

## **Caitlyn Máire Martin**

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### **EXPERIENCE:**

I have extensive experience in Linux systems engineering and administration, information and systems security, UNIX, web administration and networking. My experience with virtualization includes KVM, Xen, VMWare and Citrix. Recently I worked on deployment automation of a cloud based SAP Business One (B1) and the HANA database in a SUSE Linux / Citrix Xen environment. I have installed and tuned clustered Linux servers, primarily for use in database applications and web servers. I wrote security standards for Red Hat Linux and Solaris for a large technology company and for an agency of the U.S. federal government. My security experience includes intrusion detection, system / network hardening and patching, and post-incident mitigation. I have extensive technical writing and documentation experience and regularly publish technical, news and opinion articles regarding Linux. I have extensive Internet, Cloud computing, SaaS, and intranet experience. I have designed, installed, and configured small and medium-sized networks and have worked as a systems architect, administrator, systems/network engineer, and security expert in both large and small enterprise environments.

### **KEY SKILLS:**

#### **Systems Administration and Development Operations:**

Linux (Red Hat, CentOS, SUSE, Ubuntu, Debian)	Scripting & programming (Python, shell, PERL, PHP)
UNIX (Solaris, HP-UX, BSD, AIX)	Database servers (Oracle, HANA, MySQL, PostgreSQL)
Linux clustering (Red Hat, CentOS)	Web servers (Apache/LAMP)
Performance testing and tuning	Content Management Systems (Drupal, WordPress)
Virtualization (KVM, Xen, VMWare)	Mail scanning and filtering (MailScanner, SpamAssassin)
Microsoft Windows interoperability	Server support (HP, IBM, Dell, Sun)
Server monitoring (Zabbix, Nagios)	Enterprise configuration management (Red Hat Satellite Server, Ansible, Puppet, Spacewalk)
Thin client solutions (NoMachine NX Server, LTSP)	Mail servers (Sendmail, Postfix, Dovecot, Exim)
Enterprise backup solutions (AMANDA, CA Brightstor, Veritas, Legato, ArcServe)	Enterprise storage - SAN and NAS (EMC, Network Appliance, HP, XioTech)

#### **Systems and Network Security:**

System hardening and patches	Intrusion detection
PCI compliance	Forensics
Systems and network scanning	Security auditing
Incident mitigation and recovery	Firewalls
Development and documentation of enterprise systems security standards	

## **WORK HISTORY:**

### **ALIYA CONSULTING SERVICES**

Eden, NC / Youngsville, NC / Hunstville, TX

Principal Consultant

3/13 - 7/17 and 1/18 - present

Linux systems engineering and administration (Red Hat Enterprise Linux, SUSE Linux Enterprise, CentOS) including stand-alone and virtual web servers running LAMP stacks, database servers and application servers. Process automation for SAP Business One and HANA database server deployment in an environment running SUSE Linux Enterprise Server (SLES 12 and 11) in a Citrix Xen cloud. Project plan development and management of Linux related projects. Development of an enterprise/cloud monitoring solution using Zabbix and other Open Source tools. Incident analysis, mitigation and recovery of a clustered LAMP stack running a large number of WordPress instances on Ubuntu Server in an Amazon AWS EC2 environment. Security auditing and implementation of improved security for web/cloud environments including OS and application patching, implementation of both system and web server security tools, log analysis, and insuring and maintaining PCI compliance.

Wrote Red Hat Enterprise Linux security standards and documentation for a large enterprise environment at a major technology company. Support for popular content management systems including experience with Drupal and WordPress. Maintained virtualized development and QA environments under KVM. Configuration management and software deployment using Ansible and Puppet. System, database and application monitoring using Zabbix and Nagios. Software packaging and package testing in Linux environments (Red Hat, SUSE). Shell, Python and PERL scripting, primarily for process automation.

