Report On Internship at Thakral Information Systems Pvt. Ltd.

by

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An internship report submitted to the Department of Computer Science and Engineering in partial fulfillment of the requirements for the degree of B.Sc. in Computer Science

Department of Computer Science and Engineering Brac University October 2024

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Declaration

It is hereby declared that

- 1. The internship report submitted is my original work, completed as part of my degree at BRAC University.
- 2. The report does not contain material previously published or written by a third party, except where appropriately cited through full and accurate referencing.
- 3. The report has not been submitted for any other degree or diploma at any university or institution.
- 4. All main sources of assistance have been acknowledged.

Member's Full Name & Signature:

Tazkir Taher ID: 18101048

Letter of Transmittal

Annajiat Alim Rasel Senior Lecturer Department of Computer Science and Engineering BRAC University Kha 224 Bir Uttam Rafiqul Islam Avenue Merul Badda, Dhaka 1212

Subject: Internship at Thakral Information Systems Pvt. Ltd.

Dear Sir,

It is my pleasure to submit my internship report titled "Internship at Thakral Information Systems Pvt. Ltd." This report provides details regarding my experiences during the internship.

I have tried my best to incorporate all necessary information and propose meaningful recommendations in a concise and comprehensive manner. I trust that the report will meet your expectations.

Sincerely yours,

Tazkir Taher 18101048 Department of Computer Science and Engineering BRAC University

Date: October 17, 2024

Approval

The project titled "Daily activities as an Intern at Network Service Department" submitted by

• Tazkir Taher (18101048)

of Summer, 2024 has been accepted as satisfactory in partial fulfillment of the requirement for the degree of B.Sc. in Computer Science.

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Acknowledgement

First and foremost, thanks to the Almighty Allah, I have successfully completed my internship. Second, thanks to my supervisor Annajiat Alim Rasel for all of his help and guidance in getting me through my internship assignments. He was there for us anytime I needed assistance. Thirdly, throughout the entire internship, I received guidance from Md. Feroz Imtiaz Razee sir. He also helped me a lot by referring me for this internship position. And lastly, we could not be able to do this without our parents' unwavering support. Thanks to their thoughtful prayers and support, I am almost done with my degree.

Executive Summary

An extensive summary of my three-month internship at the IT division of Thakral Corporation's Bangladeshi branch is provided in this report. My academic curriculum would not have been the same without the internship, which gave me practical experience in the quickly changing IT sector. Helping with network administration, Windows server setup, software installation, and participating in CCNA-based tutorials to enhance my comprehension of networking protocols were among my main duties throughout my internship.

Through these tasks, my soft skills grew. Now, I solve problems, cooperate with others and speak well. My technical abilities also developed, especially in network administration and server management. I discovered key information about current and valuable market trends. These trends are crucial for the future of the IT world, like cloud computing, cybersecurity and artificial intelligence (AI).

My career goals are now much clearer and I am eager to seek a career in IT, focusing on network management and cybersecurity. During the internship, I learned the importance of professional growth. I now aim to explore a job in networking to acquire more knowledge in this domain.

Keywords: Internship, IT Division, Thakral Corporation, Practical Experience, CCNA Tutorials, Networking Protocols, Soft Skills, Technical Skills, Problem-Solving, Teamwork, Communication

Table of Contents

De	eclar	ation	1					
Letter of Transmittal Non-Disclosure Agreement Acknowledgment Executive Summary								
					Ta	ble o	of Contents	vi
					Li	st of	Figures	viii
					No	omer	nclature	viii
1	Intr 1.1 1.2 1.3	Poduction Purpose of the Internship	. 2					
2	Ove 2.1 2.2 2.3 2.4 2.5 2.6 2.7	Company History and Background Business Segments and Operations Company Culture and Values Sales and Project Workflow Process Thakral's Role in the Global Market Recent Developments and Innovations Strategic Vision and Future Outlook	. 3 . 4 . 4 . 5					
3	Inte 3.1 3.2 3.3 3.4 3.5 3.6	Overview of My Role in the IT Department Key Responsibilities Specific Activities 3.3.1 Assisting with Network Configuration 3.3.2 Participating in Team Meetings 3.3.3 Engaging with Documentation Practices Technical Skills Development Networking Project Soft Skills Development	. 7 . 8 . 8 . 8					

	3.7	Reflections on the Internship Experience	9		
	3.8	Challenges Faced During the Internship			
		3.8.1 Navigating New Technologies			
		3.8.2 Time Management in a Professional Setting			
		3.8.3 Communication Barriers			
	3.9	Impact of the Internship on My Professional Development $\ \ .\ \ .\ \ .$	11		
4	Lea	rning and Skills Development	12		
	4.1	Technical Skills Development	12		
		4.1.1 Networking Fundamentals			
	4.2	Soft Skills Development	13		
		4.2.1 Communication Skills	13		
		4.2.2 Team Collaboration	13		
	4.3	Critical Thinking and Problem-Solving Skills	14		
	4.4	Adaptability and Flexibility	14		
	4.5	Time Management Skills			
	4.6	Cultural Awareness and Diversity	15		
	4.7	Professional Development and Industry Insights	15		
	4.8	Career Aspirations and Future Goals	16		
	4.9	Importance of Feedback and Reflection	16		
	4.10	Reflecting on the Internship Experience	17		
		The Impact on Future Career Aspirations			
5	Inte	rnship Report on Router Configuration	19		
	5.1	Overview of the Task	19		
	5.2	Experience and How Lab and Real Life Differ $\ \ldots \ \ldots \ \ldots \ \ldots$	20		
6	Conclusion				
	6.1	Key Takeaways from the Internship	22		
	6.2	Future Aspirations			
$\mathbf{B}_{\mathbf{i}}$	ibliog	craphy	24		

