Working as Network Operations Center Trainee Engineer at Metal Plus Ltd.

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Internship titled "**Network Operations Center Trainee Engineer**" submitted by Rezaul Huque Nayeem, ID No: 162-15-8106 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 Saturday 14th September 2019.

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Finally, I must admit with due respect the continuous support and patients of my parents without whom I can't come this farther.

ABSTRACT

I am Rezaul Huque Nayeem a proud student of Daffodil International University and I have just completed my final year internship on a very reputed company Metal Plus Ltd. As a NOC engineer. This report necessity of the internship program for my Bachelor of Science course degree in my university. Metal Plus Ltd is doing maintenance activities of every telecom company on Bangladesh like Grameenphone, Robi, Airtel and Banglalink. They are in this business from 2006. They have a very beautiful NOC or Network Operation Center. I do my internship on their NOC. I am showing my interested to internship at this NOC because now a day communication technology played a very important role in modern world. In this internship period I learn working processes in a NOC and how to monitor the network. The First part of internship statement gives a summary about journey of Metal Plus Ltd. How they able become an important vendor for all of telecom service provider. And how much role they have been played on telecom sector. Then expatiate about the tasks we performed and our tasks through internship, finding hitches during monitoring network and process of solving them. There our main responsibilities are to monitoring the various power related alarm and take necessary steps. Hear I get a very good chance to observe the main operation on every telecom company. That is why I select this interesting subject "Working as Network Operations Center Trainee Engineer at Metal Plus Ltd.". This report written about how a NOC engineer work and how they are monitor the whole telecom network system.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

For completing my BSc in Computer Science and engineering I have to complete my thesis or project or internship. I chose to complete internship. I already complete my internship on Metal Plus NOC. During my Internship I learned about how to work on a NOC, how to monitor network operation 24/7. At beginning of my internship, I just have to observe how my senior co-worker are doing their job. How they manage all kind of operations, and escalates various network alarms to field. During this time, I learned how see alarm, every kind of network alarm, when and why alarms appeared on system monitor etc.

1.2 Motivation

My internship place is metal plus ltd, which company is doing maintenance every telecom company's network tower in all over Bangladesh. That's why in this company I can observe the operation of Grameen phone, Robi, Airtel and Banglalink in one place. I can learn how they work and how their network work. Every telecom company work in different way. In metal NOC I can learn all of them or at least know their working procedure. This will give me a chance to develop my working experiences. In future I can show this experience on any telecom company in Bangladesh for an honorable job position. Joining a company as an intern gives us the opportunity to work hands on in a professional environment. Internships help us by teaching more about the career path we are pursuing.

1.3 Internship Objective

By Internship I can get a chance to attend real life office meeting and events. That's why I can interact with professional person who can help me to make new connections and teach me how to communicate in a professional environment. I my internship I have been introduced with a lot of professional and resourceful person.

- 1. Learn how to Telecom Network Work.
- 2. Gain knowledge about networking components & technologies.
- 3. Know about internet, data, router & LAN.
- 4. Learn how I can access Ip addressing.
- 5. Learn about telecommunication.
- 6. To gain experience about telecommunication.
- 7. Understood the scenario of networking practical fields.
- 8. Most of all Learn about official environment and workplace.

1.4 Introduction of Company

"The Metal Private Ltd (Market Leader of Tractor industry in Bangladesh), Metal Agro Ltd, Sleek Knitwear, Jamil Engineering Ltd). From July 2008, MPL is marketing Eicher Tractors in Bangladesh. Our Market Share in this industry is around 15 %. From August 2010, MPL is marketing Diesel Generators, Powered by Eicher Engine Metal Plus Limited (MPL) was established in July 2005. Its sister s. From January 2011, MPL has started O&M activities in Telecom sectors. Presently, we are working with Grameenphone, Banglalink, Airtel Bangladesh Ltd., Huawei Technologies (BD) ltd., City cell, and Ericsson etc." [2]

Key Management

<u>Chairman</u>

Engr Mr. Aminul Islam. He is also MD of more eight companies (including Project Builders Limited)

<u>Managing Director</u> Engr Mr. Sadid Jamil. He is MD of more four companies including The Metal Private Limited

Executive Director

Lieutenant Colonel Tarequl Alam Khan (Retired), psc,

He is working in this company from July 15, 2009. He is responsible to look after overall business of the company

1.5 Report Layout

1. In chapter 1, I discuss introduction, motivation and internship objective of MPL NOC.

2. In chapter 2, I overview of organizational info, history of MPL, basic erection of info, capacity and linking of MPL.

3. In chapter 3, I deliberate about my duty and events of internship, events and maintains works.

4. In chapter 4, I discoursed about my Skills Earned, Smart Plan, and thinking.

5. In chapter 5, discussion and decision, describe possibility for further career of telecommunication field.

CHAPTER 2

ORGANIZATION

2.1 Introduction

The word 'Metal' manifests hardness of bondage existing among its members of companies, its shine in works accomplished and conductivity maintained throughout building dynamic organization. The seed of Chronological progress of Metal sown in 1987.

1987	1992	2002	2003	2004
In November of this year, engineer Mr. Sadid Jamil and engineer g jointly started their business journey with their flagship company.	In mid of this year, in Bangladesh 'The Metal (Pvt.) Limited' changed its business track by introducing Messy Ferguson Tractors in the name of TAFE tractors, owned by Tractors and Farm Equipment (TAFE) of Chennai, India.	The Metal (Private) Limited took a very prudent and dynamic decision by introducing credit line for tractor buyers on its own accord.	In earlier of this year, Metal kept its foot point in agriculture sector by opening a company named, 'Metal AGRO Limited'.	In February, The Metal (Pvt.) Limited opened a manufacturing unit of tipping and non-tipping trailers at Langolband, Narayanganj. In the same year TMPL introduced Italy Organized world famous MASCHIO Rotavators in Bangladesh as its Sole Distributor.

Fig. 2.1: Journey of Metal Plus Ltd 1

2008	2009	2010	2011	2012	2017
In February of 2008, both Metal and TMTL of India agreed to sign an agreement to introduce latter's new brand product Eicher Tractor in Bangladesh by its sister concern 'Metal Plus Limited'	Jamil Engineers Limited, a concern of Metal was formed in May, 2009. It was formed to act as a dealer of Bosch fuel pumps in Bangladesh and provide related services. In addition, this company manufactures various AGRO Machineries.	From July of this year Metal diversified its business by introducing marking of Eicher Engines powered Diesel Generators its concern Metal Plus Limited	From January of this year Metal stepped into Telecom sector as its service support provider through Metal Plus Limited and thereby diversified further.	Metal Holdings Limited, a developer company of Metal come into in mid of this year. This company started their journey by building Surf Club cum Hotel at Cox's Bazar.	To meet huge demand of genuine parts of both TAFE and Eicher Tractor in Bangladesh a separate company of Metal Parts Limited was opened in April of this year. At the same time another company Metal Agritech Limited was also introduced to do marking and sales of various types of AGRO machineries in Bangladesh.