### **I-BUSINESS NETWORK**

Eden, NC / Marietta, GA

Senior Linux and Security Engineer

7/17 – 1/18

Design and implementation of an enterprise-wide monitoring solution for a cloud services company using Zabbix in a heterogeneous environment including SUSE Linux Enterprise and Windows servers and Citrix Xen virtualization. This is a continuation of a project I started as an outside consultant. Planning for data center expansion and migration. Mitigation and recovery from a security incident working with affected Microsoft Windows Server 2008 and 2012r2 systems. Scripting for process automation.

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#### ALLIED CONSULTANTS

On contract to TEXAS DEPARTMENT OF CRIMINAL JUSTICE

Hunstville, TX

Linux Architect / Administrator

10/12 – 3/13

Linux server administration and support in a SUSE Linux Enterprise Server environment including both physical servers and virtual servers under VMWare. Supported existing thin client (terminal) servers using NoMachine NX Server running on SLES 11 and SLES 10. Redesign proposed distributed virtual NX Server cluster. Supported application and database servers running SLES and legacy servers running Solaris. Implemented enterprise backup solution for a closed private network using AMANDA. Troubleshooting and problem solving on undocumented and previously unmaintained Linux servers. Server hardening, patching and forensics following a security incident in a thin client environment. Patching and updating of all Linux servers.

#### ALIYA COMPUTING

Youngsville, NC

Owner/Principal Consultant

2/07 – 9/12

Linux systems engineering, administration (Red Hat Enterprise Linux, CentOS, SUSE, Ubuntu, Debian, Slackware and Scientific Linux) and documentation of processes and procedures for server configuration and security. Support and maintenance of clustered, stand-alone and virtual web servers, database servers, and related infrastructures, including load balancers, SAN/NAS storage systems, switches, firewalls and routers. Web server deployment, performance optimization and ongoing support for popular content management systems including extensive experience with Drupal 6 and 7. Support for virtualized development and QA environments under KVM and VMWare including a small scale migration from VMWare to KVM. Security auditing and implementation of improved security for web/cloud environments including OS and application patching, implementation of both system and web server security tools, log analysis, and insuring and maintaining PCI compliance. System, database and application monitoring using Zabbix and Nagios.

Packaging and customization of Linux software including writing or modifying build and installation scripts. Co-lead developer team for the Yarok Linux distribution including development of graphical systems administration tools in Python. Provided technical assistance and advice for migration to a virtualized environment using Xen. Deployment of a Linux VPS for a 2012 state political campaign including mail server (Sendmail, Dovecot, Squirrelmail) and website design and maintenance utilizing Drupal 7 running in a CentOS LAMP stack. Feature article writer for DistroWatch Weekly and occasional writing of news section and remainder of column. Contributor of articles to the O'Reilly Media websites.

This period includes a contract for a Department of the State of North Carolina government supporting Novell NetWare 6.5, Microsoft Windows (server and workstation) and CentOS 5.x. Built and deployed an imaging server using CloneZilla Server Edition running on CentOS.

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A.C. NIELSEN

Green Bay, WI

Lead Systems Administrator

11/05 – 3/06

Responsible for systems administration of Red Hat Enterprise Linux and UNIX (HP-UX, AIX, Solaris) servers, including day to day operations and OS/application patches and security updates. Coordination with developers and application teams.

RESOLVIT RESOURCES

On contract to RED HAT, INC.

Raleigh, NC

Consultant

4/05 – 11/05

Consultant in Global Professional Services (GPS) serving Red Hat's enterprise customers. Responsibilities included onsite troubleshooting and problem solving of complex issues in large scale Red Hat Enterprise Linux deployments and installation of new deployments of the enterprise OS and additional Red Hat products including Red Hat Network Satellite Server, Red Hat Cluster Suite, and Global File System (GFS). Performance testing and optimization of operating system ranging from kernel to filesystem parameters. Preparation of environment for Oracle RAC (versions 9i and 10g) installation. Onsite training of customers in automated deployment and management of Red Hat Enterprise Linux systems and providing extensive documentation for both customer and internal Red Hat use.