List of Figures

2.1	Sales and Project Workflow Process	4
4.1	CISCO Network Infrastructure Diagram	13
5.1	Demo Code for Router Configuration	21

Chapter 1

Introduction

Internships open a new journey of application of the theoretical knowledge we learn throughout our undergrad life. I completed an internship with Thakral Corporation's Bangladeshi branch as a prerequisite for my computer science degree. In addition to providing me with practical experience in a real-world environment, my three months in the IT department gave me a rare chance to comprehend the dynamics of technology implementation in a global corporation.

Established in 1905, Thakral Corporation is a multinational conglomerate with operations in more than 35 nations. The business is a major player in the Asian market and engages in a number of industries, including consumer goods, real estate, and technology.[1]

Seeing how technology is incorporated into business processes to improve productivity, security, and efficiency was made possible by my IT department assignment.

1.1 Purpose of the Internship

My internship was primarily intended to help me build real-world skills to supplement my academic knowledge. At the end of my graduation life, I realized how important it was to obtain practical experience in IT operations. Among my objectives were:

- 1. Enhancing Technical Skills: I wanted to gain a deeper grasp of networking, server administration, and software installation by working in the IT department. These are skills that are essential for a successful career in information technology.
- 2. Understanding Organizational Dynamics: My internship at Thakral gave me a firsthand understanding of how IT departments operate inside a larger business framework. I was excited to learn about project management, teamwork, and the daily activities of a tech-driven company.
- 3. Fostering Communication and Teamwork: The internship gave me the chance to interact with seasoned professionals, which I thought would improve my capacity for teamwork and communication. During this encounter, I tried

to internalize the notion that teamwork is crucial to accomplishing shared objectives.

1.2 Challenges of Being New

There is generally a mix of enthusiasm and anxiety while beginning an internship. I had a number of difficulties as a new employee, such as adjusting to a work setting and comprehending the particular duties and obligations in the IT division. I had to be proactive in looking for learning opportunities because my initial tasks were limited, mostly because I was a rookie. Although this would have been disappointing, I decided to see it as an opportunity to watch and pick up tips from my peers. I was able to ask questions and get advice from seasoned team members in the encouraging and cooperative atmosphere at Thakral.

1.3 Significance of the Experience

This internship was more than just a graduation requirement; it was a life-changing opportunity for me to put academic ideas into practice. My desire to work in this industry has been cemented by the chance to interact with many facets of IT operations. Moreover, my knowledge of the worldwide impacts of technology has enriched after working in a multinational corporation.

To sum it up, my internship at Thakral Corporation was a crucial beginning in my career. I found the excellent combination of technical instruction and soft skill development while working under this industry. As I continue to move up in my career, the knowledge I've gained from here will surely make a huge impact on my future career.

Chapter 2

Overview of Thakral Corporation

2.1 Company History and Background

Thakral Corporation started as a small retail company in Thailand in 1905. And since then it grown into a multinational business, currently operating in over 35 countries. [2] It began with a focus on consumer goods but later shifted to technology and lifestyle product after overcoming many challenges like the 1997 Asian Financial Crisis. Today, it continues to adapt to changing markets and in the meantime expanding into sectors like real estate while staying flexible to ensure ongoing success.

Today, Thakral Corporation operates in various industries, including consumer goods, technology, and real estate etc. By expanding its range of innovative products, currently the company has adapted its business strategy to keep up with changing market demands. This ability to evolve is a key factor in its ongoing success and growth.

2.2 Business Segments and Operations

Thakral Corporation's activities are organized into several business segments while each specializing in a different industry. Among these segments are:

- 1. **Investment:** Thakral makes investments in a variety of sectors, with a focus on spotting prospects for expansion in developing nations. The business makes strategic investments in industries like technology and real estate that are expected to grow. [3]
- 2. Lifestyle Products: TIn collaboration with well-known international brands including Ralph Lauren, Maison Margiela, and John Masters Organics, the company markets and distributes a broad variety of beauty and health goods. Thakral has been able to successfully accommodate customer demands, especially in Asia, thanks to its ability to build and maintain strong connections with major businesses.
- 3. **Technology Distribution:** By joining up with top technology firms, such as DJI, the biggest drone manufacturer in the world, as a regional distributor, Thakral has established itself as a major force in the technology industry.[4]

This division contributes to the company's reputation for innovation by supplying high-tech devices and accessories.

