



Rizwan Khan

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ASPIRATIONS: *Position requiring a visionary and dynamic leader. Seeking technical role supporting business management in telecommunication.*

EXPERIENCE:

Truphone (SCN Limited), London UK (Aug 2007 – present)

Network Solutions Engineer at Truphone - a mobile VOIP operator. Responsible for liaison with network and engineering teams within the company. . Working on latest projects like BlackBerry and Windows Mobile VoIP clients. Operating **open-source VOIP platform** and design scripts for batch jobs in **Linux** environment. Optimized **Billing solution** according to customer requirements (pre-paid & post-paid) Performing packet analyses using **Wireshark** and other **NMS systems**. Writing business plans, technical documentation, develop POC and prototype testing.

Universal IP Limited, London UK (Sept 2005 – July 2007)

Network/VoIP Architect for the company's *IP telephony* solutions (formerly **Call2Save Limited**), Network design and implementation. Managed a team of 6 engineers in India and Dubai alongwith the VoIP platform (**Cisco, Sysmaster, Brekeke and Quintum**) and **Class5 IP Centrex** (Mega Switch). **DDIs, IVR, SS7/SIP/H323, softphone, 3rd level technical support**. Involved with latest **CPE** like **WiFi/GSM dual phone** including **WiMax and WiFi Mesh networks**. Perform regular backup of network resources, managing **routers, load balancer, border control, and IDS/IPS firewalls**.

Axis Communications AB, Lund Sweden (Oct 2004 – May 2005)

Full time thesis research performed at Axis Communications AB, related to *Network Security in Embedded Devices*. Worked with Axis network cameras, print servers etc. involving technologies like **RADIUS, Kerberos, Diameter, LDAP, C-Programming, Latex and web-servers with Debian OS**.

Superior Group of Colleges, Lahore Pakistan. (June 1999 – Aug 2003)

Network admin at SGC providing technical support and managing network setup of over 300 PCs operating *Windows* and *Linux* platforms using Layer3 network and switched LAN. Other responsibilities involved managing local ISP of SGC. Installing **hotspots, webservers, DNS, DHCP, Dialup, Proxy, Firewall and Routing** services between college campuses.

EDUCATION:

M.Sc in Internetwork Communications from Royal Institute of Technology (**KTH**), Stockholm, Sweden. The course work included hands-on Internetworking experience, VoIP, Routing, Switching, Wireless Network Architecture, Network Security and Privacy (2005)

B.Sc (Hons) in Computer Science from University of Engineering and Technology, (**UET**) Lahore, Pakistan. UET is an esteemed public sector engineering school of the country. I was ranked among top ten students of the batch. (1999)

TRAINING & CERTIFICATIONS:

- **GEL-Global Entrepreneurial Leadership at Stanford University, (SCPD), USA** (Nov-Dec 2003)
- **Cisco C-Voice and Call Manager** training (May 2007)
- **Mera MVTS** training (Aug 2007)
- **Quintum** VOIP Gateways Technical training (May 2006)
- **AYC IP PBX** training (Dec 2005)
- **CCNA** (Cisco Certified Network Associate 2) training (Dec 2002 – Jan 2003)

Technical Skills:

- Technical liaison and requirement gathering from valued customers.
- Provide 3rd level technical support to Internet and PC customers.
- Practical knowledge of **VoIP, SIP Proxy, softswitches, media gateways and border gateways** etc.
- Competent with **Cisco PGW 2200, Quintum, Sysmaster's VM 2000, SM7000, Brekeke, Mera SBC, Universal PBX, Asterisk** configuration, billing, CDR, Rate tables etc.
- Good understanding and practical experience of integrating **PSTN & VOIP, E1/T1 circuits, ISDN PRIs, SS7/ISUP, SIP, H323, MGCP, H248 including latest 'Convergence techniques and NGNs'**.
- Sound knowledge of Routers, Switches, and other networking equipment from design perspective.
- Extensive hands on experience on **Cisco Catalyst 3750, 2900 and 3900** series Switches, **Cisco 2500, 2600, and 3600** series routers, **Cisco Access Point AP350**.
- Implementation of logical segmentation using **VLANs** for the management of Inter VLAN and Intra VLAN traffic using Cisco Catalyst Switches.
- Advanced **BGP** configurations like BGP Multihoming, Route filtering using Access Control lists, Prefix lists and AS-path lists, Route Manipulation using Route maps, Route Aggregation, Route Reflectors, Peer-Groups and Communities.
- **IDS, IPS** firewalls. **Cisco PIX, Juniper NetScreen, Fortinet FG-200, Checkpoint, ISS**.
- Wireless data and voice-enabled BlackBerry products like 6230.
- Redistribution of Classless and Classfull IP routing protocols
- Comprehensive knowledge of **VPNs, TCP/IP, IPv4, IPv6**, LAN technologies, Bridging, WAN protocols, Policy Routing, **Access Lists, VoIP, NAT** and **IPX** including **IPX RIP / EIGRP**.

