

# **INTERNSHIP ON CISCO NETWORKING TECHNOLOGIES**

**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**

**29/01/2023**

## APPROVAL

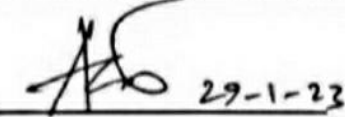
This Project titled “Office Internship”, submitted by **Md Humayun Kabir Sumon**, ID No: **191-15-12164** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on **29/01/23**

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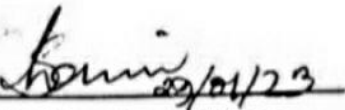
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## DECLARATION

I hereby declare that, this project has been done by me under the supervision of **MS SHARUN AKTER KHUSBU**, Lecturer, **Department of CSE**, and Daffodil International University. We also announce that neither this project nor any piece of this undertaking has been submitted somewhere else for grant of any degree or diploma.

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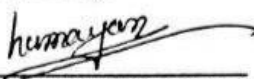
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I am extremely grateful to **Ms Sharun Akter Khusbu , Lecturer, Department of CSE**, Daffodil International University, Dhaka, and wish to express our deep gratitude. To complete this project, our supervisor must have extensive knowledge and a keen v interest in the field of "Networking." His never-ending patience, scholarly guidance, endless support, continual and energized oversight, constructive, valuable advice, and having read many poor drafts and correcting people at every stage made this Internship possible.

I'd like to express the deepest appreciation to all of the CSE lecturers and department heads for their generous assistance in completing my internship, as well as to

Finally, I must acknowledge with due respect the constant support and patients of our parents

## ABSTRACT

Networking has become an increasingly important part of business sector for both professional and non-professional events in this era. We couldn't imagine our lives without the Internet. The internet has become a necessary part of our daily lives. The Internet is used for everything from education to business.

The internet is by far the most useful element in the world in the "Covid-19." All of the work in "Covid-19" is dependent on the Internet. All of the work is now being done online.

Like: -

- Bank,
- Education,
- Business,
- Transportation, and
- Food Delivery

Because all work is becoming more online-based, I chose "Network System Administrator. I completed my training with the well-known organization "IsDB" and gained live server

experience at Amber IT Ltd. Amber IT has a wealth of experience. From these reports we can learn a lot of networking and then we can use the knowledge to the job life

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# Chapter 1

## INTRODUCTION

### 1.1 Introduction:

Internships are a great way to learn about how a company operates in real life. The internship helps to connect practical and theoretical knowledge. I took programming, graphics, networking, and other courses as a computer science & engineering student at Daffodil International University. I chose networks out of all the subjects because everything currently works reliably. East. I have always been concentrated on adding my networking career.

As a result, I chose to take an "IsDB" training course in network services administration. I completed a six-month training program with handsome. I'll bandy all of the success I encountered during the training in this report.

### 1.2 Motivation:

We live in a Digital World. Nothing is feasible without the Internet, and we can fluently comprehend the Internet's power in the age of "Covid- 19." Everyone recognizes the value of either the Internet when they're brazened with blocking issues. We're unfit to use the internet in any way. As a result, living is by far the most main matter we can do with our lives. moment, the Internet provides dependable access to all conditioning. The Internet connects everything from education to business, either directly or laterally. I chose the network to achieve my thing of getting a network systems director. All of this, I explained, served as negotiating the externship. Because I network, I'm confident that I'll keep pursuing a career in this area and be better in the request.

### 1.3 Internship objects

- How the Internet connects everyone
- Mastery of technical skill
- How it works well for those
- How to communicate effectively with others
- Develop logical and critical thinking chops as well as executive chops.

#### **1.4 Introduction to the Company:**

The Islamic Development Bank- Bangladesh Islamic Solidarity Educational Wakf( IsDB BISEW) was the first association in Bangladesh to work in the field of information technology. In Bangladesh, it offers computer-affiliated training courses. Only Muslim scholars are served by this association. The main reason for encouraging Muslim scholars to pursue careers in information technology. The IDB- BISEW was founded in 1997 as a result of an agreement between both the IDB and the Authorities of Bangladesh. The IDB was established to help Muslim scholars in Bangladesh who are pursuing an Islamic education. It's in the Bangladeshi megacity of Agargaon. This association has trained up to 50,000 student preceptors so far. The Association assists the apprentice in chancing employment 42,000 interns are among them, working in a variety of associations. This association has listed six months of work. All trainers are needed to attend all meetings.

#### **1.5 Report Layout:**

The part objective and readings type subtleties, as well as benefits, line breaks, pagination, furthermore, adding equations, figures, and references, are accessible while planning this report. Table 1 shows the general design details.

# Chapter 2

## ORGANIZATION

### 2.1 Introduction:

A network is a collection of two or indeed more PCs that are linked together. There are colorful types of networks when it relates to networking. still, the following are the common types of networks.

1. Local Area Network (LAN)
2. Wireless Local Area Network (WAN)
3. Network of Metropolitan Areas (MAN)

A LAN connects computers in a small area, as in an office, a home, or a small area. A WAN connects computers via lines of communication, radio signals. We classified networks grounded on three parcels indeed before we wanted to classify them.

1. Topology
2. Protocol
3. Design and construction.

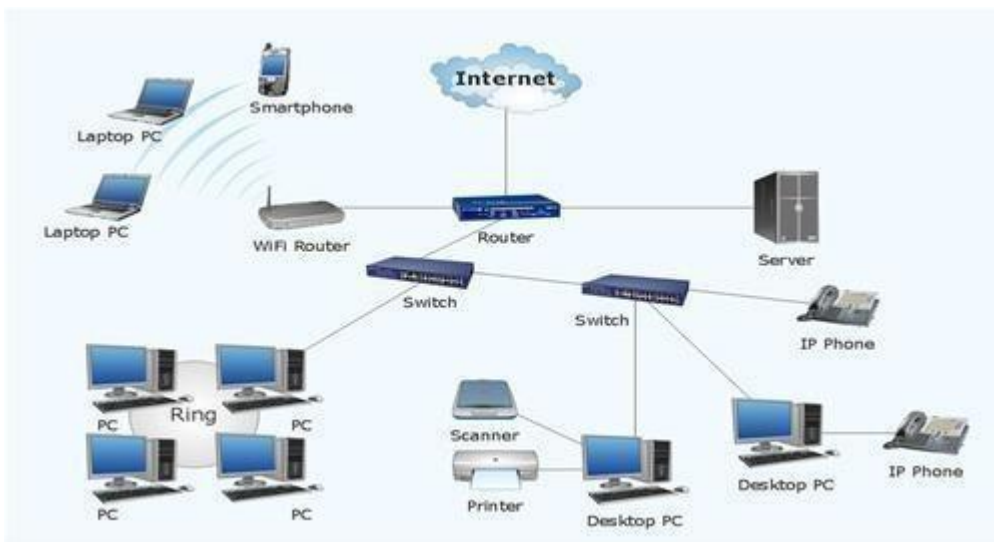


Figure 2.1: Introduction to internet

### 2.2.1 Internet:

The Internet is an overall arrangement of a great many PCs that speak with each other. You can utilize the Internet to get practically any data, begin speaking with individuals from onside of the planet to the other, and undeniably more. This can be all cultivated by joining a gadget to the

Network, otherwise called the web. The expression "online" just alludes to a PC's association with the Internet.

