

SHYAMSUNDER RATHI

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SUMMARY

Six (6) years of experience in software development, including five years at Brocade Communications; working on multiple releases of Brocade FCX and ICX series of stackable switches.

EDUCATION

Master of Science, Computer Science

University of Southern California, Los Angeles, CA

May 2009

GPA: 3.8/4.0

Coursework: Operating Systems, Internetworking and Systems Laboratory, Computer Communications, Security Systems, Analysis of Algorithms

Bachelor of Engineering, Electronics Engineering

SV National Institute of Technology, Surat, India

May 2006

TECHNICAL SKILLS

Programming Languages: C, Perl (current); Python, Java, C++, C# (prior experience)

Development Tools: Clearcase, GNU Debugger, SVN, Source Insight, GDB, SlickEdit, Visual Studio, Eclipse, Netbeans, Wireshark, Spirent TestCenter

Computer Networks: TCP/IP, TLS, Ethernet, 802.1x, MAC-authentication

WORK EXPERIENCE

1. Member of Technical Staff – Software Developer, Nutanix Inc., San Jose, CA

Dec 2014 – present

Description: Design and development for Nutanix NAS products:

Nutanix NX Virtual Computing Platform

- Working on Nutanix NX series of products to design and develop a file sharing NAS server.

2. Sr. Software Engineer, Brocade Communications Systems, San Jose, CA

July 2009 – Nov 2012

Description: Design and development for various features on Brocade Enterprise Stackable products:

Brocade Stackable Products

- Implemented various stacking related features on FCX and ICX family of stackable products.
- Worked on algorithms for unit-discovery, interactive stacking setup, stack formation, unit replacement, ID assignment, etc.
- Designed and developed Link-Aggregation feature to increase throughput and to provide redundancy.

High Availability

- Implemented High availability (HA) features to ensure uninterrupted system operation in the event of firmware upgrade or software failure.
- Designed and developed software-data synchronization between two CPUs on a chassis system.

Security Features

- Worked on security related features, e.g. Access Control List (ACL), 802.1x, MAC-authentication, Policy Based Routing (PBR), etc.
- Developed HA support for Mac-authentication and 802.1x authentication, so that authenticated clients can have uninterrupted traffic flow in the event of firmware upgrade or software failure.

Other

- For above features, provided support to QA engineers during Feature Verification Tests (FVT), alpha and beta (customer) testing phases.
- Worked with Technical Assistant Centre (TAC) engineers to resolve customer cases for the above-mentioned features.

3. Software Developer and Member, Teamcore Research Group, University of Southern California

<http://teamcore.usc.edu/projects/security/>

June 2008 – May 2009

ARMOR (Assistant for Randomized Monitoring Over Routes)

- Developed ARMOR, a scheduling system used for canine patrolling units, deployed at the Los Angeles International Airport (LAX) since 2008.
- Implemented an algorithm based on game theoretical research to output a weekly schedule which was used to ensure a randomized distribution of canine units at all the LAX terminals.

IRIS (Intelligent Randomization in Scheduling)

- Developed IRIS, a software program used for allocating Federal Air Marshals (FAMs) in passenger flights since 2009.
- Designed and developed the front-end and back-end of an application to implement a Bayesian-Stackelberg game theoretical algorithm to ensure randomized distribution of FAMs in passenger flights.

4. Assistant Systems Engineer, TATA Consultancy Services Ltd, Mumbai (India)

June 2006 – June 2007

Project: BANCS 24 - Core Banking Solutions to State Bank of India

- Developed multiple features for handling financial transactions for State Bank of India.

PATENTS & PUBLICATIONS

- **Patent:** Co-inventor - *“Device id assignment in a system of devices”* - Application number 14/106302, filed Dec, 2013.
- **Publication:** Co-author – *“IRIS - A Tool for Strategic Security Allocation in Transportation Networks”*, published at The 8th International Conference of Autonomous Agents and Multi Agent Systems (AAMAS) 2009 Industry Track, Budapest, Hungary.
- **Publication:** Co-author – *“Software Assistants for patrol planning at LAX and Federal Air Marshals Service”*, published in Interfaces Journal, Volume 40 Issue 4, July 2010.

AWARDS

- Brocade Button Award, 2011, for contributions in development of high-availability (HA) features on Brocade FastIron family of products.
- Best publication award for co-authored publication *“IRIS: A Tool For Strategic Security Allocation in Transportation Networks”*; published at The 8th International Conference of Autonomous Agents and Multi Agent Systems (AAMAS) 2009 Industry Track, Budapest, Hungary.
- Certificate of appreciation from City of Los Angeles for successful deployment and working of ARMOR, a randomized scheduling assistant for checkpoints and canine patrolling units at LAX.
- Certificate of appreciation from Federal Air Marshal Service (Department of Homeland Security) for development of IRIS, a software program used for allocating officers in passenger flights.

WORK PERMIT

- Valid H1B Visa