4. **Real Estate:** Thakral invests in real estate, especially in Australia and Japan, in addition to its consumer and technology industries. In line with consumer demands and demographic trends, the company's real estate endeavors include lifestyle resorts aimed at the elderly population.

2.3 Company Culture and Values

Thakral Corporation promotes a cooperative and creative work environment. It is built on strong family values and the company promotes loyalty and dedication among its employees. It encourages open communication and teamwork at every level.

Additionally, the company also prioritizes the growth and development of its staff and offers training programs to keep them up to date with new technologies. Thakral understands the importance of staying flexible in today's fast-paced business world.

2.4 Sales and Project Workflow Process

Firstly, sales team of the company initiates the talk with clients. They gather the primary requirements and pass it down to the management or development team to create an proposal with an estimated cost. According to the proposal, sales team forwards quotation to the client along with a draft proposal. However, accounts team is also responsible for payment procedures. And finally, the finished product is given to the sales team and they hand it over to the client.

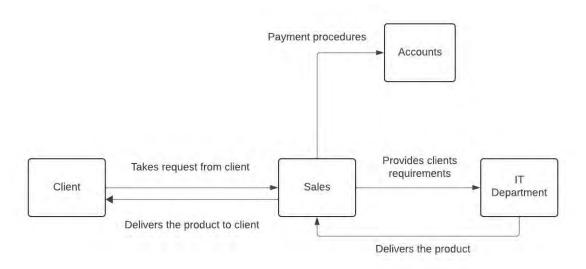


Figure 2.1: Sales and Project Workflow Process

2.5 Thakral's Role in the Global Market

Thakral Corporation is a respected player in the global market, particularly in Asia. Its diverse portfolio that allows the company to respond effectively to changing consumer needs and market trends. With strategic partnerships and investments in fast-growing sectors like technology and real estate, Thakral is well-positioned for future growth.

The company is also very committed to social responsibility, sustainability, and innovation. It aims to positively impact the communities where it operates while creating long-term value for its stakeholders. Thakral's focus is on strong corporate governance and ethical business practices to strengthen its reputation in the international marketplace.

2.6 Recent Developments and Innovations

Thakral Corporation has made significant innovative development in recent years by enhancing its product offerings and expanding its market presence. A stand-out achievement is its partnership with "DJI". Which has positioned Thakral as a leading distributor of drone technology in South Asia. This collaboration allows the company to tap into the growing demand for drones in various sectors which include logistics, security, and agriculture.

Thakral has also invested in Australia's growing lifestyle resort industry for people over 50. This shows the company's ability to respond to the needs of an aging population seeking quality living options. By working with experienced developers, Thakral aims to create a more vibrant communities that focus on wellness for seniors.

Additionally, the business has consistently worked to improve its technological growth. It emphasizes cutting-edge technologies across its business areas. Thakral has deployed sophisticated IT solutions to enhance operational effectiveness and customer service. To better understand customer preferences and optimize operations, this involves implementing cloud solutions and data analytics technologies.

2.7 Strategic Vision and Future Outlook

Thakral Corporation's main strategy is all about growth through innovation. The company plans to strengthen its presence in developed markets. It also explores opportunities in developing ones. One key area of focus is improving its e-commerce site and keeping up with new technologies because of the current trend of online shopping continues to grow. This also includes investing in cybersecurity to protect customer information. Thakral is also dedicated to sustainability, aiming to promote eco-friendly sourcing of products products that are good for the environment, catering to customers who value sustainability. Additionally, the company is also looking for opportunities in new markets in areas like Africa and Southeast Asia. It

has plans to introduce products and services tailored to local needs while leveraging its existing networks and expertise.

Chapter 3

Internship Activities and Responsibilities

3.1 Overview of My Role in the IT Department

I was allowed to work in the IT department during my internship at Thakral Information, at the Network Service department. My main duties were assisting the team in overseeing and maintaining a smooth Network Service infrastructure by introducing them to fundamental ideas in server and networking administration. My comprehension of the IT landscape and the operational dynamics of computer networks in a corporate setting has improved significantly as a result of this role.

3.2 Key Responsibilities

Due to my inexperience in the position, my work was somewhat constrained, but I was still able to participate in several crucial activities that aided in my learning and growth:

- 1. Assisting with Network Management: Helping the IT team with network management duties was one of my first assignments. To maintain efficient communication inside the company's digital infrastructure, I gained knowledge of fundamental networking concepts and protocols. Under my supervisor's supervision, I took part in configuring and setting up network equipment such as switches and routers. I was able to comprehend the significance of appropriate network configuration for guaranteeing data integrity and effective communication thanks to this practical experience.
- 2. Engagement with CCNA-Based Tutorials: I used CCNA-based tutorials to improve my networking skills such as IP addressing, network security, and routing protocols are among the fundamental subjects covered by the Cisco Certified Network Associate (CCNA) certification, which is highly respected in the IT sector. I concentrated on comprehending fundamental ideas. For example: subnetting and virtual local area networks, or VLANs, are essential for managing and segmenting networks.

