AUSTRALIAN COMPUTER SOCIETY

RECOGNITION OF PRIOR LEARNING APPLICATION - 2016

This document is required to be completed for all Recognition of Prior Learning (RPL) Application types and must be attached to the online application form under the RPL tab in PDF format.

In this document there are two sections that all applicants must complete –

- The Key Areas of Knowledge – Section 1
- The Project Report Forms – Section 2

RPL applications are for those applicants who do **not** hold a recognised tertiary ICT qualification and who have a minimum of 6 years of closely related experience. Please refer to the Summary of Criteria for further information.

This document provides the opportunity for applicants to demonstrate knowledge learnt throughout their professional experience.

Applicant Name	
Application ID (if known)	
Applicant Date of Birth	

SECTION 1 – KEY AREAS OF KNOWLEDGE

INFORMATION ABOUT THE AREAS OF KNOWLEDGE

Please read the following document to assist you in completing Section 1 of this document -The ACS Core Body of Knowledge for ICT Professionals (CBOK).

Applicants must detail the relationship between the selected Areas of Knowledge and their learning from their experience and qualifications. This section of the RPL application needs to be specific as to how and where the applicant has acquired the knowledge.

The ICT Key Areas of Knowledge:

Essential Core ICT Knowledge

Topic 1. ICT Professional Knowledge
Sub Topics are -
a. Ethics
b. Professional Expectations
c. Teamwork Concepts and Issues
d. Communication
e. Societal Issues

Topic 2. ICT Problem Solving
Sub Topics are -
a. Modelling Methods
b. Processes to understand problems
c. Methods and tools for handling abstraction

General ICT Knowledge

Topic 3. Technology Resources

Sub Topics are -

a. Hardware and Software Fundamentals
b. Data and Information Management
c. Data Communications and Networking

Topic 4. Technology Building

Sub Topics are -

a. Human Factors
b. Programming
c. Information Systems Development and Acquisition

Topic 5. ICT Management

Sub Topics are -

a. IT Governance and Organisational Issues
b. IT Project Management
c. ICT Service Management
d. Security Management

You are required to select one topic from the Essential Core ICT Knowledge (Topic 1 or Topic 2) and one topic from the General ICT Knowledge (Topic 3, Topic 4 or Topic 5). Please ensure you address at least 2 subtopics from each of the topics chosen. In the following expandable typing areas, explain **how you have acquired your in-depth knowledge** in these topic areas through your professional experience.

Important:

- **Identify the Area of Knowledge topic that you have chosen to explain by entering the name of the Area of Knowledge topic in the box.**
- **Explain, in the expandable typing area, how you have acquired the knowledge and illustrate the depth of that knowledge.**
- **You should NOT address all sub topics included in the Area of Knowledge in your explanation. Address at least TWO of the sub topics. Enter the sub topic name(s) in the box.**
- **Be clear and concise in your explanation.**
- **Limit each explanation to no more than one to one and a half pages.**

Essential Core ICT Area of Knowledge:

Essential Core Knowledge

ICT Professional Knowledge

- Ethics,
- Teamwork Concept and Issues
- Communication
- Societal Issue.

For a beginner in IT career at a very early age just after my high school exams, the interest developed over the time and I polished my skills in my professional career and got introduced to advancement of ICT with the passage of time, introducing myself with all kinds of computer networking and system related online knowledge through different mediums like forums, online mentors and specially video tutorials over the internet helped me a lot to learn, evaluate and evolve new skills and continue further in pursuing my dreams of becoming an ICT professional.

Since my professional occupation started with an online trading& brokerage based company in 2001, the core dependency of entire operations is on complex IT based infrastructure, hence I am aware about most of the topics mentioned in **Essential Core ICT Area of Knowledge.** Required subtopics are below:

Ethics:

As I started my career I was hired on a level of desktop support and due to my interest in learning by putting extra efforts and time into gaining and grasping knowledge through my co-workers and internet. This was the time when I learned ethical standards and principals followed by, promote values like equality, good behaviour, trust, kindness and fairness towards my work, our customers as well as my colleagues. This was the stage of my work when I learnt about importance of righteousness for oneself with regards to every aspect of life including my work environment. Learning became very easy whenever I faced any problems and I took concerns of my managers, asking them for help in a very honest way instead of feeling shy or hesitant. With good response from my managers this later became a habit and I became more curious and inquisitive. Asking help for what you do not understand and absorbing knowledge to become a professional is a better option instead of making an unrepairable damage to the existing system.