Fig. 2.2: Journey of Metal Plus Ltd 2



Fig. 2.3: Metal Plus Ltd Official Logo [1]

2.2 Product and Market Situation

2.2.1 The Metal (Pvt.) Limited

Products:

The Metal (Pvt.) Limited is the exclusive dealer/distributer in Bangladesh of:

TAFE tractors
MASCHIO rotary Tillers
Metal rice Trans planters
CLASS combine harvesters
Reaper binder machines
Metal reapers
World combine harvester

Services

- After sales service
- Free trainings on machinery operation, machinery maintenance, and entrepreneurship for farmers and local services providers.

Creating widespread change

The sale of every machine of the Metal (Pvt.) Limited can help Up 20 non-machine owing farmers in the community for Increased production via machines service support.

2.2.2 The Metal AGRO Limited

Products

- Vegetable seeds
- Rice seeds
- Maize seeds
- Oil seeds
- Pulse seeds
- Potato seeds
- Spices seeds
- Fodder seeds
- Flower seeds
- Nursery seed

Services

- Seed genetic development, with an emphasis on regional preferences, stress and disease tolerance and resistance along with yield, taste, earliness, and shelf life.
- Seed production, both hybrid and Open Pollinated (OP).
- Quality control throughout seed packing, storage, and delivery.
- Product demonstration and field days to increase product awareness and collection of direct farmer feedback.
- Feedback collection on product usage and problems from their customers via Metal's own call center.

2.2.3 The Metal Plus Limited

Products

- Eicher tractors
- Diesel generators
- Telecommunications service support

- MASCHIO Rotavators
- Supply of Telecom Power Support items
- Combine Harvester
- Reaper



Fig. 2.4: The Metal Plus Limited Head Office

Services

- After sales services support of tractors
- After sales services support of generators
- Providing management services to mobile operators.
- After sales supports of other AGRO machineries.

2.3 Target Group

Metal Plus Ltd. lock foreword to become a vibrant self-motivated group and lead The country's telecommunication sector by establishing a sound and Cost-effective tower maintenance.

They are trying to become the largest vendor in telecom sector. They provide a very activate cost effective BTS maintenance service to every telecom group in Bangladesh.

Achievements

Sold 750 units of diesel generators to retail and corporate clients in the last 8 years. Provided operations and maintenance support in more than 5,000 Base Transceiver Station (BTS) sites for large mobile operators, including Grameenphone. Ensured average 39% year-on-year growth of Eicher Tractors for the last 3 years. Grew total number of staffs from 15 to 450 during the last 9 years. Having more than 14% of the tractors market share, up from 10% in 2013. By now positioned Eicher Tractors in 44 districts of Bangladesh.

2.4 SWOT Analysis of Metal Plus (Pvt.) Limited

SWOT (strengths, weaknesses, opportunities, and threats) analysis is a background used to estimate a corporation's inexpensive position and to progress premeditated planning. SWOT analysis measures interior and exterior influences, as well as present and upcoming potential.

A SWOT analysis is premeditated to facilitate a representative, fact-based, data-driven look at the strengths and weaknesses of an association, its creativities, or an industry. The association requirements to keep the analysis correct by circumventing pre-conceived opinions or gray areas and as an alternative focusing on real-life situations. Corporations should use it as a attendant and not necessarily as a preparation.



Fig. 2.5: SWOT Analysis [3]

The rest of the steps in the SWOT analysis series, find them here:

- Step 1: Strengths
- Step 2: Weaknesses
- Step 3: **Opportunities**
- Step 4: Threats

Strengths

In Meta all the administration groups are highly educated and experienced. The managing executives are the strengths of the Company as they have years of professional knowledge, expertise, and qualifications which helps them to work and take Metal plus Ltd. to the position it is right now.

Metal Plus Ltd. has shown spectacular growth in the profit sector.

• A remarkable revenue increase rate has already been achieved by Metal Plus Ltd.

• Metal has so many branches all over the country which offers the best service possible. All the branches are located in suitable places and they keep the branches very protected so the customers feel secured while doing services

• Vast services distinguish between Metal Plus Ltd. and other company. And customers also can choose suitable services according to their requirement.

Weaknesses

- The marketing department of Metal Plus Ltd. is very weak.
- The profit rate is very low compared to other Company.

• The way of promotion in Metal Plus Ltd. is complicated so it is one of the reasons for creating unsatisfied employees.

Opportunities

- In Power Division our company is developing and with many future opportunities for success.
- To previous history there so many projects maintain responsibility offer yet to come.

• In Power Division sector many companies want to take help from our company which is noticeable.

• Metal Plus Ltd. provided great and reliable services and sometimes offer good job opportunities for expert engineers.

Threats

- Networking sector always challenging. Here always try to maintain network strictly. Cause small mistake are big issue here. In this sector losses chances are so many. That's why team always try to maintain network smoothly otherwise another company take chances.
- It mentions to influences that have the probable to harm an association. For example, a drought is a danger to a wheat-producing corporation, as it may extinguish or reduce the crop harvest.

2.4.1 Organizational Structure

An organizational structure is a scheme that summaries how positive activities are absorbed in order to accomplish the goals of an association. These happenings can include instructions, roles, and household tasks. The organizational structure also controls how material flows between stages within the corporation

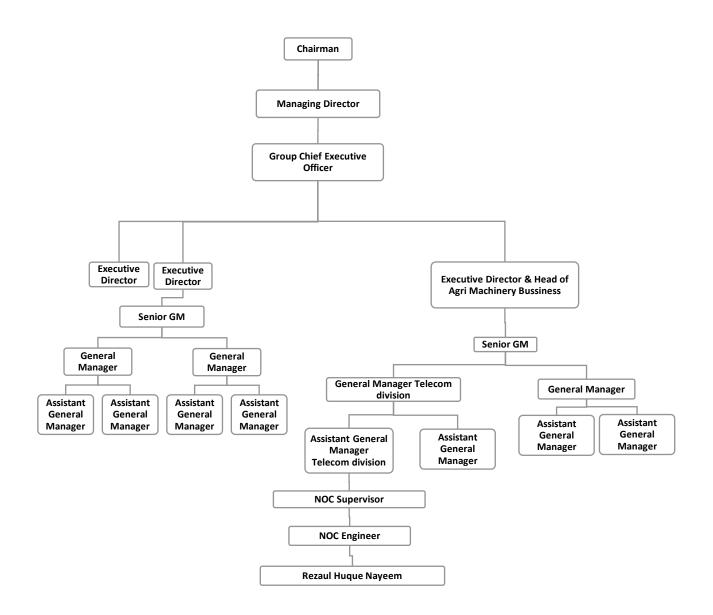


Fig. 2.6: Organizational structure.

