

Network Management System in CSL

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

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APPROVAL

This Internship titled “**Network Management System in CSL**”, submitted by **Md Ashikur Rahman** to the Department of Computer Science and Engineering, Daffodil International University's partial completion of the requirements for the degree of B.Sc. in Computer Science and Engineering (BSc) has been acknowledged as satisfactory, as well as its style and topics have been approved. The presentation has been held on, 2021.

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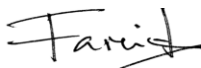
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I hereby declare that, this internship report is prepared under the supervision of **Ms. Farah Sharmin, Senior Lecturer, Department of CSE**, Daffodil International University. I also declare that neither this internship report nor any part of this internship report has been submitted elsewhere for award of any Degree or Diploma. I also declare that, I collect information from CSL Bangladesh.

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First and initially, I'd want to convey my heartfelt thankfulness and admiration for Almighty God. We were able to successfully finish our final year internship thanks to His heavenly favors. MS Farah Sharmin, Senior Lecturer, Department of CSE, Daffodil International University, Dhaka, has been a tremendous help to me. This internship will be handled by the supervisor's extensive experience and passionate interest in "Network management system in CSL." This internship was made possible by his never-ending tolerance, academic leadership, persistent encouragement, constant and vigorous supervision, constructive criticism, good counsel, and reading many poor manuscripts and revising them at all levels. I'd like to thank Professor Dr. Touhid Bhuiyan, Head, Department of CSE, for finishing my internship and for assisting other academic and staff members of Daffodil International University's CSE Department. I'd want to express my gratitude to everyone of our Daffodil International University classmates that participated.

ABSTRACT

I executed my internship at CSL Bangladesh, an information technology firm. For my Bachelor of Science degree, I must complete an internship program. By joining an organization's communication, you can acquire a lot of cool stuff. A hub can be a computer, a printer monitor, or any other device capable of delivering or receiving data generated by other hubs on the system. As a result, I was able to get expertise at the CSL Bangladesh IT Department. They are a Bangladeshi IT firm. Each of them has a unique function, and maintaining a network would be impossible without them. If your network is linked to the Network and you want to protect your data, you'll need to set up a server with the Linux operating system. That is why I chose "Server Installation and Configuration on ISP (Linux Platform)" as the title of my article. The paper examined the purpose of a specific server used by an ISP, the hardware requirements for the server, software selection and deployment, step-by-step server setup, and easy server debugging.

CHAPTER 1

Introduction

1.1 Introduction:

The Internship Attachment Report titled "Network Management System in CSL" to the Office of Arrangement and the Department of Computer Science and Engineering in partial fulfillment for the degree of Bachelor of Science in Computer Science and Engineering an has submitted Md. Ashikur Rahman (ID:183-15-12054). As a output of completing this project, when designing the organization's network, identifying the identities, designing a topology property street for the workplace, and implementing the access control system, the most important thing is to provide me with the opportunity to learn about all of the cultural issues that limit my participation in the organization, and so on. This book might be considered the period of networking and Information technology support for a firm. As time passes, our contemporary amenities improve, and our lives become increasingly reliant on the Internet. As a result, the networking system is a challenging part of the globe. There are several types of networks in the globe. They also coexist on various types of servers. Because these servers to be maintained, anyone concerned in this field should first learn about CCNA details. CCNA is made up of several components. For the project, we simply need to choose one portion and many tasks. Since the initial transmission in 1998, it is anticipated that over One million CCNA authentications have been permitted. The framework, according to CCNA, addresses far-reaching limits of organizational thinking. In the current market, I'd want to pursue a profession in networking and would like to work with it. Now, I'm convinced that I'm up to any task and that I'll have a successful career.

Motivations

I am now obtaining a Bachelor's degree in Computer Science Engineering at Daffodil International University, and I see the value of acquiring practical experience to supplement textbook knowledge and provide students a broader understanding of the courses. An internship is a professional learning opportunity for future workers. For this reason, many businesses and organizations provide meaningful, hands-on employment relating to a student's subject of study. Internships are designed for students who work for a set amount of time at a specific firm in order to gain practical experience that will help them reach their potential and learn new skills. It allows the employer to introduce new ideas and enthusiasm into the workplace. I was simply a newbie looking to learn something new. This internship will assist me in having a successful career and provide me with an excellent opportunity to pursue my profession. As a result, the globe needs a large number of Network engineers. Working as a developer in an organization or on a freelance project may be lucrative. It might be a lucrative source of revenue.

Objectives of the Internship

The internship's main goal is to prepare you as a professional by teaching you how to operate professionally. How can allow me to further my career create opportunities that did not previously exist find hidden jobs and even increase skill to run company's network.

Now I know how to interact with coworkers, clients, and anyone who are unfamiliar with the workplace. However, I now have a better understanding of the work environment, how to interact with people, how to communicate, and how to cooperate with others, all of which will be extremely useful in my future profession. My ability level has significantly improved of this internship. Now I know how to provide assistance and support. It involves the capacity to locate lucrative assignments, solve difficulties, and pick obligations. This first report covers the whole temporary job session, and I have accomplished all communication skills, as well as technical skills, style, and improvements. One thing I have a good understanding of is the interaction between coworkers. They play a important function and can assist in a variety of ways In networking filed.

