FINAL YEAR INTERNSHIP ON MIKROTIK ROUTER AND LINUX (OS)

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 31MAY 2021

APPROVAL

This Project/internship titled "An Internship on Mikrotic Router And Linux", submitted by Shefali Begum, ID No: 163-15-8273 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 31-02-2021.

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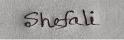
We hereby declare that, this project has been done by us under the supervision of **Md. Riazur Rahman,Assistant Professor, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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

ABSTRACT

At the point when at least two PCs are prepared for interconnect and data or data, at that point we'll mastermind their. We've to begin the PC sound and exchange information / information together. Afterward we had to call several outstanding PC server. This framework has a various of capacities as a special type of server.For example - Static, PPPoE, instead of the site, firewall Tuesday, interface, root, DNS, DHCP, FTP server, VLAN, ARP, NAT and scaffolding.Every one of them did the contrary job and difficult to hold without their framework.In the remote possibility that the frame is associated with the Internet and is required to secure your information, at that point they need to configure the server utilizing the Linux framework.The reason behind the choice of my report "Server Installation and Configuration ISP (Linux Platform)".For servers that have been determined utilizing the SSP, which is important for server, programming and prepare the items, take care and inspection procedures server directly from the server told.

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CHAPTER ONE

Introduction

1.1Introduction :

At the point when at least two PCs are prepared for interconnect and data or data, at that point we'll orchestate them. We've to begin the PC sound and exchange information / information together. Afterward we had to call several outstanding PC server. This framework has a various of capacities as a special type of server. For example - Static, PPPoE, instead of the site, firewall Tuesday, interface, root, DNS, DHCP, FTP server, VLAN, ARP, NAT and scaffolding. Every one of them did the contrary job and difficult to hold without their framework. In the remote possibility that the frame is associated with the Internet and is required to secure your information, at that point they need to configure the server utilizing the Linux framework. The reason behind the choice of my report "Server Installation and Configuration ISP (Linux Platform)". For servers that have been determined utilizing the SSP, which is important for server, programming and prepare the items, take care and inspection procedures server directly from the server told.

1.2 Motivation:

I do not now mistaken looking after my Bachelor of Engineering Computer Science at Daffodil International University.I already understood the significance of progressively down to earth data that will unquestionably supplement the learning obviously books and will have the option to feature an increasingly complete perspective on this. In a transient activity, I realized I had talent quietly on the Linux server framework and the organization and thin parts of the Mikrotik.How to get to the website provider, I have contacted my mind well overall, talking to people, the transmission of their needs and give them a superior organization. My capacity to peruse, comprehend my sentiments significantly, rapidly works, but so noteworthy.

1.3Objectives of the Internship :

My entry level program area is housed in a certificate being forced action to exhibit ultimate goal. Thus, it is profoundly compelling in headway of expertise. It could present something of

extraordinary quality myself as an expert. Construction scheduling short work still means to deal with office work, help setting dynamic arrangements and progress to work in the study room.

1.4Company Introduction :

I am a manager while to get my preparation, Future of Technology. Future of Technology commended himself as one of the principles of co-ops specialist ISPs itself in Bangladesh. This relationship is the most experienced and settled in the ICT sector, where business morale fundamental identified with long-term association with the customer. Appears to be a crack in refurbishing the entire decade of the decade, they are optimistic about what they have achieved, and likewise. In their dreams for the future, there was a huge increase so full of energy.

You may be convinced that their exercises began in 2005. In previous years, they have expanded their portfolio and work organization as indicated by the customer proposition and solicitation sharp time. They work with a wide range of national business associations and open and complete preferences. They utilize the latest advances and improvements in the organization where necessary. Enterprise Network Solutions Division they are gifted in achieving effectiveness state framework-tech and media transmission framework with certain talents deeply interesting collection.

1.5Report Design :

Chap. One :Described throughout the introduction of things after the motivation, internship objects.

Chap. Two :Then covered the objective SWOT analysis, organizational structure group. **Chap. Three :**Featured training, manager responsibilities, various types of routing configuration(DHCP, Brigade, DNS, NAT) and basic Linux commands are described.

Chap. Four :Described skills so smart plan Earned and reflection.

Chap. Five :My report describes the conclusion and professional range of Linux OS and Mikrotik.

CHAPTER TWO

Organization

2.1 Introduction :

My business a while to get my preparation, Versatile Technology. Versatile Technology commended himself as one of the principles of co-ops specialist ISPs itself in Bangladesh. This relationship is the most experienced and settled in the ICT sector, where business morale fundamental identified with long-term association with the customer. Appears to be a crack in refurbishing the entire decade of the decade, they are optimistic about what they have achieved, and likewise. In their dreams for the future, there was a huge increase so full of energy. You may be convinced that their exercises began in 2005. In previous years, they have expanded their portfolio and work organization as indicated by the customer proposition and solicitation sharp time. They work with a wide range of national business associations and open and complete preferences. They utilize the latest advances and improvements in the organization where necessary. Enterprise Network Solutions Division they are gifted in achieving effectiveness state framework-tech and media transmission framework with certain talents deeply interesting collection.

