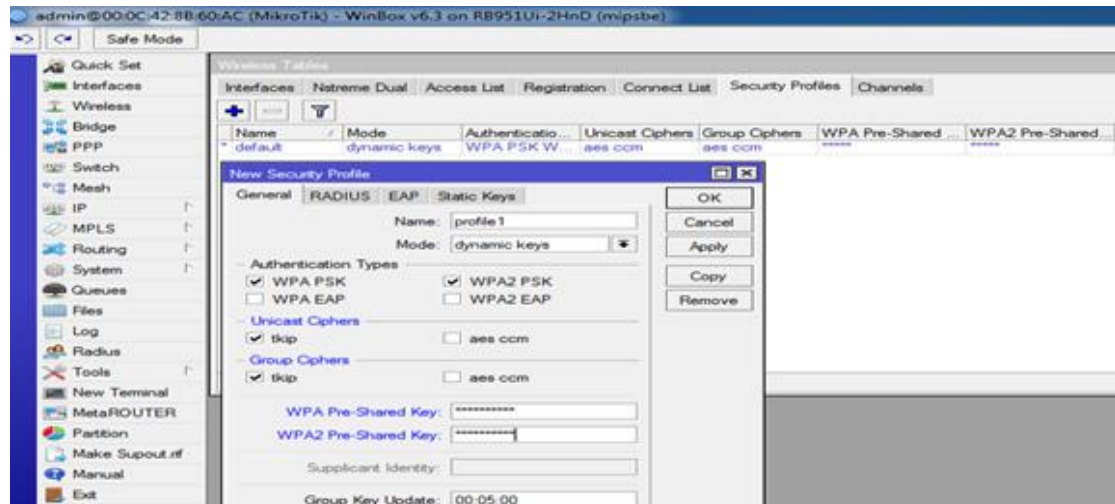


Figure 4.11: Wireless pass work setting in the MikroTik.

Here, the last MikroTik setting is a Wireless pass network. Show the screen new security profile, then setting the general then Set the Name: Profile 1 and Mode: dynamic keys select. Then authentication type cheek box tick mark is WPA PSK and WPA2 PSK. And then Unicast Ciphers is Cheek box tick mark is Tkip open, then Group Ciphers: tkip is the cheek box tick mark.

3.4 OSPF Configuration in MikroTik

For the project network and I have configured the OSPF with an existing OSPF system in the MikroTik router which is provided from the data center's juniper router. As a result and it became a relative point-to-point OSPF for the network or was easy to configure. The OSPF configuration is given below with the GUI and command line interface in the MikroTik router.

Configuration for the GUI:

Show the OSPF routing protocol in MikroTik:

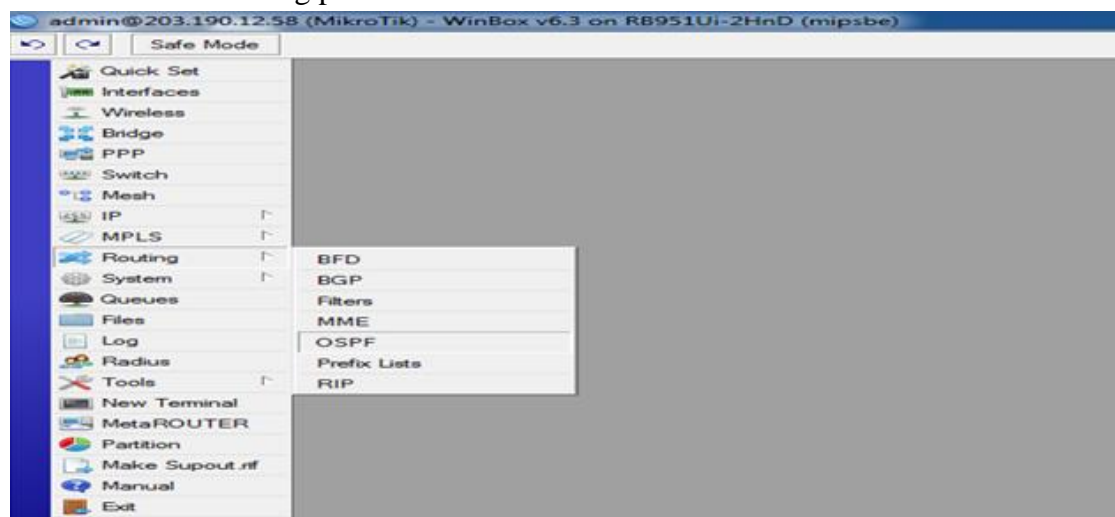


Figure 4.12: OSPF routing protocol in the MikroTik.

