

Paul Flint
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Senior zVM & zLinux Open Systems Consultant

GOAL: To develop, install and support Infrastructure for zVM, zLinux and Open Source systems.

Specific Knowledge Skills and Aptitudes in this area include but are not limited to:

zLinux Development Implementation And Administration

- The first person to boot zLinux under IBM VM on an IBM 9672 R24 Mainframe at the Pentagon (2001).
- IBM Trained in Mainframe zVM, RACF, DIRMAINT and zLinux at IBM Poughkeepsie (2002).
- Re-certified in zVM, RACF, DIRMAINT and zLinux at WAVV conference Covington Kentucky (2004).
- Refresher on zVM a RACF, DIRMAINT, zVPS, and zLinux at vmWorkshop Rutgers NJ (2016).
- Presenter at vmWorkshop Ohio State University Columbus (2017).
- Presenter at IBM SHARE conference Providence Rhode Island (August 2017).

Complex zLinux And Linux Based Infrastructure Solutions

Enthusiastic practitioner and developer in the Linux and Open Source Development area activities include:

- Development of **Visual Bash** for use in programming and maintaining zLinux instances.
- Development of **VMulater**, a Docker instance that boots VM-370 under Hercules.
- Ported ZOPE to mainframe SUSE on IBM zLinux Community Development Server (LCDS).
- Developed Triangle Boy port to IBM Mainframe for International Broadcast Bureau.

zLinux Implementation And Administration

- Installed and maintained numerous Linux and other 'nix class systems at Army Research Laboratory
- Set up Linux systems for test and evaluation at US courts
- Assisted in implementation of Linux Samba installation in support of SRA CDC certification effort
- Installed Linux systems at Radio Free Asia as part of digital audio studio system.
- Conducted numerous studies and published numerous white papers on the use of Linux at DoD, Army and other military institutions.

Linux tuning and performance optimization

- Performed security certification of AIX L, an IBM Linux derivative at the Library of Congress.
- Currently involved with zLinux and Linux development as contributor and tester.
- Maintained several score Linux systems for government and commercial clients as well as maintaining development processes in a matrix environment.

Knowledge Of Application Environments

Developed, Installed and Operated Data Centers for Vermont Department of Labor, Restore, REDONA, International Monetary Fund, World Bank, American Geophysical Union, American Physical Society, United States Courts, Radio Free Asia, Radio Free Europe / Radio Liberty. Installed, operated and maintained Linux on IBM mainframes, Macintosh, Intel based workstations, laptops and Servers

Open source marketing skills

Independent Consultant active within the Federal government, international financial organizations, trade associations and commercial firms. Intimately familiar with Federal Acquisition Regulations (FAR), business development and proposal process. As a contractor my business has involved sales related activities including as a Linuxworld participant for six years and as a personal guest of Mark Shuttleworth at the Edubuntu developers conference, London 2004 in addition to many as other educational sales venues and situations.

Linux/Open Source Activities

- Founder Ubuntu Washington DC LOCO 2006-02-25
- Ubuntu Launchpad Development Project "Gnome Instant Nationalization"
- Ubuntu Sugar Team Joined on 2009-07-30
- Ubuntu SchoolTool-Dev Joined on 2009-05-07
- Ubuntu Marketing Team Joined on 2007-01-10
- Membership in DC and Vermont Linux Users Groups
- Installed and Booted Linux on Pentagon DoD IBM R41 Mainframe in 2000.
- 1998-2005 Yorktown High School Linux Users Group.
- Certified Stonegate zLinux firewall engineer.
- 2008-2017 Founded and operate Barre Open Systems Institute class activity.

FLINT INFORMATION TECHNOLOGY SYSTEMS OF VERMONT

Current Contract Experiences

January 2014 to Present

- **Barre Open Systems Institute:** Director
- **Private Financial Services Group:** System Programmer
- **SeaLANData:** Information Architect
- **Heating & More:** Systems Administrator

Full Time Engagement

Goddard College: Systems Administrator

October 2015 to February 2016

Direct authority and responsibility for all information and systems at the Vermont Department of Labor Enterprise Computing system comprised of: Active Directory, Windows, SCO, SuSE, Red Hat and Ubuntu Linux systems, legacy Cold Fusion web services based upon management, certification and user requirements

Vermont Department of Labor: Systems Engineer III

February 2010 to January 2014

Direct authority and responsibility for all information and systems at the Vermont Department of Labor Enterprise Computing system comprised of: Active Directory, Windows, SCO, SuSE, Red Hat and Ubuntu Linux systems, legacy Cold Fusion web services based upon management, certification and user requirements

Previous Contract Experiences

Champlain College: Computer Science Professor

September 2008 to June 2009

Designed, directed and taught a senior level college course (SWE 315). This instruction was designed around the text Advanced Programming in the Unix Environment. SWE-315 is considered a required course in the software engineering discipline of the College. Instruction implemented Google Docs for code review.

Recycle North: Information Architect

April to September 2008

Research, development and implementation of open sourced based Vermont statewide multi-site virtual private network. Activities included design and documentation package as well as extensive testing and installation.

