

PAUL BRADFORD (Brad) NANCE

WORK EXPERIENCE:

UT-Battelle LLC
Oak Ridge National Laboratory
Oak Ridge, TN

- Senior Member of IEEE (2019)

10/2020 to present

- Group Leader for Performance Engineering Group in the Data and AI Systems Section.

8/2015 to 10/2020

- Team Lead for Data Systems Integration Research (DSIR) within the Data System Sciences and Engineering Group (DSSE) supervising 8-10 employees.
- Charter member of CSMD Software Council and CSMD Science Council.
- Products, Deliverables, and Capabilities
 - Gained experience leading a research engineering team.

09/2015 to present

- Task Leader for Primary Systems in the Center for Infrastructure Security Analysis (CISA)
 - Management of team of Windows system administrators, Linux system administrators, network engineers, Oracle database administrators (DBAs), AWS cloud architects, and systems engineers in support of the Chemical Security Assessment Tool (CSAT) for the Department of Homeland Security (DHS).
 - Responsible for overarching system architecture and design.
 - Leading effort to migrate CSAT systems into the Amazon Web Services (AWS) Cloud.
 - Management of annual budget in excess of \$6.1 million.
- Products, Deliverables, and Capabilities
 - Manage systems for CSAT which produces the nation's leading source of chemical security data and protects our nation's chemical facilities from terrorist attacks.
 - Gained experience directing the efforts of a team supporting a high-profile Strategic Partnership Project (SPP) for DHS.
 - Lead effort to migrate test environment for CSAT to Amazon Web Services (AWS).
 - Gained expertise engineering cloud environments with emphasis on scalability, redundancy, and cost optimization.
 - Designed and implemented a custom two-factor authentication (2FA) solution for CSAT web portals by integrating Pulse Connect Secure, Apache HTTP Server, and a custom Oracle APEX application.
 - Gained expertise in configuration and administration of Pulse Connect Secure.
 - Gained expertise implementing SAML v2.0 authentication methodologies including federated authentication.
 - Gained expertise using splunk to monitor system performance and detect system anomalies.
- White Papers
 - Nance, Brad. *Using Pulse Connect Secure® to Implement Multi-Factor Authentication Solutions*. United States: N. p., 2019. Web. doi:10.2172/1550735.
 - Nance, Brad P., and Bengston, Adam S. *An Integrated Two-Factor Authentication Solution Using Pulse Connect Secure and Apache HTTP Server*. United States: N. p., 2020. Web. doi:10.2172/1649375.

11/2006 to 09/2015

- Task Leader for Operational Support Systems in the Center for Infrastructure Security Analysis (CISA)
 - Design and Development of database applications providing operational support for the Chemical Security Assessment Tool (CSAT) for the Department of Homeland Security (DHS).

- Use of Oracle Application Express (APEX) to develop web applications incorporating PL/SQL, html, JavaScript, AJAX, jQuery, and CSS.
- Management of development team including tasking, planning, and budgeting for annual funding in excess of one million dollars.
- Products, Deliverables, and Capabilities
 - Responsible for adoption of Oracle Application Express (APEX) as the primary development platform for CSAT.
 - Application design and development of initial Chemical Security Assessment Tool (CSAT) operational support applications for the US Department of Homeland Security (DHS).
 - Facility Status Tracking Information (FASTinfo)
 - Chemical-terrorism Vulnerability Information (CVI) Training website
 - Electronic Document Vault
 - CFATS Knowledge Center
 - Delivered custom search capability using Oracle TEXT indexing
 - Designed and implemented custom data synchronization methodology for synchronizing data between two heterogenous systems in support of CSAT Business Process Management (BPM).
- Conference Presentation
 - Nance, Brad. *Techniques for Achieving Section 508 Compliance of APEX Applications*. United States: N. p., 2013. Web. (presented at 2013 ODTUG Kaleidoscope conference)

