

**Curriculum Vitae
of
Mr. Eric D. Williams**

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At-A-Glance

- Seasoned Senior/Lead Consultant, possessing over 20 years diverse career experience
- Information Technology subject matter expert with deep specialization in Cybersecurity
- Active Top Secret/Sensitive Compartmentalized Information (TS-SCI) security clearance
- Sage, proven Innovator, with an innate ability to craft right-fit client technical solutions
- Thought Leader – A well-known & respected voice in the greater IT/Cybersecurity world

Experience/Expertise

- Since 1996, have served as Principal Consultant/CEO of Information Brokers, Inc.
- Clients include the Federal government, private sector, as well as non-government agencies/non-profits. Specific clients include [Department of Commerce](#) - and its bureaus [NOAA](#) and [Bureau of the Census](#), and the [Department of Defense](#)
- Services include information security consultations, planning/implementing security solutions, conducting risk assessments, authoring & implementing disaster & recovery contingencies, and designing best-practice security policies
- Expertise in the design and implementation of Public Key Infrastructure (PKI), as well as System Administration, managing technical projects, and coding/programming

A Bit About Eric

Eric's first sweetheart was a computer.

Beginning in the late '80s, he translated that love - his passion for all-things-computers & Computer Science - into a viable career path filled with immense opportunity.

Since then, Eric has worked long and hard to become an industry-recognized Thought and Practice Leader. He has led and participated in countless technical projects over the years, and is the recipient of numerous accolades and honors. Eric's endeavors have profoundly and positively impacted the operations of a wide range of clientele.

From pioneering work with Internet technologies during their infancy, to leading the charge on cybersecurity projects leveraging next-gen technologies, Eric's work has helped shape, connect, and make safe the modern technical world.



Competencies

Client

Engagement; Pre-Sales; Requirements Gathering

Communications

Presentations; Proposals; Technical Writing

Financial

Budgeting; Cost Minimization; Vendor Management

Interpersonal

Conflict Resolution; Critical Thinking; Influencing; Relationship Building

Project Management

Process Improvement; Scheduling; Strategic Planning; Stakeholder Communications

Team Management

Coaching; Mentoring; Performance Management; Training & Development

Technical

Data Analysis; Forecasting; KPIs; Reporting

Cybersecurity

At-A-Glance

Optimistic troubleshooter and problem solver, with diverse, proven cybersecurity abilities, including strategic planning, and hands on project execution that makes client data safer, and client networks more secure. *In short* –

Talents & competencies that improve the safety & efficiency of day-to-day client operations

Areas of Experience

- ✓ Business Case Development
- ✓ Cloud Security
- ✓ Compliance
- ✓ Forensics
- ✓ Impact Analysis
- ✓ Incident Response
- ✓ Insourcing & Outsourcing of Services
- ✓ Intrusion Detection
- ✓ ISODE Reference Standard Protocols
- ✓ Open System Interconnection (OSI) / Internet Protocol Suite (IPS)
- ✓ Process Development And Maturity
- ✓ Product Management; Program Management; Project Management
- ✓ Solutions Architecture
- ✓ Strategy Development
- ✓ Transport Layer Security (TLS)

Specialties

- Implementing & integrating creative solutions to prevent advanced persistent threats
- Hands-on management of information security projects throughout the project life cycle

- Development of project plans/schedules, scope, budgets, resources, & deliverables
- Coordinating/Facilitating tasks and activities between the customer & IT Security Staff

- Identifying/Assessing risks and developing solutions/resolutions and improvements
- Deciphering complex technical challenges; Providing technical guidance to stakeholders

Tech Stack

Coding

C; C++; HTML; Java; JavaScript; Perl; PHP; Python; SQL; UNIX shell scripting; YARA; Sigma; Go; SOAP; XML

OS/Environment

CentOS; Chrome OS; Red Hat, Fedora; Free BSD; multiple Linux variants; MacOS; OS/X; MS-Windows; Solaris; Ubuntu; Plan 9; SUSE; enhanced Linux (e.g. SELinux)

Networking & Protocols

Wide variety and numerous protocol and technology implementations

Instrumental in development & interoperability testing of network protocol technologies from the beginning of commercial development and deployment to interoperable implementations.