CHAPTER 3

Tasks, Projects and Activities

3.1 Daily Tasks and Activities

Table 3.1: Daily Activities

Month-1 Activities	First months of my internee my colleague helps	
Monul-1 Acuvities		
	me to know about the working procedure. They	
	teach me how our telecom network work. They	
	taught me that we need GP MAP, and X-BOT	
	terminal on telegram for checking alarms. How	
	and which command we need. Like MP BATT	
	BON, MP DOWN BON, MP TEMP BON, MP	
	DC BON. Here BON is shortcut for Bogra North.	
	They also introduced with me our active zone.	
	Where we provide our operations. The name of	
	Zone managers.	
Month-2 Activities	My Second months they teach me about our	
	packages site, their initials and code names. How	
	to give comment for checking their voltages,	
	when we get door open alarms, when we get site	
	down alarm. They give small task like checking	
	site voltages with comment. Checking our either	
	down or up. Sites temperature alarms, if our sites	
	go down then escalates this alarm to zone	
	managers. If we get any IPBH sites alarm then we	
	inform to our regional manager.	

Month-3 Activities	At my Third month of internship they give me	
	full operation control of robi terminal. I check	
	and escalate every alarm of Rajshahi zone. I	
	take care of MUX sites and give feedback	
	about those sites' status too directly to ROBI	
	operations Head. Create a very good	
	connectivity with him. I learn about disaster	
	period and know how to face if disaster	
	happened. In my 3rd month they handover me	
	about 85% of ROBI terminal.	
Month-4 Activities:	At my fourth and final month of my internship	
	MPL NOC give me offer latter to join with	
	them. After join on metal plus they give me	
	their ID card and full access of NOC. They	
	give me a desk and full professional setup for	
	NOC. I take care of ROBI terminal. Receive	
	and send every query and full feedback about	
	all sites of Rajshahi robi terminal.	



Fig. 3.1: Metal Plus NOC Picture 1

3.2 Events and Activities

In a telecom network there are two kind of tower maintenance. Active part and passive part.

Active Part: All kind of transmission activities on this part. "Element of the active infrastructure are the basic transceiver station (BST), the base station controller BSC a, the mobile switching center MSC and microwave and GSM antenna. The antenna enables both the transmission and to proceed receipt the radio signal, enabling the cellular telephony to proceed interrupted as the subscriber is mobile." [4]

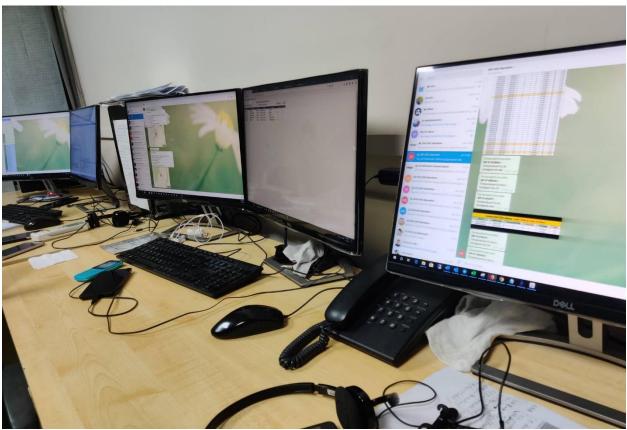


Fig. 3.2: Metal Plus NOC Picture 2

Passive Part: Passive infrastructure sharing refers to sharing of physical sites, buildings, shelters, towers, power supply, and battery backup.

Metal Plus Ltd NOC take care both part of Grameenphone, Robi and Banglalink.In my internship period I work on only passive part. I work on Robi proprietary SEM system. They give me an access of that system. I have to login every time and and take few steps on that system. And then get main monitoring system. Sem system is only support on IE 9.

3.3 Project Task and Activities

In Robi terminal we have to monitor only passive alarms on SAM system. Our Main alarm are:

OML FAULT	GENERATOR ON LOAD
POWER DOWN	HIGH TEMPERATURE
AC MAINS FAILURE	IVS FAULT
AC SURGE PROTECTOR	MAINS FAILURE VTMS
FAULT	MAINS PAILORE VIWS
AIRCON FAULT VTMS	MAINS INPUT OUT OF RANGE
AMBIENT HUMIDITY	RECTIFIER MODULE FAULT
UNACCEPTABLE	RECTIVIER MODULE PAULT
AMBIENT TEMPERATURE	SMOKE ALARM
UNACCEPTABLE	SWOKE ALANM
BATTERY CABINET DOOR	WATER ALARM
OPEN	WAIEK ALAKM
BATTERY CABINET	MONITORING DEVICE HARDWARE FAULT
TEMPERATURE FAULT	MONITORING DEVICE HARDWARE FAULT
DC LOW VOLTAGE	MONITORING DEVICE POWER SUPPLY PROBLEM
DOOR OPEN	POWER MODULE AND MONITORING MODULE
DOOK OF EN	COMMUNICATION FAILURE
GENERATOR FAULT	CELL UNAVAILABLE
GENERATOR FUEL LEVEL	GSM CELL OUT OF SERVICE
LOW	
GENERATOR NEED	NODEB UNAVAILABLE
SERVICING	

Table 3.3: All Power Alarm of ROBI

Task

Our main task is to make sure power is available all types of network tower.

Usually there is 4 kind of tower.

- 1. Package 1: CP site or Commercial powered tower
- 2. Package 2: CP+AG site or Commercial and automatic generator powered tower
- 3. Package 3: NCP site or NO Commercial powered tower or solar and automatic generator powered tower
- 4. Package 4: ISS site or only solar powered tower.

