

RAYMOND P BURKHOLDER, B.Sc.

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Career Goal

Systems Integration involving software development, ip network engineering, and server management.

Summary of Qualifications

- Over 20 years experience in the technology field
- Broad background in LANs, WANs, software development & telecommunications
- Work well with peers, vendors, consultants, and customers.
- Good working knowledge of networks, wireless, VOIP, IP Telephony, Unified Messaging
- Proven experience in technology integration
- Well developed communication skills
- Ability to develop long term working relationships with customers
- Excellent troubleshooting and integration skills
- Able to handle multiple projects simultaneously
- Diversified Skill Sets: Microsoft Servers, Cisco AVVID, Open Source, SQL, C++, Perl

Professional Experience

2008 – 2010, FKB Transact Limited, Bermuda

Manager, Network Operations

- Provided dedicated 24x7 on-call client support
- Level 3 support including shift work weekdays, weekends, and graveyard shift
- Training and ongoing support to level 1 and level 2 technicians
- Diagnosed and repaired network and service faults
- Performed capacity & reliability analysis & planning
- Built redundancy into new and existing services for superior availability.
- Configured and operated Cisco switches, routers, and firewalls
- Migrated EIGRP based network to BGP/OSPF/MPLS
- Implemented Cricket for SNMP monitoring, NfSen/NFDump for Netflow analysis, Rancid for version control
- Managed local services, including Bind for DNS; Communigate for SMTP, IMAP, POP3; Apache for HTTP; FreeRadius for RADIUS; PostgreSQL and MySQL for SQL
- Customized Perl and Shell scripts to integrate BillMax (ISP Billing System) with FreeRadius (network Authentication/Authorization/Accounting server)
- Administered and maintained a mixture of Linux and FreeBSD based servers, operating systems, and services
- Provided Sales Engineering Support for recommending and designing appropriate solutions
- Liaised with local and international carriers for service improvements and upgrades
- Maintained network documentation
- Acquired IPv6 and additional IPv4 address space from ARIN
- Implementing IPv6 throughout Transact's Network

2004 – 2008, Systems Business Integration Ltd / Igility Ltd, Bermuda
Senior Systems Technologist

- Bermuda Fire & Marine (On Bermuda Stock Exchange)
 - Assumed management of an existing Callmanager / Unity / AVVID solution
 - Improved VLAN arrangement, switch QOS of a thirteen 3550/3750 switch network
 - Reconfigured Callmanager to improve Calling Search Space and Partition arrangements in a multi-site calling solution
 - Upgraded Publisher/Subscriber to Callmanager 4.1.3
 - Implemented site-to-site VPN between three sites with QOS via IPSEC Tunnels
 - Running OSPF in-site and inter-site over VPN
 - Making use of VRF's across four sites to segregate and independently route voice traffic, data traffic, guest traffic, and BGP load balanced traffic
 - Implemented NBAR basic traffic classification
 - Using SAA/SLA for inter-site quality monitoring
 - Implemented Open Source monitoring tools including: Cricket, RANCID, NetDisco, & FlowTools, NTOP, and custom Perl code
 - Assisted with re-iping the network to facilitate summary-routes and standardized VLAN assignments for each site
 - Converting Unity Exchange to Redundant Unity Notes (work in progress)
 - Testing IPCC in IT Help desk scenario (work in progress)
 - Implementing redundant 3750 layer 2/3 core (work in progress)
 - Designing & implementing wireless IP Telephony solution with LWAP (work in progress)
 - Providing network documentation
 - Working with four Internet Service Providers for carrier diversity
 - Designing eBGP and iBGP multi-homing infrastructure
- Axis Specialty (NYSE:AXS)
 - Installed 80 seat Cisco Callmanager 3.3 / Unity 4.0 IP Telephony solution with SRST integrated into Active Directory
 - Configured ten 3550 series switches in a Layer 2 QoS'd network through three buildings
 - Upgrading to Unity 4.0.5
 - Troubleshooting Active Directory and Exchange 2000/2003 issues in multi-national network
 - Integrating New York Callmanager cluster with Bermuda Callmanager cluster through intra cluster links
- Arch Re Insurance, a member of Arch Capital Group Ltd (Nasdaq:ACGL)
 - Implemented IDS solution based upon Snort/Base/PostgreSQL/BleedingSnort/oinkmaster
 - Integrating IDS into nAble Network Monitoring Software
 - Making recommendations on Active Directory integration
 - Implementing Open Source monitoring solution based upon Debian/NetFlow/FlowTools/Cricket/Mason/NetDisco/PostgreSQL/Perl
- Max Re Capital Ltd. (Nasdaq:MXRE)
 - Converted network of daisy-chained 2950 switches to a star topology with a redundant core of Layer 3 3750's.
 - Implemented Snort server and Network Monitoring server with Cricket, Nagios, Rancid & NetDisco
 - Redesigned and re-iop'd network implementation with a VLAN structure
 - Implement policy-based routing to route Citrix realtime traffic over dedicated link and Citrix printer traffic across higher bandwidth VPN tunnel
 - Installing Open Source Master Shaper (work in progress)
- Bank of Butterfield (On Bermuda Stock Exchange)
 - Troubleshooting Microsoft SQL Server applications
 - Developing SQL Server applications with Microsoft Visual Studio/C#
 - Migrating data from Ingres database to MS SQL and writing Microsoft SQL Reporting Services reports.

