CURRICULUM VITAE

PERSONAL DETAILS

NAME	:	Nathan
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SEX	:	Male
MARITAL STATUS	:	Married
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NATIONALITY	:	Zambian
DATE 0F BIRTH	:	05th November, 1977

CONTACT DETAILS

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CAREER OBJECTIVE

Seeking a position to utilize my skills and abilities in the ever changing Information and Communications Technology (ICT) that offers professional growth while being resourceful, innovative and flexible to the changing demands of technology.

PROFILE

Experienced Multi-Vendor Telecommunication Core Network Expert with excellent information technology skills. Experience in core network systems deployment and implementation, software development and implementation, network deployment and implementation, hardware installations and web development. My demonstrable skills include the following:

CORE NETWORK SYSTEMS DEPLYOPMENT AND IMPLEMENTATION

- ✓ Fully participated in the Huawei driven Zamtel CloudEPC Project whose deliverables included among other things:
  - Installation of hardware for converged core domains based on Network Function Virtualization (NFV) with a complete geo-redundant architecture of all components
  - Configuration of Evolved Packet Core (EPC) to support 3GPP Accesses (LTE, WCDMA and GSM)
  - Configuration of convergent subscriber database to support 3GPP Accesses (LTE, WCDMA and GSM)
  - Configuration of new Policy and Charging Controller (PCC) architecture to introduce new policy rules and a UDC (User Data Convergence) to centralize subscriber database repository
  - OS Software installation & HSS/USN/UGW/CG software installation for both Lamya & Woodlands site
  - HSS/USN/UGW basic data configuration for both Lamya & Woodlands site
  - Integration to live network for both Lamya & Woodlands site
  - Service test and generation of Call Data Records (CDRs) to Charging Gateway (CG)
  - Integration of BSCs/RNCs/eNodeBs to the new NFV EPC from Huawei region, and monitor for quality of service
- ✓ Roll out of Long-Term Evolution (LTE) for both Data and Voice over LTE (VoLTE)
- ✓ Participated in the deployment of a ZTE driven NGN product with the following main components:
  - ZXSS10-SS1B (SoftSwitch)-Call control and generation of Call Data Records (CDRs)
  - ZXMSG 9000-Media Gateway responsible for translating traffic from PSTN to IP network
  - Various Access Gateways-MSAGs, IADs, etc.
- ✓ Lead role in the ongoing swapout of legacy PSTN nodes with voice over LTE (VoLTE) solutions whose main aim is to:
  - Reduce on Operational Expenses (OPEX) emanating from costs relating to replacement of vandalized copper cables, maintenance costs relating to degraded service due to old cable network, fuel costs, wear and tear expenses, salaries/wages of blotted staff, etc.
  - Improved network availability
  - Overalll improved quality of service

SOFTWARE DEVELOPMENT, IMPLEMENTATION & INSTALLATION

- ✓ Installing and configuring of software, both application and system software on client/server or standalone computer systems.
- ✓ Software Development with the use of Java
- ✓ Conversant with running scripts on Oracle database
- ✓ Installing and configuring of hardware components and other peripheral devices on client/server or standalone computer systems.
- ✓ Troubleshooting of software errors and maintenance on client/server or standalone computer systems.
- ✓ Conversant with Windows Application Platforms –Microsoft Office Suite, Autocad, Ms Projects, MsVisio and Open Office Suite.
- ✓ Installation and debuging of Windows based servers such as NT/2000/2003, etc
- ✓ Conversant with SQL and Oracle Db
- ✓ Able to install and use various vendors-specific application programs

NETWORK & HARDWARE DEPLOYMENT, IMPLEMENTATION & MANAGEMENT

- Mounting of network and server racks and cabinets
- Conversant with IP Packet switching and Circuit Switching Technology
- Conversant with TCP/IP technology
- Conversant with ZTE ZXJ10 and Next Generations Networks for PSTN Networks (Landlines/ISDN/Leased lines)
- PBX Setup and configuration
- Conversant with SS7 signaling and Sigtran
- Conversant with VOIP(SIP) and VOLTE technology
- Conversant with Radio & IP transmission
- Network cabling: UTP/STP cable termination and troubleshooting, E1s cable termination and troubleshooting.
- Installing and configuring of network devices; access points and point to point radios,
- Network administration, implementation and planning for LAN and WAN networks both on wired and wireless
- Network troubleshooting and maintenance.
- Microsoft client/server operating system deployment and Deployment of Windows server 2003/2008
- Conversant with Thin Client Technology
- Conversant with Windows standalone OS deployment –Windows 10/8/7 /VISTA XP/2000, NT /3.1
- Hardware troubleshooting, and maintenance of client/server or standalone computer systems.
- Conversant with DNS Server management and service monitoring
- Conversant with Mail Exchange/FTP/Print Server management and service Monitoring