If those sites go down for power issue then we ensure power by portable generator or pg. Check regularly sites status and if need rectify them

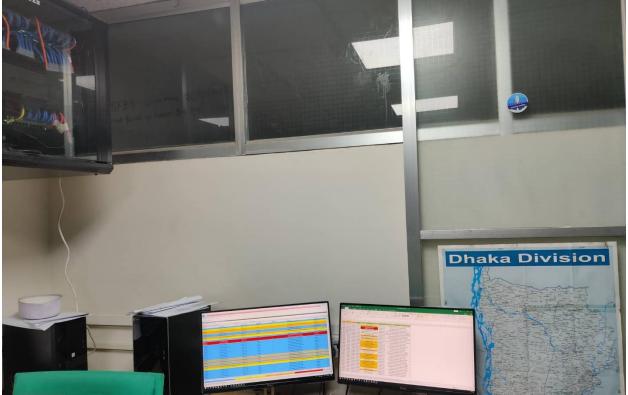


Fig. 3.3: Metal Plus NOC Picture 3

Activities

First, we connect with ROBI terminal with a Cisco VPN modified by robi. By entering user name and password we then connect with ROBI IP. Then from Internet Explorer we go to Robisso Login Page. Then we put our user name and password. Then it takes us SSO-portal. Then we go to SEM tab. Then we can find total number of alarms of Bangladesh. And summery of all tower. Then by clicking on alarm we can go to ALU Integrated Portal. Then we have to put our user name again and find main SEM system. After confirm some agreement we can see all alarm of Bangladesh of ROBI. After sorting I can find a colorful page where we can see location name, Alarm name, Last Occurrence vendor name alart group ect. Hare we can find all alarm of Rajshahi zone. Then we copy all alarm and put it on a excel file. Where by Macro we can fine our site name and alarm name. Then we observe that alarms and if necessary, we escalate this alarm to our sub center by telegram.

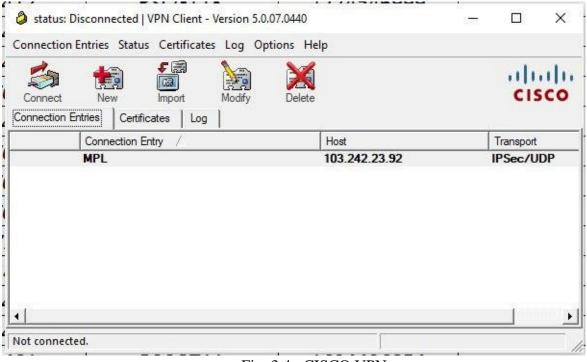


Fig. 3.4: CISCO VPN

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Connection Ent	ries Certificates	Log		
	Connection Entry / MPL	 VPN Client User The server has requester 	r Authentication for "MPL" ed the following information to comple	imes
		authentication. Usemame: r CISCO Password: 1	ratul_metal_plus	
			ОК	Cancel
•			2007	Ĵ,

Fig. 3.5: Connecting VPN

MOTIVE DYNAMIC OPERATIONS	
Enter your Username and Password	
Username:	
Password: LOGIN CLEAR	Dynamic Service Operations
	Version 1.0
	·······Alcatel-Lucent 🕖
	Alcatel-Lucent All Rights Reserved Terms of Use
	Fig. 3.6: Robisso Login Page
	8

() MOTIVE	NAMIC OPERATIONS Wilcom	; ras0897 👩
*		
SEM		
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20	Dynamic Service Operations Version 1.0	
	·······Alcatel·Lucent 🕖	
	Fig. 3.7: SSO-portal	

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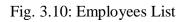
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Fig. 3.8: Total alarms of Bangladesh in SSO Portal

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5 BOSDR57	Bogra_South	BO6610	7/23/2019	Package 02	On Going		Bogra_South				15:25	17:30	2:05		lfte
6 PGTTL07	Dinajpur	PG7366	7/23/2019	Package 01	On Going	Humayun	HumayunDinajpur				9:50	18:15	8:25	BTS Battery Stole	n Robbany/Moeed
7 NASDR10	Naogaon	NN7001	7/23/2019		On Going	Bhola	BholaNaogaon				11:40	18:00	6:20		Robbany/Moeed
8 BOSBG17	Bogra_North	BO6501	7/23/2019		On Going	Shamim	ShamimBogra_North				15:10	16:10	1:00		Robbany
9 BOSBG17	Bogra_North	BO6501		Package 02	On Going		Bogra_North				9:02	10:08	1:06		Moeed
IO RPSDR65	Rangpur	RP7626		Package 02	On Going	Anowar	AnowarRangpur				10:00	13:00	3:00		Moeed
1 RPSDR60	Rangpur	RP7622	7/23/2019		On Going		Rangpur				10:55	15:15	4:20		Moeed
2 NASDR10	Naogaon	NN7001	7/20/2019		On Going	REZAUL	REZAULNaogaon				11:45	18:10	6:25		Moeed/Kamalish
3 RPSDR59	Rangpur	RP7621	7/20/2019		On Going		Rangpur				14:49	18:20	3:31		Moeed/Kamalish
4 RPSDR65	Rangpur	RP7626		Package 02	On Going		Rangpur				10:00	12:00	2:00		Kamalish
5 BOSBG17	Bogra_North	BO6501	7/23/2019		On Going	Mofodul Islam	Mofodul IslamBogra_North				10:10	10:50	0:40		Kamalish
5 RPSDR60	Rangpur	RP7622	7/20/2019		On Going		Rangpur				15:00	18:00	3:00		Kamalish
RPSDR65	Rangpur	RP7626		Package 02	On Going		Rangpur				12:30	15:50	3:20		Kamalish
SGSDR19	Bogra_South	SG7787	7/23/2019		On Going	Mr.Moudud	Mr.Moudud Bogra_South				15:15	17:40	2:25		Kamalish
RPSDR30	Rangpur	RP7681		Package 06	On Going	Mr.Snowed	Mr.SnowedRangpur				13:30	17:00	3:30		Kamalish
BOSJP19	Bogra_South	BO6513		Package 02	On Going		Bogra_South				14:45	17:30	2:45		Salim
NASDR10	Naogaon	NN7001		Package 01	On Going		Naogaon				11:50			Mr. Bhola- 0131307	
GBGBD22	Bogra_North	GB9377	7/24/2019		On Going		Bogra_North				11:50			Tauhid start PC	i Indrajit
BOSBG17	Bogra_North	BO6501		Package 02	On Going		Bogra_North				13:40				Indrajit
RSBGM19	Rajshahi	R\$7478	7/27/2019		On Going		Rajshahi				9:30	14:15	4:45	Babu	Moeed
DPCRB17	Dinajpur	DP6725	7/27/2019		On Going		Dinajpur				14:30	14:50	0:20	NANNU	Moeed
RPMTH26	Bogra_North	RP7683	7/27/2019		On Going		Bogra_North				16:45	16:50	0:05	YOUNUS	Moeed
RPMTH26	Bogra_North	RP7683		Package 01	On Going		Bogra_North		_		17:20			YOUNUS	Moeed
BOSJP21	Bogra_South	BO6515		Package 01	On Going		Bogra_South		_		12:00	17:10	5:10	MOFIDUL	Moeed
RPSDR60	Rangpur	RP7622			On Going		Rangpur				11:50	14:05	2:15		Moeed
BOSDR57 BOSJP15	Bogra_South	BO6610		Package 02	On Going		Bogra_South				14:10			Mahbubul	Moeed
BOSJP15	Bogra South	BO6520		Package 01	On Going		Bogra South		_		15:24	17:10	1:46	Mahbubul	Moeed
RPSDR52	Rangpur	RP7646		Package 01	On Going		Rangpur		_		17:20			Anowar	Moeed
BOKHL10	Bogra_North	BO6521		Package 06	On Going	Md. Mofidul Islam	Md. Mofidul IslamBogra_North	Technician	_	9635759	10:15	14:15	4:00	Md. Mofidul Isla	
BOSDR53	Bogra_South	BO6507	8/7/2019	Package 01	On Going	Sree Bappy Kumar Das	Sree Bappy Kumar DasBogra_South	EBC		8156931	12:17	13:00	0:43	Mr. Bappy	Indrajit
SGBKZ11	-		8/7/2019		On Going			0	_	0	12:00	16:30	4:30	Mr. Moudud	Indrajit
BOKHL10	Bogra_North	BO6521		Package 06	On Going		Bogra_North		_		12:35	13:30	0:55	Mr. Mahabubu	
KGSDR10	Rangpur	KG6953	8/26/2019		On Going	Mr. Mohasin Ali	Mr. Mohasin AliRangpur	Sr Service En	1766	5667501	13:25	16:20	2:55	Mr. Elias	Rifat
KGSDR10	Rangpur	KG6953	8/26/2019		On Going		Rangpur				16:27	18:40	2:13	Mr. Elias	Robbany
KGSDR10	Rangpur	KG6953	8/28/2019		On Going		Rangpur				13:25	16:20	2:55	Mt. Tauhidul	Indrajit
KGSDR10	Rangpur	KG6953	8/28/2019	Package 01	On Going		Rangpur				16:25	18:40	2:15	Mt. Tauhidul	Indrajit
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Fig. 3.9: Total PG run tracker