I learned about all the basic ethical theories and implemented those into my day to day work. All of which helped me in maintaining the system integrity within my organization. Performed installations, tests on desktops, software's and applications. Later hardware related issues came into knowledge which made me develop good understanding of probing the problems and resolving hardware related issues as well. Automation and scheduling the tasks came in handy for better performance while system notifications and alerts became the whistle blower. Adherence of policies as per corporate manuals and directives are very important in our organization. Hence free online training tutorials exceled my experience and knowledge to follow my responsibilities in continuing my profession further.

I had several duties and responsibilities given in the very beginning which are mentioned below:

- Handling of day to day complains on desktop support level.
- Setting up the desktop computers and peripherals.
- Setting up the email accounts of users and helping them in user friendly way.
- Testing of network connections and trying to understand and resolve any problems within it.
- Networking and connecting computers via LAN and WAN networks within the organization for better communication.
- Making sure to maintain privacy of the official peripherals and systems by keeping a keen eye.

Managing and maintaining all of those tasks in a swift and timely manner, justifying with my work ethics as an honest employee, urge to learn more and more, and having friendly relationship with my fellow men made me a shining star in no time in front of my co-workers and managers. This lead to my promotion of becoming a "Senior IT System and Network Support Engineer", handling a team of 04 on several projects within and outside the premises of my organization giving me access to a variety of more complicated and complex systems relating to in-depth core IT infrastructures. That also raised professional expectations and team work concepts, issues and their resolutions from my associates as well as my managers in my company.

Teamwork Concept and Issues:

Where becoming a network and system engineer opened up new doors of opportunities to explore, it also made me responsible for experiencing teamwork concepts while working over several in house projects and also looking into teamwork problems and their swift resolutions for maintaining a healthy work environment. I started leading team of 04 along with managing ICT services religiously within my organization. Realizing the work load and alliance I categorized my team into two teams.

- Team 1= Server Team
- Team 2 = Support Team

Both these teams were designated for different chores within my department.

Server Team (Team 1):

I assigned Team 1 for responsibilities which mainly involved, like 24x7 health check and management of DHCP, DNS, FTP, Microsoft Exchange, Microsoft File Shares and Domain controller servers.; Microsoft windows 2008 based Active directory management, Share point administration, Spyware, Virus removal, and Hardware maintenances. 02 senior members of server team were also responsible for core layer of network, firewalls, VPN gateway with my help and supervision.

Support Team (Team 2):

Support team included two junior members and they were mainly looking into network related issues, troubleshooting, software and hardware installations, patching, managing networking cables and giving support to users when required.

Simultaneously Level 2-3 issues like analysing the feasibility of any new project, picking, deciding, and configuring any new equipment or replacing it by the old one, were done by my own self. I started conducting two dynamic brief meetings daily for at least 15-30 minutes before and after our work hours which educated me about my team members concerns and outcome of the entire day as well as any completed or pending tasks. Taking care of my teams enduring concerns made them happy and relaxed by the end of the day and they always started fresh in the next working day. This actually polished my leadership qualities with respect to group interactions and team development.

I also suggested and motivated my team members for Cisco certifications to help them and be updated with ICT knowledge. I myself kept on learning from video tutorials, web forums and practicing on several Cisco, Mikrotik and TP-Link based routers and switches for enhancing my skills for upcoming era of my profession for any challenges I may face.

I will agree that I faced certain issues from my team members, regarding late comings, leaves issues, pay raise and overtime allowance which were resolved in a polite manner and by healthy discussions.

Communication:

As I mentioned above in teamwork and concepts about our dynamic meetings, which could not have been possible without good communication skills from my side. I also made user friendly QRG's (Quick Reference Guides) for my team members as well as end-to-end users. These guides helped users to develop better understanding of the systems and they utilized those guides to polish and use their skills in much professional way. Power point presentations which were made by me for the work flow of our organization were personally appreciated by Country Managers. I conducted trainings and made user manuals for my colleagues and team. I shared weekly performance reports with my managers and country managers of every department with respect to IT infrastructure, business process optimization and asked them to evaluate and advice in case of any issues they seem to notice.