- Optimizing Butterfield Direct web server
- Recommending best practices regarding application development, business continuity, security management, data base management, & network design
- Designing dual SQL cluster with log-shipping for fail-over and load balancing
- Montpelier Re (NYSE:MRH)
 - Installing & Maintaining 75 seat Cisco Callmanager 3.3 / Unity 4.0 / Personal Assistant 2.0 IP Telephony solution with SRST
 - Installing & Configuring Microsoft Systems Management Server
 - Maintaining iSCSI SAN environment
 - Implementing IDS on DMZ using SNORT/BASE/BleedingSnort
 - Maintaining switched network with two 4506 switches, one 4006 switch, and a number of 3550's
- ACE (NYSE:ACE)
 - Configured ten 3550 switches in collocation facility for redundancy
 - Implemented MRTG for monitoring
- PXRE
 - Maintained a Cisco Callmanager 3.3 / Unity 4.0 / Domino IP Telephony solution
- Saltus Grammar School
 - Upgrading network Layer 2 and Layer 3 infrastructure in preparation for IP Telephony solution
 - Proposing replacement of existing 25 node wireless implementation with a Cisco LWAP wireless implantation
 - Performing wireless network survey with AirMagnet software
 - Monitoring network with Debian/Cricket/Rancid
 - Troubleshooting network issues with Ethereal
 - Implementing Multicast on network to facilitate Symantec Ghosting of student workstations
- Tucker's Point Club (Bermuda's Premier Golf Resort)
 - Designed and implemented campus wide switch network
 - Designed and implemented dual Callmanager 3.3 installation with Forced Authorization Codes
 - Integrated Nevotek's Hospitality Management solution in with Callmanager
- TeleBermuda
 - Implementing SNORT for monitoring border servers
- Quovadis
 - Tuning an Asterisk Open Source Telephone solution

2002 – 2003, 2005 Choice Communications, US Virgin Islands

Network Architect

- Managed the Internet Operations Department of a full service Internet and Television ISP
- Worked to reduce daily network incident rates
- Planned and budgeted for service improvements, new products, and network expansion
- Mentored a technical team of people with skills in Cisco router/switch/security technology, software development, Linux servers, and Microsoft products.
- Reduced dial-up issues
- Improved ISO Layer 1, Layer 2, and Layer 3 connectivity and reliability.
- Improved eBGP multihoming arrangements and internal OSPF routing configurations
- Implemented SNMP network management and monitoring with Cricket/NMIS/NAGIOS/RANCID
- Worked to improve wireline/wireless integration with BreezeCom, Alvarion, Hybrid, and AB Access radios.
- Troubleshooting DS3 and NTP network issues on a 7206VXR based network.

1995 - 2002, One Unified, Kitchener, Ontario

Project Manager, Technology Integration

- Cisco CallManager 3.2 multi-partition implementation over WAN, and integration into Unified Messaging/Communications system
- Open Source Asterisk IP Telephone consulting
- Unified Messaging/Unified Communication solution installations.
- ASP based Fax-To-Email services
- IVR (Interactive Voice Response) systems, Voice Recognition systems.
- Vovida/SIP/Linux Implementation
- Distributed IP Telephone System Design & Installation
- Network management & monitoring with Cisco Works 2000, Cisco Works for Windows 6, and WhatsUp Gold v7
- eCommerce development using 3-Tier techniques: ADO/SQL 2000 database, VB COM+ Components, ASP pages, Perl CGI scripting, C++ Coding
- Microsoft Exchange Server 2000 Installation, Configuration & Maintenance
- Windows 2000 Active Directory Installation, Configuration, & Maintenance.
- Cisco IOS router configuration packet filtering, EIGRP, RIP, OSPF, BGP4
- Familiar with routing technologies: RIP, IGRP, EIGRP, OSPF, BGP4
- Worked with Microsoft SMS Network Analysis/Sniffer Tool
- Cisco Switch/Router based VLAN and multi-layer switch configurations
- Cisco IPSEC based Router to Router virtual LAN over DSL, ISDN
- Cisco Dial Up solutions with W2K & CiscoSecure RADIUS authentication
- Wireless voice & data networks
- T1/PRI/DSL/BRI services selection and provisioning
- Firewall design & implementations with Cisco IOS/ IP/FW, MS Proxy.
- Certified installer for 3M Fibre, Hubbell Copper & Fibre
- TCP/IP, DHCP (Cisco & W2K), WINS, DNS (BIND & NT) integrated configurations
- Network Monitoring and alerting with CastleRock SNMPc, CiscoWorks, HP OpenView
- Linux, Unix, Windows 95, 98, 2000, XP