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	Md.Zakirul Islam	Md.Zakirul IslamRajshahi	GP-702	Zonal manager	Rajshahi	Rajshahi	1730316182		Common for GZM & GZO	-
	Md. Aminur Islam	Md. Aminur IslamRajshahi	DG-293	Field Maintenance Engineer	Rajshahi	Rajshahi	1777786260		Common for GZM & GZO	-
_	Zahangir Alam	Zahangir Alam Rajshahi	DG-373	AC Technician	Rajshahi	Rajshahi	1777786220			-
	Md. Shohel Rana	Md. Shohel RanaRajshahi	220	Sr. Assistant Mechanic-II	Rajshahi	Rajshahi	1755585116			-
	Mr. Harun Al rashed	Mr. Harun Al rashedRajshahi	GP-752	AC Expart	Rajshahi	Rajshahi	1708156884			-
_	Mr.Khurshid Rayhan	Mr.Khurshid RayhanRajshahi	CL-215 ATP	Service Engineer	Rajshahi	Rajshahi	1708125319		+	-
	Md.Rofiqul zaman Babu	Md.Rofiqul zaman BabuRajshahi	New	Sr.AG Technician	Rajshahi	Rajshahi	1844513625		+	-
	Md. Hasan Ali	Md. Hasan AliBogra_North	249	Zonal Manager	Bogra_North	Bogra	1708156856	-	+	-
_	Md.Masudul Haque	Md.Masudul HaqueBogra_North	GP-616	FME	Bogra_North	Bogra	1730340984			-
	Sabuz morol	Sabuz morolBogra_North		Exe -Accounts	Bogra_North	Bogra	1777786234			-
	Md.Habibur Rahman	Md.Habibur Rahman Bogra_North	New	AC Technician	Bogra_North	Bogra		1916757567	-	-
_	Md. Hemayetul Islam Millat	Md. Hemayetul Islam MillatBogra_South	GP-904	Zonal Manager	Bogra_South	Bogra	1708156897	1744320138		-
	Md. Rakib Hossain	Md. Rakib HossainBogra_South	DG-404	FME	Bogra_South	Bogra	1777786250	1718428475		-
	Ziaul Islam	Ziaul IslamBogra_South	CL-739	Service Engineer	Bogra_South	Bogra	1708810735	1750690956		-
_	Kishor Kumar	Kishor KumarBogra_South	DG-384	AC Technician	Bogra_South	Bogra	1777786226	1933592670	Need SIM Card	-
	Md. Ebrahim Mollah	Md. Ebrahim MollahBogra_South	DG-437	CM & PM Tcehnicain	Bogra_South	Bogra	1777786265	1796742007	Need SIM Card	-
	Krisna Chandro Ray	Krisna Chandro RayBogra_South	ATP-774	DG Technician	Bogra_South	Bogra	1708156877	1729625443	Need SIM Card	-
_	Sree Bappy Kumar Das	Sree Bappy Kumar DasBogra_South	CL-611	EBC	Bogra_South	Bogra	1708156931	1711041789		-
	Md. Habibur Rahman	Md. Habibur RahmanNaogaon	GP-932	Zonal mamager	Naogaon	Naogaon	01708156891	1714739094		-
	Md. Mizanur Rahman	Md. Mizanur RahmanNaogaon	DG-353	Field Maintenance Engineer	Naogaon	Naogaon	01777786243	1737208070		-
_	Md.Alamgir Hossain Rupam	Md.Alamgir Hossain RupamPabna	GP-893	Zonal Manager	Pabna	Pabna	1708156896			-
	Md.Mazedul Islam Md.Shamim miah	Md.Mazedul IslamPabna	GP-746 GP-668	AG & PG Technician, Acting FME	Pabna	Pabna Pabna	1708156852 1709643538	1955442009		-
_		Md.Shamim miahPabna		Executive Account	Pabna			1955442009		1
_	MD.Titul Biswas Md. Matiur Rahman	MD.Titul BiswasPabna	CL-208 ATP 142	DG Technician Zonal Managor	Pabna	Pabna	1708156890 1730310956		+	-
	Md. Matiur Kanman Md. Ruhul Amin	Md. Matiur Rahman Rangpur Md. Ruhul AminRangpur	142 DG-299	Zonal Manager	Rangpur	Rangpur	1730310956			-
-	Tapan Kumar ghoas	Tapan Kumar ghoasRangpur	GP-671	Service .Eng. Executive Account	Rangpur Rangpur	Rangpur Rangpur	1755548071 1709643543		+	
-	Md. Khalilur Rahman	Md. Khalilur RahmanRangpur	CL-480	Sr. Technician	Rangpur	Rangpur	1709643543	1764662275	+	-
	Md. Rabiul Islam	Md.Rabiul Islam Rangpur	CL-480 CL-596 GP	EBC	Rangpur	Rangpur	1708156920	1/040022/5	+	1
-	Md.Abdul Ahad	Md.Abdul AhadRangpur	CL-596 GP CL-639	PG Expart	Rangpur	Rangpur	1709635757		+	1
_	Md.Shahin Ali	Md.Shahin AliRangpur	New	AC Technician	Rangpur	Rangpur	1/00010/25		+	
	Md.Ariful Islam	Md.Ariful IslamRangpur	New	Sr.AG Technician	Rangpur	Rangpur	1844513629		+	1
-	Md.Kurban Ali	Md.Kurban AliRangpur	CL-473 GP	Jr. DG Technician	Rangpur	Lalmonirhat	1709643547	1719933772	ON Call Number	
	Md.Rakibul Islam	Md.Rakibul IslamDinajpur	GP-974	Zonal manager	Dinajpur	Dinajpur	1705643347	1781330895	on can number	1
	Md. Rafigul Islam	Md. Rafigul IslamDinajpur	GP-705	Executive Account	Dinajpur	Dinajpur	1709643539	A10433003J		1
-	Md. Bulu Mia	Md. Bulu MiaDinajpur	GP-703	Technical Officer	Dinajpur	Dinajpur	1709635744		+	
	Md. Sadikur Rahman	Md. Sadikur RahmanDinajpur	CL-642	Executive EBC	Dinajpur	Dinajpur	1709833744		+	1
	Md. Nobin	Md. NobinDinaipur	CL-642 CL-424	Senior Technician	Dinajpur	Dinajpur	1709643530			1
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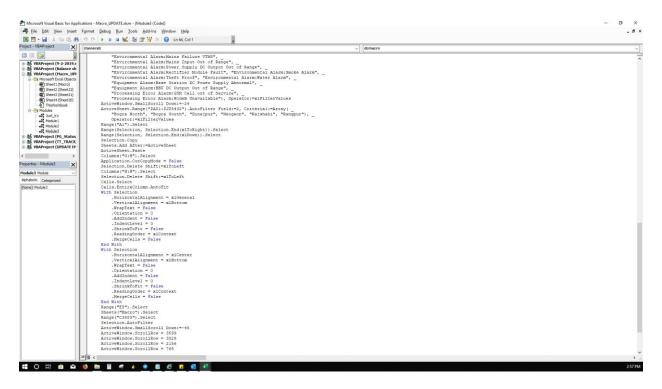