Hence in 2012, that was one of the several core projects I worked upon for which I had meetings with multiple vendors and all the departments' heads within my organization as well. This ultimately groomed my interpersonal skills as those meetings could not have been successfully possible without sufficient knowledge and understanding of requirements, equipment's, concerns form my fellow co-

workers and users.

Societal Issue:

Since my organization involved trading via internet, there is high risk of financial data and its privacy violation. This was a humongous responsibility for me to make the internal and external network as secure as I could, afterwards came the financial data security concerns.

I managed that by setting up port security on all the switches with respect to physical layers. The external and internal traffic was managed by firewalls. For internal security, kept all the user end systems up-to-date with antiviruses and windows updates and secured the financial data over servers by encryption.

I also educated my co-workers with the help of meetings and training sessions to minimize the chances of any possible security threats.

General ICT Area of Knowledge:

Technology Resources

a. Hardware and Software Fundamentals
b. Data Communications and Networking

How have you acquired this knowledge in your working environment? Illustrate your depth of knowledge.

Hardware and Software Fundamentals

As I mentioned above, I started my profession as a Desktop Support. Hence I acquired basic knowledge of hardware and software fundamentals from that beginning period of my work, where I was multi-tasking with different components of computing in my organization, installation and configuration of computer systems, diagnoses of hardware and software faults and solve technical and applications problems, either over the phone or in person.

Hardware:
My role included all sort of hardware activities such as repairing, assembling, disassembling of unbranded and branded systems. System Up gradation, Down gradation, amendments and replacement of motherboards, microprocessors, RAM, Hard Disks, Power supplies, Network Controllers, Input/output devices, change of toners in printers and troubleshooting for any faults and their resolutions was a part of my daily routine.

Software:
Perfectly working System software's in an operating system is very essential for the users. There are thousands of software's available for free downloading over the internet on hundreds of websites. In my opinion the best place to find any software which is trustworthy and not containing any malicious malware so far is filehippo.com. I kept all the user systems up-to-dated with respect to applications (Microsoft Office, word, excel, power point, access) which my co-workers needed to perform their job descriptions. Also system security was very important so I used different types of Antiviruses e.g. Norton, AVG, Avast etc.

Data Communications and Networking

The second most important project I worked upon in 2014 was Virtualization, because of which I learnt a lot of new things about Data Communications within computing of an organization. Also we built a supporting network within the organization on two different locations for day to day scenarios within two offices in the same city i.e. Karachi. Network was supported by Switches, DHCP server, VPNs and MPLS.

SECTION 2 - RPL PROJECT REPORTS

A project report is a coherent written description of a project or engagement that provides you with the opportunity to show how you perform as an ICT Professional. Each report is to relate to a significant project or work episode undertaken by you during your professional career.

The purpose of these reports is to enable you to demonstrate your command and implementation of the Areas of Knowledge described in Section 1 of this application.

Please note: You are required to provide two project reports.

Of the two reports, one must pertain to a project undertaken within the last three years, and the other for a project within the last five years.

Projects over two years long may be used for both reports under either of the following conditions:

- **The project has clearly-defined work efforts which took place in parallel, each with their own solution development and design activities and their own deliverables.**
- **The project had clearly-defined phases that were executed in succession, each with its own solution development and design activities and deliverables. Note that a second project phase that constructs and implements the solution developed by the first phase does not meet this requirement.**

Depending on the nature of your role in each project, the Project Report should cover an appropriate selection of factors. Appropriate factors will be determined based on the type of ICT project selected. Possible factors include:

- System Analysis and Design and Software Engineering methodologies used;
- Contribution to the processes involved in the design and implementation of enterprise-wide computing systems;
- Programming languages, design paradigms and implementation procedures adopted;
- Database and/or file design and management techniques employed;
- Network topologies, including size, distribution and security facilities installed;
- Project Management and quality assurance techniques followed;
- Internet application design, including database interactivity and security measures implemented;
- ICT managerial activities, demonstrating the nature and extent of responsibilities

Project Summary:			
	Project Name	**Start Date**	**End Date**
Project 1	**Design and implement network system in Al Jibra Pvt. Limited**	**06/2012**	**11/2013**
Project 2	**Server Virtualization**	**01/2014**	**08/2014**

Instructions

The following pages provide a template for your reports.

