

Joni Julian, Ph.D.

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SUMMARY OF QUALIFICATIONS

- 20 years of independent IT project experience, including Automated Security Manager and FreeRADIUS
- 10 years of personnel management; comfortable interacting with a wide range of personalities
- Experience in Network and System Automation resulting in personnel time-saving
- 5 years of IPv6 Experience, including systems and networking
- Core specialty in Network Management

EDUCATION

Ph.D., Biomedical Engineering, University of North Carolina at Chapel Hill, 2004

Dissertation Title: *Network Service Management: Preparing the Internet for Telemedicine*

Master of Science, Physics, The Pennsylvania State University, University Park PA, 1993

Thesis Title: *An Introduction to Scanning Tunneling Microscopes*

Bachelor of Science, Physics, University of North Carolina at Chapel Hill, 1991

PROFESSIONAL EXPERIENCE

Adjunct Faculty, UNC School of Information and Library Science, UNC Chapel Hill, January 2007-present

Senior Systems Engineer, WebAssign (acquired by Cengage September 2016), August 2016-October 2016

Associate Director of Networking, ITS Networking, UNC Chapel Hill, February 2006-August 2016

Network Management Applications Specialist, ITS Networking, UNC Chapel Hill, September 2000-February 2006

MANAGEMENT EXPERIENCE

Associate Director of Networking, ITS Networking, UNC Chapel Hill, February 2006-present

Managed the Systems and Services group within ITS Networking

- Supported Unix (Red Hat Enterprise Linux, Ubuntu, Mac OS X, OpenBSD, retired Solaris)
- Guided transition to VMware and Cisco UCS
- Managed F5 load balancer pairs
- Configured and maintained applications for network management software (CA Spectrum, Extreme Netsight, Airwave)
- Maintained IP Services (ISC DNS and DHCP, PowerDNS, NTP), authentication and authorization (FreeRADIUS)

Network Management Applications Specialist, ITS Networking, UNC Chapel Hill, September 2000-February 2006

- Directed a small group to deliver a tailored solution with Automated Security Manager (ASM)

AUTOMATION EXPERIENCE

Associate Director of Networking, ITS Networking, UNC Chapel Hill, February 2006-present

- Analyzed Cisco EEM output triggered by high CPU
- Led ongoing migration from ISC DNS to PowerDNS master
- Demonstrated and promoted automation tools including RHN, kickstart, and Puppet

Network Management Applications Specialist, ITS Networking at UNC Chapel Hill, September 2000-February 2006

Streamlined the Automated Security Manager Deployment, August 6-16, 2004

- Documented the process; see flowchart at <http://www.networkworld.com/supp/2005/ndc2/032105auto.html>
- Provided final feasibility opinion for security tool selection
- Customized Automated Security Manager (ASM) deployment for UNC

Automated Network Architecture Migration, August 2004

- Automated network architecture migration from SecureFast (proprietary) to 802.1Q (standards-based) VLANs
- Wrote white paper and consulted with USC for their migration
- Provided scripts to Enterasys (now Extreme) to aid their European customers

AWARDS

Network World All-Star Award for Intrusion Prevention and Response, November 2005

Network Management award, Worldwide Spectrum User Conference, Boston MA, October 2005

Network Management Guru, Worldwide Spectrum User Conference, Las Vegas NV, June 2004

Favorite Presenter Award, Worldwide Spectrum User Conference, Portsmouth NH, September 2003

Graduate Teaching Award, Penn State Department of Physics, May 1993

TEACHING EXPERIENCE

Adjunct Faculty, UNC School of Information and Library Science, January 2007-present

- Teach *Protocols and Network Management* (INLS 578) course select spring semesters
- Guided three independent study courses

Substitute Teacher, St. Timothy / Hale Academy, Raleigh, NC, August 1993-June 1994

- Taught 9th grade Physical Science and 11th grade Chemistry
- Taught and co-developed curriculum for 11th grade AP Chemistry

Teaching Assistant, Penn State Department of Physics, August 1991-August 1993

- Taught recitation for all four semesters of Introductory Physics
- Prepared lessons, quizzes, tests, final grades, and study guides

Teaching Assistant, UNC Department of Physics, August 1990-May 1991

- Graded assignments and tests, and designed study guides for the first semester of Introductory Physics

SELECTED PRESENTATIONS

Welcome to IPv6 at SouthEast Linux Fest, June 2014

IPv6 Security at SouthEast Linux Fest, June 2014

FreeRADIUS for AAx at SouthEast Linux Fest, June 2014

IPv6 Network Troubleshooting at Ohio Linux Fest September 2013, at SouthEast Linux Fest June 2013, at BarCamp UNC May 2011

Secure Networks at InfoSecurity conference, New York NY, January 2005

Spectrum Report Gateway integration at Worldwide Spectrum User Conference, Portsmouth NH, September 2003

SELECTED PROJECTS

Associate Director of Networking, ITS Networking, UNC Chapel Hill; *IPv6 Deployment* February 2011-August 2016

- Prepared UNC for World IPv6 Day on June 6, 2011
- Deployed IPv6 on campus name servers, with extensive troubleshooting
- Trained network analysts for IPv6 support
- Managed DHCPv6 for select VLANs
- Hurricane Electric Certified IPv6 Professional

Network Management Applications Specialist, ITS Networking, UNC Chapel Hill;
FreeRADIUS May 2001-August 2016

- Implemented scalable VPN user authentication for 50,000 potential campus users using FreeRADIUS
- Designed custom automation tool to block users not complying with acceptable use policy
- Expanded RADIUS to handle authentication and authorization for network devices (Cisco, Extreme, Arista), applications, and 802.1X wireless with TLS

Design of Home Sensor Network, personal project, February 2013-present

- Selected Raspberry Pi over Arduino for IPv6 support
- Selected HTU21D temperature and humidity sensor for high precision and reliability at reasonable cost
- Integrated Grafana with graphite with collectd on Pi

Open Source Software Contributions, small personal projects, January 2007-present

- Tuned a solo project; submitted patches, feature requests, and documentation to other open source projects