Network Configuration System: Here I will configure the network for OSPF. At first, I will configure WAN and select this is OSPF.

First WAN network Configuration for the OSPF:

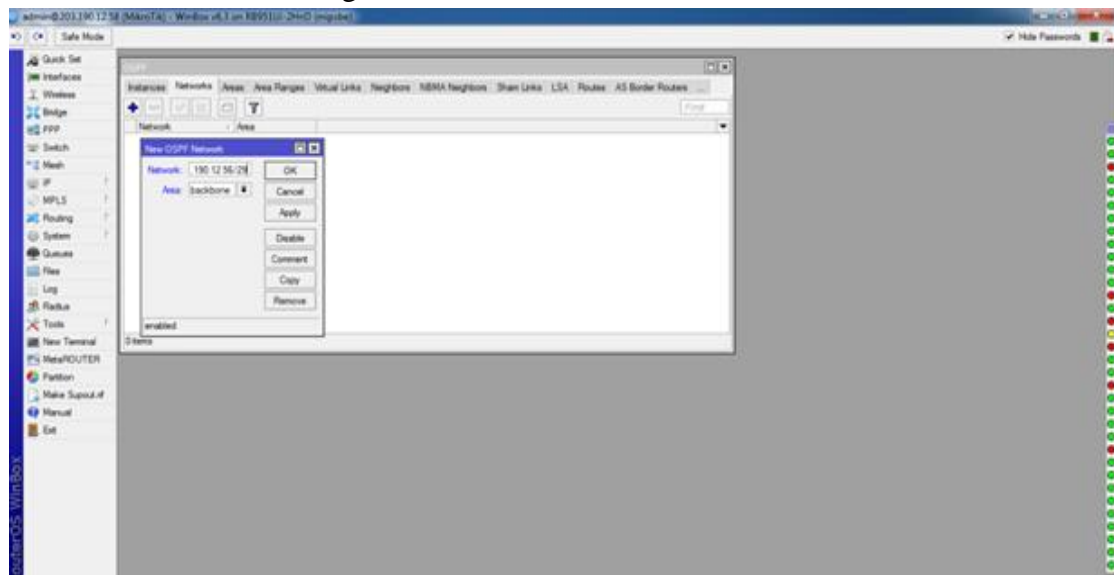


Figure 4.13: WAN Network Configuration for OSPF.

First, click this Network Menu then Put the network IP and select the Backbone and Then OK.

LAN network Configuration for the OSPF:

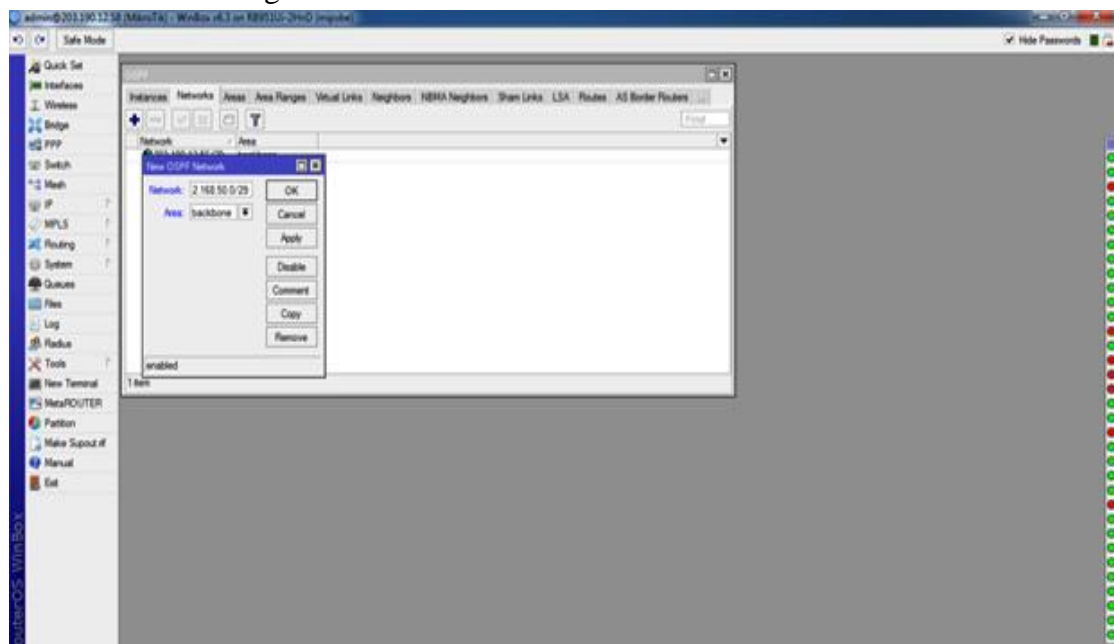


Figure 4.14: LAN Network Configuration for OSPF.