When writing your reports please provide your own thoughts – do not just copy project documentation.

Please use the first person in your discussion, so it is clear to the assessor what you did versus what others did – say "I did X" rather than "X was done".

Diagrams from the project documentation may be helpful, but the text should be in your own words. Please ensure that diagrams are relevant, readable, and help the assessor to understand what you did as a member of the project team.

If sections of the Project Report template (see below) are not relevant to your participation in the project, then leave the section blank.

Focus on quality rather than quantity.**Each Project Report should be no more than four or five pages in length.**

SPECIAL NOTE:

By submitting this RPL Knowledge and Project Report form as a component of your ACS skills assessment application, you agree with the following statement:

The applicant confirms that the explanation of their knowledge and project reports submitted in this application truthfully and accurately describe the applicant and the applicant's personal involvement in the projects. The applicant is aware that plagiarism by the applicant will automatically invalidate this application, will jeopardise any future applicationsfrom the applicant and will be reported by the Australian Computer Society to the Australian Department of Immigration and Border Protection.

Project 1: Design and implement network system in Al Jibra Pvt. Limited

1. Project Summary

1.1. Identification

Client's Company Name		
Business Address		
Contact Numbers		
Web Address		
Email Address		
Nature of project		
Location of project		
Name of your employer		

1.2. Duration

	From	To
Total project duration	06/2012	11/2013
Your involvement	06/2012	11/2013

1.3. Resources

	Number
Your team size	04
Total project team size	07

1.4. Personal Involvement

Please list the phases of the project in which you were personally involved

Start	Completion	Phase Description
06/2012	09/2012	**Phase 1: Scope Analysis + Requirement Study + Product Selection** The scope of the project was to design and implement network system which may enhance the operational efficiency for in house users, few remote office locations within the city and global contract customers online. In the initial phase of this project I conducted brief meetings with my Country Managers, Managers and Co-Workers, to understand their requirements. After collecting all the necessary requirements and pre-requisites from our end, I thoroughly studied the similar products and their vendors available in the market as per their reputation and cost. I made numerous calls to top ranking selected vendors and asked them to conduct initial meetings and elaboration of their products with all of my department heads. After several demonstrations from different vendors, collectively all the stake holders on-board evaluated the demo products and their features in technical proposal for a final acceptance and gave a positive feedback. After the acceptance and compiling a general agreement, I raised a RFP (Request for Proposal) to several vendors and finally the best-fit due to closest needs and was fulfilling all the requirements. Simultaneously I had to look into the pre-requisites of the Software requirements, Hardware requirements, connectivity issues between remote locations and online customers. The proposed operating environment for the Application Server required a server machine with 8GB of Ram and 250 GB of HDD, and for Database Server the requirements were a server machine with 12 GB of Ram and 500 GB of HDD.

Start	Completion	Phase Description
09/2012	12/2012	**Phase2: Hardware and Network feasibility Report** I received hardware and network recommendation from my seniors to design the network infrastructure. Being the project lead I took the charge and prepared a project feasibility report; the points for that report are as below. • I projected a Logical network diagram to show network design by using Microsoft Visio. • I suggested Live IP pool from ISP for VPN server configuration. • I proposed Up-to-date Server Hardware (04 Servers ,HP G7 Rack mount) • I suggested HP Server cabinets • Suggested NAS (Network Area Storage) and SAN (Storage Area Network) for data backup. • Proposed HP LTO 6 Backup Tape drive for off-site data backup. • Cisco 1000 Base-**SX** Gigabit Ethernet SFPmodule suggested to provide fibre uplinks. • Optical Fibre Cable up-links between 04 on-premises sites following star network. • 01 Cisco Ethernet Gigabit SwitchesSGE2010at each site. • Link from Cisco Switches to Workstations was connected via UTP Cat 6. • Microsoft Windows 2012 R2 64 operating system • APC 5000 UPS for power backup with warranty and SLA. • 40 HP Z840 workstations for end-to-end users. After complete hardware and network feasibility I forwarded BoQ (Bill of Quantity) to potential suppliers for financial proposal.
01/2012	02/2013	**Phase 3: Financial Approval** I requested a financial approval meeting with CFO (Country Financial Manager), Admin Manager, and other important Board members to enlighten them on my progress report, budgeting aspects (upfront and reoccurring costs) and SLA's cost.