### **2.2.2 Broadband:**

Broadband and baseband appear to be two changed ways of sending simple and computerized information over an organization line. Since everybody utilizes broadband at home, we hear individuals say "broadband" a considerable lot nowadays. Broadband empowers us to communicate both simple and advanced information over a similar transmission object.

Broadband permits us to all the while send principal media transmission recurrence parts, as well as simple and computerized signals, across a similar link.

### **2.2.3 Baseband:**

Baseband is utilized by all LANs. At the point when the actual arrangement's data transmission has been completely used. We realize that Ethernet just communicates each double code in turn and makes use of all suitable data transfer capacity. At the point when different examples are sent all at the equivalent from various has during correspondence, impacts happen; the equivalent is valid for Wi-Fi.

### **2.2.4 Hardware:**

In an organization framework, there are a few unique kinds of sensors that can be utilized. When a network director is responsible for a framework with servers, switches, and switches, he will not at any point be confronted with the requirement for these instruments. These equipment devices, then again, are unbelievably useful for chairmen on the grounds that network configuration includes the arrangement of links. A significant number of the most generally utilized network gadgets are given below.

### **2.2.5 Cables Tester:**

The electronic estimating instrument that consolidates can actually look at the association between the two finishes of the link. It can determine whether the association is straight or on the other hand in the event that it is crossed.



Figure 2.2 Cable tester

Cable Stripper/Snips: Scissors/Wire Stripper: Wire stripper/scissors are creasing apparatuses that can crease wires. An organization expert's sack contains a crimper, which is a helpful apparatus. Creasing.



Figure 2.3: Cable Stripper

### 2.2.6 Antivirus:

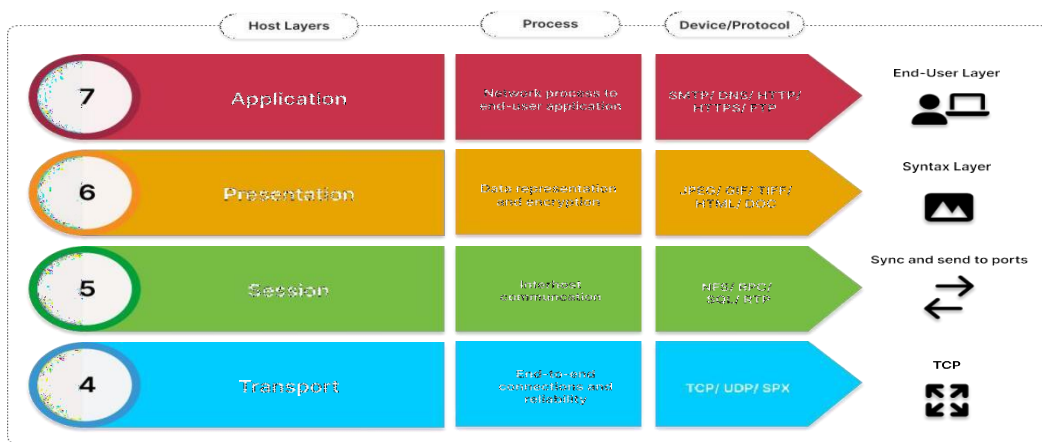
Infection security is a significant issue for a business. At the point when a business needs to refresh, antivirus programming should be kept up with on a standard premise. Malware definitions, and the malware motor itself, should be stayed up with the latest by the association. With regards to choosing an enemy of malware arrangement, organizations have two choices.

1. Host-centric
2. Cloud-based

Host-based antimalware will be antimalware that is introduced as well as run on the host PC. The advantage of utilizing a host-based antivirus arrangement is that you have unlimited authority of the cycle. Associations, then again, should adjust to the changes.

## 2.2 OSI Model:

The OSI model is the main organization capability. The model determines how information is moved starting with one host then onto the next. The host can be Unix-based, Windows based, or Mac-based, yet the OSI model empowers us to impart between individuals. It has seven layers, which each performs seven distinct undertakings.



### OSI model layers are:

- Application (Layer 7)
- Presentation (Layer 6)
- Session (Layer 5)
- Transport (Layer 4)
- Network (Layer 3)
- Data Link (Layer 2)
- Physical (Layer 1)

## 2.2 Virtual Private Network (VPN):

Despite the fact that it gives off an impression of being a WAN association, a Virtual confidential organization a LAN to a WAN since a LAN machine attempts to remotely get to its assets. The principal distinction among VPNs and different sorts of associations is security. In spite of the fact that associating a Organization to a WAN might have all the earmarks of being exactly the same thing, a VPN is considerably more. A regular WAN associates the two

or much more virtual LANs that utilization another person's network, like an internet service and switch. The host and switch consider these organizations to be remote organizations, yet not networks.

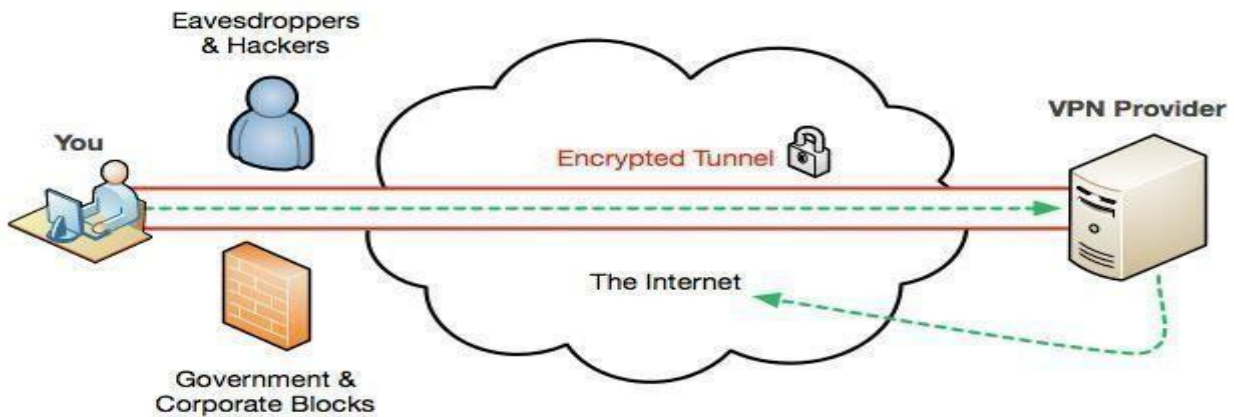


Figure 2.5: Virtual Private Network

## 2.5 Software:

To continue checking the organization framework, organizing utilizes programming. Unique undertakings require the utilization of specific devices or programming, as well as their establishment, to deal with the organization. We utilize some of programming to organize scanners consistently.