2.2Market Situation&Product :

Bangladesh is deserving populace, and his goal is to be digitized by 2021. In this manner, each division and each association in our nation ought to be digitized. Therefore, IT Master and IT specialists need a tremendous number in the accompanying hardly any years. So Vesatile Online Limited gauges a basic piece of displaying movement by giving different organization as:

- Net service
- Ensure security
- Creating and developing Web Site
- Make IT Guru through efficient training
- Marketing
- Communications
- Provides a wide range of technical support for the nation
- Provides a variety of online services to users

• Provide support for the development server installation systems

So in the end, I can say that the Versatile Online Technology is an important piece of computer based publicizing.

2.3 Group's Target

Versatile Online Technology give numerous administrations and collection of their objectives is provided below:

- Multinational company and corporate house,
- Security solution,
- Domain registration and web hosting,
- Development of Website,
- Professional courses and training,
- Opening the provision of the application of the source,
- Internet specialist co-op (ISP),

2.4 SWOT Analysis

SWOT means strengths, weaknesses, opportunities and threats.

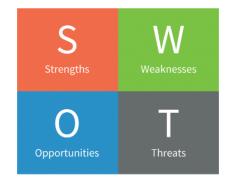


Fig.2.4.1: The display shows the SWOT

Qualities are characterized in three different ways Location, Uniqueness, Management.

Area: Busy midtown territory

Uniqueness: Alternative to cheap food

The executives: Wide running aptitude

Deficiencies is lack of capital and lack of fame and degree is the development of areas and showcase collection target and finally dangers are issues of rivalry and opening day.

2.5 Organizational Structure :

There is such a significant number of associations in the nation and there have possess authoritative figure.Four sorts of hierarchical structure useful, at that point divisional after that grid, and flatarchy.

The network structure is testing because it can communicate with different supervisors difficult detailing and learning. In this way, it is important for workers to know their work, duty and employment inclinations.

Autarky: Although the last four authoritarian structures may work for some associations, another cross race hierarchical structure might be useful for removing or small organizations.

CHAPTER THREE

Projects, Tasks& Activities

3.1 Daily Activities

I'm transitory boss to get my learning, Future of Technology. Future of Technology commended himself as one of the principles of co-ops specialist ISPs itself in Bangladesh. This relationship is the most experienced and settled in the ICT sector, where business morale fundamental identified with long-term association with the customer. Appears to be a crack in refurbishing the entire decade of the decade, they are optimistic about what they have achieved, and likewise. In their dreams for the future, there was a huge increase so full of energy. You may be convinced that their exercises began in 2005. In previous years, they have expanded their portfolio and work organization as indicated by the customer proposition and solicitation sharp time. They work with a wide range of national business associations and open and complete preferences. They utilize the latest advances and improvements in the organization where necessary. Enterprise Network Solutions Division they are gifted in achieving effectiveness state framework-tech and media transmission framework with certain talents deeply interesting collection.

Collection month to month, month - 1, this is the first month that I learned is restricted in position while the Versatile and do the accompanying:

- IP inclined
- Sub nets
- Design of the ISP on lines
- LAN Interfaces, WAN Intefaces
- Gateway, DNS, NAT, ping
- DHCP server

Month -2, this is the second month of temporary job on constrained Versatile online. I have learned and done the following:

- PPPOE
- Bridge
- Queue, Bandwidth
- Block Web sites, configure Mangle

Month -3, Versatile online temporary employment is limited to the last. I learned and achieved accompanies them:

- Creation of Linux.
- Order practices Linux.
- Difficult plate segment.
- Add, Delete, and Lock.
- To use of the board.
- Basic Linux commands.
- Man, adaptation, history.
- Add the client and other approvals in the document.

Month -4, Versatile onlinetemporary post is limited to the last, I learned accompanying works are carried out:

- Information of various types of indexes.
- Duplicate files and registry, remove, alter, disrupt, Edit.
- User group and other authorizations.
- Shell scrip.
- Managed command and Backup.

3.2 Activities & Events task :

In training area, the most significant thing is to provide quality instruction to gifted and experienced instructors. DOL doesn't talk about this topic. To be the good educator, DOL maintains a fundamental asylum. To start with, competitors will sit for composed tests, at that point will have a meeting. At last, the applicant must give 3/4-exhibit classes. We should create human capital to tend to our challenge for the 21st century and training is a standout among other furniture struggle against poverty and segregation. From his expression, the online Daffodil Ltd tried to create and pass on new skills and learning in innovative and professional education and provide important capabilities and gear for the occupation of the 21st century advertising. through which we react to understudies. Finally, the postulant is chosen or rejected. We usually emphasize the applicant.

To guarantee practical advancement in the public eye, So, toward the end, Versatile Online Ltd is making specialized specialists in IT division in the nation and any foreign country.