Start	Completion	Phase Description
02/2013	03/2013	**Phase4: Hardware Installation & Network Infrastructure Building** My core responsibility was to design and implement Servers and Network Infrastructure within 30 days. The Initial setup; installation of 42 U server cabinet and mounting of HP server into the cabinet were done by my junior team however all the **Server Setup** RAID-5 implemented on hardware level to provide disks level redundancy. Installation of Microsoft Windows Server 2012 R2 64 bit operating system on all 4 HP servers. Installation of Microsoft Forefront Protection. **Remote Access Setup** Installed RRAS (Routing and Remote Access Service) by configuring PPTP to authenticate and authorize VPN (Virtual Private Network) requests from remote sites. **Network Setup** Configured Cisco 2960G switches by creating VLANs and Access Lists. DHCP (Dynamic Host Configuration Protocol) service configured on core cisco switch to assigned dynamic IPs to workstations. Configured gigabit fibre uplinks from core Cisco switch to the access layer Cisco Switches. Cisco ASA-500 firewall configured to protect the network against unauthorized access and DoS (Denial of Service) attacks. **Disaster Recovery Setup** Configured Seagate NAS (Network Area Storage) and transfer all the network shares from previous server to the NAS. Configured automated schedule backup job to perform data backup on daily, weekly and monthly basis. Dell Tap Drive configured in way to copy weekly and monthly backup automatically on the taps. **VPN Client Site** Configured VPN client connection on remote sites Lahore, Peshawar and Karachi offices. **Network Monitoring** Network Monitoring tool (PRTG) installed and configured to monitor network and internet bandwidth utilization of local and remote data links from the head office to the remote sites.

Start	Completion	Phase Description
04/2012	06/2012	**Phase5: Network Testing** In last phase of the project, I verified network links by using cisco network utility. After getting desired results (The average network response time from each remote sites was 120 milliseconds) I then declared the system is ready to install ERP
06/2012	08/2012	**Phase6: ERP Installation**
08/2012	04/2012	**Phase7: Go-Live**

1.5. Describe your role(s) and responsibilities in the project.

I have been working as Network Systems Engineer and core job responsibilities included

- Designing, developing, testing and interpreting overall computer network and system related services.
- Ensuring optimal configuration of all developed computer network systems and making sure that all computer and network systems are operational and ready for use.
- Identifying, troubleshooting and rectifying all technical errors and shortcomings in existing computer and network systems.
- Conducting technical analysis for complicated network architecture and system analysis in the development and configuration of computer and network systems.
- Testing the performance of new and existing computer and network systems by conducting formal testing programs.
- Installing and configuring new and upgraded networks, software database applications, servers and workstations.
- Providing expertise in network system programming in support of specific operational and business requirements.
- Recording and maintaining paperwork associated with computer network inventory, network issues, faults, improvement plans etc.
- Enhancing overall network performance by implementing performance boosting plans.
- Keeping a vigilant eye on network performance by monitoring flow of data traffic to conform non-stop integrity and optimal network performance.

2. Business Opportunity or Problem

2.1. Describe the business opportunity or problem(s) this project addressed.

Initially there were very tiny network systems installed at each department of organization separately and mostly operations used to carry out manually. Therefore in order to enhance operational efficiency of organization, company felt the need of developing a proper network system through which things can get streamlined. It was basically more of a problem solver for operational inefficiencies but it had an indirect impact on company's overall business as well. There were different departments in the organization but the major problem was that in order to share any information or transfer any data, or to access any particular data there was no server installed. All data used to be transferred through emails or USBs. And network systems which were already there, they could process a limited amount of data and that too inter-department only.
This project tied all the departments under one network which overall improved operations of the company through proper flow of data traffic.