Fig. 3.11: Macro for alarms

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	"Processing Error Alarm:SSM Cell out of Service", End Sub Sub Macro4 () Macro4 Macro ActiveSheet.Range("SAS1:SJS5432").AutoFilter Field := 9, Criterial := Array("Communication Alarm:ESL Link Fault", "Communication Alarm:ML Fault", "Environmental Alarm:AC Mains Failure 1000", "Environmental Alarm:AC Surge Protector Fault", "Environmental Alarm:AC Surge Protector Fault", "Environmental Alarm:ADE Surge Protector Fault", "Environmental Alarm:Abbient Humulty UNAS", "Environmental Alarm:Abbient Temperature Tault", "Environmental Alarm:Abbient Temperature Tault", "Environmental Alarm:Abbient Door Open", "Environmental Alarm:Detrey Cabinet Door Open", "Environmental Alarm:Detrey Cabinet Door Open", "Environmental Alarm:Detrey Cabinet Door Open", "Environmental Alarm:Detrey Cabinet Door Open", "Environmental Alarm:Deor Open Alarm", "Environmental Alarm:Do Coven", "Environmental Alarm:Deor Open Alarm", "Furvironmental Alarm:Door Open", "Environmental Alarm:Generator Need Servicing", "Environmental Alarm:Generator Need Servicing", "Environmental Alarm:Heinerator Need Servicing", "Environmental Alarm:Menerator Need Servicing", "Environmental Alarm:Menerator Need Servicing", "Environmental Alarm:Heiner Faulter VTMS", "Environmental Alarm:Meorifier Module Fault", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neet Supply DC Output Out of Range", "Environmental Alarm:Neetifier Module Fault", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neetifier Proof", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neetifier Module Fault", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neetifier Module Fault", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neetifier Module Fault", Devir Supply Doormal", "Environmental Alarm:Setter Proof", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Setter Proof", "Environmental Alarm:Smoke Alarm", "Environmental Alarm:Neetifier Module Fault", Devir Supply Doormal", "Environmental Alarm:Neetifier Module Fault", Dev	-

Fig. 3.12: Codes in Macro

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cation	CustomAttr3	LastOccurrence O	VendorName	AlarmPriority	AlertGroup	CustomAttr13
KHL01	RCC	7/30/19 15:35		0	CommunicationOrEquipment	Kahaloo
WGHL01	UNABLE TO PROTECT	7/30/19 15:35		0	CommunicationOrEquipment	Kahaloo
IHTB05	AC MAINS FAILURE	7/30/19 15:35	Huawei	1	Environmental Alarm:AC Mains Failure	Hatibandha
DSDR22	NODEB UNAVAILABLE	7/30/19 15:35		0	Processing Error Alarm:NodeB Unavailable	Bogra_Sadar
TSDR20	RADIO FRAME	7/30/19 15:35		0	CommunicationOrEquipment	Natore_Sadar
ISDR20	RF INPUT THRESHOLD	7/30/19 15:35		0	Communications	Natore_Sadar
BRG09	AC MAINS FAILURE	7/30/19 15:35	Huawei	1	Environmental Alarm AC Mains Failure	Birganj
IHTB02	SES 24 H THRESHOLD CROSSING	7/30/19 15:35		0	Quality of service	Halibandha
UHTB02	BBE 24 H THRESHOLD CROSSING	7/30/19 15:35		0	Quality of service	Hatbandha
MHTB02	ES 24 H THRESHOLD CROSSING	7/30/19 15:35		0	Quality of service	Hatibandha
AHTB02	SES 15 MIN THRESHOLD CROSSING	7/30/19 15:35		0	Quality of service	Hatibandha
AHTB02	ES 15 MIN THRESHOLD CROSSING	7/30/19 15:35		0	Quality of service	Hatibandha
DSDR22	S1 INTERFACE FAULT	7/30/19 15:35		0	Processing Error Alarm S1 Interface Fault	UNKNOWN
PSDR11	AC MAINS FAILURE	7/30/19 15:35	Huawei	1	Environmental Alarm AC Mains Failure	Rangpur_Sadar
PSDR04	BBE 15 MIN THRESHOLD CROSSING	7/30/19 15:34		0	Quality of service	Dinajpur_Sadar
PSDR04	UNAVAILABLE PERIOD	7/30/19 15:34		3	Quality of service	Dinajpur_Sadar
STOP 18	BER	2730/10 15.54			Correctories allocation	Thatpadpar
DSDR61	AC MAINS FAILURE	7/30/19 15:34	Huawei	1	Environmental Alarm:AC Mains Failure	Bogra_Sadar
GBKC09	AC MAINS FAILURE	7/30/19 15:34	Huawei	1	Environmental Alarm AC Mains Failure	Belkuchi
	DOOR OPEN ALARM				Environmental Alama Goor Open Alami	
APRS02	RECTIFIER MODULE FAULT	7/30/19 15:33	Huawei	1	Environmental Alarm Rectifier Module Fault	Porsha
PCRB04	IP CLOCK LINK FAILURE	7/30/19 15:33		0	Equipment Alarm IP Clock Link Failure	UNKNOWN
GDBG03	AC MAINS FAILURE	7/30/19 15:33	Huawei	1	Environmental Alarm: AC Mains Failure	Debiganj
GDBG03	MAINS FAILURE VTMS	7/30/19 15:33	Huawei	0	Environmental Alarm Mains Failure VTMS	Debiganj
GDBG01	AC MAINS FAILURE	7/30/19 15:33	Huawei	1	Environmental Alarm:AC Mains Failure	Debiganj
GDBG02	AC MAINS FAILURE	7/30/19 15:33	Huawei	1	Environmental Alarm AC Mains Failure	Debiganj
GBKC09	E1/T1 EXCESSIVE BIT ERROR RATE	7/30/19 15:32	Huawei	0	Communication Alarm E1/T1 Excessive Bit Error Rate	Belkuchi
ASDR03	AC MAINS FAILURE	7/30/19 15:32	Huawei	1	Environmental Alarm AC Mains Failure	Naogaon_Sadar
ASDR11	AC MAINS FAILURE	7/30/19 15:32	Huawei	1	Environmental Alarm AC Mains Failure	Naogaon_Sadar
PSDR07	IP CLOCK LINK FAILURE	7/30/19 15:32		0	Equipment Alarm3P Clock Link Failure	UNKNOWN
GULP03	AC MAINS FAILURE	7/30/19 15:32	Huawei	1	Environmental Alarm AC Mains Failure	Ulipur
MDB04	AMBIENT HUMIDITY UNACCEPTABLE	7/30/19 15:32	Huawei	0	Environmental Alarm Ambient Humidity Unacceptable	Mahadebpur
PBRM01	DC LOW VOLTAGE	7/30/19 15.31	Huawei	1	Environmental Alarm:DC Low Voltage	Birampur