3.3 Specific Activities

3.3.1 Assisting with Network Configuration

When I first started out, I observed senior network engineers configuring switches and routers. I gained knowledge about connecting and resolving connectivity problems. Taking part in these activities made it clear how important network dependability is in a corporate setting. One useful ability that I intend to develop more in the future is the ability to identify and fix network issues for a client company.

3.3.2 Participating in Team Meetings

I participated in frequent team meetings where the Network Service team talked about current initiatives, difficulties encountered, and ways to do better. These gatherings reinforced the value of teamwork and communication in a professional context by offering insights into project management and the collaborative nature of IT work. It was instructive to see how team members shared their thoughts and got feedback since it demonstrated the fluidity of group problem-solving.

3.3.3 Engaging with Documentation Practices

Additionally, I had the chance to watch and witness the Nettwork Service team's documentation procedures. Maintaining an orderly and effective IT operation requires that procedures, configurations, and troubleshooting techniques be documented. I discovered how important precise documentation is for future reference and training, which is essential for maintaining IT operations' efficiency and continuity.

3.4 Technical Skills Development

My comprehension of networking principles, such as IP addressing schemes and routing protocols, was strengthened by my participation in network management responsibilities. For any future network management or engineering endeavors, this fundamental understanding is essential.

3.5 Networking Project

A network upgrade campaign aiming at improving the organization's IT infrastructure was one of the major thing that I learned in the course of this project. The things that I helped with are:

1. Assessing Current Network Infrastructure: My first task was to assist the group in assessing the current network configuration. This necessitated locating locations that needed repair as well as attentions. Using network monitoring tools I gained knowledge on how to evaluate network performance and examine traffic trends. Planning the upgrade and making sure the new network could handle the expanding needs of the business depended heavily on this study.

- 2. **Implementing Changes:** I also helped put a number of adjustments into places like re-configuring switches and routers to maximize performance. Applying best practices for network configuration gave me practical experience, which enhanced my comprehension of how to create and manage a productive network.
- 3. **Testing and Validation:** I took part in testing the updated network configurations and follow all the modifications. In order to make sure that the enhanced network could manage all the loads without any problems, it was required simulating various traffic scenarios. This element of the project was especially instructive since it made clear how crucial it is to conduct extensive testing prior to implementing changes in a live setting.

3.6 Soft Skills Development

In addition to honing my technical skills, the internship gave me lots of chances to improve soft skills, which are just as crucial in the IT sector.

- 1. Communication Skills: Working in a group setting helped me get better at communicating. I developed my ability to express myself humbly yet clearly, both in written documents and during team meetings. It's critical to communicate effectively, particularly when sharing technical information with colleagues who might not be technical.
- 2. **Problem-Solving:** My ability to solve difficulties was improved by working on actual computer network related issues. I gained the ability to tackle problems methodically by dividing them into smaller, more manageable pieces and dealing with them one at a time. This method turned out to be crucial for efficiently resolving technological problems.
- 3. **Time Management:**My time management skills improved as a result of juggling several tasks in a hectic work setting. I developed the ability to rank tasks according to their relevance and urgency, which helped me meet deadlines without sacrificing the caliber of my work.
- 4. **Team Collaboration:** Working with a experienced Network Service team gave me insight into how crucial teamwork is to accomplishing bigger objectives. I saw firsthand how a variety of viewpoints and abilities can lead to creative solutions, confirming that teamwork is indeed the best way to tackle any problems and come up with the best solutions.

3.7 Reflections on the Internship Experience

As I think back on my internship at Thakral Information, I see how beneficial it has been to both my career and personal growth.

1. Connection Between Theory and Practice: Practical experience really enhanced the academic understanding I acquired from my education. I gained a better understanding of computer network fundamentals by seeing personally

how theoretical ideas from CSE421 course from BRACU are implemented in practical situations.

- 2. Clarifying Career Goals: My interest in a career network management and server administration, has been strengthened by the internship experience. I've been motivated to increase my knowledge and proficiency in these fields by being exposed to a variety of technologies and best practices.
- 3. **Building Professional Relationships:**My connections with my coworkers have been quite beneficial. Gaining knowledge from seasoned experts and getting helpful criticism on my work created a nurturing atmosphere that promoted development and self-assurance.

3.8 Challenges Faced During the Internship

Even though my internship was a rewarding experience, I ran into a number of obstacles that put my flexibility and problem-solving abilities to the test. These difficulties offered priceless insights and chances for development.

3.8.1 Navigating New Technologies

- When I was first introduced to the different technologies and tools utilized in the network service, I had to overcome a high learning curve because I was still relatively new to the actual application of IT ideas. For example, it was intimidating at first to become acquainted with particular server administration software and network monitoring tools.
- This made me seek advice from my colleagues and use internet resources to deepen my understanding in order to overcome this obstacle. I learned from this experience how important it is to learn on your own and how important it is to swiftly adjust to new technology in a fast-paced workplace.

3.8.2 Time Management in a Professional Setting

- It was difficult to maintain several responsibilities, especially during busy project stages. I frequently found myself with learning activities to do the jobs that were given to me.
- I created a personal time management plan to deal with this. This calendar
 included ranking things according to their complexity and urgency. To keep
 things organized and make sure I reached deadlines of my academics without
 sacrificing the quality of my work, I used tools like digital calendars and to-do
 lists.