Past efforts were closely tied to the development of:

Ethernet; Wireless Ethernet (Wi-Fi); FDDI; Token Ring; ATM; ATM LAN Emulation; SONET; ISDN; SMDS; xDSL; Frame Relay; X.25; Client/Server protocol design/implementation

Played a part in standards development of:

LDAP; DNS; TCP/IP; UDP; ICMP; POP 1-3; IMAP 2-4; IRC; SMTP; NNTP; NTP; OSF DCE protocols; Sun RPC; HTTP; FTP; MIME; Mobile-IP (MIP); RIPS0; OSPF; RIP; IGRP; EGP; BGPv4; Telnet; IP over ATM; SNMP; sockets; sFlow/NetFlow attributes and analysis

Active participation in IETF working groups concerning IPS protocol R&D and RFC

Played several roles in the convergence of standards with the commoditization and use cases of OSI - through convergence with the Internet Protocol Suite (IPS) we know today, through the Open Systems Implementors Workshop Convergence Working Group, sponsored by the IEEE

Integration & Implementation

Cisco; Elasticsearch; FireEye; RSA Netwitness and Archer GRC; Splunk, Mandiant, Zeek; Snort, Logstash; Kibana, ArcSight ESM, ThreatConnect, Shodan; VirtusTotal; INetSim; McAfee ePO

Select Accolades/Achievements

Awards

- ✓ **Certificate of Appreciation, 2016** - *Outstanding Contributions to Privacy Program*
[U.S. Department of Commerce](#)
"Your exemplary work and continual willingness to lead intra-Departmental Privacy Program efforts have greatly contributed to the efficiency and effectiveness of the program. Your impeccable and flawless contribution demonstrates your commitment and dedication to the entire Department."
- ✓ **Exemplary Service Award, 2009**
U.S. Department of Commerce, [National Oceanic and Atmospheric Administration](#)

Recognition

- ✓ **OSI & Internet Protocol Suite Technology**
Recognized Industry Implementation Expert
- ✓ **PKI**
Integral in the formulation & adoption of vendor-independent PKI industry standards
- ✓ **NOAA Computer Incident Response Team**
Office of the CIO, [NOAA IT Security Office](#)
"For exemplary work as a member of the N-CIRT in providing critical emergency response, technical expertise, unwavering dedication to the NOAA community, and outstanding performance in protecting the integrity and availability of NOAA's service to the public."
- ✓ **IT Security Day, 2010**
Joseph Klimavicz, CIO, High Performance Computing and Communications
"On behalf of the NOAA Office of Chief Information Officer, we would like to thank you for your contributions to the 2010 IT Security Day"
- ✓ **Certificate of Completion, Assessment Methodology Course, 2000**
National Security Agency - INFOSEC

Speaking/Writing

- ✓ Participated in briefings with [The White House](#) Executive Policy Advisors and with African American Internet companies to discuss minority participation in business

- ✓ Primary Educator and curriculum Author for the [United States Agency for International Development's](#) Leland Initiative establishing Internet connectivity on the African continent
 - Instructed Leland Coordinators and over 30 African country Ambassadors and their staff concerning internetworking fundamentals and the establishment, operations, and regulation of Internet Service Providers (ISP's) within those countries
- ✓ Speaking engagements have included the [National Technical Association](#) (D.C. Chapter), International Black Buyer's and Manufacturers Expo and Conference (Fall '99)
- ✓ Participant in Digitize or Die (Fall '99) and the 3rd Annual Rainbow/PUSH Coalition Wall Street Project Conference (January 2000), and the Black Human Resources Network - Management Conference (Fall 2000)
- ✓ Past Chairman - Convergence Working Group of the Open Systems Environment Implementors Workshop (OIW) OSETC, sponsored by the IEEE, Active Member of the Internet Society (ISOC) D.C. Chapter
- ✓ Participant in the Internet Engineering Task Force working groups on IP next generation (IPng), Internet Mail Extensions (mail-ext), Electronic Data Interchange integration (EDI-INT), Intrusion Detection (idwg), Public Key Infrastructure (pkix), Responsible Uses of the Internet (RUN), and others

Career Experience

***President /
Principal Consultant***
[Information Brokers, Inc.](#)
1996 - Present

Information Brokers, Inc. (InfoBro.com), is a consulting/professional services company specializing in Information/Cybersecurity.

Services include information security consultations, planning/implementing security solutions, conducting risk assessment, authoring & implementing disaster & recovery contingencies, and designing best-practice security policies.

Clients include those within the Federal government, private sector, as well as non-government agencies/non-profits.

InfoBro.com is a leader in the design and implementation of next generation cybersecurity technologies that enable Identity, Credential, and Access Management (ICAM), host system administration security, and secure coding and configuration. InfoBro.com provides expert services for the implementation of all open systems solutions and Internet security, design, protocol development, and implementation.