Fig. 3.13: Alarms on SEM System

AT SITE ID	Sub Center	Package	Location	CustomAttr3	LastOccurrence	AlertGroup
RS7464	Rajshahi	Package 01	RSDGP08	AC MAINS FAILURE	7/30/2019 14:05	Environmental Alarm:AC Mains Failure
RS7412	Rajshahi	Package 02	RSCGT13	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 14:04	Environmental Alarm: Ambient Temperature Unacceptable
PG7361	Dinajpur	Package 02	PGATR07	MAINS INPUT OUT OF RANGE	7/30/2019 14:01	Environmental Alarm:Mains Input Out of Range
RS7413	Rajshahi	Package 02	RSCGT12	GENERATOR ON LOAD	7/30/2019 14:01	Environmental Alarm:Generator On Load
RS7413	Rajshahi	Package 02	RSCGT12	DOOR OPEN ALARM	7/30/2019 14:01	Environmental Alarm:Door Open Alarm
BO6528	Bogra North	Package 01	BOSBG16	MAINS INPUT OUT OF RANGE	7/30/2019 14:00	Environmental Alarm:Mains Input Out of Range
NN7000	Naogaon	Package 01	NASDR18	AC MAINS FAILURE	7/30/2019 13:59	Environmental Alarm:AC Mains Failure
RS7421	Rajshahi	Package 01	RSBLA17	AC MAINS FAILURE	7/30/2019 13:56	Environmental Alarm:AC Mains Failure
SG7782	Bogra South	Package 02	SGSJP19	MAINS INPUT OUT OF RANGE	7/30/2019 13:56	Environmental Alarm:Mains Input Out of Range
RP7619	Rangpur	Package 02	RPPGC18	MAINS INPUT OUT OF RANGE	7/30/2019 13:50	Environmental Alarm:Mains Input Out of Range
RP7647	Rangpur	Package 01	RPSDR49	MAINS INPUT OUT OF RANGE	7/30/2019 13:46	Environmental Alarm:Mains Input Out of Range
RP7646	Rangpur	Package 01	RPSDR52	MAINS INPUT OUT OF RANGE	7/30/2019 13:46	Environmental Alarm:Mains Input Out of Range
RP7612	Rangpur	Package 02	RPPGN16	AC MAINS FAILURE	7/30/2019 13:42	Environmental Alarm:AC Mains Failure
RP7611	Rangpur	Package 02	GBSDL11	AC MAINS FAILURE	7/30/2019 13:42	Environmental Alarm:AC Mains Failure
R\$7429	Rajshahi	Package 01	RSRJP19	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 13:42	Environmental Alarm:Ambient Temperature Unacceptable
NM7183	Rangpur	Package 01	NPSDP05	AC MAINS FAILURE	7/30/2019 13:22	Environmental Alarm:AC Mains Failure
RP7681	Rangpur	Package 01	RPSDR30	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 13:17	Environmental Alarm:Ambient Temperature Unacceptable
GB9379	Rangpur	Package 02	GBGBD23	GENERATOR ON LOAD	7/30/2019 13:08	Environmental Alarm:Generator On Load
BO6552	Bogra North	<u> </u>	BOSDR40	POWER DOWN	7/30/2019 13:07	Environmental Alarm Notification
BO6552	Bogra North		BOSDR40	OMLFAULT	7/30/2019 13:04	Communication Alarm:OML Fault
BO6552	Bogra North		X	GSM CELL OUT OF SERVICE	7/30/2019 13:04	Processing Error Alarm:GSM Cell out of Service
BO6552	Bogra North		BOSDR40	GSM CELL OUT OF SERVICE	7/30/2019 13:04	Processing Error Alarm:GSM Cell out of Service
BO6552	Bogra North		BOSDR40	GSM CELL OUT OF SERVICE	7/30/2019 13:04	Processing Error Alarm:GSM Cell out of Service
BO6552	Bogra North		BOSDR40	ESL LINK FAULT	7/30/2019 13:04	Communication Alarm:ESL Link Fault
BO6552	Bogra North		BOSDR40	NODEB UNAVAILABLE	7/30/2019 13:03	Processing Error Alarm:NodeB Unavailable
BO6552	Bogra North	-	BOSDR40	NODEB UNAVAILABLE	7/30/2019 13:03	Processing Error Alarm:NodeB Unavailable
SG7803	Bogra South	-	SGROY01	AC MAINS FAILURE	7/30/2019 12:49	Environmental Alarm:AC Mains Failure
SG7790	Bogra South		SGROY15	AC MAINS FAILURE	7/30/2019 12:49	Environmental Alarm:AC Mains Failure
TG7955		Package 02		GENERATOR ON LOAD	7/30/2019 12:41	Environmental Alarm:Generator On Load
BO6552	Bogra North	and the second se	CONTRACTOR OF THE OWNER OWNE	DC LOW VOLTAGE	7/30/2019 12:15	Environmental Alarm:DC Low Voltage
TG7956	Dinajpur	Package 01	TGPGN06	AC MAINS FAILURE	7/30/2019 12:13	Environmental Alarm:AC Mains Failure
TG7956	Dinajpur		TGPGN06	DOOR OPEN ALARM	7/30/2019 12:05	Environmental Alarm:Door Open Alarm
CN7196	Rajshahi		NWSDR20	AC MAINS FAILURE	7/30/2019 11:42	Environmental Alarm:AC Mains Failure
RP7679	Rangpur	Package 01	RPPGC19	IVS FAULT	7/30/2019 11:42	Environmental Alarm: IVS Fault
BO6512	Bogra South	-	BOGBT18	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 11:09	Environmental Alarm:Ambient Temperature Unacceptable
RS7469	Rajshahi	Package 02	RSPBA19	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 11:09	Environmental Alarm:Ambient Temperature Unacceptable
DP6710		Package 02	DPSDR33	AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 11:04	
	Dinajpur					Environmental Alarm:Ambient Temperature Unacceptable
JY6921	Naogaon	Package 01	JYKTL07	IVS FAULT	7/30/2019 9:43	Environmental Alarm: IVS Fault
GB9379	Rangpur	Package 02	GBGBD23	MAINS FAILURE VTMS DC LOW VOLTAGE	7/30/2019 9:09	Environmental Alarm:Mains Failure VTMS Environmental Alarm:DC Low Voltage
TG7956	Di- i				7/30/2019 9:02	
The second second second	Dinajpur	Package 01				
BO6552	Bogra North	Package 01	BOSDR40	AC MAINS FAILURE	7/30/2019 8:59	Environmental Alarm:AC Mains Failure
BO6515	Bogra North Bogra South	Package 01 Package 01	BOSDR40 BOSJP21	AC MAINS FAILURE AMBIENT TEMPERATURE UNACCEPTABLE	7/30/2019 8:59 7/30/2019 8:33	Environmental Alarm:AC Mains Failure Environmental Alarm:Ambient Temperature Unacceptable
	Bogra North	Package 01 Package 01 Package 01	BOSDR40	AC MAINS FAILURE	7/30/2019 8:59	Environmental Alarm:AC Mains Failure