1/2005 to 11/2006

- Systems Analyst responsible for supporting the National Asset Database (NADB) project for the Department of Homeland Security (DHS).
 - Operations support of Windows 2003 servers
 - Configuration of Veritas Backup Exec software
 - Design and Configuration of ORACLE database server
 - Development of ORACLE web-based applications using HTML DB
 - Maintenance and development of ORACLE Portal application
 - Development and maintenance of databases and applications using ORACLE SQL and PL/SQL
- Products, Deliverables, and Capabilities
 - Gained expertise with Oracle Database Server
 - Gained expertise programming with Oracle PL/SQL
 - Gained expertise developing with Oracle HTML DB that later became Application Express (APEX)

Senior Implementation Engineer
AllMeds, Inc.
Oak Ridge, TN

5/2002 to 12/2004

- Implementation Engineer responsible for traveling to customer sites installing client-server electronic medical records software. Activities include:
 - Installation and configuration of Microsoft SQL Server
 - Restoration of database backup files
 - Use of SQL scripts to automate the installation process
 - Analysis of network, servers and workstations
 - Installation and configuration of a Visual Basic .NET application
 - Authoring of software installation instructions
 - Gathering of pre-installation information from technical contact at customer site
- Implementation Engineer responsible upgrading existing installations to latest version of software. The upgrade includes:
 - Running of a series of SQL scripts to convert the database structure
 - Importing of data from Microsoft Access databases into the SQL Server databases
 - Updating of executables and dynamic link libraries
 - Software Developer responsible for creation of product installer using the NullSoft Installation System (NSIS) installer.
- Products, Deliverables, and Capabilities
 - Installations and support for over 200 specialty practices across the United States.
 - Installation software allowing remote installations at practices greatly reducing travel cost.
 - Gained expertise using Microsoft SQL Server.
 - Gained expertise troubleshooting issues of live production systems.

Network and Systems Administrator
Celery Systems, Inc.
Knoxville, TN

11/2001 to 5/2002

- Network administrator responsible for maintenance of network wiring and LAN/Internet connectivity.
- Systems administrator for Microsoft Windows NT 4.0 servers, Redhat Linux servers (versions 7.1 and 7.2), and Sun Solaris 8 servers. Activities include:
 - Use of OpenSSH on these platforms to implement a secure mechanism for managing remote customer sites via web, telnet, and VNC
 - Use of Backup Exec for tape backup and disaster recovery
 - Administration of e-mail servers
 - Administration of Microsoft PPTP server for remote dial-up access
 - Administration of Microsoft IIS
 - Administration of Apache web server on Linux and Solaris servers
 - Administration of Winguard firewall.
 - Secondary support of nCUBE video servers running Transit operating system and Oracle Video Server
- Web designer using FrontPage 2000 and PERL to design a guestbook page that both submitted data to an Access database and sent an e-mail of form data. Tools from cygwin suite (mutt and ssmtp) were used to send the e-mail.
- Support specialist for Windows 95, Windows 98, Windows NT, Windows 2000, and Windows XP.

MIS Manager
ASE Technologies USA, Inc.
Knoxville, TN

10/1996 to 11/2001

- Information systems administrator responsible for network infrastructure design, selection of Internet service

provider, installation of network switches and hubs, configuration of Cisco 2501 router, and relocation of entire network to a new facility.

