

Jonathan D. Schipp

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Primary Experience

- **National Center for Supercomputing Applications**
Security Engineer, CyberSecurity Directorate
Urbana, IL
July 2013 – Present
 - Team is responsible for defending one of the world's fastest supercomputers, Blue Waters
 - Implement and configure security controls and solutions in a security conscious R&D environment
 - Administration of two large Bro clusters, Collective Intelligence Framework integration.
 - Provisioning systems using Puppet, Ansible, Vagrant, and Git
 - Virtual Machine building and administration with VMware ESX and VCenter
 - Instituted a multi-tier logging infrastructure (relays, analyzers, and collectors) for thousands of nodes.
 - Large Nagios deployment with Thruk, MySQL, IRC interaction, NRPE proxies, and custom plug-ins
 - Red Hat and CentOS Linux server administration
 - Intrusion detection, network flow analysis, and incident response
 - **Touch of Class, Parke-Bell LTD, Inc.**
Unix System Administrator and Security Specialist
Huntingburg, IN
June 2011 – July 2013
 - Manage and configure computer networks and computer network systems for four locations
 - Design, implement, and automate solutions to increase business productivity
 - Maintain telephony software and hardware for a call center utilizing VoIP technologies
 - Monitor networks for problems, intrusions, incidents, and other anomalous activities
 - Coordinate the storage of events and logs, and ensure the integrity of system records
 - Pursue compliance with PCI's Data Security Standard and follow common industry practices in an effort to protect company assets
 - Perform and review vulnerability assessments and internal penetration tests
 - Policy writing and technical documentation of modifications, configurations, and tasks
 - **Mitchell International**
Technical Support Specialist
Evansville, IN
March 2011 – June 2011
 - Aid customers in resolving software issues by phone and with remote assistance
 - Troubleshoot and configure different software in various network environments
 - Communicate, coordinate. and diagnose problems with members of our team
 - Document dialogues, procedures, and solutions with and for the customer
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Secondary Experience

- **Touch of Class, Parke-Bell LTD, Inc.**
Consultant
Huntingburg, IN
August 2013 – May 2014
 - Train staff in network security monitoring practices and tools
 - Git training and orchestration, Github.com workflow for project management
 - Administer a SecurityOnion machine monitoring 7 links, write Snort rules and Bro scripts
 - Nagios, Multi-Router Traffic Grapher, and NfSen deployment for network monitoring
 - Design departmental E-mail forward list workflow, Postfix header rule rewriting
 - Network administration, OSX and Linux server support
 - **Syncurity Networks, LLC.**
Contractor
Rochester, NY
December 2013 – Present
 - Nagios and Munin deployment for a large number of network security monitoring sensors
 - **Kitchen Jewels, LLC.**
Consultant
Jasper, IN
April 2014 – Present
 - Network, server, and workstation installation
 - VMware ESX, Nagios, Syslog, security controls, LastPass and backup solutions
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Projects

- **The More You Bro** **ICSI, NCSA**
2014
Video series for the Bro Network Security Monitor
- **Bro Live: Sandbox Environment** **ICSI, NCSA**
2014
Design system that issues isolated environments (LXC) to improve conference training events

Education

- **ITT Technical Institute** **Newburgh, IN**
2007 – 2011
Computer Network Systems and Information Security, B.S. Applied Science

Additional Training & Education

- Over 1000 hours of specialized information security and technology based workshops and conferences
- Attended the HFC Metasploit Framework workshop in Cincinnati and Louisville
- iOS Development Course, *Vincennes University*
- National Science Foundation's 2013 Bro Workshop
- International Supercomputing Conference's Ensuring Network Performance with perfSONAR tutorial
- Information Systems Security Association's Password Exploitation Workshop, *Louisville*
- SecurityTube.net's Wireless LAN Security and Penetration Testing Megaprimer
- CourseEra - Learn to Program: The Fundamentals (Python), *University of Toronto*