Fig. 3.14: Our Final Alarms after sorting

3.4 Challenges

At starting of my internship, I faced interesting challenges. Like first I have attended office at 8 AM. That's is really very tough for me. Also have to work at office all day long from 8 AM to 5 PM. that was really very difficult for me. It was my first office environment that's why I have to learn many office rules in a very short time. I have to communicate with lots of people. I learn how to work with the and how to deal with them. I also have to do night shifting duty on NOC. It was really a very big challenge for me.

CHAPTER 4

COMPETENCIES AND SMART PLAN

4.1 Competencies Earned

- Monitored network and resolved all issues that occurred on same At Grameenphone Network.
- Performed troubleshoot on system and resolved all issues in process.
- Coordinated with senior level engineering group and site contacts for resolving all technical issues.
- Monitoring all Critical, Major, and Minor of BTS related alarm through GP web soc webpage.
- Monitoring the Back Bone network as well as high capacity links through x-bot.
- Provide different types of technical information to FO team by checking GP web soc webpage.
- Maintaining the MS Excel logbook for prepared different types of report based on customer requirement.
- Follow up different types of work orders based on customer requirement.
- Power alarm monitoring for backbone round the clock.
- SMS notification to concerned engineers for different faults.
- Alarm escalation according to the guideline.
- Maintaining the MS word and MS Excel log book for prepared different types of report based on customer requirement.

4.2 Smart Plan

By Intern on Metal Plus NOC now I am concerned to the future of my career now. In intern period, I get real life knowledge that will help my future career in Telecom sector. It has very high demand in modern technology. I learned some practical things in my internship period in an office environment. Now I will try my best to increase this knowledge and practice more and more. My future plan is completely learning about Network Engineering, then implementation in real world.

4.3 Reflections

By doing Internship on Metal Plus we get the practical experience and knowledge in the field of Network Engineering. It helps me to get experience in engineering job. In my intern period, I learned telecom related Practical knowledge. Telecom sector is a smart and energetic job at this time. This Internship will help me to be get a smart job. Internship gives advanced tricks and trips that skillful by the professional.



Fig. 4.1: Metal Plus NOC Conference Room

CHAPTER 5

CONCLUSION AND FUTURE CAREER

5.1 Discussion and Conclusion

My Internship on Metal Plus Ltd has been completed in 30 April 2019. By internship, I gain knowledge of many things which is discuss in previous chapter. Now a day's all communication system depends on Telecom network. This internship gives me a chance to gain particular career knowledge before permanents obligations are made. I am really lucky to get internship on Metal Plus NOC.

5.2 Scope for Further Career

In our country in Bangladesh there are many lots of company. In this companies Metal Plus Ltd. is one of the largest and popular company. Main services in this company they provided are Maintenance main backbone of network field. They take care all network tower of all telecom operator in the Bangladesh. Therefore, by intern on MPL NOC it's really help me to get an honorable job on this company. Infect after completing my four month of internship they offered me to join MPL as a NOC Engineer. I join on Metal Plus Ltd. immediately after completing my internship with an honorable salary.

References

[1] Metal Plus official Logo: http://www.metalplusltdbd.com/Default.aspx (Last accessed on 31-07-2017 08:06pm)

[2] Metal Plus website: http://www.metalplusltdbd.com/CompanyProfile.aspx (Last accessed on 31-07-2017 08:06pm)

[3] SWOT Image: https://medium.com/thrive-global/how-to-complete-a-personal-swot-analysis-2f8769aebd5e: (Last accessed on 31-07-2017 08:06pm)

[4] Active Part: https://knowledgescrap.blogspot.com/2012/06/difference-in-active-and-passive.html_(Last accessed on 31-07-2017 08:06pm)

APPENDICES

Appendix A: Internship Reflection

I am very thankful to finish my internship. At first, I want to give a boundless thanks to my supervisor, to AHMED AL MAROUF sir without whom it's impossible for us to complete it. He is continuously to prepare to response all of my questions and clear my thought for allocated tasks. For this internship in a few months a lot of changed happened for me. This internship is open a great opportunity to pass in a new era. Reflection on my intern I achieve numerous real-life connectivity and lots Experience.

Appendix B: Company Details



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