3.3 Project Task and Activities

3.3.1MikroTik Router

MikroTikls Ltd., also known worldwide as MikroTik. American Equipment Manufacturers Networks Group. Soldout items remotely and switch. Established in 1995, the market innovation in Europe stock was sold. By 2015, the organization has more than 200 workers, the elements of the organization are known for their choices minimal effort costly Ethernet switch .



Fig. 3.1: The display shows the configured router MikroTik

3.3.2Winbox Interface Menu

We do not have a lot of work with the menu interface. Basically, the menu interface is then used to interface or interfaces comment. Here, in our business, we will change the name ether1 as Ether 1-WAN, which will provide a superior comprehension of the association Ether 1 WAN. It may be noted with Ether 1 that is used for WAN association.

F	nnect To: Login: ^D assword:		6D 83 DE E9				Keep Password Open In New V	
		Add/	Set	Connect T	o RoMON	Connect	Click to	
Manag	ed Neigh	bors					Connec	
7	Refresh]				Find	all	Ŧ
	ddress	1	IP Address		Identity	Version	Board	-
D4:CA	:6D:83:DE	:E9	192.168.88.1		MikroTik	6.42.2 (st	RB2011UiAS-	2HnD

Fig. 3.2: Display the on-screen Winbox

3.3.3 Static Configuration :

Formation of total employment microcontroller framework switch, we just need to set the interface. Provide a password for the virtual machine (if set secret key, generally leaves the field remove the secret word) .An Interface WAN, LAN

- The IP address WAN, LAN
- •Gateway
- DNS
- NAT
- IP set computer
- Ping
- Interfaces WAN, LAN

Interface WAN, LAN

Firstly, we click then again click Quick Setup ether port 1 then the statement is-1 is the WAN port

🔏 Quick Set 👞						
CAPsMAN	Interface Interface List	Ethernet EoIP Tunnel	IP Tunnel	GRE Tunnel VI	AN VRRP B	onding LTE
Interfaces	+ * *	Detect Inte	emet			-
🚊 Wireless	Name			LOMTH T.		Rx
Bridge	Name /	Type Ethemet	Actual MTU 1500	L2 MTU Tx 1598	0 bi	
E PPP	R Mether2_LAN	Ethemet	1500		131.5 kb	
🕎 Switch	etho 2	Interface <ether1 td="" wa<=""><td>N></td><td>1500</td><td>.</td><td></td></ether1>	N>	1500	.	
°t¦ Mesh	∢ i≯ether5	General Ethernet	Loop Protect	Overall Stats	Rx Stats	
IP N	*ether6	4		MAN		ОК
MPLS N	<pre></pre>		Name: ether1	_WAN		Cancel
	ether9	đ	Type: Ethem	et		Apply
😹 Routing 🛛 🗅	ether10	E	MTU: 1500			гфріу
🛞 System 🗅	≰i ≯sfp1	E	MIO. 1500			Disable
Queues	X ≪≫wlan1	Actual	MTU: 1500			
Files		L2	MTU: 1598			Comment
Log	•		MTU: 4074			Torch
Louis -	12 items (1 selected)					Cable Test
A Radius		MAC Ad	dress: D4:CA	:6D:83:DE:E8		Cable Test
💥 Tools 🛛 🔿			ARP: enable	d	Ŧ	Blink
New Terminal		ARP Tir	neout:	690		Reset MAC Address
🖳 LCD						Reset Counters
MetaROUTER						L

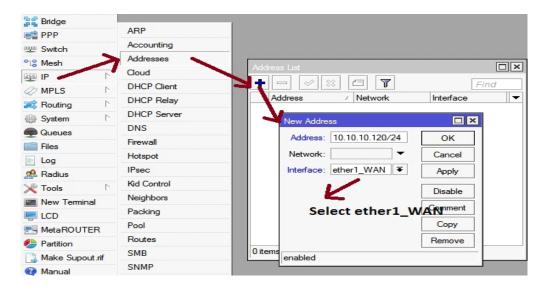
Fig. 3.3: Shows the WAN screen print port No

Now we click quick set then click to ether port 2 then declaration either-2 is port no of LAN

General	Ethemet	Loop Pr	otect	Overall Stats	Rx Stats		ок
		•• E					
		Name:	ether2	_LAN			Cancel
		Type:	Ethem	let			Apply
		MTU:	1500				
	Actual	MTU:	1500				Disable
	L2 MTU: 1598				Comment		
		MTU:				_	Torch
		L control		:6D:83:DE:E9			Cable Test
		ARP:	enable	ed		₹	Blink
ARP Timeout:						1-	Reset MAC Address
		L	5				Reset Counters

Fig. 3.4: Displays the LAN screen print port No

IP address WAN, LAN



 $IP > Address > Address List > + > Address 10.10.10.120/24 > interface (ether1_WAN)$