Introduction of company

CSL Ltd. is Company of third-party services in Bangladesh. They have been working in this sector since 2006. Their services include information technology sector, web and offline software department, networking department, hardware department, freelancer department, interior design department etc. They are providing services like:

IT Services:

- Businesses solution by networking
- IP calling.
- A solution for security.
- Domain acquisition with Webhosting.
- Creation of a website
- A solution that is open source.
- Provider of Internet Services
- Data Interconnection, Co-Location, and Data Center
- Mail Server Solution, Proxy & DNS Server Solution
- Expert training and courses.
- Troubleshooting.
- Hardware upkeep, etc.

Software Services:

- Internet marketing solution
- Software tests
- Software customization
- Web and E-commerce
- Graphic and Graphics
- App Development
- Electronic marketing

Report Layout:

The organization of my report is assorted by 5 chapter.

- In Chapter 1, I go through roles, motivation, internship goals, corporate biography, and report structure.
- Chapter 2: I address the organization's personality, product and market scenario, target group, SWOT analysis, and organization culture.
- Chapter 3: I explain my everyday work and activities, events and activities, project work and activities, and problems.
- Chapter 4: I address earned competencies, a wise strategy, and reflection.
- Chapter 5: I explore the outcome and my future job options.

CHAPTER 2

Organization

Introduction:

CSL is a bespoke software development and support firm established in Bangladesh with a development and support center in Dhanmondi. Software development, disk - based, and service support are all areas where CSL excels.

CSL is an application development consulting organization that works with infrastructure projects and other businesses. Its business initiatives have evolved to address all aspects of the product and project project lifecycle, from preliminary analysis and design to programming, software configuration, project implementation, and training, with the goal of meeting market demands for a wide variety of Business IT needs. The institution has collaborated on a number of national and international initiatives that have received great praise from all parties involved. CSL promotes vital platforms such as education, governance, and the environment through its programs and services. They primarily provide consulting services to a variety of Bangladeshi industries and Networking applications for its clients. By combining world-class talent with a strong management focus, specialized products of the company, rather than a well finance team, CSL delivers an unrivaled standard of support to its clients.

Product and market circumstances

Today's market conditions are influenced by current and future industrial movements, so everyone should look at the industry's supply chain as well as the position of genuine purchasers to gain a better understanding of the product's quality and state. Companies re-operate and adapt their conduct on a daily basis. Government and non-government groups in different nations are gathering and acquiring entertainment data for the future generation. With their accurate and timely predicted expenses and accounting, CSL Bangladesh has established a strong market position. Since they must also preserve their culture .They gather feedback from the public, as well as from movies and television

shows, and then compile a survey report. Every business has its own network system. We also have a responsibility to contribute to and preserve archives for future generations. Bangladesh is presently an advanced country. They collaborate on network systems, software development, hardware maintenance, mobile apps, and other topics

Target Group

We provide as much useful info as necessary. In our data center, we store entertainment from the past, present, and future.. In order for individuals all around the world to have access to our data centers. We provide immediate updates. We're working on cross- platform software that will allow anyone to access our data model from any device We keep data for future generations. On the World Wide Web, we collect and share information. Because the rest of the world is continually updated, we will continue to upgrade our software, technology, networks, and other systems. And, without a doubt, we will deliver the greatest possible training to our staff and others who wish to learn from us. . We ignore false information in order to provide users with only new and accurate information. We will build a wonderful data center one day, where we will have everything connected to information.

SWOT analysis

A SWOT analysis is an approach for evaluating these four components of an organization. SWOT stands for strengths, weaknesses, opportunities, and threats. SWOT stands for Strengths, Weaknesses, Opportunities, and Threats, and it is a systematic planning process for evaluating these four components of a project or commercial initiative. It is a way for analyzing the environment and placing technology enterprises. A Swot is a personal plan for launching energy, activism, opportunities, and permits connected to a commercial initiative or project.

❖ SWOT analysis figure:

STRENGTH	Weakness	Opportunities	Threats
Suitable location	Instant financial crisis	High speed internet Connectivity availability	Political instability
Strong technical knowledge	Communication system	We are making Large data center In our country	Global competitions
Good Working environment	High rent cost	Government has Positive view on developing digital Bangladesh	Super market moving online deliveries

Figure 2.4.1: SWOT analysis

2.1 Organizational Structure.



CSL Organization Structure below in fig 2.5:

CHAPTER 3

Tasks, Projects and Activities

3.1 Tasks and Activities on a Daily Basis:

First I set up My Computer, then I set up the router for connect with internet, then I installed Windows, I installed some software that is required Microsoft, for example, Avro Keyboard, Antivirus Installation, Printer Configuration, Winrar, Share it Team Viewer, Virtual Machine for testing problems. Also I handle some hardware issues like USP, CPU check, as well as some troubleshooting issues.