Robert Half: Linux Systems Administrator

January to April 2008

Remote operation, maintenance, upgrade and enhancement of several Centos Linux systems. Tasks include backup system development, split-brain DNS management, and web site support, email system operation. Additional duties included development of a Payment Card Industry (PCI) compliant Linux system design.

Code 4 Design: Business Development Consultant

December to March 2007

Participation in a virtual web enterprise. Activities included development of sales database, policy and contract

documentation, customer support, proposal development, trade show development, setup and operation. C4D LAMP and Drupal based product porting to IBM zLinux via the Linux Community Development system.

FLINT ELECTRONICS CORPORATION OF VIRGINIA CONTRACTING EXPERIENCES

Radio Free Asia: Lead Information System Consultant	April to September 2006
•Developed Ubuntu / Xen based Web Site Prototype evaluation tool	
•Wrote RFA Web 2.0 System Test and Evaluation and RFA Web 2.0 Transition Plan	
•Supervised development team and trained system operations personnel	
•Installed Ubuntu-based system backup using mondo mindi	
Library of Congress: Information System Certifier	January to September 2006
Author of a NIST 800-37 style Information Assurance Security Certification and Accreditation of the AIX Oracle based Financial Hosting Environment (via SPS Corporation)	
Housing and Urban Development: Lead Developer	September 2004 to September 2005
•Lead team that completed a NIST 800-37 type Information Assurance Security Certification and Accreditation of all HUD Cold fusion based web, database and network systems.	
•Developed database, spreadsheet and text processing tools and programs. (via Innotion Corporation)	
DoD Command Control Survivability Program: Representative	September 2003 to September 2004
Acted on behalf of US DoD liaison to the Mainframe / Server Integrated project team. Duties included development and implementation of an Infrastructure for Linux on the new z900 Mainframes being installed as part of the project. Continue to advocate Linux on DoD Mainframe (via General Dynamics)	
Center for Disease Control and Prevention: System Certifier	September 2002 to September 2003
Completed NIST modeled Certification and Accreditation project of all database and network facilities at CDC. Included systematic on-site inspection and reporting of CDC sites. (via SRA)	
Radio Free Europe – Radio Liberty/ RFA: Security Certifier	September to December 2002
Developed, authored negotiated and facilitated Mutual Information System Security Test and Evaluation (MISST&E) system evaluation process (via Booz Allen Hamilton)	
Office Of Cuban Broadcasting Radio Marti: Security Analyst	January to September 2002
•Authored Information Assurance Risk Assessment document.	
•Performed “Bug Hunt” type system survey using open source tools	
RGII Technologies, Inc., a Computer Horizons Company: Certifier	September to September 2001
• Department of Commerce , Commerce Administrative Management Service GISRA Risk Assessment	
• Department of Interior, Minerals Management Service (DOI MMS) . FISCAM Risk Assessment for the ABACIS Financial Disbursement database system.	
• Health and Human Services SAMHSA NAIACAP System Security Policy and Plan.	
• National Naval Medical Information Center DITSCAP based Certification and Accreditation	
Office Of The Surgeon General, TRICARE Medical Activity (TMA),	January to September 2001
Theater Medical Information Program (TMIP): Security Analyst	
Security support in the development of next generation Oracle (DCOM) based Medical Treatment Facility Information System (Northrop Grumman Information Systems).	

Pentagon Information Technology Agency: System Security Analyst September 1998 to September 2001

- **ITA-DC** Performed security risk assessment of Enterprise Computer Facility, including implementation of Configuration Management system with MS and DB2 SQL & HTML based Software and Hardware diagrams designed for DB2 UDB implementation.
- **ITA-SR**, Developed edited and published SIPRNET Certification and Accreditation Documents. Platforms included IBM X, P, and Z series, including zVM, and AIX.
- **ITA-AE** Definition of certification and Accreditation security policies related to Mail And NT Architecture (MANTA).
- **Army Digital Advanced Warfighter Experiment (DAWE)**, Fort Hood, Texas oversight and liaison service in promulgation of network security risk assessment. Evaluated security assessments at Pentagon and Field Commands (Telos Corp).

Army Research Laboratory: Network Systems Administrator September 1997 to September 1998

Battlefield Environment Directorate (ARL/BED) Planning, installation implementation, security certification & administration of mixed UNIX, NT, Windows Local Area Network installation with VTC / High-resolution subsystem. Analysis, design, installation, accreditation and security certification of extensive SGI IRIS & ONIX, Sun Solaris, HPUX OSF, Axil, AIXL, Xterm DGUX, X.11, NT systems within heterogeneous ATM operational, tactical and research inter-networks, Adelphi, Maryland. (SSA Corp).

Chief Of Naval Operations Pentagon (CNO): Network Administrator September 1995 to September 1997

Microsoft NT / UNIX Public and Secret Local Area Network (SIPRNET) Conversion. Design implement and install TCP/IP networks, systems and services for Chief of Naval Operations (N-0) and Director Space and Electronic Warfare office (N-6). (Teksouth Corporation).