Certifications

- COMPTIA A+
- COMPTIA NETWORK+
- COMPTIA LINUX+
- COMPTIA SECURITY+
- WIRESHARK CERTIFIED NETWORK ANALYST (WCNA)
- GIAC CERTIFIED INTRUSION ANALYST (GCIA)
- GIAC REVERSE ENGINEERING MALWARE (GREM)

Skills

- Working knowledge of FreeBSD, OpenBSD, OSX, AIX, GNU/Linux (Fedora & Debian families), Windows
- Understanding and experience with firewall and packet filtering software such as iptables, PF, IPFW, OSX ALF, Sonicwall, Windows Advanced Firewall, Windows 2000 IP Security Policies
- Detailed knowledge of the TCP/IPv4 packet structure and network traffic
- Experienced in network and host based intrusion detection systems including signature and behavioral based detection engines such as Snort, Suricata, Bro, OSSEC, and Sonicwall
- Proficient with packet capture and network traffic analysis tools like Tcpdump, Wireshark, ARGUS, iftop, Ntop, passivedns, httprry, arpwatrch, TCPick, TCPFlow, Netsniff-ng etc.
- Experience in the automation of administrative tasks on unix-like systems with Bash and Korn shell programming. Some additional experience with Git, Awk, Bro, C, L^AT_EX, Tcl/Expect, HTML, and reStructuredText. Very comfortable with command-line interfaces.
- Working knowledge of Metasploit, Nessus, Nmap, hping3, John the Ripper, Hashcat, Aircrack-ng and other popular open source security testing software and utilities

Television Appearances

- **ITT Technical Institute**
Nationwide Commercial
Film date - February 2014

Louisville, KY
ITT, La Fabrica Films, MGSCOMM
Air date - March 2014

Selected Presentations

- 2014 "Vagrant Environments" *Association for Computing Machinery Linux User Group, University of Illinois*
 - 2013 "Intrusion Detection and Network Analysis" *ITT-Tech, Newburgh, IN*
 - 2013 "The Netsniff-NG Toolkit" *Derbycon*
 - 2013 "A Look at the Netsniff-NG Toolkit" *Midwest Open Source Software Conference, University of Louisville*
 - 2013 "Hacker Hotshots" Interviewed by *ConsciseCourses.com*
 - 2012 "A PCAP Workshop" *Hack3rcon 3*
 - 2012 "An Introduction to Traffic Analysis" *AIDE Conference, Marshall University*
 - 2011 "FOSS for Unix Administrators" *Vincennes University*
 - 2011 "Implementing a Network Monitoring System" *Hack3rcon 2*
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Publications

- 2014 "Intelligence Data and Bro" *Bro Blog, bro.org*
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Honors & Awards

- 2011 Touch of Class - Employee of the Month
 - 2010 Hack3rcon – Capture the Flag winner – Black Badge recipient
 - 2009 ITT Tech – Academic Honors
 - 2007 ITT Tech – Academic Honors
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Community Contributions

- FOUNDER – Dubois County Linux User Group – *Operating system discussion group*
- FOUNDER – Southern Indiana Computer Klub – *Security research group*
- CONTRIBUTOR – Netsniff-NG Toolkit – *Suite of high performance networking tools*
- CONTRIBUTOR – SecurityOnion – *The NSM Linux Distribution*
- IMPLEMENTOR – Free downtown Wifi, *City of Huntingburg*
- AUTHOR – HC3 presentation material used at Princess Sumaya University for Technology (PSUT)
- AUTHOR – 50+ online articles covering network security monitoring and system administration
- AUTHOR – mal-dnssearch, a malware host detection and prevention script that handles multiple logs
- AUTHOR – Many other useful system admin scripts such as pps, gencfg, and malcachesnoop
- MEMBER – USENIX, ACM, REN-ISAC, ISSA Kentuckiana, Infragard, and Appalachian Institute of Digital Evidence