ZTE / HUAWEI EQUIPMEMT ENVIRONMENT

- Knowledgeable in GSM Mobile Network Technology and Architecture - ZTE /HUAWEI equipment environment.
- Conversant with SS7signalling and Sigtran Technology
- Conversant with PSTN Network Technology and Architecture - ZTE /HUAWEI equipment environment.
- Conversant with the Intelligent Networks (IN) Technology - ZTE equipment environment.
- Vast experience in Value Added Service Platforms - ZTE /HUAWEI environmentPlatforms (USSD Management, Bulk sms Management, Etopup, Bulk Number provisioning and short code configurations)
- Vast experience Intelligent Network Platforms - ZTE /HUAWEI environmentPlatforms (Online Billing System)
- Conversant with DWDM and PTN transport networks ZTE /HUAWEI equipment environment.
- Conversant with Circuit Switching /Packet Switching, GSM Core Network Equipment - ZTE /HUAWEI equipment environment (MSCs, GGSNs, CG, vUSN, vUGW, vCG, SGSN, MGWs, SMSCs, HLR, VLR, BSCs and BTSs, NodeB, MME,SGW, PGW)

OTHER TECHNICAL SKILLS

- Conversant with the provisioning and troubleshooting of LTE subscribers
- Proficient in the provisioning and troubleshooting of VoLTE and VoIP subscribers
- Proficient in the provisioning and troubleshooting of H.248 subscribers
- Excellent in provisioning and troubleshooting of SIP Trunks
- Excellent in provisioning of ISDN PRIs using DSS1 protocol
- Conversant in APN provisioning and troubleshooting
- Excellent provisioning and troubleshooting skills of CDMA Wireless Local Loop subscribers on both the SoftX3000 and Radio Access Controller of Huawei systems
- Excellent provisioning and troubleshooting of V5.1/V5.2 subscribers
- Proficient in SS7, Sigtran, R2, V5.1/V5.2, ISDN, SCTP, etc. used predominantly on the PSTN
- Conversant with VoIP protocols such as MGCP, SIP, H.248, SDP, SAP, RTP, UDP,etc.
- Conversant with IuCS interface (between MSC and RNC), IuPS interface (between SGSN and RNC), Gs interface (between MSC and SGSN), Gn interface (between SGSN and GGSN), etc.
- Good installation and troubleshooting skills on Windows NT/2000/2003 Servers

ACADEMIC QUALIFICATIONS

YEAR	HIGH SCHOOL/COLLEGE/UNIVERSITY	QUALIFICATION
2016-PRESENT	University Of Lusaka	Bsc. In Information Technology
2003	City and Guilds – London (UK)	Technician Diploma Telecom and Electronics
2002	Zamtel Staff College – Ndola	Technician Certificate in Telecommunications
1997	Naboye High School	O Level Certificate

PROFESSIONAL QUALIFICATIONS

YEAR	COLLEGE/UNIVERSITY	QUALIFICATION
2018	Huawei University – China	Core Operation and Maintenance – MsoftX3000 (ATCA) and UMG8900
2014	Huawei University – China	Core Operation and Maintenance – GGSN9811, SGSN9810 and GPRS/UMTS
2013	University Of Zambia	Certificate Cisco Exploration - Network Fundamentals
2013	University Of Zambia	Certificate Cisco Exploration – Routing Protocols and Concepts
2013	University Of Zambia	Certificate Cisco Exploration – LAN Switching and Wireless
2013	University Of Zambia	Certificate Cisco Exploration – Accessing the WAN
2013	ZTE University – China	Certificate – Level B ZXSDR BTS Commissioning
2011	ZTE University – China	Certificate – NGN Technology
2008	University Of Zambia	Certificate – Web Design & implementation
2005	CDMA University – USA	Certificate – 3G Wireless Broadband
2003	Zamtel Staff College	Certificate – NEC CDMA Wireless Local Loop (WLL)

PROFESSIONAL AFFILIATION

- Member Engineering Institution Of Zambia (MEIZ)

WORK EXPERIENCE

2016 – PRESENT

Zambia Telecommunications Company Ltd | Core Networks Expert – Core Support
- ✓ Timely country-wide support on escalated PSTN and Mobile Core outages
- ✓ Service provisioning on both Mobile and PSTN Core Nodes – e.g. APN, VoLTE, VoIP, LTE, SIP Users, SIP Trunks, Narrowband ISDN PRI/BRI, H248 Users, V5 Users, SS7 Routes, etc.
- ✓ Support on configuration of access devices such as FTTB, FTTH, Huawei/ZTE CPE for LTE, MSAG, IAD, IP phone, Soft phone, etc.
- ✓ Second level support on both Core and access nodes/devices
- ✓ Monitoring and Management of various interconnection links – e.g. Links to and from Airtel, MTN, International, Regional/Inter-provincial, etc.