Fig. 3.5: Screen printed IP address shows WAN Port configure

IP > Address > Address List > + > Address 192.168.0.1/24 > interface (ether2_LAN)

vddress List	
• - 🖉 🛪 🖪 🍸	Find
Address / Network 骨10.10.10.120/ 10.10.10.0 骨192.168.0.1/24 192.168.0.0	Interface ether1_WAN ether2_LAN
Address <192.168.0.1/24>	
Address: 192.168.0.1/24	ОК
Network: 192.168.0.0	Cancel
Interface: ether2_LAN =	Apply
ĸ	Disable
Select ether2_LAN	Comment
	Сору
item	Remove
enabled	

Fig. 3.6: Shows screen printing IP addressLAN port

<u>Gateway</u>

Bridge				
E PPP	ARP			
2 Switch	Accounting			
C Mesh	Addresses	Route List		
👳 IP 😱 🗈 🗅	Cloud	Routes Nexthops Rules VRF		
	DHCP Client		ind	all 🔻
Routing	DHCP Relay	Dst. Address / Gateway Distance Routing Mark	Pref. So	
System	DHCP Server	DA ► 10.10.10.0/24 ether1_WAN reachable 0 DAC ► 192.168.0.0/24 ether2_LAN reachable 0	10.10.1	
Queues	DNS	UAC P 152.108.0.0/24 ethetz_LAW reachable 0	132.100	.0.1
Files	Firewall	New Route		
Log	Hotspot	General Attributes		ОК
A Radius	IPsec	Dst. Address: 0.0.0.0/0		Cancel
X Tools	Kid Control	Gateway: 10.10.10.1	•	
New Terminal	Neighbors	Gateway: 10.10.10.1		Apply
	Packing	Check Gateway: Gateway IP	•	Disable
MetaROUTER	Pool	Type: unicast	Ŧ	Comment
Partition	Routes			Сору
Make Supout.if	SMB	2 Distance:	•	
Manual	SNMP	Scope: 30		Remove
New WinBox	Services	Target Scope: 10		
Exit	Settings	Routing Mark:		
	Socks			
	TFTP	Pref. Source:	_	

IP > routes > + > Gateway 10.10.10.1 > Apply > ok

Fig. 3.7: showing up the designof screen Print Gateway connection

<u>DNS</u>

Domain name system IP > DNS > server 203.190.10.252

Bridge		-			
PPP	ARP	-			
🛫 Switch	Accounting				
°tesh	Addresses				
	Cloud	DNS Settings			
MPLS N	DHCP Client			-	
Routing	DHCP Relay	Servers:	203.190.10.252	\$	OK
System	DHCP Server		8.8.8.8	\$	Cancel
Queues	DNS	Dynamic Servers:			Apply
Files	Firewall		Allow Remote Reque	sete	Static
Log	Hotspot	Max UDP Packet Size:			
A Radius	IPsec	Max ODF Facket Size.	4036		Cache
¥ Tools ►	Kid Control	Query Server Timeout:	2.000	s	
New Terminal	Neighbors	Query Total Timeout:	10.000	s	
	Packing				
	Pool	Max. Concurrent Queries:	100		
Partition	Routes	Max. Concurrent TCP Sessions:	20		
Make Supout.rif	SMB	Cache Size:	2040	КВ	
Manual	SNMP			rVB	
S New WinBox	Services		Cache Max TTL: 7d 00:00:00		
Exit	Settings	Cache Used:	17 KiB		

Fig. 3.8: Shows IP DNS setting Criteria

<u>NAT</u>

Network address translationIP > Firewall >NAT > + > Action masquerade

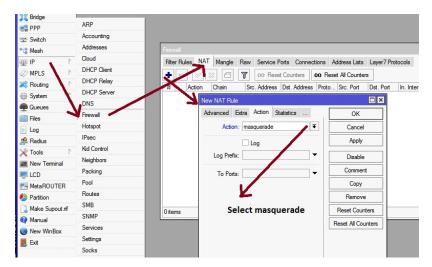


Fig. 3.9: Shows the NAT finishing display window

Ping

After that command ping 8.8.8.8to the new terminal click then press enter acommand

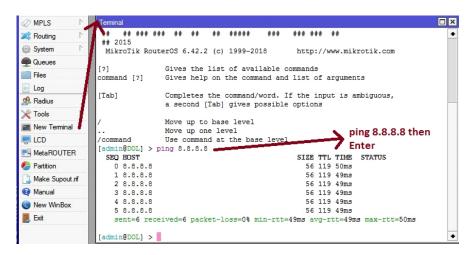


Fig. 3.10: Showing Ping end display

IP set Compute

Snap to web association symbol at that point system setting after that change connector alternative then Ethernet, Now snap to right fasten then properties and use IP address and DNS server address

ieneral	
	ed automatically if your network supports need to ask your network administrator
Obtain an IP address auto	omatically
Output State St	ess:
IP address:	192.168.0.2
Subnet mask:	255.255.255.0
Default gateway:	192.168.0.1
Obtain DNS server addres	ss automatically
Output Series Use the following DNS series	ver addresses:
Preferred DNS server:	203 . 190 . 10 . 252
Alternate DNS server:	8.8.8.8
Validate settings upon e	kit Advanced

Fig. 3.11: Shows Screen Print getting IP in pc configure

3.3.4DHCP Server

The DHCP server incorporates both server and customer part. DHCP hand-off, DHCP customer, different DHCP systems, static and dynamic DHPP arrangements, radio help tiny switch working frameworks incorporate DHCP or Dynamic Host Control Protocol. DHCP is utilized for simple dissemination of IP addresses in neighborhood.