Setup router via IP address:

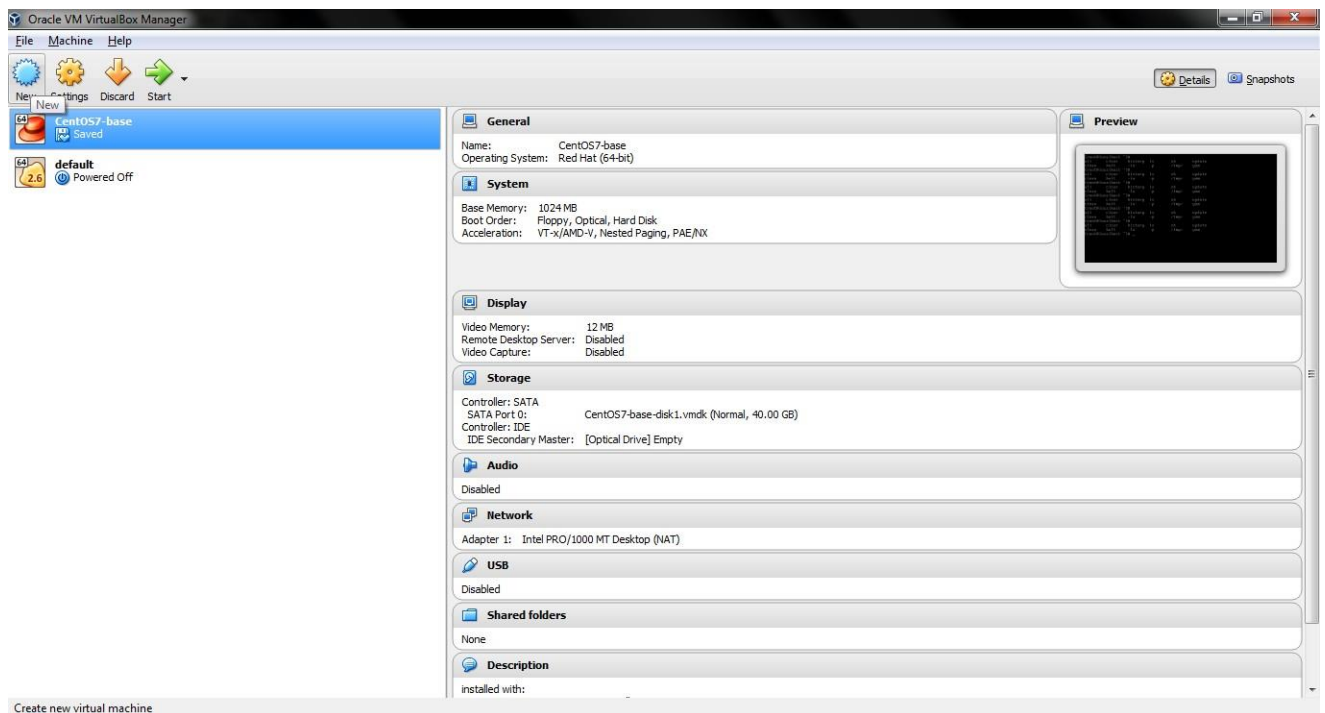


Figure 3.1.1: Router Configuration

Events and Activities

All such activities can successfully complete my internship. The work environment is the maintenance and evaluation of logical maintenance work to maintain the information technology system. This internship helps me learn about many types of technology and the work environment. It has helped me to familiarize myself with IT management and other courses in a timely manner. I acquired and acted the accompanying work,

1. Talk about IP addresses and subnets.
2. Educating yourself on the many components of a network.
3. A mechanism for network administration.
4. Gaining knowledge of the hardware system

Project task and activities

I have many achievements from Infinity Dreams Bangladesh. It was a beautiful trip with them. By working with them I was able to understand the work situation and the need for good communication with colleagues. Here are some of my work-

1. Update network component inventory.
2. Help network team.
3. Help hard ware team.
4. Create summary reports.
5. Update some existing report.
6. Install important software's

UBUNTU is a Linux operating system. Install and configure for Network Troubleshooting:

1. Start virtual machine



Figure 3.3.1: Setup Virtual Machine

2. Install Ubuntu

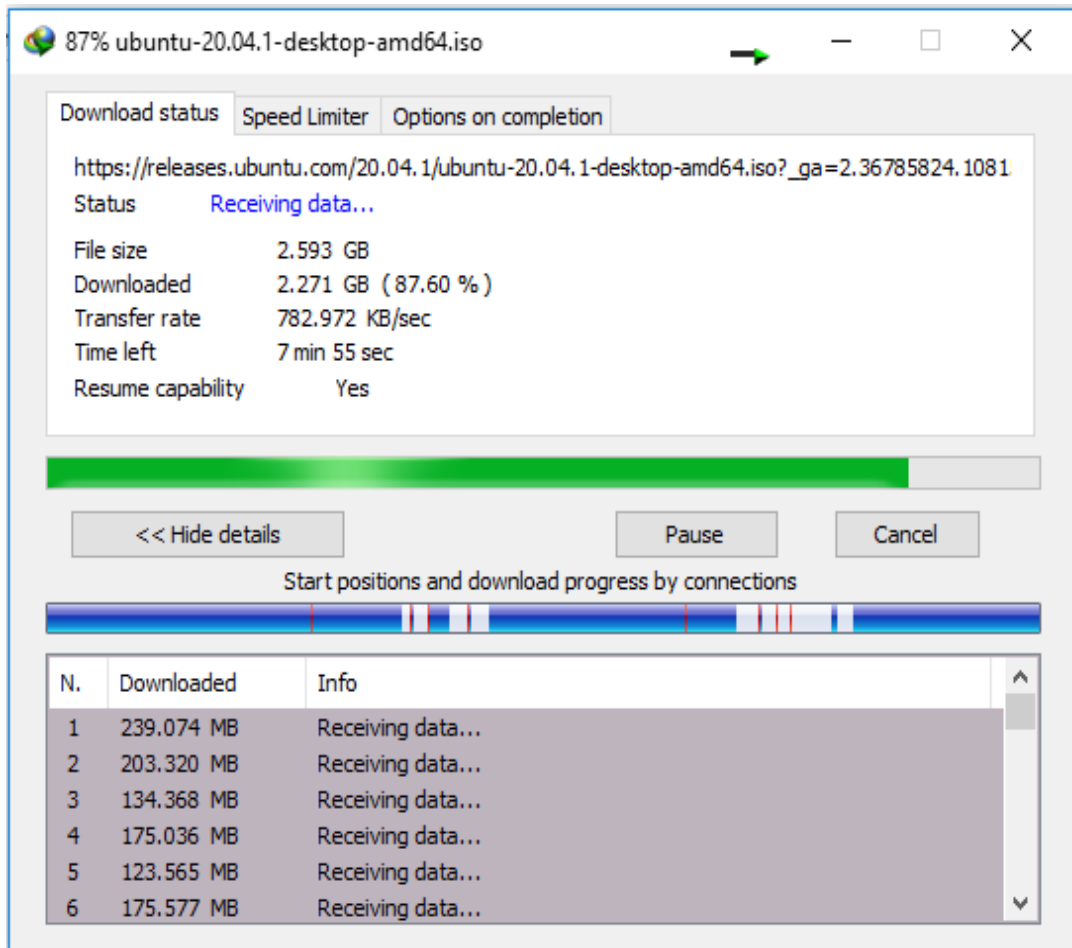


Figure 3.3.2:Ubuntu installation process

3. Open Virtual Box

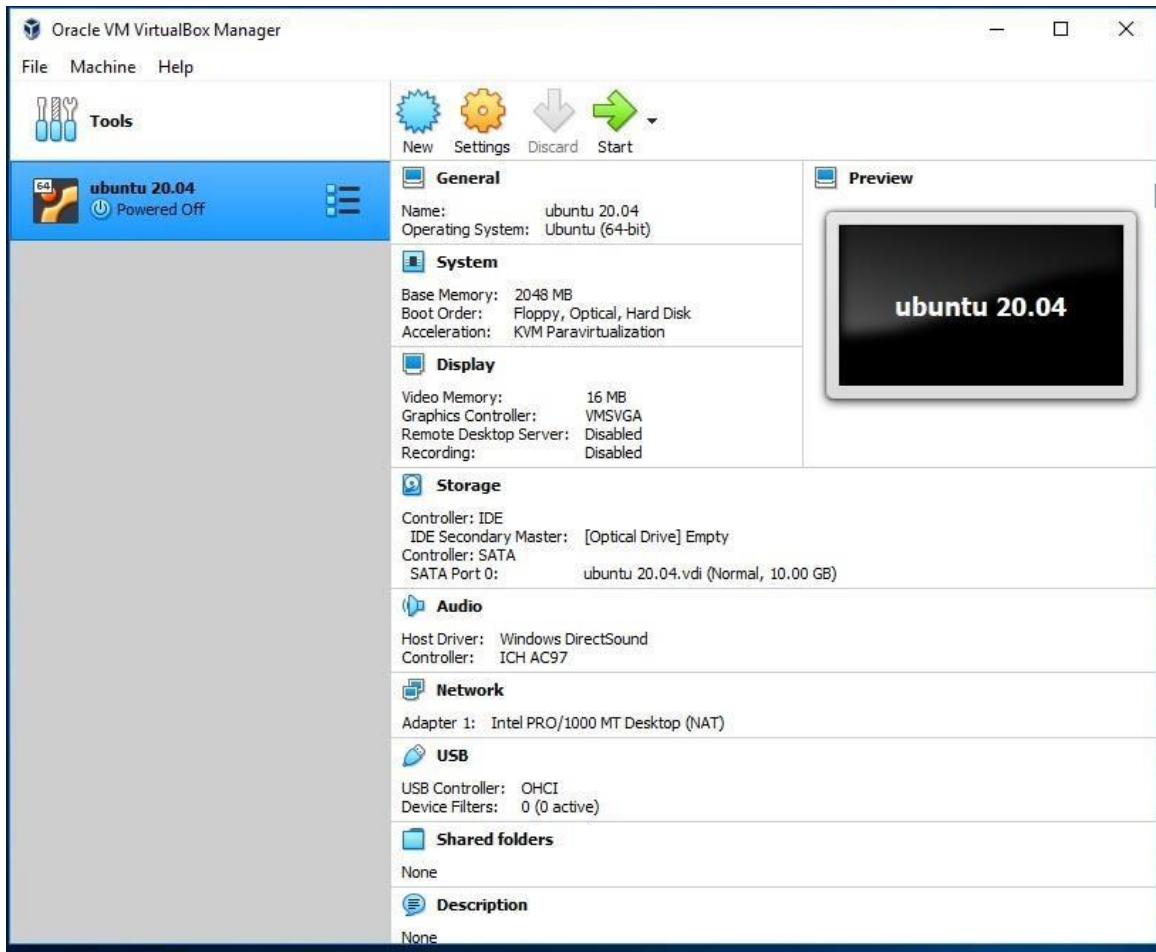


Figure3.3.3 virtual box settings