3. Solution

3.1. Discuss your contribution to the solution, project or engagement.

As I was working as the Project lead so one of my major contribution in this project was to get this network system configured with Al-Jibra core software and functions which were already been used there. As they had to gather clients' different services related information from different set of software applications so network system was required to have sufficient strength to deal with heavy and multiple data traffic from one source to another.
Then I also installed a distribution application in network system which helped me in catering all the processes in a single application.
A part from that I used Technical Development Review template in order to maintain all necessary paper work or documentation. I also conducted testing phases of project.

3.2. Describe any design or problem solving methods you used on this project.

I went for prototype design methodology as it was ideally getting suited to the requirements of the organization/project. As explained earlier, there were different departments in the organization and there was no certain bond available which could link up all those departments and keeping in view the performance efficiency, it was very necessary to process the flow of data traffic through all these departments at a rapid pace. I could have gone for standard design methodology but the structure of overall organization was complex so it was not getting possible to go through that design methodology.
In this design methodology, there were 3 test runs which were executed. In Test R1, Identification of technical requirements were determined. Then in Test R2, analysis of practical possibilities for configuration of technical/functional requirements in accordance with network system was ensured. And in Test R3, solutions which were validated through previous two tests and through approval of senior management.

3.3. List the major deliverables of the project that you were responsible for or contributed to.

Being the project lead, it was my responsibility to carry out all the steps under my direct supervision and ensure that all operations are carried out as per defined plan. But if just pin point another deliverable which was proven as to be technically a major deliverable then that was the installation of a compiler in this network system. In order to process data through server, data should must be collected/compiled first and that was possible only through installation of compiler.
Another key deliverable was that I designed this whole network system and from A to Z all steps were performed under my supervision. Other key deliverables include identification, troubleshooting and rectification of problems incurred in network design and development process.

4. Results

4.1. Was your solution implemented? If so, describe the role, if any, you had in the implementation.

I was the project lead and it was only me who was guiding the whole project that what to be done and what is not feasible with the requirements of the project. Therefore the answer to this question is YES, my all proposed solutions were implemented and In-fact I myself was directly involved in the implementation of this project.

4.2. *Assess the overall success or failure of the project*.

In my opinion, if your set objectives/goal is achieved in the way you aimed for then that project can be considered as successful. As stated earlier, this project was done for the purpose of streamlining operations of company and it really gave a massive boost to operational management. Management was immensely satisfied with the end result and our whole team after the completion of this project was assigned with special incentive as an acknowledgment for our achievement.

4.3. Lessons Learned

In retrospect, what you might have done differently on this project?

This project was indeed a great learning lesson for me. It was the first project where I was assigned with the responsibilities of Project Lead. Therefore it was a totally different experience and a very learning one. This project taught me a lot of things. I had never led any team before. Through this project I learnt that In a team there are people with different sets of mind and you need to treat them differently so that work efficiency must not get affected. Other thing which I learnt in this project was not follow the foot prints of your seniors all the time. Every project is different and you need to always assess it as an individual project rather than matching it with previous experiences. Another important element is when you are leading a project, always stay focused. One mistake and your all efforts been done can get wrapped away. So it is very important to conduct test runs at every stage so that everything can be completed flawlessly and in a timely manner.

Project 2: Uprgadation of network system deployed in Al-Jibra

5. Project Summary

5.1. Identification

Client's Company Name		
Business Address		
Contact Numbers		
Web Address		
Email Address		
Nature of project		
Location of project		
Name of your employer		

5.2. Duration

	From	To
Total project duration	mm/yy	mm/yy
Your involvement	mm/yy	mm/yy

5.3. Resources

	Number
Your team size	
Total project team size	

5.4. Personal Involvement

Please list the phases of the project in which you were personally involved

Start	Completion	Phase Description
mm/yy	mm/yy	
mm/yy	mm/yy	
mm/yy	mm/yy	
mm/yy	mm/yy	

5.5. Describe your role(s) and responsibilities in the project.

My main job responsibilities in all projects (including this project) revolved around