- Windows NT 4.0 administrator in a domain consisting of NT 4.0 Servers, NT 4.0 workstations, Windows Terminal Server 4.0, Windows 2000 Professional, Windows 98, Windows 95, Linux running Samba, dial-up Windows NT Server running Routing and Remote Access Service along with Point-to-Point Tunneling Protocol for virtual private networking, ARCserve 2000 for tape backup and disaster recovery.
- Microsoft Access 2000 application developer working on projects including an employee time tracking system and a product tracking system.
- Web developer designing and implementing the corporate web site using Microsoft FrontPage. Web development included use of ASP and JAVASCRIPT.
- Lotus Notes administrator on a Windows NT Server that acts as the e-mail server and SMTP message transfer agent.
- Configuration management administrator using PVCS Version Manager, PVCS Tracker, and Microsoft SQL Server v6.5.
- Gauntlet Firewall administrator of a firewall running on the BSDI operating system used for network security and implementation of a virtual private network.
- Multicast video network administrator creating a video network consisting of a multicast router, 3COM 3300 switch supporting multicast filtering and IGMP snooping, 2NetFX ThunderCast IP video server, and IBM Video Charger Server.
- Linux system administrator configuring Linux system as a ppp server for internal product testing.
- Application support analyst troubleshooting problems encountered by end users while using Microsoft Office, Lotus Notes, and PVCS Version Manager.
- Hardware support specialist maintaining all computer hardware and performing memory upgrades, hard disk replacements, and motherboard replacements.
- Phone system administrator supporting Merlin Legend and Merlin Mail voicemail system.

Senior Systems Analyst
Philips Consumer Electronics
Knoxville, TN

4/1995 to 10/1996

- Network administrator responsible for design and installation of initial network infrastructure in new facility and configuration of all systems for LAN and WAN access.
- NetWare 3.12 administrator responsible for server upgrades and maintenance of all user accounts.
- Application support analyst troubleshooting problems encountered by end users while using Microsoft Office, WordPerfect, and GroupWise.

Computing Specialist
Martin Marietta Energy Systems
Oak Ridge, TN

8/1987 to 4/1995

- Database application developer creating systems for PCs using C, FoxPro, Visual Basic, and Clipper. The projects managed included multi-user database applications on PC-based local area networks and document management systems incorporating scanned documents.
- Data modeler creating logical and physical database designs using ErWin.
- Novell NetWare administrator for three 3.11 servers.
- Network administrator for an entire division at the Oak Ridge National Laboratory configuring PCs with Digital's PATHWORKS allowing them to access NetWare file servers, the Internet, and the departmental VMS systems.
- Mentor providing assistance to other FoxPro software developers. Other related activities included design of a standard FoxPro application skeleton, publication of a FoxPro newsletter, and design of re-usable modules.
- Held a Q clearance

EDUCATION:

North Carolina State University
Raleigh, NC
BS Computer Science

Forsyth Technical Institute
Winston-Salem, NC
AAS Accounting

COURSES OF PRIMARY INTEREST

SecureAuth Administration, Principles of Software Configuration Management – PVCS Version Manager for Administrators – PVCS Tracker Usage and Administration -- Technical Writing – File Organization and Processing

COMPUTER LANGUAGES/SYSTEMS

AWS Cloud, Oracle Database, Oracle WebLogic, Pulse Connect Secure, SAML V2, Two-factor Authentication (2FA), PIV Card authentication, Oracle PL/SQL, JavaScript, jQuery, AJAX, CSS, html, XML, Windows Servers, Microsoft SQL Server, Novell NetWare, Lotus Domino/Notes Server , Linux, Gauntlet Firewall, C, FoxPro, Visual Basic, Clipper, MS Access, Cisco router, CSU/DSU, BSD/OS v3.0, DEC PATHWORKS, Citrix Metaframe Server, Windows, MacOS, TCP/IP, IPX/SPX, MS DHCP, MS DNS, MS IIS, MS RAS.

HONORS & ACTIVITIES:

Significant Event Awards (1991, 2006, 2007, and 2013) -- Graduated Summa Cum Laude -- Member of Phi Kappa Phi academic honor society -- Member of Gamma Beta Phi academic and service society -- Member of Upsilon Pi Epsilon, computer science honor fraternity -- Member of Pi Mu Epsilon, mathematics honor fraternity -- Member of Phi Eta Sigma freshman honor society -- Member of ACM and DPMA -- Participant in MMES Golf League -- Sunday School teacher -- Church choir member -- Commissioner of the Norris Area Basketball League -- Baseball coach.

PUBLICATIONS, PRESENTATIONS, AND WHITE PAPERS:

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