- ✓ Corporate clients service management – e.g. APN, ISDN, SIP, etc.
- ✓ Consultancy on innovative telecommunications solutions – e.g. deployment of customized IPBX, interconnections to TELCO, hosted solutions, etc.
- ✓ Traffic and link status monitoring, troubleshooting and fault resolution of Zamtel's radio access network
- ✓ Perform regular core network system health checks as scheduled
- ✓ Ensure fault resolution on both Mobile and PSTN core nodes according to various SLAs with corporate customers
- ✓ Ensure Packet Data Protocol activation success rate of =>99.0%
- ✓ Undertake scheduled backup of various core nodes such as MSCs, MGWs, vUSN, vUGW, NGN-SS, ZXJ10, SGSN, GGSN, CG/vCG, etc.
- ✓ Monitoring success rates (e.g. SMS success rate, Paging success rate, 2G/3G/4G Attach success rate, 2G/3G/4G PDP Activation success rate, etc.) and provide mitigation measures where necessary
- ✓ Monitoring throughput on various links/interfaces (e.g. Gb, Gi, IuPS, Gi,S1, SGi,Ga interfaces) and link failure resolutins
- ✓ Knowledge transfer on the implementation and troubleshooting of various core network driven customer services to field personnel
- ✓ Ensure adherance to timely Work Order executions as received from Planning and Optimization teams
- ✓ Ensure compliance in carrying out of preventive maintenance on all Core Network Nodes
- ✓ Test and Launch roaming services and monitor new launched services as per Zamtel International Business Unit (IBU) launch schedule
- ✓ Run and collect local and interconnect Call Data Records (CDRs) using software tools like bill converter for onward processing by the billing team
- ✓ Run Transferred Account Procedure (TAP) files for billing and settlement of roaming subscribers which are then sent to respective Home Public Mobile Network (HPMN) operators from Visited Public Mobile Network (VPMN) operators
- ✓ Implementing definitions of new numbering series and charging schemes such as Rating Groups (RGs) on ePC
- ✓ Actively participate in the technical and commercial evaluation of core network element purchases and network integrations to ensure that they meet technical specification, operational and business requirements
- ✓ Work with vendors and maintenance partners on all network implementation and installations on the Core Network and related network elements
- ✓ Carry out acceptance service testing on newly installed and configured network elements and services
- ✓ Prepare statistical reports on MSCs, HLR/HSS, vUSN, vUGW, VLR, SMSC and VAS platforms
- ✓ Offer configuration support on Value Added Services (VAS) 3G Data/ Video Calling configurations, Video Streaming, VMS, MCA, CRBT, ROAMING

2010-2016

Zambia Telecommunications Company Ltd | CS Technician – Second Line Maintenance (SLM)
- ✓ Offer second line maintenance of various PSTN core nodes scattered around Zambia
- ✓ Operation and Maintenance of core equipment which include Core Routers, ZTE IN Platform, ZTE NGN-SS1B, NEC CDMA WLL, Huawei CDMA WLL, ZTE ZXJ10, Alcatel E10B and NEC NEAX61E Systems
- ✓ Carrying out Core Network configurations for new services such as ISDN PRI, SIP links, LTE450 (SIP User configurations on the NGN-SS1B, Evolved Packet Core-EPC configurations and end-user CPE configurations), BRI users, etc.
- ✓ Installations and configurations of Integrated Access Devices (IADs), IPPBXs, SIP terminals, etc.
- ✓ Implementing definitions of new numbering series and charging schemes on PSTN IN & VAS
- ✓ Configuration and troubleshooting of Windows NT/2000/2003 Servers and Clients for management of ZXJ10 Core Nodes
- ✓ Implementing definitions of new numbering series and charging schemes on PSTN
- ✓ Monitoring and troubleshooting hardware/software problems related to PSTN IN, inter-exchange links, NGN network elements, etc.
- ✓ Programming of routing and charging tables for purposes of routing calls to desired destinations and charging calls respectively
- ✓ Scheduling and carrying out preventive maintenance on all PSTN Core nodes scattered across the country
- ✓ Generate traffic status, performance and utilization report reports on all system nodes monitored
- ✓ Programming of routing and charging tables for purposes of routing calls to desired destinations and charging calls respectively
- ✓ Management of Multi-Vendor Platforms of Huawei, ZTE, Erikson, NEC, etc.
- ✓ Collect and analyze core network performance statistics and make basic assessments on the performance of the network elements and make recommendations based on the results of the analysis and assessments
- ✓ Offer support on GSM VAS configurations which include Bulk SMS, Bulk Number Provisioning and configurations, Short code configuration and management.