Some significant programming that are utilized in the systems administration:

- Wireshark
- N-map, Zen-map
- Clay
- GNS3
- Bundle Tracer

## 2.6 Domain and Hosting:

Newbies much of the time botch space and facilitating for exactly the same thing, however this isn't the case. While beginning an internet based presence, you'll require a name as well as a host. On the Internet, a space name could be the identifier of an organization. Think about an organization that involves an information the executives framework to store arrangements for each record numbers what's more, different subtleties. Thus, a site's name goes about as a kind of Internet contact list. When a PC program looks into an association's URL or name, first it



asks the facilitating organization's DNS server, then gets the IP address of the site. The PC web pioneer can access the favored site utilizing the IP address. An organization gives facilitating as a help.

## 2.7 IP Address:

IP addresses, otherwise called intelligent addresses, are a unique number assign to each device.

### IP (Internet Protocol) Address

- A particular identifier
- A strategy for finding a machine or PC on an organization.
- To associate towards another PC, utilize this strategy.

IPv4 and IPv6 addresses are both conceivable

```

Administrator: Command Prompt
C:\WINDOWS\system32>ipconfig /all

Windows IP Configuration

Host Name . . . . . : SOMOISJ00KS7N
Primary Dns Suffix . . . . . : ad.unc.edu
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : ad.unc.edu
                                  med.unc.edu

Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . : 
   Description . . . . .           : Intel(R) Ethernet Connection I217-LM
   Physical Address. . . . .       : 00-23-24-65-F6-A3
   DHCP Enabled. . . . .          : No
   Autoconfiguration Enabled . . . : Yes
   IPv4 Address. . . . .           : 152.19.95.83(Preferred)
   Subnet Mask . . . . .          : 255.255.255.224
   Default Gateway . . . . .      : 152.19.95.92
                                   152.19.95.65
   DNS Servers . . . . .          : 152.19.4.1
                                   152.19.4.2
   Primary WINS Server . . . . .  : 152.2.247.14
   Secondary WINS Server . . . . .: 152.2.247.15
   NetBIOS over Tcpip. . . . .    : Disabled
  
```

Figure 2.6: IP Address

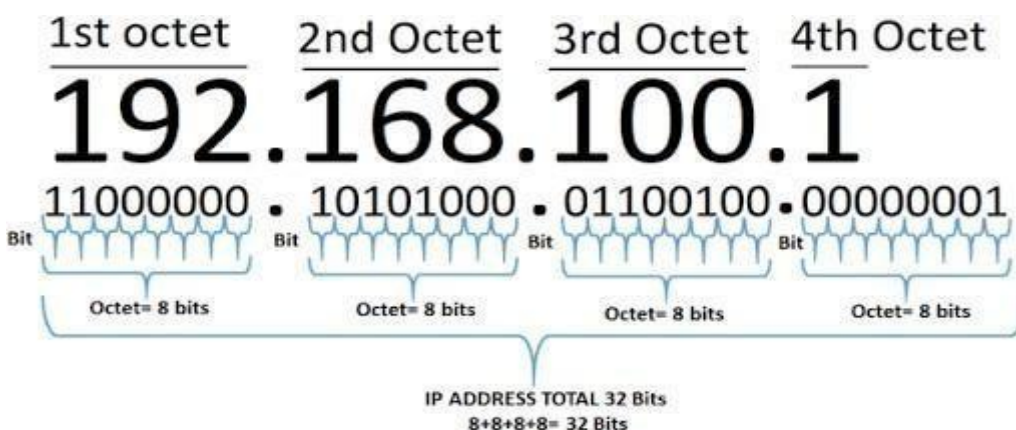


Figure 2.7: IP Address Notation

## Chapter 3

### TASK, PROJECTS AND ACTIVITIES

#### 3.1 Daily Task and Activities

I interned at IsDB for a long time. I completed my everyday errands in general. The arrangement of data administrations has had many errands and exercises, which are recorded underneath.

- Investigating Internet-related issues for clients and program establishment on the competitor's work area.
- Arrangement of all imperative programming and equipment for every client.
- Email arrangements and tackling for Eudora and Outlook
- Recognize and proper programming and equipment issues, as well as sup plant anyflawed parts.
- Set up programming parts like programming framework, equipment programming, and network programming, among others.
- A MikroTik remote switch that has been tweaked to address the issues of the client.
- Oracle VM Virtual Box can be introduced, upheld, and arranged in any or even all designs.
- Check that all PC frameworks, equipment, applications, and setups are doing date.

Customer and gathering organization.

#### 3.2 Events and Activities

Eudora is an email client that gets and sends email through your Internet Provider (ISP) or framework. Eudora permits you to form flags and sends them with individualized writing material and marks. As "connections," you can send documents made in different projects, like message also, pictures, to your email messages.