Bridge		n en
FPP	ARP	
🛫 Switch	Accounting	
°t <mark>8</mark> Mesh	Addresses	
255 IP	Cloud	DHCP Server
2 MPLS	DHCP Client	DHCP Networks Leases Options Option Sets Alerts
2 Routing	DHCP Relay	
System	DHCP Server	ame / Interface Relay Lease Tin
Queues	DNS	
Files	Firewall	click to Add(+)
Log	Hotspot	
A Radius	IPsec	

Fig. 3.12: Screen print setup display DHCP configure

DHCP Setup	DHCP Setup
Select interface to run DHCP server on	Select network for DHCP addresses
DHCP Server Interface: ether2_LAN	DHCP Address Space: 192.168.0.0/24
Back Next Cancel	Back Next Cancel
Click toNext	Click toNext

DHCP Setup	DHCP Setup
Select pool of ip addresses given out by DHCP server	Select gateway for given network
Addresses to Give Out: 192.168.0.2-192.168.0.254	Gateway for DHCP Network: 192.168.0.1
Back Next Cancel	Back Next Cancel
Click to Next	Click toNext

Fig. 3.13: Print all process of screen display and successfully DHCP setup

DHCP Setup	DHCP Setup
Select lease time	Select DNS servers
Lease Time: 00:10:00	DNS Servers: 203.190.10.252
	8.8.8.8
Back Next Cancel	Back Next Cancel
Click to Next	Click to Next
DHCP Setup	
Setup has com	pleted successfully

Fig. 3.13: Print all process of screen display and successfully DHCP setup window

3.3.5 PPPOE

Point-to-Point Protocol over Ethernetfirst thing in the PPPOE IP then pool then add (+) and create name then given address

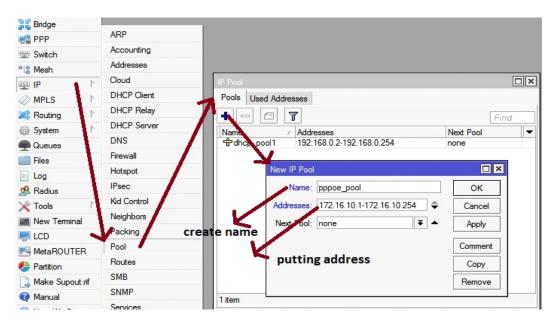


Fig. 3.14: Screen creation shows PPPOE diagram

3.3.6Bridge

The extension can make a sensible interface. This extension interface empowers to consolidate between at least two physical interfaces or physical and consistent interfaces. Name another interface and snap OK. Thus, to make a scaffold association, make another interface with the given name, click "connect". At that point click on the extension tab "+" will open another window.

Step :1

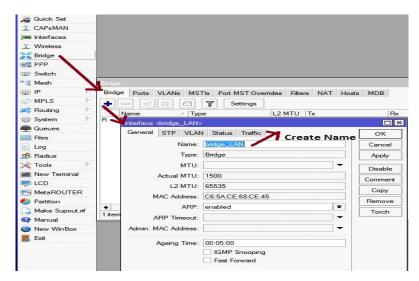


Fig. 3.15: Shows Screen Print create of BRIDGEprocess (1) diagram

Step 2

Bridge	e Ports	VLANs	MSTIs	Port MST On	verrides	Filter	s NA	TH	losts	MDB	
#		ace	E T	dae	Но	rizon	Priority	h	Path (Cost	Role
0 1		ther4	bri	dae LAN	10.00	LOIT	Thoney	80	1 dut s		disabled por
1	H 116	ether3		dge_LAN dge_LAN	-1:-			80		10	disabled por
21	H 110	ther5	brid	dge_L/N	CIIC	кас	ld to	80		10	disabled por
~ 1							port				disabled por

Fig. 3.16: Shows Screen Print create of BRIDGE process (2) diagram

<u>Step 3</u>

Bridge				t.		
PPP		ARP				
🕎 Switch		Accounting				
°tesh	>	Addresses		<u> </u>	dress List	
255 IP	N	Cloud		Add		
2 MPLS	1	DHCP Client		+		Find
2 Routing	1	DHCP Relay		_	Address / Network	Interface ether1 WAN
System	N	DHCP Server		D	+ 10.10.10.1207 10.10.10.0 + 172.168.19.255 172.16.10.254	<pppoe-numabi></pppoe-numabi>
Queues		DNS			· 〒192.168.0.1/24 192.168.0.0	bridge_LAN
Files		Firewall		1	Address <192.168.0.1/24>	
		Hotspot	5		Address: 192,168,0,1/24	ок
A Radius		IPsec	double	9		
X Tools	1	Kid Control	click		Network: 192.168.0.0	Cancel
New Termina		Neighbors			Interface: bridge_LAN F	Apply
		Packing			V	Disable
MetaROUTE		Pool			and and interactions	
45	ĸ	Routes			select interface	Comment
Partition		SMB				Сору
Make Supout	.nt	SNMP		3 it		Remove
Manual		Services			enabled	
Solution New WinBox		00111000				

Fig. 3.17: Shows Screen Print create of BRIDGE process (3) diagram

3.3.7 LINUX

Linux is the best-known and most-used <u>open source</u> operating system. As an operating system, Linux is software that sits underneath all of the other software on a computer, receiving requests from those programs and relaying these requests to the computer's hardware.