3.8.3 Communication Barriers

• I was first afraid to speak clearly with more senior team members as a new intern, especially when I needed help. I occasionally found it difficult to raise questions or seek clarification on duties because I was afraid of interfering with their workflows or coming across as annoying,

• I've discovered over time that communication is indeed the key. I eventually gained confidence in sharing my ideas and concerns by seeing how my coworkers interacted with one another. This change not only enhanced my educational experience but also strengthened the team's professional ties.

3.9 Impact of the Internship on My Professional Development

My professional development has been significantly impacted by my internship at Thakral Corporation, which has shaped my abilities and viewpoints in a number of crucial areas:

- 1. **Enhanced Technical Proficiency:** My technical proficiency was much improved by the practical networking expertise I obtained. I now have a better understanding of IT infrastructure configuration and management, which is crucial for a prosperous career in the industry.
- 2. Improved Problem-Solving Skills: As my profession develops, my ability to tackle technical problems methodically by dissecting them into smaller, more manageable parts and dealing with them one at a time is a very useful strategy and this problem-solving skill will be extremely useful for me in the future.
- 3. **Professional Networking:** Developing connections with mentors and coworkers has greatly increased my professional network. These relationships will be helpful to me as I look for new jobs in the IT sector. A key component of job development is networking, and my internship experience has given me the tools I need to cultivate fruitful business partnerships.
- 4. Clarified Career Goals: My career goals have become clearer as a result of being exposed to many challenges of network service. I now have a strong interest in computer network and network administration, which I plan to further explore in my studies and profession. I now have a better idea of the direction I want to go thanks to the real-world experience I obtained during my internship.

Chapter 4

Learning and Skills Development

4.1 Technical Skills Development

I had the chance to greatly improve my technical abilities during my internship at Thakral Informations, which are essential for a successful career in the IT sector. I was able to apply academic theory to real-world situations thanks to my hands-on experience in Network Service Department.

4.1.1 Networking Fundamentals

Networking was one of the main areas of technical skill development. I had some real life help with network management and worked in CCNA-based courses, which helped me have strong concepts on Networking. And among other things I learned are:

- 1. **IP Addressing and Subnetting:** Understanding the structure of IP addresses was vital. Another thing that helps in designing networks well is Subnetting. This knowledge provided clarity on the importance of assigning IP addresses correctly to avoid conflicts and achieve excellent network performance.
- Network Configuration: I gained practical experience setting up networks by assisting with configuring routers and switches. I learned how to establish connections, install VLANs and apply basic security steps, to block unwanted access to the network,
- 3. **Troubleshooting Techniques:** I gained important problem-solving skills when I faced different network problems, by discovering how to find connection problems with tools like ping and traceroute.

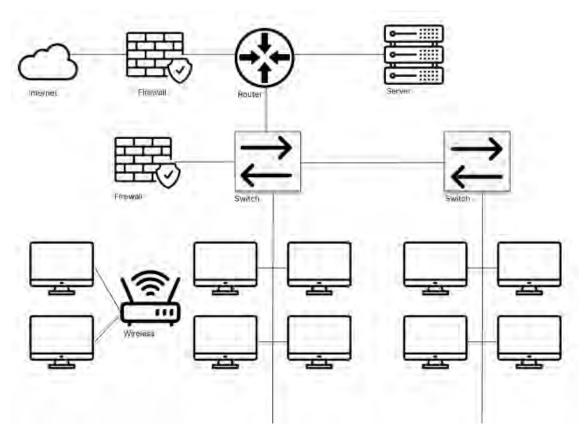


Figure 4.1: CISCO Network Infrastructure Diagram

4.2 Soft Skills Development

Although technical skills are important, my internship also highlighted the value of soft skills, which are necessary for effective teamwork and communication at work.

4.2.1 Communication Skills

Communication abilities I was able to greatly enhance my communication abilities by working in a team setting. I gained the ability to communicate technical information humbly yet clearly, both in written documentation and at team meetings.

- 1. **Verbal Communication:** Through communication with peers and superiors, I have also advanced my ability to communicate complex ideas to both technical and non-technical audiences.
- 2. Written Documentation: By working to document IT procedures and processes, I was able to enhance my writing skills significantly. I learned what it takes to do technical writing that is simple to read and serves a purpose for active as well as future team members.

4.2.2 Team Collaboration

My internship experience made me realize how important teamwork is to reaching shared objectives. Working with seasoned IT department specialists gave me insights into successful teamwork techniques.

- 1. **Building Relationships:** Getting to know team members helped to create a positive work atmosphere. I discovered how crucial it is to establish business relationships founded on respect and trust, as this improves collaboration and output.
- 2. Conflict Resolution: I learned a lot about how to settle disputes amicably by watching how my coworkers handled disagreements and conflicts. Sustaining a positive team dynamic requires effective dispute resolution abilities.

4.3 Critical Thinking and Problem-Solving Skills

I greatly improved my critical thinking and problem-solving abilities during my internship at Thakral Corporation, which are crucial for success in the IT industry.

