Naveen S Gunukula

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*408-390-9609 (mobile)*

#### Professional Experience

Over 20 years of industry experience, constituting of lead software development roles in Micro-services architecture (hosted on Public Cloud providers like AWS, Azure), Cisco embedded platform software development, IoT technologies, SDN technologies, SD-WAN technologies, Cloud Computing, and Embedded Systems.

#### Skills

* Expertise in SDN, NFV, OpenVSwitch, OpenStack, OpenFlow, Yang-Model, NetConf, Restful APIs
* Expertise in SD-WAN based cloud service using technologies like GraphDB, Big Data Cassandra DB, messaging technologies like Kafka Message broker
* Expert Level knowledge in Embedded Systems, IoT Devices.
* Jump Started Agile teams at Cisco and moved away from Waterfall model.
* Cloud Computing: Amazon EC2, Rackspace, Google Cloud, ELK Stack
* Expert knowledge of Cisco platform development, QoS(Quality of Service), driver level programming.
* Knowledge of protocols used in Soft-switches, in particular MGCP, H.323.
* Capable of bringing solutions live into customer networks.
* Capable of planning and integrating Solutions in customer environments.
* Good knowledge of Embedded Systems, constraints involved in such systems and design requirements. Very good knowledge of Agile work environment, mentor and ramp-up junior engineers.
* Leadership skills to lead a team and deliver projects as per the set deadlines while understanding the project priorities and external dependencies both human and technical.

#### Achievements

* Ranked among Top 10% in current performance review at Cisco Inc.
* Issued two patents for SFP/RJ45 Physical Layer Failover at US PTO office at Cisco Systems Inc.(Patent# [8,094,569](https://wwwin-cpol.cisco.com/docs/Published/958505/8094569.pdf), [8,605,575](https://wwwin-cpol.cisco.com/docs/Published/976970/8605575.pdf))
* Awarded with Cisco-CAP award for successfully delivering Cisco Integrated Services Router exceeding manager’s expectations and received appreciation from the director.
* Awarded with Cisco-CAP for code committing the Cisco Integrated Service Router IOS(Internet Operating Systems) software into the Critical branch from which the OS images are picked up by the customers.
* Awarded with CAP award for delivering the Front Panel GigE device driver code for Cisco Integrated Services Router.
* Awarded with Cash bonus for successfully delivering sockets API implementation on Sony’s Real-time OS
* Awarded with Cash bonus for successfully going through the Softswitch compliance testing at SINGTEL Telecommunications, Singapore.

**Technical Skills**

**Technologies** OpenFlow, OneP, IoT, Open daylight, Cloud Computing,

BigData, GraphDB, ELK Stack

**Processes** Agile development process, Waterfall development process

**Languages**  PYTHON, C++, C, JAVA, XML, PERL, ASSEMBLY 80X86.

**DataBases** CassandraDB, MySQL, Neo4J, Titan, Tinkerpop, Gremlin, Gephi

**Case Tools** Git, ACME, ClearCase, Code coverage tools.

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#### Work Experience

**Technical Engineering Leader/Principal Engineer, October 2017 – Present**

**Ca Technologies part of BroadCom Technologies.**

* Responsible for managing, hiring and leading three scrum teams following Agile methodologies building a Telemetry system to collect metrics from various Ca Products to visualize and present relevant metrics to get a better understanding of the product usage by the customers which would further enable CA Technologies’ Sales, Marketing, and Engineering Teams to focus on what are the pain points customers are facing to further adopt the product and ensure that product renewals happen when it is due for both, cloud based deployments and, product upgrades happens for on-prem products.
  + Hosting the services on AWS.
  + Deploying using Docker Containers and Kubernetes Container managers.
  + Using Helm as the package manager for Kubernetes deployments.
  + Confluent Kafka is the main streaming bus between the microservices.
  + MicroServices expose RestAPI Based Endpoints to perform various CRUD operations.
  + Using Git as the Source control tool for these services.
  + Using CircleCI as the Continuous Integration tool.
  + Using Quay.io as the docker image registry store.
  + Using Promethues to collect metrics from these services and generate Alerts.
  + Using Pager Duty to message oncall engineer if any alerts are generated.
  + Using TwistLock scanners to check for any vulnerabilities exposed by the docker images and upgrade any thirdparty packages which are included in the microservices which might expose these vulnerabilities
  + Using Grafana to visualize key metrics of the microservices.
  + Different microservices used different language following true microservices paradigm.
* Worked on Data Analysis for some on-prem products of Ca Technologies to collect key metrics.
  + Hosting the services on AWS.
  + Using RedHat OpenShift Containers to manage the services.
  + Used TeamCity and Jenkins to manage the CI/CD pipeline.
  + This service was primarily written in Java.
  + Visualization of key metrics was done by using PowerBI tools.