4. Add Ubuntu Iso In This System For Compile And Running Emulator:

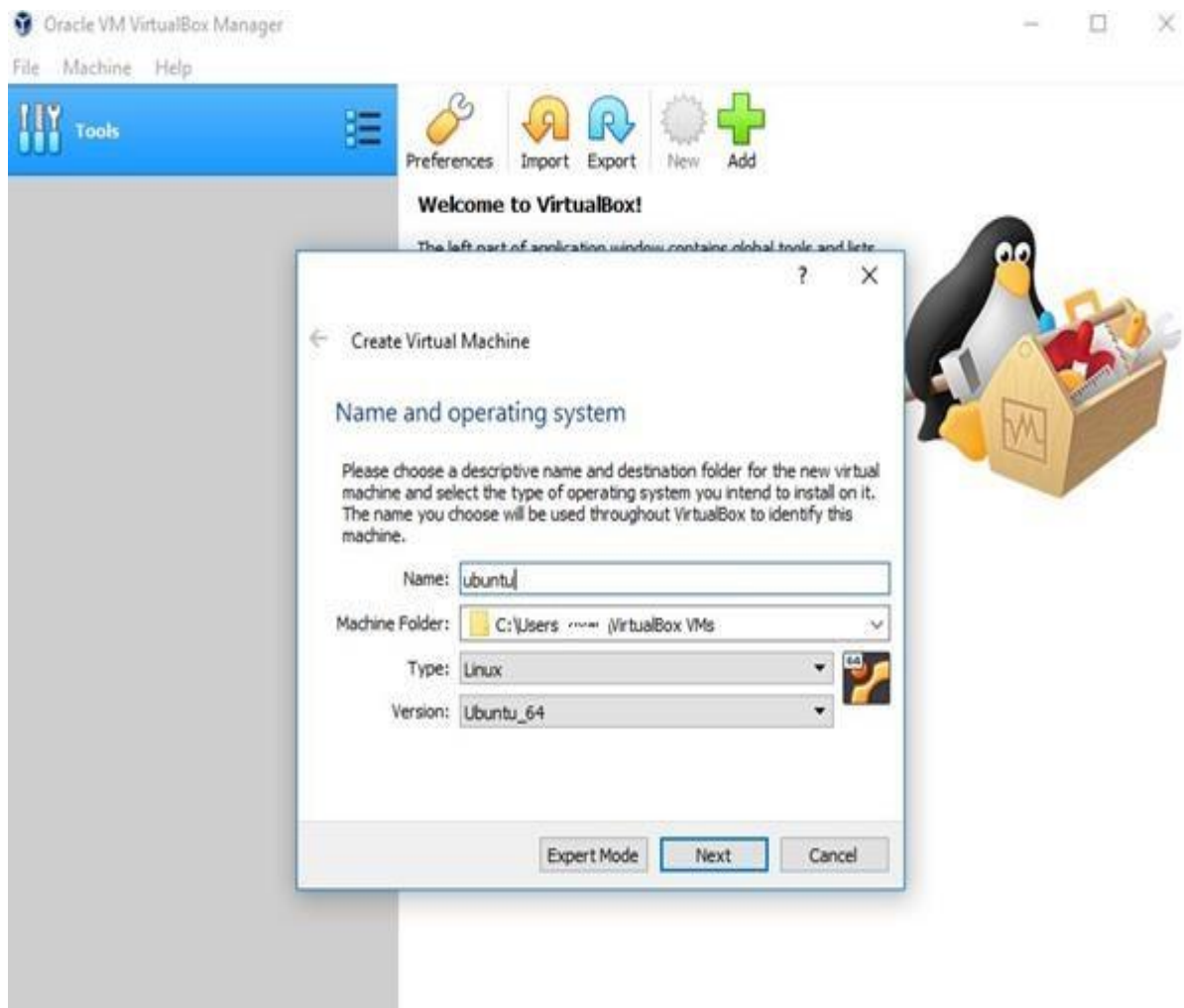


Figure3.3.4: Ubuntu setup process

4. Now Run And Setup Ubuntu Operating System

After install Ubuntu operation system for using Ubuntu Frist of all run this module and setup all of the requirement.