- 1. **Analyzing Problems:** I usually ran into technological problems that needed careful attention to fix. I realised how to break down problems into smaller parts in order to find out their actual causes, whether it was diagnosing software bugs or troubleshooting connectivity issues. Using logical reasoning instead of trial and error, this analytical method helped me come up with workable answers.
- 2. Developing Solutions: I took part in brainstorming meetings with my team to generate possible solutions once issues were recognized. This cooperative approach placed a strong emphasis on using a range of viewpoints to produce creative results. I gained the capacity to assess the viability of several approaches according to cost, time, and resources, which reaffirmed the necessity of flexibility when facing difficulties.

4.4 Adaptability and Flexibility

I had to maintain flexibility and be sensitive to the constantly shifting conditions of IT during the whole procedure.

- 1. **Embracing Change:** My firsthand experience of the technology being swift in its development made me fathom the importance of companies trying to adapt to it for fair competitiveness out in the field. To me, embracing such changes means being adept at picking up new skills and methods and venturing beyond my comfort zone while adjusting to cope with project scope.
- 2. Managing Multiple Priorities: Juggling multiple projects and assignments was one other crucial component of my job. Hence priority maintenance according to timeframes and project requirements was one most important things that I have learned throughout my job experience. Digital Calendars and a to-do list to stay ahead of deadlines is of high organizational value.

4.5 Time Management Skills

Effective time management was critical during my internship. Working in a professional IT environment with tight deadlines emphasized the importance of managing my time efficiently.

- 1. **Prioritization Techniques:** I discovered how to rank jobs according to importance and urgency, figuring out which ones needed to be done right now. By classifying jobs and allocating time appropriately, I was able to make sure I was concentrating on the most crucial ones by using prioritization strategies like the Eisenhower Matrix.
- 2. Setting Goals and Milestones: Setting specific objectives and deadlines for my job was crucial to sustaining my output. I discovered how to divide more complex projects into smaller, more doable jobs with clear due dates. In addition to making work more attainable, this gave me a sense of achievement when I reached each goal. I was able to stay on course by routinely assessing my progress and making necessary adjustments to my goals.

4.6 Cultural Awareness and Diversity

Gaining knowledge about cultural sensitivity and the value of diversity was made possible by working for a global corporation such as Thakral.

- 1. Understanding Cultural Differences: Engaging with coworkers from various backgrounds helped me to understand and value other viewpoints. I discovered how cultural variations can affect team dynamics and communication methods, highlighting the significance of cultural sensitivity in cooperation.
- 2. Building Inclusive Work Relationships: Maintaining a positive atmosphere at work requires promoting inclusivity. I discovered how to establish connections based on respect and understanding, which is crucial for productive teamwork. A more creative and effective work environment was produced by being receptive to many points of view.

4.7 Professional Development and Industry Insights

The period of my internship, I was motivated enough to plan my future career in Computer networking. I have gained important knowledge and information about this sector. Being able to participate in a real life project and being able to contribute gave me confidence for achieving my future career goals.

1. Understanding Industry Trends:

One of the most important things I took away from my internship was how important it is to keep up with industry developments. Thakral's dedication to creativity and flexibility served as an example of how businesses need to change to satisfy shifting customer needs and technical breakthroughs. Discussions regarding new technologies like cloud computing and AI, for example, demonstrated their increasing importance in the IT business. I discovered that keeping up with industry developments not only improves technical expertise but also helps guide strategic decision-making. As my career develops, this knowledge will be essential to my ability to make a significant contribution to upcoming initiatives and projects.

2. Networking within the Industry:

During my internship, I had the chance to connect with IT industry professionals. I was able to build relationships through conversations and group initiatives that might aid me in my future professional endeavors. Building a professional network requires active engagement, such as attending industry events, joining online forums, and using social media platforms like LinkedIn to connect with peers and industry leaders. Networking is a crucial part of career development because it facilitates the exchange of ideas and experiences that can lead to new opportunities.

4.8 Career Aspirations and Future Goals

My internship experiences and skills have had a big impact on my future objectives and job aspirations.

1. Clarifying Career Direction:

(a) Prior to beginning the internship, I was generally interested in a career in information technology. My exposure to several facets of IT operations, however, has made it easier for me to define my precise professional objectives. I've grown really interested in network administration and server management, which I plan to study more about in my schooling and career. This sense of purpose has driven me to look for more training and certifications, like the CCNA certification, to improve my employability in the cutthroat IT job market and expand my networking expertise.

2. Commitment to Lifelong Learning:

The IT industry's rapid pace demands a dedication to lifelong learning. I now understand how crucial it is to keep learning new things in order to remain current in my area.

4.9 Importance of Feedback and Reflection

During my internship with Thakral Corporation, my superior checked my every work and provided feedback and constructive criticism, which I believe helped me grow a lot. I was able to advance both professionally and personally by participating in a feedback- rich atmosphere.

1. **Receiving Feedback:** Each one of my work was reviewed twice, once by my peer which is called peer review. If needed I modified my work according to

peer review. Then again, my superior checked them and gave feedback as well. I believe this helped me grow the most during my internship.