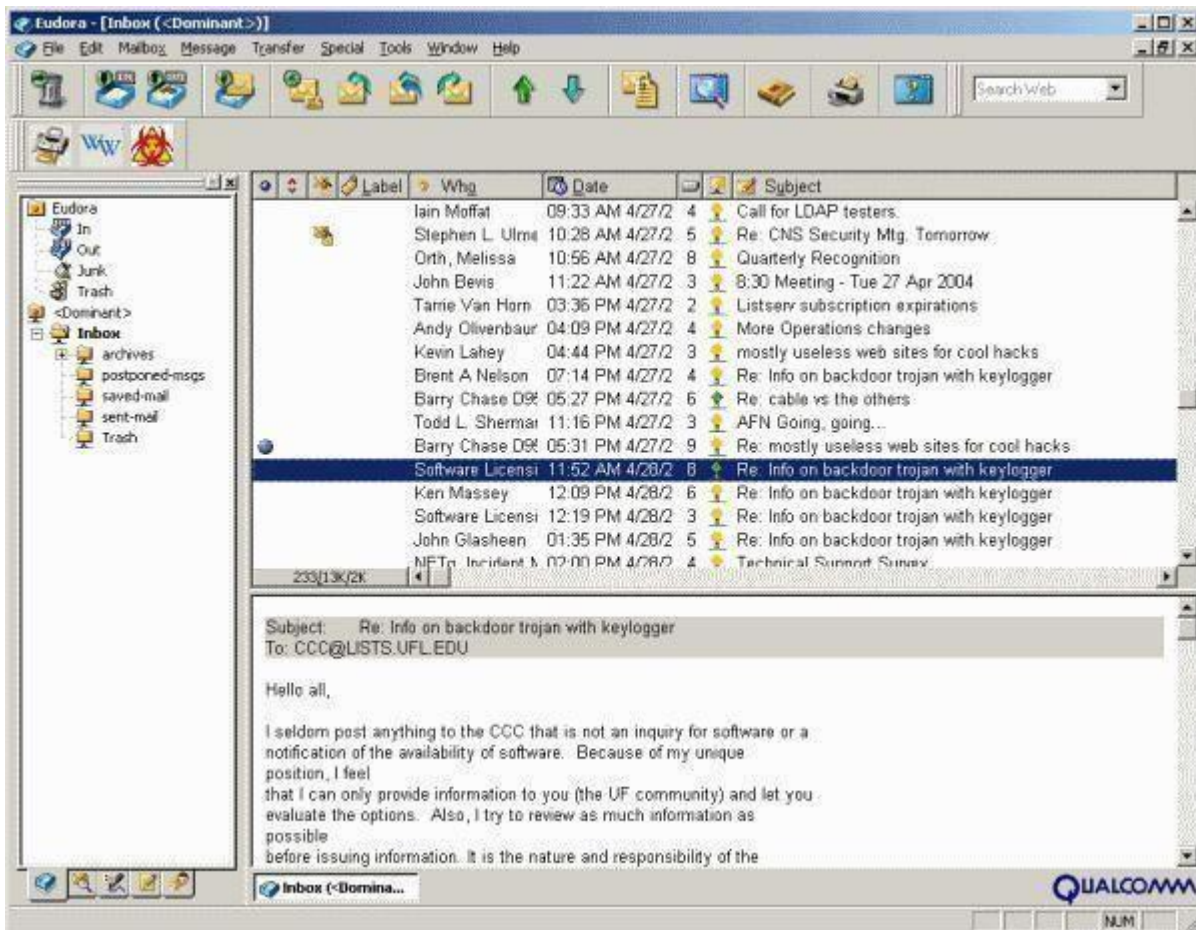


Figure 3.1: Home page of Eudora

### 3.2.2 WinBox

WinBox is a tiny program that provides a simple and quick interface for managing MikroTik RouterOS. It was a native Win32 binary which runs on Linux and MacOS under Wine (OSX). There are no WinBox segments in the control option so because WinBox interface is just so comparable to console operations. A large number of critical and framework customization options, such as: B. modifying the MAC address on to an interface, are not supported by WinBox.

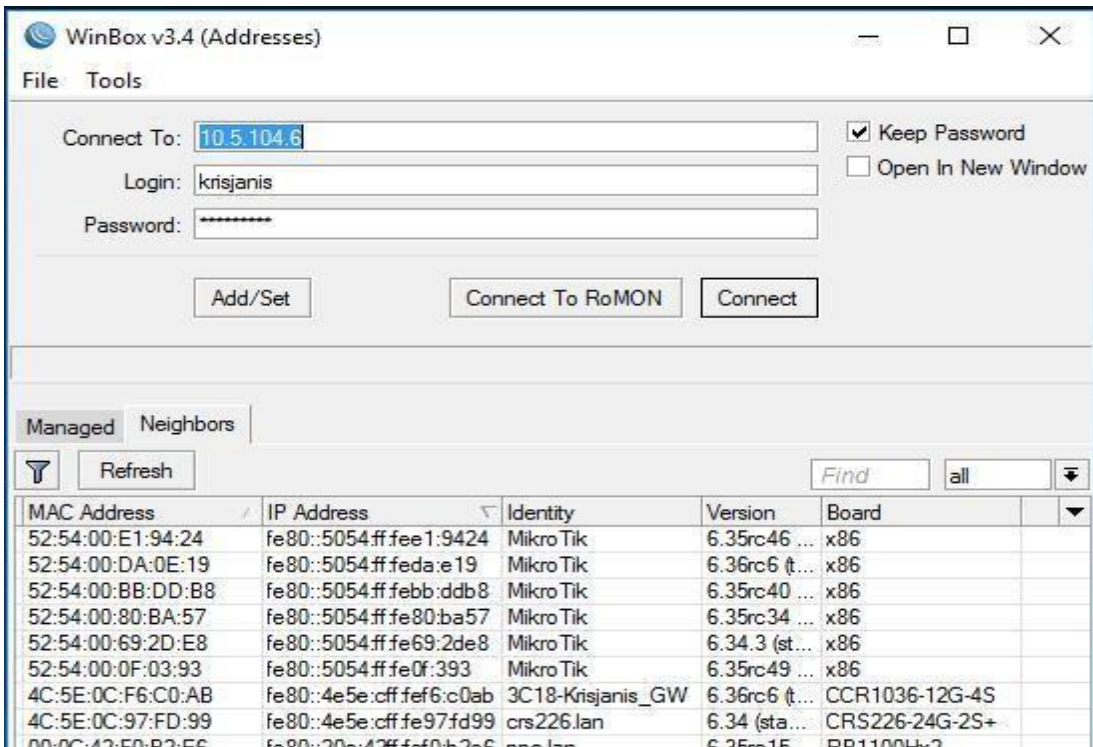


Figure 3.2: Interface of WinBox

### 3.2.3 SNMP

The SNMP protocol (Simple Network Management Protocol) is being used to manage and monitor devices, most of which are network-related devices like routers and switches.

Regardless of the specific technology, SNMP allows a single software to recover information from a large sample of computer systems before new data is transmitted between them.



Figure 3.3: SNMP Management Protocol

### 3.2.4 Real-time Monitoring

Any windows desktop or server system software, 32-bit or 64-bit, can run the Real - time data Bandwidth Monitor software. Solar Winds allows you to view a variety of router and switch statistics. Interface/port status, last customized time, current accept and transfer traffic rates, ui ( user usage rate, duplex setups, collisions, erroneous history, runts, giants, and a plethora of other statistics are all available.

Interface Index	Interface Type Icon	Interface Name	Interface Description	Interface Alias	Admin Status Icon	Operational Status Icon	Port Speed	Type of Interface	Trunk/Port
1	🔌	sc0	sc0		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
2	🔌	sl0	sl0		🟢	🟢	9.6 Kbps	slip(28)	False
3	🔌	me1	me1		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
4	🔌	VLAN1	VLAN 1		🟢	🟢	Unknown	propVirtual(63)	False
5	🔌	VLAN-1002	VLAN 1002		🟢	🟢	Unknown	propVirtual(63)	False
6	🔌	VLAN-1004	VLAN 1004		🟢	🟢	Unknown	propVirtual(63)	False
7	🔌	VLAN-1005	VLAN 1005		🟢	🟢	Unknown	propVirtual(63)	False
8	🔌	VLAN-1003	VLAN 1003		🟢	🟢	Unknown	propVirtual(63)	False
9	🔌	2/1	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
10	🔌	2/2	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
11	🔌	2/3	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
12	🔌	2/4	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
13	🔌	2/5	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
14	🔌	2/6	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
15	🔌	2/7	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
16	🔌	2/8	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
17	🔌	2/9	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
18	🔌	2/10	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
19	🔌	2/11	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
20	🔌	2/12	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
21	🔌	2/13	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
22	🔌	2/14	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
23	🔌	2/15	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
24	🔌	2/16	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
25	🔌	2/17	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
26	🔌	2/18	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
27	🔌	2/19	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False
28	🔌	2/20	10/100 utp ethernet (cat 3/5)		🟢	🟢	10.0 Mbps	ethernetCsmacd(6)	False

Figure 3.4: Real-time interface monitoring

### 3.2.5 Observium

Observium is a low-upkeep network checking stage that works with a wide scope of gadgets, stages, and working frameworks, like Cisco, Windows, Linux, HP, Juniper, Dell, FreeBSD, Brocade, NetScaler, NetApp, and others. Observium is a network wellbeing and status checking device that spotlights on conveying an outwardly appealing, strong, straightforward, and natural connection point.