For the purposes of this page, we use the term "Linux" to refer to the Linux kernel, but also the set of programs, tools, and services that are typically bundled together with the Linux kernel to provide all of the necessary components of a fully functional operating system. Some people, particularly members of the Free Software Foundation, refer to this collection as GNU/Linux, because many of the tools included are GNU components. However, not all Linux installations use GNU components as a part of their operating system. <u>Android</u>, for example, uses a Linux kernel but relies very little on GNU tools.

3.3.8Installation Centos diagram

CentOS Linux OS version. Centers have been setting up for enterprise operating systems, it is a distribution of Linux operating systems depends on RHEL (Red Hat Enterprise Linux) and currently the most popular Linux distributions for web servers system.



Fig. 3.18: Centos shows the installation process (1) diagram



Fig. 3.19: Centos shows the installation process (2) set time zone setting



Fig. 3.20: Show in Centos shows the final process diagram

3.3.9Creating a Partition of Linux

Creating Linux in Partition

To install Linux, we need to create root / boot, (/), swap, / home for our partitions in the system.

Root Partition: /

There is a root partition where "/" is located on the root partition, where all the files (except boots) are located in the root directory system. Minimum 5 GB HDD space is needed for this system.

Boot Partition: /boot

Parcel Boot (200 MB): The segment mounted on/boot/with the records utilized during the bootstrap procedure contain the working framework portion (which enables your framework to boot Linux). Because of limitations, you should make a nearby ext3 parcel to hold these documents. For most clients, a 200 MB boot segment is adequate.

SWAP Partition: swap

Segment swap is utilized to help virtual memory. In different hands, the information is kept in touch with a swap segment when there isn't sufficient RAM to store the prepared information on your framework. Segment Swap 2 GB virtual RAM for 2 GB of physical RAM, and afterward any sum over 2 GB ought to be equivalent to 1x physical RAM, yet it can't be under 32 MB

/home Partition: /home

Fill the mount point / home and maximum allowed size in the system

Device	Size (MB)	Mount Point/ RAID/Volume	Туре	Format		
LVM Volume Groups						
∀ VolGroup	204596					
LogVol01	2048		swap	\checkmark		
LogVol00	100000	/	ext4	\checkmark		
LogVol02	102548	/home	ext4	\checkmark		
Hard Drives						
▼ sda (/dev/sda)						
sda1	200	/boot	ext4	\checkmark		
sda2	204599	VolGroup	physical volume (LVM)	\checkmark		
			Create	Edit	Delete	Reset

Fig 3.21: Screen Display Screen Print Partition diagram

3.3.10Files and Directories

A gathering of registries and/or different indexes. Since an index can do it.

On the off chance that there are different indexes, we get a registry arrangement. Top degree of control

Unique catalog Files and indexes can be named by away. Unique registry

Is alluded to as/Other catalogs are determined by the way. Framed the way

Separate by name/by a record can be indicated by way. In the event that it's the index, at that point

The way could end with a/. A flat out way index begins with order course and name registry or document under it. For instance:/and so on/hostname specifies the hostname of the above document hostname in the root index of the root registry.

CentOS release 6.4 (Final)
Nurnabi
Password:
Cancel Log In

3.3.11 User login and Terminal Interface

Fig. 3.22: Screen Centos shows the user's login page print diagram

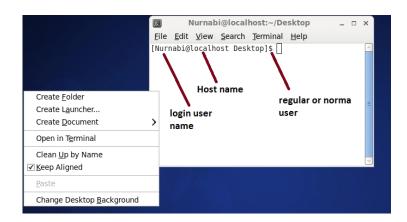


Fig 3.23: Shows Screen Print terminal diagram

3.3.12 Basic Command

- uname
- uname -a
- cat/proc/meminfo
- date
- cal
- cal 2019
- hostname
- pwd
- poweroff
- init 0
- shutdown -h now
- Whoami
- /root/home
- clear
- history
- df -Th
- lsblk
- lscpu
- cat/etc/redhat -release
- free –m

3.3.13FTP Server (File Transfer Protocol) criteria

FTP is a widely used network protocol for transferring files between computers over a TCP/IPbased network, such as the Internet. FTP lets people and applications exchange and share data within their offices and across the Internet. FTP was one of the first technologies developed to solve this common need, and it remains, with several generations of enhancements, the second most popular protocol used today (after HTTP or the "World Wide Web").