2. Giving Feedback: During team meetings, I also got to take part in peer feedback sessions. Giving coworkers constructive criticism was enlightening since it showed me how to present my observations in a positive and encouraging perspective. In cooperative settings, where effective communication can improve team dynamics and project results, this ability is crucial.

I became more conscious of my communication style and how my comments could affect my coworkers' motivation and performance after learning how to give feedback effectively. I will benefit much from this insight in my future profession, especially in positions requiring cooperation and teamwork.

4.10 Reflecting on the Internship Experience

When I think back on my entire time at Thakral Corporation, I see how beneficial this internship has been to both my professional and personal growth. There are some noteworthy reflections:

- 1. Growth through Challenges: In the end, the difficulties I encountered—from adjusting to new technologies to juggling several priorities—helped me grow. Every challenge offered a chance to hone resilience and adaptability, two qualities that are essential in the ever changing IT industry. I discovered that obstacles are not setbacks but rather opportunities to grow as a professional.
- 2. The Value of Teamwork: Working with a diverse team brought home how crucial teamwork is to accomplishing shared objectives. Bringing people with diverse backgrounds and viewpoints together produced a synergy that encouraged innovation and creativity. I learned how good project outputs and improved problem-solving skills can result from productive teamwork.
- 3. The Role of Continuous Learning: My internship experience reaffirmed the importance of ongoing education in the IT sector. Professionals must maintain their curiosity and dedication to lifelong learning due to the rapid speed of technology changes. I'm more driven than ever to pursue further education and certifications that will broaden my skill set and keep me up to date with market developments.

4.11 The Impact on Future Career Aspirations

My future plans and career goals have been greatly impacted by the knowledge and abilities I acquired throughout my internship.

1. Clarified Career Goals: My precise career interests, especially in network administration and server management, became clearer after being exposed to a variety of IT roles and responsibilities. Now that I know these fields fit with my interests and abilities, I feel comfortable pursuing them further.

- 2. Commitment to Professional Development: Commitment to Professional Development: I have a strong commitment to ongoing professional growth as a result of my internship experience. In order to boost my resume I intend to work for professional certification like CCNA.
- 3. **Embracing Lifelong Learning:** Embracing Lifelong Learning: It is established that the IT sector is constantly changing and it is essential to keep learning new technologies. I intend to learn new technologies and align myself with the new technological trends.

Chapter 5

Internship Report on Router Configuration

As an intern at Thakral Information Systems Pvt. Ltd., my first-ever assignment that gave me hands-on experience was configuring a router. Previously, I had only practiced such setup-related activities under a controlled setting as an academic endeavor, for example, Cisco packet tracer. So, this real-world configuring of a router under no other surveillance but mine to judge my competency was nervewracking but exciting. I had come to acknowledge how dealing with real-world hardware greatly differs from that in virtual labs. The account of configuring a router along with my newfound difference between lab and real-world installations is provided below in greater detail.

5.1 Overview of the Task

I was assigned to configure a Cisco router to establish a fundamental network for one of our client locations with simple instructions such as providing IP addresses to interfaces, securing privileged EXEC access, setting up the hostname, establishing console and VTY passwords, and making sure the interfaces were operational. The aim was to verify that the router was functional and worthy of deployment. Procedure for Configuring Privileged EXEC Mode Step-by-Step

- 1. I began by logging into the router's console and used the 'enable' command to switch to the privileged EXEC mode. Although this portion was comparable to what I had done in Cisco Packet Tracer, working with actual hardware gave it a more authentic feel.
- 2. For establishing the hostname, I updated the router's default hostname to "R1" so that it would be easier to identify. 'hostname R1' was the straightforward command. This step seems normal in Packet Tracer, but performing it on a live router made me feel more accountable because any changes I made would have an immediate impact on the actual network.
- 3. To turn off IP Domain Lookup using 'no ip domain-lookup', I turned off IP domain-lookup. While this may appear insignificant in lab settings, it can save time in the field by avoiding the router from attempting to convert incorrect commands into domain names.

- 4. Creating Passwords I set up the console/VTY line passwords as well as the enable secret password. Even though the commands were straightforward ('enable secret querty' and creating passwords for 'line console 0' and 'line vty 0 4'), I came to the realization that creating strong passwords is essential to maintaining network security in the real world.
- 5. Configuring the Interface I then proceeded to the Serial and FastEthernet interfaces. One of the most complicated procedures was giving the interfaces IP addresses. When I first used the wrong subnet mask ('255.255.0'), I got an error; however, the router's response enabled me to change it to '255.255.255.0'. In the real world, you have to pay much more attention to these details because even a minor misspelling can result in serious network connectivity problems.
- 6. To Activate of the Interface I became aware of the immediacy of working on actual hardware when I used the 'no shutdown' command to enable the interfaces. You can't physically see the interface in a virtual lab, but I knew it was live when I saw the link lights blink and got confirmation notifications like '
- 7. Lastly, I used 'copy running-config startup-config' to save the configuration. This phase was essential since losing a configuration in real life could result in network outages, unlike in a lab where things can be simply restored.