On contract to AMERICAN FINANCIAL GROUP

Cincinnati, OH

Linux/UNIX Systems Administrator

11/04 – 3/05

Systems administration including maintenance and support of 77 servers running HP-UX, Red Hat Linux, Gentoo and Sun Solaris. Support of Java-based web hosting environment running on Red Hat Enterprise Linux using Apache and Tomcat. Built local repositories and web server for Red Hat Linux and Fedora patches and updates. Wrote scripts to automatically update repositories on a nightly basis and log results and to automate startup of applications on HP servers.. Extended monitoring to all HP, Sun, and Linux servers using Nagios and nrpe. Wrote custom Nagios plugins for applications monitoring. Patched and hardened servers to improve security. Researched and wrote specification for HP blade servers for evaluation. Harmonized user and group IDs to facilitate migration from NIS and flat files for authentication to LDAP and maintained existing NIS servers. Hardware supported included HP, Sun Enterprise and Dell servers as well as EMC NAS and SAN storage.

#### NETFERRETS

Owner / Principal Consultant

1/04 – 11/04 plus 7/00 – 9/00 and 9/98 - 3/99

Network and system consulting, as well as systems integration and conversion services. Installed and tested a Linux based firewall solution for an Atlanta-based accounting and finance application service provider (ASP). Conducted extensive security audit and wrote security recommendations and specifications, which were implemented by myself and the customer's IT staff. SUSE to Red Hat Linux migration and deployment of client/server environment (thin clients) for a customer in the banking/finance industry. Contract systems and network administration in a mixed HP-UX and Windows NT environment. Creation of virtual servers and configuration of a web hosting environment for several small businesses and nonprofit organizations in a Linux/Apache environment. Design of web sites including HTML and Perl coding, database maintenance, graphic design and layout. Writing and editing of marketing text.

#### TEK SYSTEMS

On contract to ADC

Raleigh, NC

UNIX Systems Administrator

9/03 – 1/04

Responsible for consolidation of the UNIX (Solaris and HP-UX) and Linux environments in five former offices into the new, centralized engineering, research and development facility in Raleigh. Planning and implementation of server reallocation and consolidation to best utilize resources and reduce number of UNIX servers, including the merger of five NIS domains into a single environment. Planning and implementation of a rational security strategy for the new environment. Recovery from security incident including forensics, system hardening and implementation of new security standards which I developed. Implemented snort for real time intrusion detection. Systems administration of Solaris, HP-UX and Linux servers and workstations.

**PRIOR EXPERIENCE:**

- 8/02 – 3/03 RATEINTEGRATION INC.  
Durham, NC  
Senior Systems Administrator
- 10/00 – 11/01 LOCKHEED-MARTIN  
Research Triangle Park, NC  
Systems Analyst
- 4/99 – 7/00 HOWARD SYSTEMS INTERNATIONAL  
On contract to IBM CORPORATION  
Research Triangle Park, NC  
Senior Systems Network Engineer
- 3/98 – 9/98 INTERPATH COMMUNICATIONS INC. / TRI-NET SERVICES  
Morrisville, NC  
Senior Systems Engineer
- 6/96 – 3/97 RANDY INTERNATIONAL LTD.
- & 5/80 - 9/85 Jamaica, NY and Hallandale, FL  
Director, Information Systems
- 11/95 – 6/96 CALIFORNIA MEDICAL ASSOCIATION  
San Francisco, CA  
Operations Administrator, Network Services
- 9/85 – 10/95 INDEPENDENT CONSULTANT  
Boca Raton, FL

**AWARDS AND CERTIFICATIONS:**

Awarded Lockheed-Martin Lightning Award (3/2001) for work done in support of the EPA National Health and Environmental Effects Research Laboratory (NHEERL) in recovering from a security incident and securing of UNIX systems to prevent future incidents.

Red Hat Certified Technician (RHCT). Successfully completed RH300 class in preparation for Red Hat Certified Engineer (RHCE) exam. Successfully completed RH423 class: Red Hat Directory Services and Authentication.