Example Projects with One Unified

2004 Vertex Works

- Implemented a 15 seat Asterisk based IP Telephone solution

2000 – 2002 One Unified

- Design multi-site network architecture for providing VoIP and Unified Communications services in an ASP (Application Service Provider) environment.
- Utilized Cisco Call Manager / AVIID architecture components (routers, switches, firewalls, gateways)
- Integrated with Microsoft Exchange Server 2000
- Custom 3-tier web site development with integrated credit card processing

1999 – 2002 ESG International

- Troubleshoot IP/IPX network connectivity issues
- Implement wide area VPN network with Cisco routers and switches
- Architect Windows NT multi-domain, multi-site network
- Design plan for migrating from Windows NT environment to Windows 2000
- Migrate Exchange 5.5 to Exchange 2000
- Installation & configuration of Coldfusion web server

2002 Compublox

- Install IP Centrex solution using Cisco Callmanager, Unity, Personal Assistant
- Troubleshoot Wide Area Connectivity issues

2001 Stack A Shelf

- Implement PIX firewall connectivity with parent company
- Audit Microsoft Exchange Server connectivity and backup scenarios
- Custom software development for accounting system conversion

2001 Outokumpu Mintec

- Designed and installed Cat 5e network/telephone cabling at new office location
- Assisted with moving, migrating, and connecting IP/IPX network to sister company's network
- Integrated wiring for use with PBX telephone network wiring

2001 Coldwell Banker

- Designed, documented, and presented a greenfield network infrastructure design utilizing Cisco AVVID networking technologies incorporating Call Manager products, Alexis Unified Communications services, and Microsoft Exchange Server capabilities.

2000 Digitized Solutions

- Migrate Windows NT network to Windows 2000 Active Directory
- Migrate Exchange 5.5 to Exchange 2000

1999 A Trinidad Consulting Company

- Presented a one day Year 2000 seminar to IT Professionals

1999 Armid Marketing

- Supervised the development and roll-out of an Envoy based IVR system
- Implemented user utilities for designing customized IVR scripts incorporating any combination of yes/no, numeric, and multiple choice entries
- Handled integration into accounting and reporting system
- Supervised two developers

1998 – 2000 Merck Medco Rx Services of Nevada

- Develop Microsoft Visual C++ application for interfacing packaging machine to VMS mainframe
- Utilized multithreaded, object oriented programming model
- Migrated ODBC database connectivity to OLE/DB/ADO architecture
- Handle communications between a VAX VMS system using DECNet & TCP/IP protocols and an Allen Bradley PLC5 using RS-Linx/OPC drivers.
- Worked with PLC programmers, mechanical designers, mainframe developers, and operations personnel

1997 Johnsonite Floor Coverings

- Implemented C program in a manufacturing environment for data–logging values from: Allen Bradley SLC/03 PLC using DH-485 protocols, a string of Euratherm temperature controllers over RS-422, and a LaserMike measuring system over RS-232.
- Supervised software developer.

1996 Bell Northern Research (Nortel), Angstrom Engineering

- Thin Film Vacuum Deposition Equipment Automation
- Designed and implemented a modularized, object-oriented, multi-threaded, Microsoft Visual C++ program to use process recipes for controlling thin film deposition under vacuum in a real time environment.
- Supervised software developer.

1985 – 1996 Limnoterra Atlantic, Inc.

- Embedded Systems Design, Software Development
- Provided full life-cycle design, development and support for Electronic Fish Measuring System, Electronic Ecobug Data Logger, Electronic Digital Calipers
- Designed, coded, and tested assembly language level embedded firmware which implemented a Forth-flavored token interpreter.
- Used Lex, YACC, and C to develop a tokenizer for translating Instrumentation Configuration Language source code into pseudo-code (p-code) instructions.
- Designed a general purpose hierarchical database engine. Engine field and record definitions were defined by a text based schema language read in by Lex/Yacc. The engine was used for controlling and validating Electronic Fish Measuring System collection sessions.
- Supervised test engineer and installation engineer.

Employment History

2009 - 2010	Manager, Network Operations, <u>FKB Transact Limited</u> , Bermuda
2004 – 2008	Senior Systems Technologist, <u>Systems Business Integration/Igility</u> , Bermuda
2002 - 2003	Network Architect, <u>Choice Communications</u> , St. Thomas, USVI
1995 - 2002	Project Manager, <u>One Unified</u> , Kitchener, ON
1985 - 1995	Systems Architect, <u>Limnoterra Limited.</u> , Kitchener, ON
1984 - 1985	Systems Analyst, <u>Wilfrid Laurier University</u> , Waterloo, ON

Professional Affiliations & Certifications

Member of Association for Computing Machinery (ACM)
Member of The Institute of Electrical and Electronics Engineers (IEEE)

Education

BS Mathematics, 1986; Wilfrid Laurier University