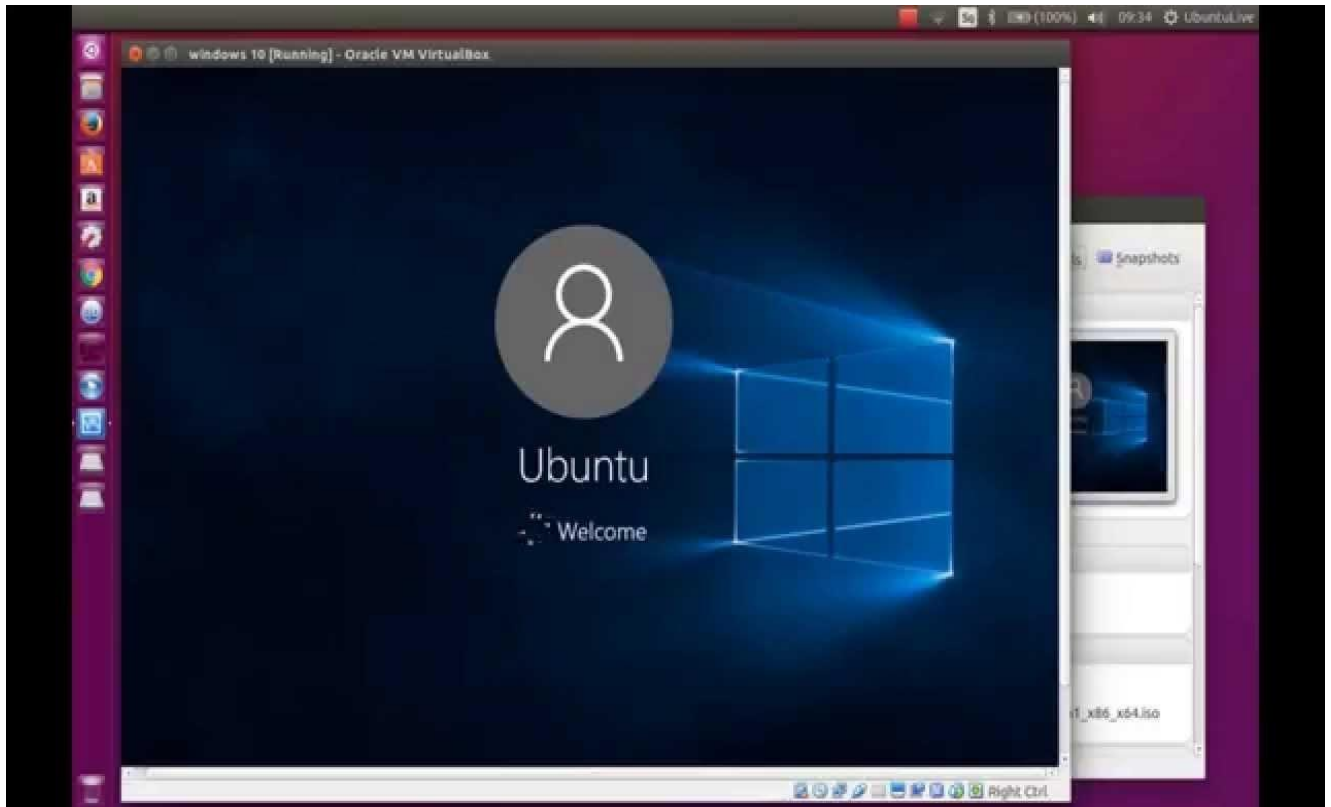


Figure3.3.5: Ubuntu login screen

5. Login To Ubuntu Secure Screen

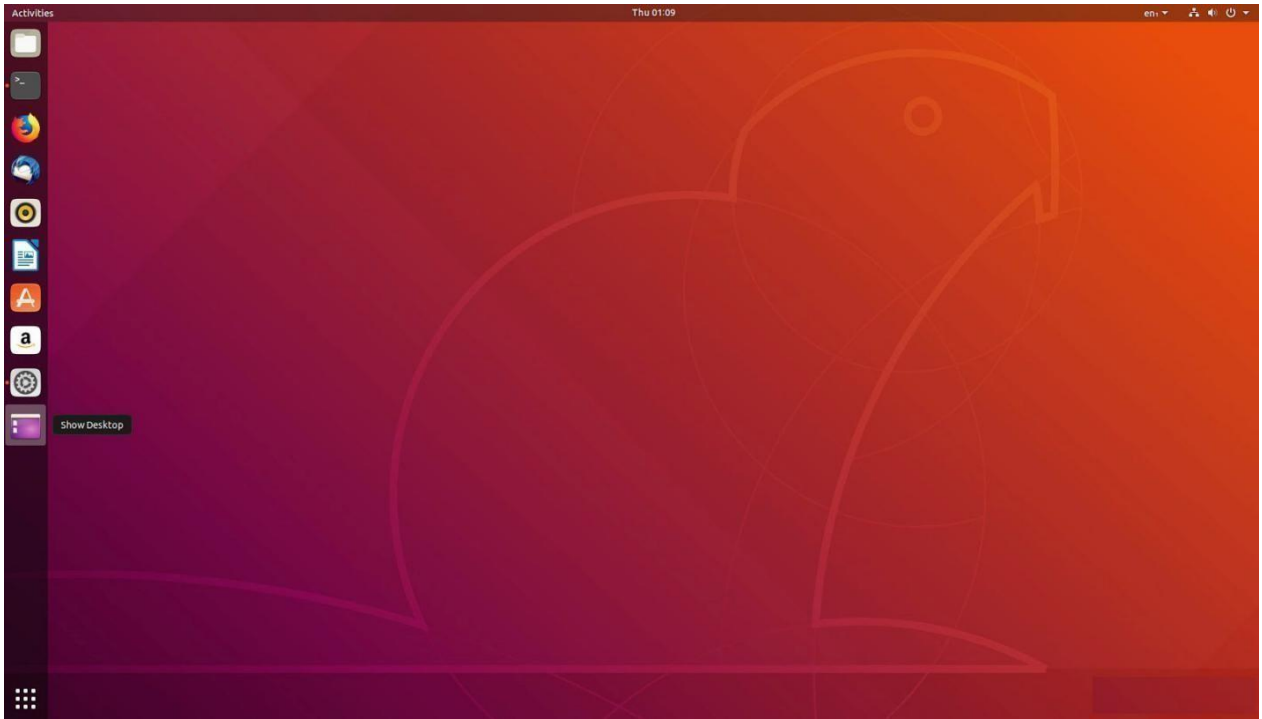


Figure3.3.6: Ubuntu desktop

3.3.7 In internship period I had to this type of work which is assigned by the authority-

Problem identification:

- Computer Manufacturing Problem
- Display Power Cannot Be Received By The Display
- Computer Takes A Long Time To Boot
- Computer Shutdown Issue
- Driver Installation Problem
- Printer Does Not Working
- Mouse Not Moving At All
- PC Restarting Sometime After And After
- Operating System Is Not Manufactured Properly.
- Utility Software Does Not Started.

Problem solutions:

- If The RAM Is Low, The Computer Can Be Rebooted. As A Result, RAM Must Be Replaced Or Increased.
- If Your RAM Isn't Working, You Won't Be Able To See Anything On Your Screen. As A Result, The RAM Must Be Cleaned Of Dust And Reinstalled In The Slot. Alternatively, You May Require RAM Replacement..
- A Virus Has Infected The Computer, And The RAM Is Malfunctioning.
- The Driver CD/DVD Is Damaged Or Does Not Fit The PC
- Printer Toner And Telephone Are Both Damaged And Need To Be Repaired Or Replaced.
- The Mouse Sensor Isn't Working Properly.

- The operating system has crashed, and a new one must be installed.
- Windows must be reinstalled.
- You'll need to remove and then reinstall.
- Antivirus must be updated, and the computer must be cleaned, among other things.

Challenges

Working with a computer network system is not an simple task, as it presents many obstacles and tasks. There are many kinds of difficulties, because everything is deep in networking. No job is without its problems, but after four months of interning and sharing friends after hearing about happy hour, I've discovered that there are certain typical challenges for interns. Interns are three things, in my opinion: unpaid / underpaid, transient, and in a race to get experience.