Fig. 3.24: Simple Network with FTP Server diagram

Step 1 Install yum and the command is given bellow: yum install vsftpd

[root@localhost Desktop]# yum install vsftpd* Loaded plugins: fastestmirror, refresh-packagek Loading mirror speeds from cached hostfile * base: mirror.dhakacom.com * extras: mirror.dhakacom.com * updates: mirror.dhakacom.com		
updates: milliol.dnakacom.com		
base	3.7 kB	00:00
extras	3.4 kB	00:00
updates	3.4 kB	00:00
Setting up Install Process	• 1.0.00 D	
Package vsftpd-2.2.2-24.el6.x86_64 already inst Nothing to do	alled and latest vers	ion
[root@localhost Desktop]#		

Fig. 3.25: Show of a Yum installation

Step 2 Now inputvi editor and command vi /etc/vsftpd/vsftpd.conf Then press Enter key

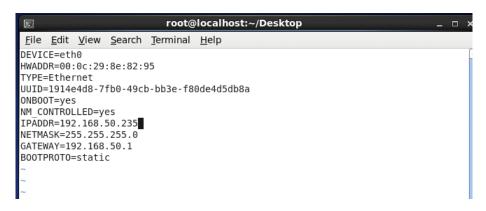


Fig. 3.26: Print screen of a Vi Configuration diagram

<u>Step 3</u> I click the Esc button and enter the command then show this page. When the line changes. Here I will delete yes and write NO and save the page sets



Fig. 3.27: Screen show 12 line of an anonymous enable No

<u>Step 4</u>We have to download and download ASCII to press Esc button and write commands = Yes then show this page. Press the Enter key. Save this page setting

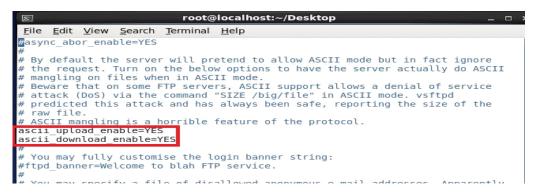


Fig. 3.28: ASCII screen can be printed and downloaded file

Step 5 User created and set the password



Fig. 3.29: Create screen print user and password set

Step 6 Now I restart and press the network key again by restarting the command

	l	υк	1
[root@localhost ~]# service NetworkManager status NetworkManager (pid 1405) is running			
[root@localhost ~]# service NetworkManager stop			
Stopping NetworkManager daemon:	[0K]
[root@localhost ~]# check NetworkManager off			
bash: check: command not found			
[root@localhost ~]# check NetworkManager off bash: check: command not found			
pasn: cneck: command not found [root@localhost ~]# chack NetworkManager off			
bash: chack: command not found			
[root@localhost ~]# check Networkmanager off			
bash: check: command not found			
[root@localhost ~]# chkconfig NetworkManager off			
[root@localhost ~]# service NetworkManager status			
NetworkManager is stopped			
[root@localhost ~]# service network restart			
Shutting down interface eth0:	[0K]
Shutting down loopback interface:	ļ	0K]
Bringing up loopback interface:	ļ	OK	1
Bringing up interface eth0:	l	0K	1
[root@localhost ~]#			

Fig. 3.30: Restart a service network screen print diagram

Step 7 Then I will open the browser and ftp: //192.168.50.235 and will show this page. Here I'll

type the username and password setting in diagram

e <u>E</u> dit <u>V</u> iew Hi <u>s</u> t	Index of ftp://192.168.50.235/ - Moz ory Bookmarks Tools Help	illa Firefox	
Connecting	\$		
ftp://192.168	50.235	🗇 🕶 🔕 🛃 🛩 Google	
8	Authentication Required ×		
User Name:	Authentication Required × Enter username and password for ftp://192.168.50.235 Nurnabi	Last Modified	

Fig. 3.31: Print a username and password screen diagram

3.4 Challenges

It is hard to think about joining as a strong association when your transitory area can be reestablished. Brief errands there is a probability of noteworthy undertakings engaged with workplaces up until this point, and afterward they can be tried and how the framework decides how to look. Brief area is their own boundary! I will cover some of the concerns with many soldiers help.

But remember all. As an intern these may face various challenges in the given Given below:

- a) Get in with work spacing
- b) Some systems have the power to achieved
- c) Compare withqualityand the official decency.
- d) Building relationships associated with such authorization.
- e) Expert to see the self-offensive activity.
- f) Get some awards from the organization.
- g) Use candied dialect with the authority for similarity.
- h) Disclose the relevant range with clients of different levels.
- I) Efficient and keep cool customer convenience
- j) In the end all lining is facing several different problems add above.

Last of all, we can say that you can't reach success if there is no test. Alongside these lines, in the process of your prosperity, each of our exams will be taken seriously in the system.

CHAPTER FOUR

Smart Plan and Competencies

4.1 Competencies Earned

explicit questions towards the end of the frame, the question of Linux, and understanding of driving. Because conditions indicating conditions, we can only present some new mistakes. I accept the Model Framework Model Linux provide an answer that was later expanded or later. radial carbide plant quality and rotation device manufacturer excellent cutting application.