Recent projects include multiple efforts to apply forensics to malicious software programs, the probing and discovery of methods of introduction, and assisting in the development of detection tools that identify exploit types & combat cyberterrorism.

With deep technical expertise in security frameworks and dynamics for implementation of the Internet Protocol Suite (IPS), InfoBro.com has led robust, successful projects involving the World- Wide-Web (HTTP), File Transfer Protocol (FTP), Simple Mail Transfer Protocol (SMTP), Post Office Protocol (POP), Interactive Mail Access Protocol (IMAP), and Lightweight Directory Access Protocol (LDAP).

Recent Client Project

Team Leader - Sr. Security Engineer & Incident Response Technical Lead

Client: **National Oceanic and Atmospheric Administration (NOAA)**
Through: **Reston Consulting Group; IBSS Corp.**
Type: Contract
Dates: March 2003 – August 2020
Location: Silver Spring, MD

The NOAA Computer Incident Response Team (N-CIRT) is the incident response focus area of NOAA Cybersecurity Center (NCSC) operations. N-CIRT provides cybersecurity incident response for all of NOAA's lines of business, including the [National Weather Service](#), [National Environmental Satellite Data Information Service](#), National Ocean Service, Office of Marine and Aviation Operations, Office of Atmospheric Research, [The National Marine Fisheries Service](#) and NOAA staff offices.

- Tasked initially to follow up work performed by [Lawrence Livermore National Laboratory](#), and also collaborating with NASA to develop policy for the NASA Systems Incident Response Capability (NASIRC), while developing security guidelines and policies that established the N-CIRT
- Followed Livermore risk assessment punch list, plugging security gaps/vulnerabilities
- Developed robust security policies, guidelines, SOPs, and implementation parameters
- The tasking also included:
 - Security incident response
 - Security architecture development
 - Secure infrastructure implementation
 - Public Key Infrastructure
 - Security Awareness Training

Select Achievements

- ✓ Drove the iterative development of multiple new N-CIRT policies and procedures
- ✓ Principle author of the initial NOAA Public Key Infrastructure (PKI) Certificate Policy
- ✓ Designed the new Network Security Architecture for the NWS Strategic Network Plan

Past Client Projects

US Dept. of Commerce, Bureau of the Census

1998

Firewall Test and Implementation Plan

- Completed the planning and implementation of the Bureau's firewall system; System consisted of ANS Interlock Application Gateway Firewall & router filter security
- Delivered presentations, lecturing on policy and implementation considerations
- Designed/Developed a plan testing integrity of vendor implementation and conformance with requirements
- ✓ Instrumental in the implementation of initial security counter measures and security policy development at the Bureau of Census, when tasked to develop testing and implementation guidelines for the prototype CENNET Internet firewall implementation
- ✓ Testing guidelines identified weaknesses in the proposed firewall implementation when used in conjunction with layer-2 switching equipment
- ✓ Designed tests which confirmed IP router and ethernet switch vulnerability to IP spoofing and MAC spoofing; crucial in design and implementation of the secure system, and represent the only known published ethernet switch MAC spoofing test suite
- ✓ Developed personnel role definitions for the enforcement of next generation ADP security, and lectured extensively on considerations for the establishment of ADP and Telecommunications policies concerning Internet access, network load balancing, management, and physical security

Metters Media Network

1995-1998

Services Design, System Administration & Implementation

- Provided system administration and technical support for Metter Media, a national Internet Services Provider
- Tasked w/design & implementation, organizational & user account services, incl. web design, system administration, Internet site security, system security & tech support

- Support provided through systems running Windows 3. Windows/NT, Silicon Graphics Indy, and Sun Sparc workstations and Apple Macintosh PowerPC.

Foundation for Educational Innovation, Inc.

1995

Distance Learning Initiative Planning

- Aided in the planning of the Foundation for Educational Innovation distance Learning initiative at several Washington D.C. area public primary schools
- Design work included planning for network utilization in a multimedia environment
- Underlying network incl. video/audio systems utilizing narrow-band ISDN & T- services
- Consulted concerning implementation considerations; Designed and developed a test plan testing integrity of the vendor implementation and conformance with requirements

National Defense University (NDU)

1994-1995

GOSIP and POSIX Transition

Integrated Systems and Communications (ISC)

- Many of these projects led directly to the innovations of Exchange and Active Directory Services (Microsoft) and intra-ship and ship to shore email communication
- Authored recommendations for GOSIP & POSIX migration for NDU
- Migration plan developed recommendations on implementing GOSIP, follow-on OSI standards, POSIX/FIPS, and future POSIX standards
- Steps were detailed for migrations using RFC-1006 "ISO Transport on Top of TCP", POSIX Simple Network Services API, POSIX Network Services API, X/Window technology, and POSIX Windowing API