I'm bored, unused, at my desk strumming my fingers and tempted to check Facebook. Sometimes There isn't enough work assigned to me: There isn't enough work assigned to me.

Too much work: Because interns are eager to get their foot in the door, some employers may exploit young workers by assigning them to tedious, repetitive labor for long periods of time.

Fearful of asking questions: There's an influx of work all of a sudden, and I finally get an opportunity to prove myself! However, I'm not sure about x, y, and z.....I'm convinced I'm under pressure to be self-sufficient and independent.

Chapter 4

Competencies and smart plan

4.1: Competencies Earned

The computer market is inundated with high-quality items these days. To achieve higher success, you must acquire competencies. If someone delivers system and monitoring data but does not obtain enough response, this suggests that they are not sufficiently skilled. As a result, it's crucial to keep one's spot in the system administration queue. Then one must increase one's possibilities; else, one's interest in the subject of system management would wane. To acquire outstanding abilities, one must understand a fundamental and distinct level of effort that leads to achievement. Another important component is communication, which might include employees, coworkers, other businesses, customers, buyers, and others..

Smart Plan

I always follow a smart plan, which makes my job easier and give me professional knowledge. But if my ambition is to perform better, it is important to monitor the terminals at all times. Look into many devices and many smart technologies for unique screen resolutions and concepts. Deliver or gain ideas in a unique way and I also able to handle all of complex problem every day in my work life.