5.2 Experience and How Lab and Real Life Differ

A real router and Cisco Packet Tracer have the same syntax and commands, but the actual experience is very different. Errors are easily fixed in Packet Tracer, and there isn't much of a sense of urgency or accountability. There is pressure to prevent errors that could affect the network or necessitate extensive troubleshooting when establishing an actual router, though.

The primary distinctions I observed are:

- 1. Hardware Points to Remember: In the actual world, physical connections must be handled, cables must be plugged in correctly, and the router's physical condition (such as its link lights) must be monitored. Although it lacks the physical component, Packet Tracer mimics these things.
- 2. **Real-Time Feedback:** Packet Tracer's errors are simple to ignore or swiftly fix. Errors on a real router might have serious repercussions, and troubleshooting can occasionally take more work, particularly when network devices are attached.
- 3. Accountability and Repercussions: If something goes wrong in the lab, you can reset and try again without feeling under any pressure. Because misconfigurations can impact the client's operations, you must be exact and cautious when working in the field.
- 4. **Handling the Environment:** Compared to the ease of configuring in a virtual configuration, working in the field might occasionally involve noisy server

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config) #hostname R1
Rl(config) #no ip domain-lookup
R1(config) #enable secret qwerty
R1(config)#line console o
% Invalid input detected at '^' marker.
R1(config) #line console 0
R1(config-line) #password 123456
R1(config-line) #login
Rl(config-line)#exit
R1(config) #line vty 0 4
Rl(config-line)#password admin
R1(config-line)#login
R1(config-line)#exit
Rl(config) #interface fastethernet 0/0
R1(config-if) #ip address 192.168.1.1 255.255.0
% Invalid input detected at '^' marker.
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if) #no shutdown
R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1(config-if)#interface serial 0/0/0
R1(config-if)#ip address 132.168.2.1 255.255.255.0
R1(config-if)#clock rate 64000
R1(config-if) #no shutdown
%LINK-5-CHANGED: Interface Serial0/0/0. changed state to down
R1(config-if)#end
R1#
%SYS-5-CONFIG_I: Configured from console by console
Rl#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
```

Figure 5.1: Demo Code for Router Configuration

rooms, confined areas, and new environments, making the task physically more difficult.

Real-world router configuration was a worthwhile educational experience that went beyond simply understanding the commands. It required paying close attention to details, handling the actual components of network equipment, and comprehending the larger context of network configuration. The real-world assignment offered new layers of learning that I had not experienced in a simulated setting, even if my prior lab experience with Cisco Packet Tracer had helped me grasp the steps. Through this practical exercise, I learned how to manage the demands and obligations of field work in addition to configuring a router.

I'm excited to learn more about the useful applications of IT infrastructure at Thakral Information Systems Pvt. Ltd. and to continue my internship there.

Chapter 6

Conclusion

My internship at Thakral Corporation has been a life-changing experience that has greatly influenced my professional and personal growth. During my three months in the IT department, I improved my technical skills, developed critical soft skills that are essential for success in the field, and gained invaluable insights into the ever-changing IT industry.

6.1 Key Takeaways from the Internship

- 1. **Technical Proficiency:** I improved my technical proficiency in computer networking. I gained a strong foundation in IT operations from the practical experience, which enabled me to use my theoretical knowledge in practical situations. I learned more about the significance of data analytics, cloud computing, and cybersecurity-all of which are essential to the industry's future.
- 2. Collaboration and Teamwork: My experience made clear how important teamwork is to accomplishing project objectives. I learned the importance of open communication, respect for one another, and using multiple viewpoints to spur creativity by working with diverse teams. I discovered that productive teamwork can improve problem-solving skills and result in good project outputs.
- 3. Adaptability and Lifelong Learning: The requirement for constant learning and flexibility was brought to light by the speed at which technology was changing. I understand that success in the IT sector depends on keeping up with developments and trends in the industry. My dedication to lifelong learning will enable me to take advantage of opportunities and overcome obstacles in the future.
- 4. **Networking and Professional Development:** Developing connections with mentors and coworkers broadened my professional network and gave me insightful knowledge about the field. Interacting with seasoned experts gave me the opportunity to learn and receive advice that would help me grow in my career. In order to keep improving, I intend to actively participate in the professional community.

6.2 Future Aspirations

After thinking back on my internship, I'm more certain that I want to work in IT, especially in fields like network management and cybersecurity. My job ambitions have become clearer as a result of my newfound understanding of industry trends and obstacles, and I am now more driven to pursue further education and certifications in order to improve my abilities.

I'm determined to take a proactive stance toward my career advancement, pursue lifelong learning, and acquire a broad skill set that meets market needs. By doing this, I hope to establish myself as a useful resource in the IT industry and make a significant contribution to upcoming projects and activities.

One of the most important periods of my academic career has been my stay at Thakral Corporation. I have the skills I need to succeed in the IT sector thanks to a combination of technical instruction, exposure to real-world problems, and personal development. I am appreciative of my mentors and coworkers' support and advice, and I am eager to use the knowledge I have gained from this internship in my future undertakings.

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