✓ Etc.

1999-2010

Zambia Telecommunications Company Ltd | Core Network Technician – Core Networks
- ✓ General Operation and Maintenance of multi-vendor PSTN core nodes such as:
  - ○ ZXIN (Intelligent Network)
  - ○ Huawei CDMA Soft-Switch (SoftX3000)
  - ○ Huawei CDMA Radio Access Controller (RAC6610)
  - ○ Huawei CDMA Universal Media Gateway (UMG8900)
  - ○ NEC CDMA Signaling Convertor (SC)
  - ○ NEC CDMA Wireless Service Controller (WSC)
  - ○ NEC Neax61E
  - ○ Alcatel E10B
  - ○ Ericsson (used as an international gateway)
- ✓ Billing data extraction
- ✓ Route creations using R2 and SS7
- ✓ Number analysis configuration
- ✓ Charging Tables configurations
- ✓ Generate traffic status, performance and utilization report reports on all systems monitored

HOBBIES

- ✓ Playing soccer
- ✓ Watching soccer, golf and tennis
- ✓ Socializing and meeting new people

ADDITIONAL SKILLS AND INTERESTS

- ✓ Linguistic – can comfortably communicate in English, Tonga, Nyanja and Bemba
- ✓ self-motivated, well organized individual with an ability to analyze things and get creative solutions
- ✓ Very good mathematical and analytical skills
- ✓ Excellent understanding and operation of computers
- ✓ Excellent fault resolution skills with a history of resolving serious core outages across the Zamtel network
- ✓ High learning ability
- ✓ Strong interpersonal skills built through effective communication and respect other people
- ✓ Excellent levels of discipline and commitment to work
- ✓ Highly dependable and reliable in supporting and enabling team effort to produce long term sustainable results
- ✓ Highly determined and decisive in making decisions that demand urgency without overlooking consequences some decisions can have on the systems as a whole
- ✓ Adapts easily to changes in the work environment and technology in order to keep abreast with modern trends

PROJECTS PARTICIPATED

2001	Expansion of Call Control Processor for the Ridgeway Core Node (Neax61E)
2002	NEC CDMA WLL roll out targeting the farming community located mostly in peri-urban and rural areas (voice service)
2003	ZXJ10 country-wide roll out project (swap out of analogue PSTN nodes and other old systems)
2006	Huawei CDMA WLL roll out
2010	Participated fully in the installation, testing, implementation and evaluation of the ZTE NGN Platform comprising of NGN-SS1B (Control), MSG9000 (Media), MSAN (V5 Access), MSAG (H248 Access), T64G and ZXR3952 (Transport), IAD (H248 Access), etc
2011	Implementation and installation of NGCC System (New Generation Call Center) for Zamtel customer care helpline
2012	Implementation and service acceptance testing for the new Zamtel Converged BillingSystem - Online Charging System (OCS – ZTE Platform)
2013	Implementation of the Centralized Billing of the entire PSTN network (i.e. interconnection of all provincial

switching centres to the Online Charging System – OCS)

2014	Lead role in the decommissioning, recovery and redeployment of the Neax61E Core Node from Kafue to Zambia Air Services Training Institute (ZASTI) as donation for hands-on training of students in telecoms
2015	Phased country-wide swapout of various core systems (Legacy PSTN Core Nodes – Neax61E, ZXJ10, E10B) and being replaced with Access Gateways (MSAGs) whose control is the Soft Switch (NGN-SS1B)
2016	LTE450 (data and voice) roll out in parts of Livingstone, Chikankata, Siavonga and Mkushi areas
2017	LTE2300 (data and voice) initial roll out in parts of Copperbelt, Southern and Lusaka
2018	Zamtel CloudEPC installation, testing and implementation which provides a future-proof carrier grade core network platform
2019	Ongoing country-wide swap of various copper dependent PSTN services (data and voice) with LTE450/2300 whose main objective is to reduce on OPEX while enhancing customer experience on data and voice services

REFEREES

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