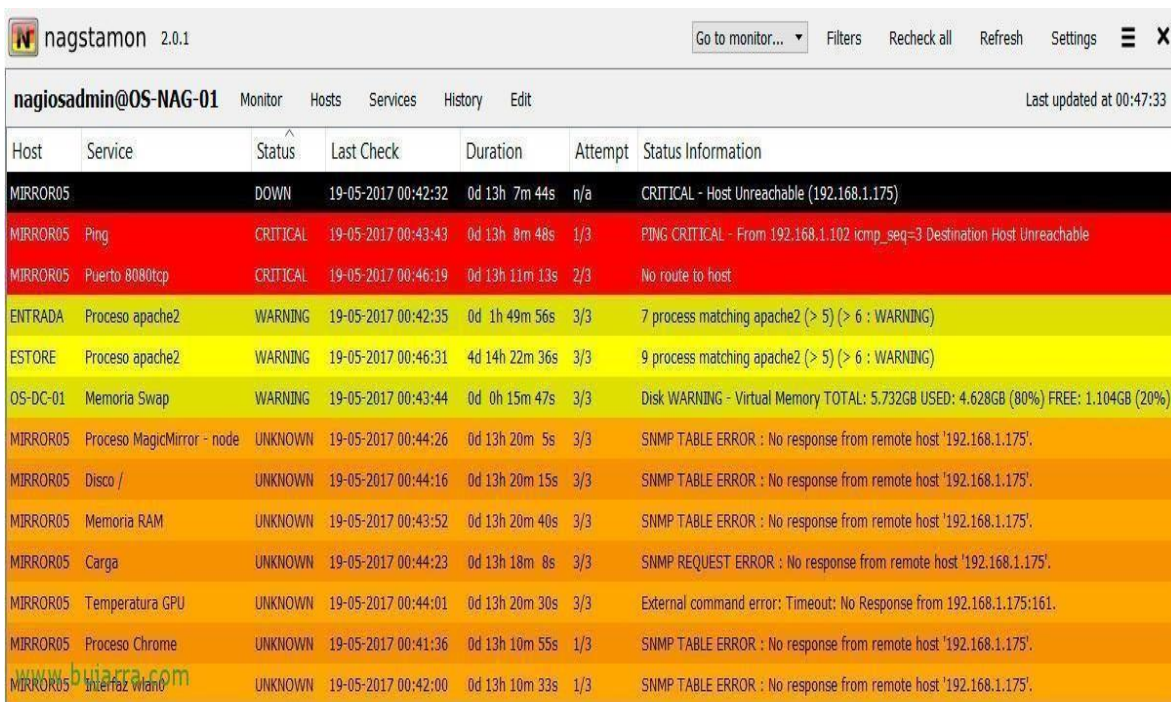


Figure 3.5: Real-time Interface monitoring

### 3.2.5 Nagstamon

Nagstamon is a Server status screen that can run behind the scenes or on the work area. Nagstamon is a program that shows the situation with web servers as a drifting signifier or framework pressing symbol on the op5 screen.

- Perceive what is going on.
- Remember margin time for your timetable.
- Twofold really take a look at everything (Reschedule confirmation).
- Go to the particular host/op5 administration's Monitor web interface



Host	Service	Status	Last Check	Duration	Attempt	Status Information
MIRROR05		DOWN	19-05-2017 00:42:32	0d 13h 7m 44s	n/a	CRITICAL - Host Unreachable (192.168.1.175)
MIRROR05	Ping	CRITICAL	19-05-2017 00:43:43	0d 13h 8m 48s	1/3	PING CRITICAL - From 192.168.1.102 icmp_seq=3 Destination Host Unreachable
MIRROR05	Puerto 8080tcp	CRITICAL	19-05-2017 00:46:19	0d 13h 11m 13s	2/3	No route to host
ENTRADA	Proceso apache2	WARNING	19-05-2017 00:42:35	0d 1h 49m 56s	3/3	7 process matching apache2 (> 5) (> 6 : WARNING)
ESTORE	Proceso apache2	WARNING	19-05-2017 00:46:31	4d 14h 22m 36s	3/3	9 process matching apache2 (> 5) (> 6 : WARNING)
OS-DC-01	Memoria Swap	WARNING	19-05-2017 00:43:44	0d 0h 15m 47s	3/3	Disk WARNING - Virtual Memory TOTAL: 5.732GB USED: 4.628GB (80%) FREE: 1.104GB (20%)
MIRROR05	Proceso MagicMirror - node	UNKNOWN	19-05-2017 00:44:26	0d 13h 20m 5s	3/3	SNMP TABLE ERROR : No response from remote host '192.168.1.175'.
MIRROR05	Disco /	UNKNOWN	19-05-2017 00:44:16	0d 13h 20m 15s	3/3	SNMP TABLE ERROR : No response from remote host '192.168.1.175'.
MIRROR05	Memoria RAM	UNKNOWN	19-05-2017 00:43:52	0d 13h 20m 40s	3/3	SNMP TABLE ERROR : No response from remote host '192.168.1.175'.
MIRROR05	Carga	UNKNOWN	19-05-2017 00:44:23	0d 13h 18m 8s	3/3	SNMP REQUEST ERROR : No response from remote host '192.168.1.175'.
MIRROR05	Temperatura GPU	UNKNOWN	19-05-2017 00:44:01	0d 13h 20m 30s	3/3	External command error: Timeout: No Response from 192.168.1.175:161.
MIRROR05	Proceso Chrome	UNKNOWN	19-05-2017 00:41:36	0d 13h 10m 55s	1/3	SNMP TABLE ERROR : No response from remote host '192.168.1.175'.
MIRROR05	Interfaz wlan0	UNKNOWN	19-05-2017 00:42:00	0d 13h 10m 33s	1/3	SNMP TABLE ERROR : No response from remote host '192.168.1.175'.

Figure 3.6: Nagstamon

### 3.3 Project Task and Activities

All through my temporary position at the Information Systems Network, I became weary of this work, so I'm giving it to you (ISN). The arrangement techniques for the some switch arrangements, programming updates, and observing frameworks are itemized beneath.