Screenplay: see about meeting basic Linux first-class, college, life sciences, server and storage bar structure response, national security through the core development strategies.

4.2 Smart Planning

A training outcome is showing a technique depends on what comes understudy, and he has the ability to obtain or another to do so. For the presentation and extradition system and Datacenter Server machine, for example, drive a part of the Linux programming capacity to spend, for example LDAP HA, coordination of the review program performance, evaluation of the position impermanent and field. The office stores the Association of many students new results of universal education: Collecting and sorting a business point of temporary position of interest. Submit a review dilapidated Linux. Design review the results and the formation of programming and redesigns; brain, orchestrate and control the sorting of the administrations of the employer. Moreover, the statement of results always, the work of temporary employment in the hierarchical strategy and monitoring methods on site.

4.3 Reflections

Your brief location can be restored, while it's miles tough to recognize about joining the marketing organization as a supportive. Brief responsibilities can nevertheless be vital in the environmental surroundings after which they are able to fall into the exam and you'll must decide

how the method will be found. Temporary region is without their very own barrier! I am going to cover some issues with many assisted fighters.

Finally, we are able to say that there is no success if there's no take a look at. Similarly to these strains, inside the method of your prosperity, every of our tests could be taken crit

CHAPTER FIVE

ConclusionandCareer plan

5.1 Conclusion

Growing this brief job purpose and creating ISP setup and management at the Linux platform. The access-level role centers offer fundamental information communique, Linux necessities, Linux machine administration, and advance network setting and more portion. However it's far completely loose because of the whole management. This is about all styles of system advantages, web server programs, telnet, ssh, ftp, dns, mail and greater. There may be an extremely good chance to study the framework programming in Linux with interference. Since the source code is available to us and the guideline and co-worker's average machine, we can perform a little searches. Diverse elements of Linux were created as experimental or entrepreneurial features, as an instance, postgraduate posts. Fully included, firm UNIX working framework, with plenty of unfastened-contact programming equipped to support the Linux elite machine administration, makes Linux programming a best that makes it a minimum attempt, stable, bedstead processing layer suitable for company server conditions. These complete handcourses will assist you examine and adapt the function, management, and control of the studying server for challenge-based gadget management. Learn the way you need to introduce additional, update programming components with the greater element current paperwork and enhance server security. Linux OS is the useful framework that provides strong output, solid and powerful authentication of successful management. We do no longer make decisions in this effective structu

5.2Scope forCareer

In a short time of this temporary work initiative, I mechanically carried out put Linux on pupa Linux to implement future automation for computerized auto completion extensions for socLinux. Diploma payment initiatives / tasks and fixed time-gauge. In this situation there may be internet availability devices, for example, a web program and an electronic mail patron that allows the client to take a shot at the internet without having to get the essential framework for their gadgets - no matter whether or not windows is working. In the meantime, the Linux multipurpose net gadget (mids) is displayed. Impressions gadget, for instance, cellular smartphone and pda and further netbook device - small laptop right gadget, a small a part of their larger accomplice's principal advantages, extra sturdy effective bundles

Linux is an incredible and huge work framework that you may research with the aid of education, i appear to signify you start running with Linux in your new and a rookie. I'm able to restore it and maybe it is able to make it much less tough. There is no defect in representing particular authority in a particular programming dialect, but it does not let you symbolize it. What's a Linux programmer and engineering paintings discipline? What are the favelas choice approach to get a transient job at a starting?? Computer and notice pad laptop framework bios release Linux, which enables customers to begin their devices inside a few seconds.

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Appendices

Appendix A: Internship Reflection

I probably would guarantee that every assistant was given an extraordinary activities to provide safe working conditions, efficient progress. UNIX and Linux Server shell hooks general popularity with the business enterprise open source open-framework-speaking Linux open source operating framework. In fact, the form of painting used for the layout of the Linux server. Theoretically, Linux is seen as the most simple, adaptable, effective server capabilities-primarily based. My motive is to provide a safe workplace. Studying of the business enterprise Linux server from the server, we can communicate about the cause of working on a painting while and make the association. Today, most sources using Linux sport framework. Global framework.

Appendix B: Company Detail

I am a temporary trading company for my training, future technology in the limited line. Narcissus in line ltd. Praised as a company leading ISP provider in Bangladesh. It seems to be an extreme improvement of the entire decade of the last decade are very happy for what they have done, and likewise have a big boom in its prospects for the future. They work with many companies throughout the country and the authorities and corporations are quite preferential. This is an organization with experience and established ICT in their main rules of the trading company is related to long-term relationships with their customers. Modern improvement and reconstruction of the administration where they wanted. His department enterprise networking solutions is professional in acquiring the maximum green specialized collection was superior skills and the means of transmission of the machine. You may be convinced that their sports began in 2002. In previous years, increased its portfolio of process and administration in accordance with the recommendation of the buyer and request a revered time.

Plagarisom:

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