**Technical Lead, September 2004 – Present**

**Cisco Systems,**

**San Jose, CA**.

* Enabling Cisco to move NFV technologies into cloud, especially SD-WAN software as a cloud service. Moving the platform independent code which enables a particular traffic flow to pick the best path given multiple paths are available to reach a destination. Monitoring dynamic metrics in the network and making split-second decisions to move the traffic to a more efficient path, which meets the customer SLAs. All this achieved by using Graph Databases such as Titan, TinkerPop, Cassandra, Bigdata Database, Kafka Message broker to send/receive messages across modules.
* Working on SD-WAN or Software Defined WAN technologies enabling most of the service providers to securely leverage the Internet at lower costs and off-loading non-business critical traffic from MPLS networks to low cost internet alternative. There by enabling cost savings to the customer. There is a Cisco’s APIC-EM SDN controller which controls the network and new performance based routing will take over the more standard EIGRP or BGP routing protocols.
* Boot strapped Agile Teams at Cisco and delivering a single sourced code of QoS technologies spanning multiple Cisco’s DataCenter Switching platforms.
* Delivered a SDN QoS layer which opens up the CLI based QoS layer through OpenFlow API interface.
* Delivered IoT devices on Cisco Platforms. These devices are being sold in SmartGrid technologies and Smart Meters.
* Team lead for QoS technology, delivering new feature requests on various Cisco Routers and Switches and driving the quality initiative for the team.
* Worked in the lead role on Cisco ISR G2 routers 1905, 1906C & 1921 project named Swoop platforms. Delivered Swoop platforms and was involved in all phases of the project until it was successfully committed to the branch. As part of swoop platform delivery, was involved in driving the meetings, handing over the IOS code to the DevTest and supporting the DTs until the project was successfully FCS’ed. This is one of the most successful router being sold in the SRTG BU.
* Worked on Next generation Integrated Services Router called ISR G2s. Involved in design, development and delivery of these platforms to Dev Test team. ISR G2 routers have layer 3 Gigabit Ethernet ports on the front panel of the router. I was involved in the development of the Ethernet driver code to support these ports.

**Principal Software Engineer/Engineering Manager, June 2000 – September 2004**

**IpVerse Networks Inc.,**

**San Jose, CA.**

* Implemented various VOIP protocols in the Startup for the VoIP softswitch. Interoperated and productized the softswitch. This is a deployed solution at the startup’s customers. Project lead for the Softswitch, handled all the customer requirements and management. Provided product support to customers while deploying the solution.
* Went through VoIP Softswitch conformance testing of the control switch at Singapore’s largest telecommunications company. Demonstrated the Control Switch, Media Gateway combined solution and brought-up on SINGTEL live network. This resulted in product sales to one of the biggest telecom operator of Singapore from the startup.

***Embedded Software Engineer,* July 1997 – June 2000,**

**Sony Electronics Inc.,**

**San Jose, CA.**

* Implemented BSD compliant sockets API on Aperios, Sony’s Real-Time OS that is used in the AIBO toy pet. The API was used to port all the networking applications onto Aperios.
* Implemented File system caching on the Aperios OS. Aperios RTOS due to memory constraints was relying on Sun Solaris file system through Remote File System mechanism. File system caching was implemented using well known caching algorithms.

## Education

- MS Computer Science, University of Louisiana, Lafayette, Louisiana.

- MBA from Leavey School of Business, Santa Clara University

- BS Electronics and Communication Engineering, Osmania University, Hyderabad, India.

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## Activities

* Prior Member of IEEE and ACM.
* Member of Toastmasters Club at Sony Electornics and Cisco Systems Inc.
* Attended

1. Embedded Systems Conference held at San Jose Convention Center (1999).
2. Linux World Conference at San Jose Convention Center (2000).
3. JAVA EXPO at Moscone Center San Francisco (2000).
4. Cisco Live at Moscone Center San Francisco (2014)

**Status** US Citizen

**Other Contact** 408 831 2710 (H)