**American Geophysical Union, American Astronomical Society,
American Physical Society: Internet Installer** January 1993 to October 1995

Provided technical consulting services including both hardware and software for an Ethernet based information system. Systems integrated included VAX 3100, SUN SPARC, PC AT 386 and 486 Computers. Integrated AGU into the NASA Science INTERNET communications network.

International Monetary Fund: Network Consultant September 1992 to September 1993

Supervised design testing and installation of 178.4 Mbs. (DS-3) optical fiber link. Oversaw interconnection to voice and data circuits presented at T-1 level. Principal investigator of high-speed base-band open wire Local Area Network Interface to existing telephone and data systems. Developed Network Management system, Base-band LAN, Initial Untwisted Pair (10baseT) network, Optical T-4 network. Graphics Department network. **World Bank** UNIX based X-25 and Localtalk installation. Telecom Study - Kampala Uganda.

EDUCATION

Certification IBM Mainframe Linux Stonesoft Firewall Certification
BS Business Administration, Windham College Putney, Vermont

ACHIEVEMENTS, AWARDS, AFFILIATIONS

US Patent 4,821,307
Image Splitter for two way image apparatus
Linux User Group Organizer **Recent Publications:**
IEEE, ITCA, SBE, Radio World, NAB
Conference Presenter

Linux User Group Organizer Washington DC
Yorktown, Virginia
Montpelier, Burlington and Barre Vermont
Conference Presenter North East Linux Symposium: Edubuntu
Edubuntu Initial Design Conference London 2004
Ubuntu Sub Zero Development Meeting 2005
Prior to the current entrepreneurial experience worked as an employee for the following

organizations:

GEORGETOWN UNIVERSITY MEDICAL CENTER

Basic Science

Department of Communication,

3900 Reservoir Rd., NW

Video Engineer: 1978-1983 Washington, D.C.20007

Washington, D.C.2007

Oversaw technical management of all technical audio and video aspects of the hospital, the medical school and the dental school.

Responsible for two stationary color video studios, one mobile studio, four monochrome studios, one sound studio, and numerous E.N.G. style television recording systems

(1978-1983)

FRAZIER, GROSS & CLAY

5028 Wisconsin Ave., NW

Broadcast Facility Appraiser

Washington, D.C. 20016

Engaged in preparation of broadcast systems proposals for new facilities and on site appraisal of existing facilities. Responsibilities included maintenance of technical quotation source library, and computer operations. Some of the stations appraised include, KMPH TV Visalia, California; WUTV TV Buffalo, New York; KDAL TV Duluth Minnesota; Mutual Broadcasting System, Alexandria, Virginia; WTOP AM Washington, D.C.; WANN AM Annapolis, Maryland.

(1977-1978)

CARL T JONES ASSOCIATES

2990 Telestar Court,

Broadcast Consultant

Merrifield, Virginia 22042

Consulted in broadcast engineering research and assisted in operation of broadcast radio and television stations. Duties included assisting in the adjustment of the directional antenna system at CHUM AM, Toronto, Canada; WKBW AM Buffalo, New York; WQXR AM New York, New York.

(1976-1977)

SKILLS:

- **Interpreters and Compilers:** Bash, nodejs, Python, BASIC, PERL, C, C+, Pascal, FORTRAN, REXX, HTML5
- **Computer and Network Operating Systems:** IBM zVM, zLinux, MVS/zOS, BSD, UNIX, SOLARIS, IRIX, HPUX, LINUX, X.11, BE OS, VMS, CPM, TRSDOS, CTOS, MAC OSX, ATMEL, Motorola and Intel Assembler Netware, Microsoft DOS 3.2 – Windows 10, Active Directory, NFS, Samba, Localtalk, IBM SNA, IPV4 and IPV6
- **Policy and Regulation:** NIST 800 Series, Orange Book, GISRA, OMB A130, DII COE, HIPAA, DMCA, PCI, AFFSI CON, AR-380-19, DITSCAP, DIACAP, NIACAP DITSCAP, NIACAP, NSTISSI, 5200.25.
- **Digital Security:** PCI, RACF, ACF2, PGP, GPG, Secure Shell, shadow password, TCP wrappers, SPI, SysScan, ISS NID, TSI Toolkit, PIX, IPCOP, PFS firewalls, Cylink, RSI, STU, NES.
- **Network, Routing Protocols and Network Operating Systems:** TCP/IP, IPX, SNA, NTAS, NFS, Localtalk, Vines, Samba, LanManager V.24, V.35, X.25, 802.2-4, DS-1/3, T-1/3, OC-3, ATM, FDDI, RS 170, RS 255, H320, H323, RAS, PPP, 10 & 100baseT, ISDN BRI & PRI, NetBEUI, Novell Inter Packet Exchange, DEC LAT, Appletalk, XNS, RIP, EGP, BGP, OSPF, Chef, Puppet, Ansible.
- **Digital Tools:** Open Source, Docker, Vagrant, Google Docs, PLC, SNA, Apple and Microsoft based tool proficiency

Experience 30 years

Exhibitor Shelburne Vermont Mini Maker Fair 2013, 2015

Publications: Radio World, IEEE, ITCA, SBE, NAB

BS Business Administration, Windham College, Vermont

References, Additional Publications & Clearances

Available Upon Request