LAN is the same configuration: Select the Network Menu and given the IP Address and then area select Backbone and Ok.

IP Address setup in LAN and WAN for OSPF:

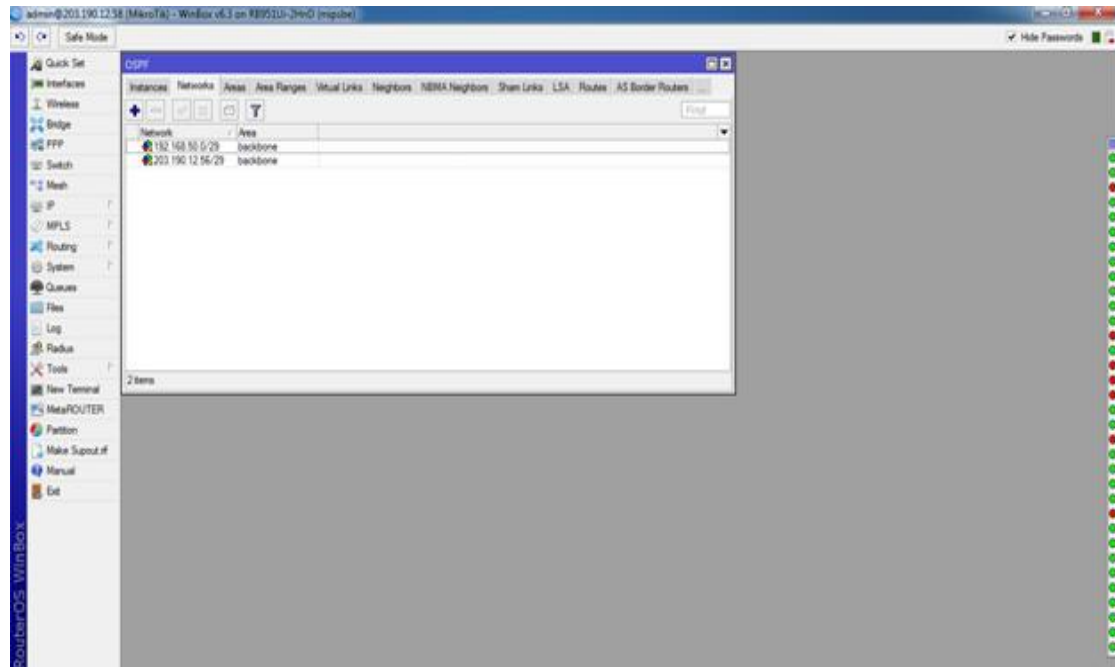


Figure 4.15: IP address Setup in LAN and WAN for OSPF.

Here, is a Create the LAN and WAN Network.

The Interface Selection in OSPF:

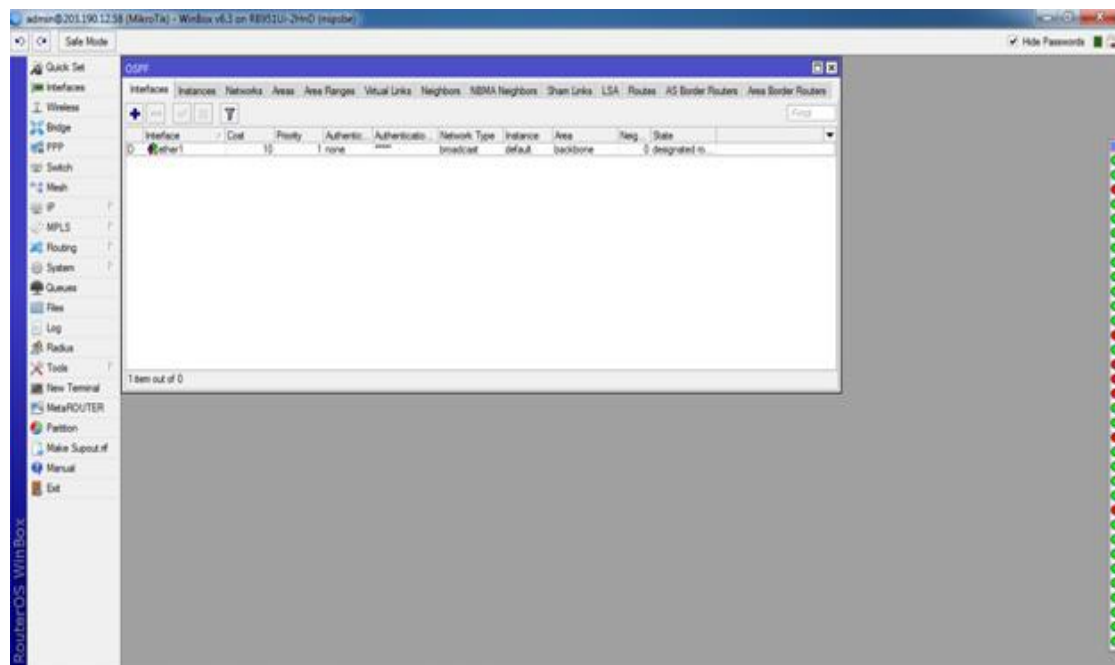


Figure 4.15: show Interface selection in the OSPF.

Here the selection the Interface, show the Area Name: backbone then instance: default than is ID then Type: default and then some on.

4.4 My Challenging work

There is no challenge in the work and but after listening to my internship experience four months and happy hours or for sharing of friends and I have seen that there are some common internal challenges and I think it has three topics intern interns or under-unfriendly or temporary and temporary and they are a nation to gain experience. Sometimes not enough work: Not enough work for me is allocated and I bothered and neutral my fingers strumming my fingers and enticed Face booking to peruse or Too much work and because internally are very happy to be on the door and some workplaces can take advantage of young workers to do repetitive work for a short time. Compare to other interns: Fortunately I was an intern and we ask each other's questions and can easily work with the cooperation that has worked in groups where there were such associate relationships. Internals for future job openings or recommendations for a good letter will be challenged in other office environments and so may not be friendly. A New Lifestyle: As a recent college graduate and I may be going to a new lifestyle that can be quite annoying or Instead of waking up at eight and go to classes every day or I'm sitting in the 9-5 table. I used to stay with my parents to save money. Hours and the new living conditions are clearly more difficult to socialize than before.

CHAPTER 5

Conclusion

5.1 Competencies Earned

Learning how to learn and understand or enable a learner to learn the result of qualification or learning is a statement. Install and exterminate both network and server machines in two data centers or Lead role in the implementation of advanced Linux software and for example, LDAP HA, adjoining program learning results in this field and internship evaluation. Student Association Office funded by many or others students Internal Learning Outcomes or An Internship Collects Project Details and Organizes and Participate in a new look at the Linux Lab's web site and Learning outcomes Install and configure software and upgrade or Install and Configure and Test Network Employer Services. In addition and consistent with educational results in and internship on-site supervisors will provide an orientation to organizational policies and procedures.

5.2 Conclusions

This internship review has a wonderful and rewarding experience and I have seen in the future and I will be able to help me with network opportunities that many people have been able to make sure. Through this internship and I learned that one of the main topics and time management skills and self-motivation is one. When I first started I was eight hours a day and i can sit in the office for six days a week and I do not think so. Once I realized that my overlapping hour was not broken and then so I arranged for my day job. Organized and when it was the right time, I would have learned to respond readily for questions that I want to know. I am working hard for my position and hope to learn about art and meet new people.

Reference: Font-12

[1] Get idea about Daffodil online limited (DOL), Available at, <<http://www.daffodilnet.com/index.php?option=com_content&view=article&id=54&Itemid=112>>, last accessed on 16 February 2019, 11.30pm.

[2] Get idea of Google Translate, Available at, <<<https://www.google.com/search?q=google+translate&oq=hgoo&aqs=chrome.2.69i57j0l5.14432j0j7&sourceid=chrome&ie=UTF-8>>>, last accessed on 03March 2019, 10.00am.

[3]Get idea about MikroTik Router, available at, <<<https://en.wikipedia.org/wiki/MikroTik> >>, last accessed on 24 March 2017, 11:00am.

[4]Get idea about MikroTik Router Configure, available at, <<<https://www.youtube.com/> >>, last accessed on 24 March 2017, 11:00am.

[5] Get idea about Recommended Partitioning Scheme, Available at, <<www.centos.org/docs/5/html/5.2/Installation_Guide/s2-diskpartrecommen-ppc.html>>, last accessed on 20March 2019, 11.00pm.