#### 3.3.1 MikroTik RouterOS Basic Setup

##### Description

Another Intel Pentium Advanced motherboard from the fourth or fifth era that keeps on supporting Intel IA32 and a processor with 32MB to 1GB of RAM, as well as a essential IDE streak drive or a 30MB or bigger hard drive

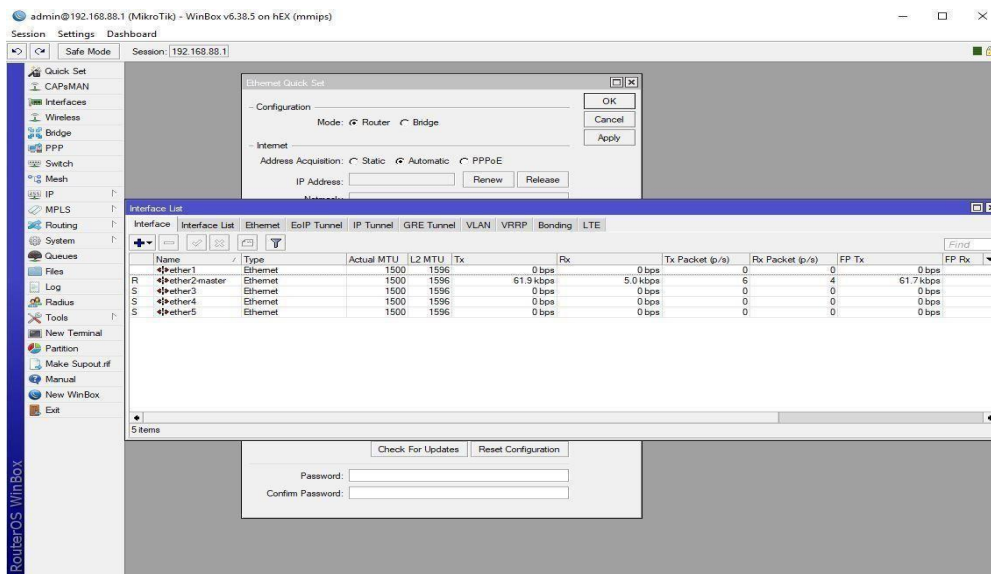


Figure 3.7: Admin home page

### 3.3.1.2 MikroTik Basic arrangement

MikroTik is among the most helpful gadgets for any Internet supplier or office supervisor since it has a considerable lot of organization benefits that guide in the development of a solid and solid organization. MikroTik Router is prestigious for its transmission capacity checking administration and WinBox application graphical UI (GUI), which makes utilizing MikroTik Router straightforward and modest

The MikroTik switch's essential arrangement is generally separated into five stages.

- WAN and LAN arrangement
- Passage arrangement
- DNS arrangement

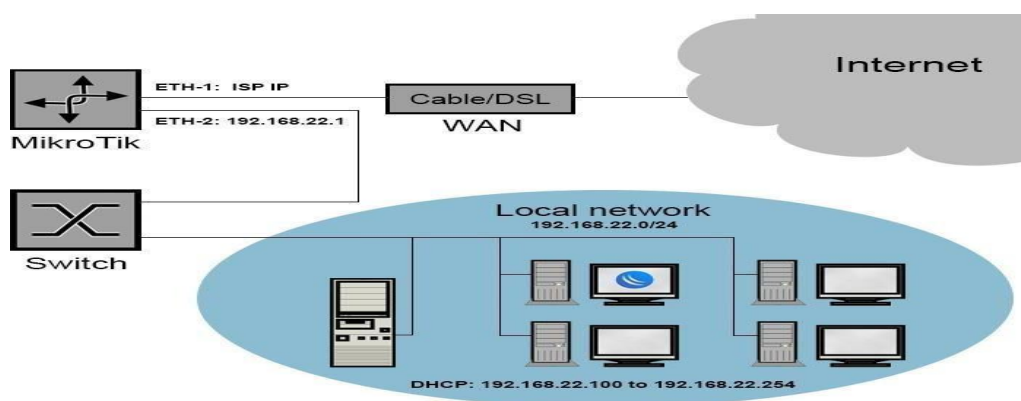


Figure 3.8: MikroTik simple network diagram



### 3.3.1.3 MikroTik WAN and LAN design

Designing the WAN and LAN IP addresses is the most important phase in setting up a MikroTik switch. To do exactly that, follow the means beneath.

- To dole out a WAN IP address, go to IP > Addresses menu > (+) > relegate WAN IP address gave by, then, at that point, click Apply and afterward OK.
- Yet again click (+) to dole out a LAN Gateway IP address, then Apply and OK

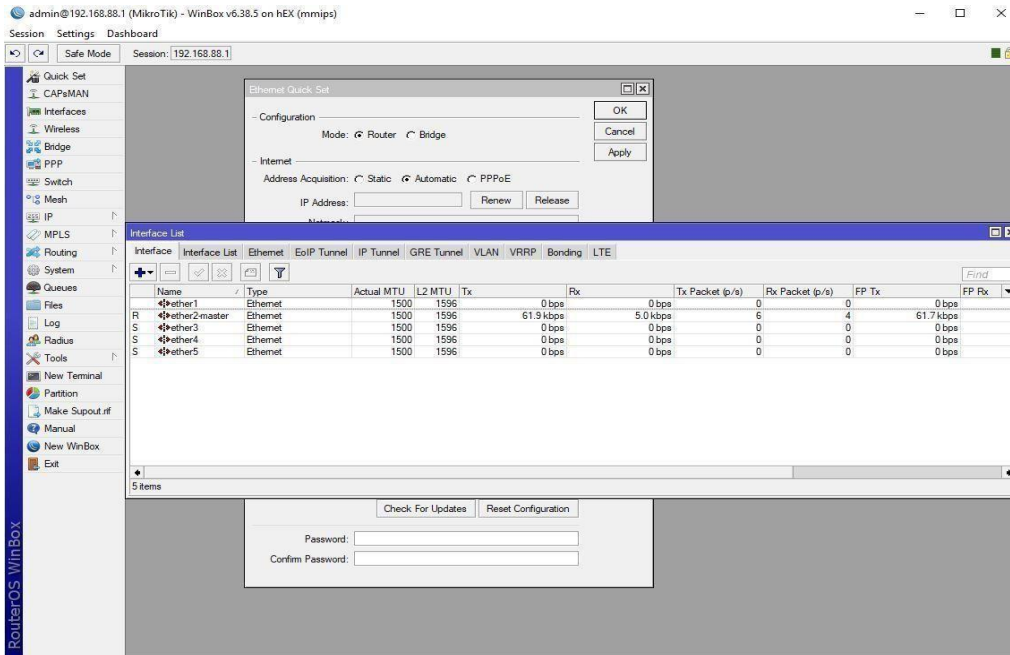


Figure 3.9: MikroTik WAN and LAN design

### 3.3.1.4 MikroTik gateway Configuration

After we've wrapped up designing the WAN and LAN, I'll need to arrange the MikroTik door given by the ISP.

Head toward IP > Routes > Route > List > window > button (+), then, at that point, to IP > Routes

> Course > List > window > button (+). Presently appoint the entryway address gave by the ISP. Then press the Apply and OK fastens.

The screenshot shows the 'Route List' window in MikroTik WinBox. It displays a table of routes with columns for 'Dst. Address', 'Gateway', 'Distance', 'Routing Mark', and 'Pref. Source'. The routes are as follows:

	Dst. Address	Gateway	Distance	Routing Mark	Pref. Source
AS	0.0.0.0/0	172.16.57.130 reachable ether1	1		
DAC	10.50.50.0/24	ether2 reachable	0		10.50.50.1
DAC	172.16.57.128...	ether1 reachable	0		172.16.57.131

At the bottom of the window, it indicates '3 items'.