Operating System:

Well familiar with *Linux Operating System*:

- **MiniSIP** clients and server setup over Linux platform.
- Implemented Domain Name Services (**DNS**) in Linux using Bind.
- Configured **DHCP** on a server that was running Linux using ISC DHCP distribution.
- Implemented Web server in Linux using **apache, php** and **postgreSQL**.
- Configured email server using **qmail and squirrel mail**.
- Setup proxy server using **Squid and IP-tables firewall**.
- **Dial-Up server** setup using **Cisco 3700** series router with **NM-16AM** modules.
- Configured Dynamic routing (**OSPF**) on a Linux box using **zebra**.
- Recompiling the **Linux Kernel**.

Experienced with *Windows Operating System*:

- **VPN** tunneling and connectivity.
- **RAS** management and Remote administration with **NetOP** remote control, **Remote Admin**.
- Setup Internet domains, **file and print servers** etc.
- Proxy and firewall setup using **Microsoft ISA** server and **Wingate**.
- **Real and Windows media streaming** server setup.
- Webservice implementation with **Microsoft IIS and PWS**.
- Mail server setup with **i-mail, Active Directory, MS Exchange, MS Outlook**.

Computer Skills:

SIP, CISCO IOS (Internet Operating System), VoIP, Java , C, C++, HTML, WML, Shell scripting, , Latex, Linux, Windows, MS Exchange and MS Office.

Academic Projects:

- The master's thesis 'User Authentication & Authorization in Embedded Devices' performed at Axis Communications AB, Sweden was related to *Network Security*. It involved evaluation of technologies like **RADIUS, Kerberos, LDAP, and Diameter** for *Efficient, Secure and Centralized management of network surveillance cameras and print servers*. Later, a prototype was designed with RADIUS to prove the findings of this research using **freeradius, Boa webserver, C-Programming and Debian OS**.

(www.it.kth.se/~itex_rak)

- Mobile Chronicles, provides insights to the latest Wireless Technologies of today with prime emphasis on WAP, i-Mode & XHTML along-with their underlying Bearer Network Services like **GSM, GPRS, FOMA** and the **3G**.

- U-Bank-The Universal Bank related to Mobile Banking with Next Generation Device Independent Mobile Financial Services developed using **XML, WML, XHTML, JSP and Java Beans with Oracle 9i** as Database for the Windows platform.

- Having lead my team to setup Internet Application Services at NUoL, enabling the University to join the academic network with Thailand and Vietnam. Services included development of **Web (Apache), Mail (Squirrel Mail), Ftp, DNS (Bind), DHCP, Proxy (Squid), Firewall (IP tables) and Dial-up (Cisco 3700 series router with NM-16AM modules)** services at the University using *Linux*.

(csd.ssvl.kth.se/~csd2004-team6)

- Implemented an application in **C** using **NET-SNMP** to monitor the traffic patterns on a router based on SNMP. This application can run on Management Server and a node can be monitored.

Research Documents:

- 'Quality of Service in VoIP over GPRS, Wireless and Wired networks' is a research paper that presents the performance evaluation of VoIP over the stated protocols.

http://www.geocities.com/rizkhanhere/2g1325/qos_voip.pdf

- A research document on WEP with the title "**Breaking the Wired Equivalent Privacy (WEP)**".

http://www.it.kth.se/~itex_rak/pvt/wep_report.pdf

- A project report presented to SIDA on accomplishment of **Open source network** infrastructure in Laos.

http://web.it.kth.se/~itex_rak/pvt/final_report-may14-v01-e.pdf

- A research paper on the design issues of **Border Gateway Protocol**.

http://www.it.kth.se/~itex_rak/pvt/2G1703_RizwanKhan.pdf

References:

Professional references and supporting documentation will be furnished upon request.