- Designing, developing, testing and interpreting overall computer network and system related services.
- Ensuring optimal configuration of all developed computer network systems and making sure that all computer and network systems are operational and ready for use.
- Identifying, troubleshooting and rectifying all technical errors and shortcomings in existing computer and network systems.
- Conducting technical analysis for complicated network architecture and system analysis in the development and configuration of computer and network systems.
- Testing the performance of new and existing computer and network systems by conducting formal testing programs.
- Installing and configuring new and upgraded networks, software database applications, servers and workstations.
- Providing expertise in network system programming in support of specific operational and business requirements.
- Recording and maintaining paperwork associated with computer network inventory, network issues, faults, improvement plans etc.
- Enhancing overall network performance by implementing performance boosting plans.
- Keeping a vigilant eye on network performance by monitoring flow of data traffic to conform non-stop integrity and optimal network performance.

6. Business Opportunity or Problem

6.1. Describe the business opportunity or problem(s) this project addressed.

This project was actually an opportunity for Al-Jibra to expand its operations. Along-with changing environment, and increasing market competition, it was very necessary for Al-Jibra to introduce different models of cameras and other related products so that it could cater to different market segments. As I was the one who had built the design of existing network system. Therefore, once again I was called for to lead this project and upgrade it as per the changed and enhanced operational needs of organization. It was although a kind of operational problem solver but at the same time had direct relation with company's business expansion as well. So it was both of business opportunity generator and problem solver as well. As of now company was planning to increase its product line by introducing various fire alarm systems, accessories, access control systems and it was expected that this product line is to keep on increasing at a rapid pace with the passage of time. So this project was whole about enhancing the capacity to meet operational as well as business requirements.

7. Solution

7.1. Discuss your contribution to the solution, project or engagement.

My major contribution in this project was to revamp all the designed network system and redesign it in such a way that it does not only meet the existing operational requirements but this time it is flexible enough to make necessary changes easily for new changes without changing completely new design. So design methodology was one major contribution. Other major contributions include building up roadmap in order to achieve desired outcomes from the project. Identification and selection of resources required was determined by me. Then configuring the upgraded distribution application was another part of my major contributions.

7.2. Describe any design or problem solving methods you used on this project.

This time I opted for standard design methodology rather than prototype design methodology because I had to make it flexible for future changes. Previously developed network system was admired but it was not flexible. I also considered the option of Modular Approach for network design. It was because in this developed network was easy to scale. In case if any problem incurred, then it could be easily isolated and it could also create logical interconnection points where different protocols changes could be done. Some Design tools which I used in this project included MS Visio, Excel, Power Point, Word NDDK (Network Design and Development Kit) etc.

7.3. List the major deliverables of the project that you were responsible for or contributed to.

8. Results

8.1. Was your solution implemented? If so, describe the role, if any, you had in the implementation.

Before building up design I got the approval from management after finalizing the features of network system which were required. Once I got the approval, I executed the whole plan accordingly and different problems arose at each phase but at that point of time my vast experience and specialized troubleshooting expertise came into play and all solutions were proposed and implemented through my direct coordination. Although I was the project lead but I stayed directly involved in execution to ensure everything was going on accordingly.

8.2. *Assess the overall success or failure of the project*.

After completion of this project, I gave a presentation and let them knew that what utilities they could now achieve through this upgraded network system. I enlisted their requirements and compared them individually with the outcomes of the project in contrast to those requirements. After the meeting and cross questioning, whole team applauded my performance and informed that they were very pleased and satisfied with the end result.

8.3. Lessons Learned

In retrospect, what you might have done differently on this project?

Just the way previous project gave me the opportunity to learn a lot of things, so was the case in this project. The first and biggest lesson which I got was to always design network system with flexibility approach. If I would have kept that thing in mind then it would had saved a lot of time and effort which I had to put in again in this project. The other lesson which I learned was to opt for branded tools and equipment's. Initially wires and equipment's used were non-branded so I had to replace them and it led on towards cost efficiencies. A few other lessons which I learnt were

- Quality Assurance and Testing Procedures are not expenses
- Never get yourself de-track from the ultimate goal.
- Feasibility plan should be prepared with extreme caution

After the successful execution of this project, I could now proudly say that I was a purely professional Computer Network and Systems Engineer