Figure 3.10: MikroTik gateway Configuration

### 3.3.1.5 MikroTik DNS Configuration

We have done most Important setup. Presently we need to design DNS

Go to IP > DNS > DNS Settings > relegate DNS server address or utilize public DNSIP

(8.8.8.8) or optional DNS IP (4.2.2.2)

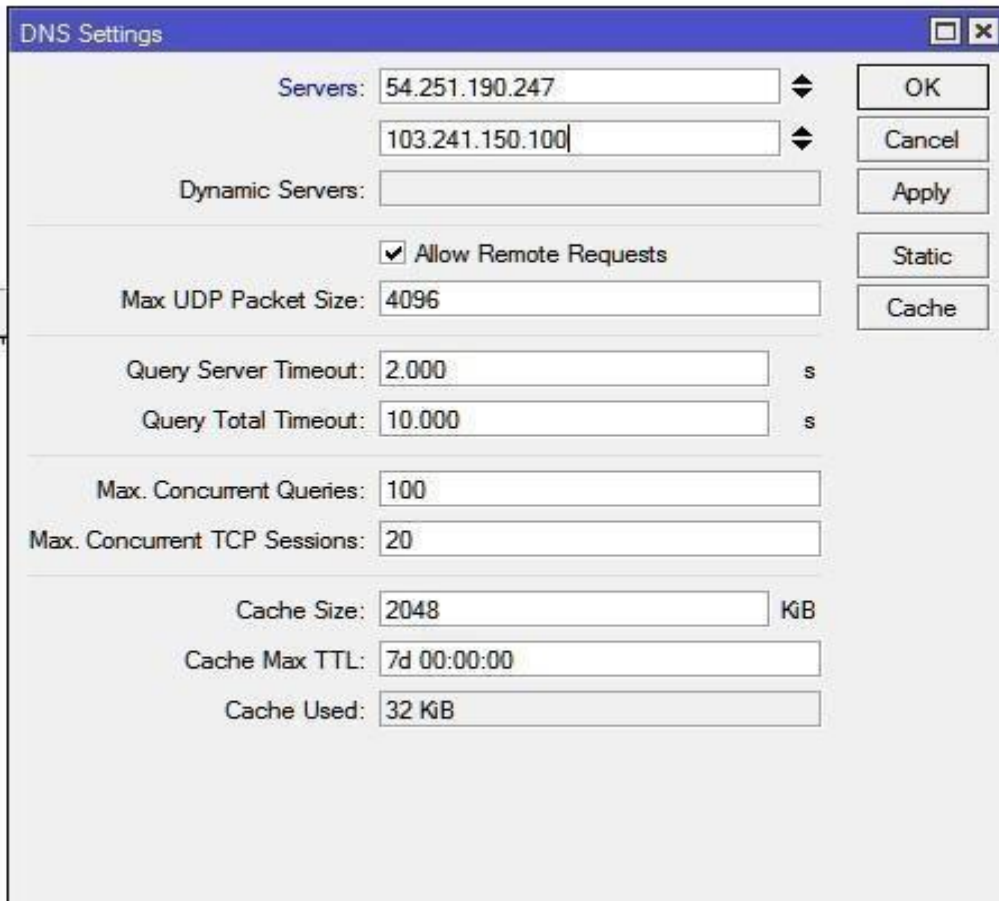


Figure 3.11: MikroTik DNS Configuration

### 3.3.1.6 MikroTik NAT Configuration

After setup of entryway, need to complete NAT firewall rule to disguise.

Any other way, LAN client can't get to web. Along these lines, follow underneath steps

Go to IP > Firewall > NAT > add new button (+) button > New NAT Rule

Pick Chain: > srcnat > Src then click on Apply and afterward OK button

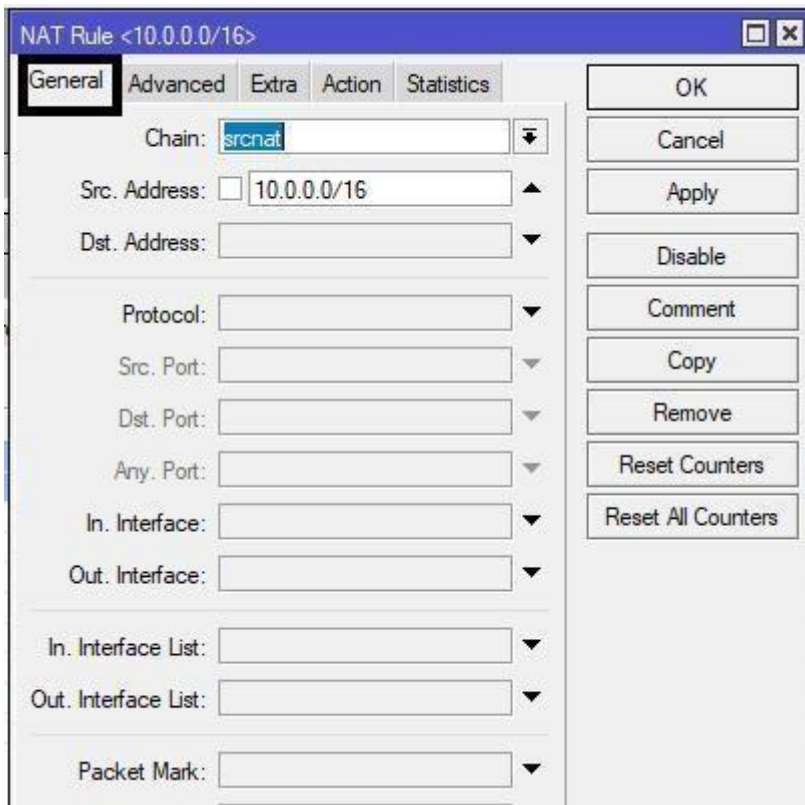


Figure 3.12: MikroTik NAT Configuration

### 3.3.1.7 MikroTik DHCP Server Configuration

Dynamic Host Configuration Protocol (DHCP) is a client/server convention where a DHCP server consequently gives an IP address and furthermore give other related data like subnet veil, default entryway and DNS

Go to IP > DHCP Server > DHCP Setup button > select the point of interaction > LAN organization

block in DHCP Address > door address > Provide IP range > Provide favored DNS server > IP rent time.

DHCP arrangement is finished now and an effective message will be displayed in a window.