Reflection

My long-term goal is to become a world-class network system developer. So, with this firm, I had a fantastic opportunity to learn a lot about networking systems. To me, it was the ideal chance. I need my own portfolio, which is a representation of my work, if I want to be successful. It aids in demonstrating my worth and originality to my client. For my nation, I must produce something remarkable. I need to study more about technology and other subjects in order to do a better job.

Chapter 5

Conclusion and Future Career

5.1: Discussion and conclusion

Evaluating the internship, I can say that it was a fantastic and gratifying experience. I've glimpsed the future, and I'll be able to assist me with the ability to network with a great amount of people who can corroborate it. My hours of overlapping were not broken after I recognized what I had to accomplish, so I organized my day work. Through my internship, I've learnt that work ethic and self-motivation are two of the most important challenges. When I first started, I thought that I would be able to sit in an office for eight hours a day, six days a week. I had to learn how to push myself through this internship and goal setting in the office for many hours. When I get a reaction prepared for concerns that need to be learned, I'm organized and it's the perfect moment.

Scope for further career

The internship achievements provide me a good picture of what the practical and semantic Network foundation system is all about. Using my knowledge, I created proof of concept for a decision-making system during my internship. I'm looking for an excellent job that doesn't require my experience. It's quite difficult. However, this internship will greatly assist me in establishing a successful profession in my life. As a result, this internship will be extremely beneficial in terms of learning and applying for my future profession.

5.3: further career:

- Learn About The Networking Components In Depth.
- Install Centos Linux,
- Server Configuration,
- Network Management,
- Jobs As Like Network Engineer.
- How To Interact With Customers.
- Communication Skill.
- Jobs ISP Based Company.
- Jobs As Like Network Engineer.
- Jobs As Like Network Engineer.
- Work As A Network Monitoring Concern.
- Ability To Teamwork By Good Engineer.
- Data And Information Collection.
- Work At As An IT Supervisor.
- Self-Entrepreneurship Networking field.

References:

- [1] Get knowledge Virtual Box. Available at <https://www.virtualbox.org/wiki/Documentation> lastaccess date:21.09.2021,11.00am
- [2] Ubuntu Server Basic knowledge. Available at: <https://ubuntu.com/download/server> last access date: 24.09.2021,12.00pm
- [3] About Configuring DNS, Available at: [http://www.linuxhomenetworking.com/wiki/index.php/Quick_HOWTO : Ch18 : Configuring DNS#.VTK2KPA0-1k](http://www.linuxhomenetworking.com/wiki/index.php/Quick_HOWTO:_Ch18:_Configuring_DNS#.VTK2KPA0-1k), last access on 25.09.2021, 10.00am
- [4] About Recommended Partitioning Scheme, Available at: www.centos.org/docs/5/html/5.2/Installation_Guide/s2-diskpartrecommen-ppc.html, last accessed on 26.09.2021, 4.00pm.
- [5] About internship, Available at: <http://ashleydotson.blogspot.sg/2009/08/in-review-this-internship-has-been.html>, last access on 27.09.2021, 10.20am
- [6] Get Concept about File and directory details, Available at <http://www.bitpapers.com/2012/12/linux-working-with-files.html> last access on 29.09.2021, 11.20pm
- [7] Get Concept about Web server, Available at http://www.webopedia.com/TERM/W/Web_server.html last access on 30.09.2021, 10.30am
- [8] Get Concept about DNS server, Available at http://compnetworking.about.com/od/dns_domainnamesystem/f/dns_servers.htm,last access On 01.10.2021, 11:00am
- [9] Get Concept about Mail Server, https://www.centos.org/docs/5/html/Deployment_Guide-en-US/ch-email.html, last access on 03.10.2021, 11:00am
- [10] Get Concept about MikroTik Router, <https://en.wikipedia.org/wiki/MikroTik> 04.10.2021, 11:00am
- [11] Get Concept about RouterOS, <http://www.revolvy.com/main/index.php?s=MikroTik> 07.10.2021, 11:00am
- [12] Get Concept about Release history, <http://www.revolvy.com/main/index.php?s=MikroTik> 09.10.2021, 11:00am
- [13] Get Concept about Router Board, <https://en.wikipedia.org/wiki/MikroTik> 13.10.2021, 11:00am
- [14] Get Concept about Cloud Core Router, <https://en.wikipedia.org/wiki/MikroTik> 16.10.2021, 11:00a

Appendices

Appendix A:

Internship reflection

Since completing this report, I've discovered that networking isn't as intimidating as it once was. Making a connection may be simple and occurs at any moment. It is critical to have strong social skills, communication skills, technical network abilities, and the courage to speak with significant individuals in order to construct a robust organizational network. Saying the correct things and asking the appropriate questions may be difficult. Anyone who has mastered communication skills and talents from others might get useful knowledge. I intend to use enterprise networking since it is much safer and smoother. Working as a network administrator will help me in my future endeavors.

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