Mail Gateway Implementation

- Implemented gateway systems for proprietary LAN E-Mail system integration with X.400 message transfer agents; Implementation provided only method of electronic communication ([Xerox Network Systems](#)) between Xerox network users and Novell network users, as well as messaging relay and transfer services to the Novell users

Prototype Plan

- Developed implementation strategy for interoperation between the NDU Information Resources Management College (IRMC) prototype network and the NDU Xerox network
- Structured the prototype network implementation so that normal operations were not disrupted; Project also required testing of interoperability between Apple Macintosh user end systems and PC-compatible end systems
- Deliverables included: Procedures and standards for interoperability between Mac and PC users for WordPerfect documents, and shared file volumes accessible by Mac and PC users

WordPerfect Office Gateway Analysis, Design, and Prototype

- Completed an analysis and design of a distributed messaging environment with a gateway to the [MILNET/Defense Data Network](#)
- Provided application scenarios and implementation guidelines for remote (asynchronous) WordPerfect Office (WPO) E-Mail transmission to activities supported by National Defense University; Also addressed integration of NDU into the MILNET/Defense Data Network
- Coordinated obtaining evaluation systems directly from vendors and resellers; Systems were implemented in a test bed environment
- Assessed the viability of low-cost asynchronous communications technology for the support of mobile NDU users and remote sites
- Implemented gateway technology that allowed message transfer to and from remote laptop users, as well as remote WordPerfect Office asynchronous gateway sites

Open Systems Technology (OST)

1992-1994

Router Interoperability Recommendations

- Many of the projects led directly to the innovations of Exchange and Active Directory Services (Microsoft) and intra-ship and ship to shore email communication
- Assessed interoperability issues connected with CISCO and Timeplex routers and delivered an interoperability test outline

- Considerations included support for Point-to-Point protocol, Open Shortest Path First, Intermediate System-Intermediate System and static CLNP (ISODE reference standard) routing

GOSIP/OSI LAN Implementation

- Developed several alternatives and a recommended approach for implementing eight GOSIP/OSI LANs for the [Defense Information Systems Agency](#)
- Developed strategy using IPS to GOSIP/OSI application gateways; Project was completed under a subcontract to [Digicon Corporation](#)
- Authored final report, detailing both target and interim implementations; Different configurations were developed for LAN segments with and LAN segments without GOSIP/OSI routing capabilities

(IC)2 Protocol Transition Plan

- Provided an analysis and engineered architectures that illustrated TCP/IP and GOSIP/OSI suite coexistence and transition (for the Navy Integrated Interior Communications and Control (IC)2 Program)
- Document provided a comprehensive overview of the potential benefits and difficulties that arise when implementing convergence architectures
- Task was in support of American Systems Corporation for (IC)2 efforts in developing network architectures for ship to shore, ship to ship, and ship internal communications (C3I)

Messaging and Directory Services Pilot Phase 1

- Conducted a Messaging and Directory Services Pilot (MDSP) in a phased approach
- Purpose of pilot was to validate advanced fleet messaging and directory services; Technology proved interoperability, manageability, and implemented designated DoD messaging technology; Program validated basic messaging, and messaging with graphical/audio/video attachments
- Connection options between participating sites were also tested, including X.400 ISODE PP MTA-MTA communications via the RFC-1006 transport standard as well as SMTP message transfer via TCP/IP

- A demonstration of the pilot technology was done at the InterOp Fall '92 show network

***Messaging and Directory Services Pilot (Messaging)
Phase 2***

- In the Messaging and Directory Services Pilot - Phase 2, augmented the Phase 1 activity with the implementation of wireless messaging, and messaging services
- Included e-mail via fax technology, remote file retrieval via e-mail, remote file fax via e-mail, receipt notification
- Electronic Data Interchange & physical reproduction (printing) of messages on receipt

***Messaging and Directory Services Pilot (Directory Services)
Phase 2***

- Implemented internetworked X.500 Directory System Agent and Client applications using X.500 DAP and DSP over TCP/IP between participating systems
- Established participation in the Performance Systems International (PSI)/Internet White Pages Project pilot RFC-1487 - X.500 Lightweight Directory Access Protocol
- Pilot also provided connectivity to the worldwide PARADISE X.500 directory pilot (RFC-1943). Also, the functionality of X.500 based information retrieved to the desktop was implemented
- First successful pilot implementation of X.500 technology in the integrated environment test at Wallops Island, MD