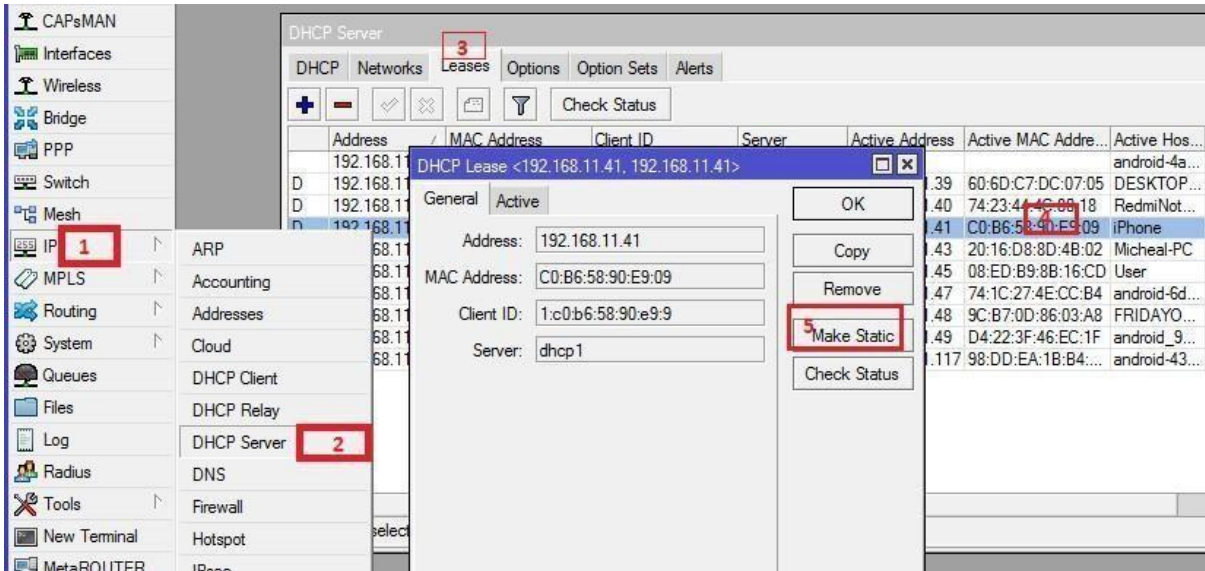


Figure 3.13: MikroTik DHCP Server Configuration

# Chapter 4

## COMPETENCIES AND SMART PLAN

### 4.1 Competencies Earned

Following the finish of the IDB temporary position. I took in an extraordinary arrangement about issues furthermore, how to tackle them. Numerous parts of commonsense work are covered during the entry level position. A mission was relegated to me during my temporary position. These assignments were finished effectively.

Troubleshooting of hardware and software

- Help clients with generally speaking organization upkeep and backing.
- For my purposes, make due, screen, and investigate the Admin Router.
- Find answers for the issues immediately.
- Lead week after week research on our organization's site and get ready week afterweek reports.
- I figured out how to create with us functional experience to manage genuine issues
- through critical thinking.
- Since the assistant, my whole friendly character has gotten to the next level.
- Getting genuine encounter is the most effective way to learn.

### 4.2 Smart Plan

The general assessment of the temporary jobs uncovers that the IDB gives satisfactory preparation. The learners' general fulfillment is reflected as they would like to think. The understudy's generally execution is palatable.

I have a few ideas for giving a wonderful degree of administration to the understudy.

- All switches, switches, servers, and documentation should be supported.
- Sped up clients Internet
- Tracking down an expense cutting evaluation
- Naming the best IT master in association
- Expanding HR
- You ought to direct more statistical surveying to foster a unified opening framework.

- Understudy ought to be kept educated regarding the advancement over the long run
- Add new highlights to the Facilities consistently

### **4.3 Reflections**

It very well may be hard to look for a job, — especially on the off chance that you really do have no related knowledge. A magnificent temporary job will empower me to transform my skill into a work opportunity. Thus, a fruitful temporary job is the underpinning of my future reflection procedure.

In our day to day routines, we should lay out and keep a Wi-Fi router.

- Design and keep a MikroTik switch for regular use, which will help me in my pursuit of employment.
- Interior routine support at ISP is helping me in my pursuit of employment.
- A few design and support options are open.
- Different ISP workplaces utilize the Client Monitoring Software. This data will help me in my pursuit of employment
- Take care of a large number of issues in endeavor to procure experience that makes a difference work on your abilities.

### **4.4 Network Engineer or Network Analyst**

Subsequent to finishing my temporary job, I will have the chance to deal with an assortment of networks, including LANs, MANs, and WANs. An organization investigator or organization engineer can evaluate network limit needs, foster a design to meet them, and screen what's more, direct the organization

### **4.5 Specialized Support Engineer**

Data Service for Technical Support Engineers Working as a Technical Support Engineer at Network Ltd is an incredible opportunity for me. Specialized help engineer undertakings remember giving specialized help to the areas of programming, equipment, frameworks, and organizing. It is important to offer specialized help and guarantee that the framework is continuously functional

# Chapter 5

## CONCLUSION AND FUTURE CAREER

### 5.1 Discussion and Conclusion

I recently examined ISN's construction and working component, and presently I'll talk about the association's principal issue. I've examined various thoughts or plans for giving sufficient assistance to clients. Clients are looking for additional items to their fundamental administrations, which have advanced into essential items. Additional administrations like QoS, reconciliation, banking, what's more, web based business are turning out to be progressively well known among clients. Inside and among ISPs, there is an unmistakable change in methodology. The report's objective was to measure client fulfillment with the information administrations organization and pinpoint regions for development. To get by in this cutthroat climate, ISN must fulfill its clients; if not, the environmental factors would be excessively unforgiving.

### 5.2 Scope for Further Career

Finding work can be troublesome, particularly assuming I have no related knowledge. That's what a temporary position goes well can assist me with transforming an encounter into an open position. Subsequently, my future degrees will be as a fruitful entry level position. In our regular routines, we want a server for arrangement and support. We likewise need the limit to deal with an ISP framework and the capacity to fill in as an organization executive.

- To work for only an IT organization.
- To turn into a specialist in PC organizations.
- I might want to be an organization engineer.
- To function as a server's framework director.
- Accept the job of Router Administrator.



## APPENDIX A: Internship Reflection

The real knowledge is that the tanning period is over. I admired the people I worked with and reflected on the observations I made and the gifts I gave them. Think about how you can interact

with your primary caregiver and others by acting efficiently with the help of your customers. A group of specialists and master teachers. button is pressed. An entrepreneurial spirit, how to collaborate with others, how to improve resources, and some expertise in orchestration and decision-making. Trading company environment, organizational work, individual work  
Internship

feedback The person in charge of the internship knitted it for me. An evaluation medium that allows

you to search for a specific assembly. Identifies the master.

## APPENDIX B: Company Details



Company Name: Islamic Development Bank ( IDB )

Address: IDB Bhaban (4th Floor) E/8-A, Rokeya Sharani E/8-A, Rokeya Sharani,  
Dhaka 1207

Gmail :[info@isdb-bisew.org](mailto:info@isdb-bisew.org)

The IsDB-BISEW-IT Scholarship Project is an educational and educational organization consisting of more than 20 training institutes, a complete research and development cell dedicated to the development of training resources and curricula, and an administrative body headed by an administrative office composed by IsDB. training network. BISEW. A full-time, intensive training program of 6 to 12 months training allows the trainee to keep her IT skills up-to-date and most of the time, her classes are rewarding in a variety of national and international organizations. lead to a successful career.

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