Manikandan Selvaganesan

Software Engineer II at Cisco(Current), System Software Developer at Red Hat(Past)

"Love to expand horizon and explore challenges"

Education

2011–2015	**Bachelor of Engineering(Computer Science)**, *Anna University*, SKCET. *GPA − 9.48, Distinction*
2009–2011	**High School(HSC)**, Vidyaa Vikas, Karamadai, *Percentage − 96* .

Projects

Title	*Implementation of SELinux Translator for GlusterFS*
Description	Currently, it is not possible to set the SELinux context on a mounted Gluster Volume. The SELinux translator intends to have this functionality added to the Gluster core, and from there on add support to additional layers (FUSE and Labelled NFS).
URL	`http://review.gluster.org/#/c/13762/`
Title	*Quota - Gluster file system*
Description	GlusterFS is a scale-out, distributed file-system with no external metadata servers. Quota and marker are major components in glusterfs which restricts the usage(based on size and number of objects per volume) of files and directories. Marker does the accounting work and quota does the enforcing. I primarily work as a co-maintainer for this component, fix bugs, review code changes, implement features, resolve customer issues and so on
Title	*Implementation of new logging framework for the distributed system, GlusterFS*
Description	The project is to make logging better by giving logs with message IDs and error strings through newer API's, so that the tools do not have to do complex log parsing to break it down to problem areas and suggest better troubleshooting options. In addition to this, also have done parsing of the entire code base which takes the message ID's and logs separately.
URL	`http://review.gluster.org/#/q/owner:%22Manikandan+Selvaganesh%22`
Title	*Performance analysis of binomial heap in a search engine using C and C++*
Description	The current search engine uses binary heap which has a merging complexity of O(n) and the proposed project checks with binomial heap which has a merging complexity of O(log n), thereby it can make storing and retrieval efficient. It is checked by feeding random data.

Title	*Efficient data visualization tool using HTML, CSS and PHP*
Description	Thousands of raw data given by the user is analyzed and is split down in the form of a rectangular color blocks(Graph) where the size indicates the number and color indicates the average division among the data which paves a way for easier understanding.
Title	*Symptom based approach for analyzing diseases*
Description	Symptoms of every disease are refined and fed into the database, using Grover's algorithm and Merge sort, the possibility of each occurrence of disease is shown to the user.
Title	*Automating glusterfs builds for packaging in Debian and Ubuntu using Python*
Description	Glusterfs packaging for different flavours of Linux was done manually which is now automated using Python.
Title	*Automation of bug cycles in the software development workflow using Shell and Python scripts*
Description	Whenever a bug is filed and is in NEW state, the change of bug states happen from the time the developer starts working on it till a bug is getting closed. The complete process was automated by making changes in gluster run scripts, gerrit hook scripts and using bugzilla api's.
Open Source Projects	Improving testing framework in Netbsd, Working on selinux module for glusterfs, User and group quotas feature implementation and contributing to other community projects.
Hobby Projects	Family tree maintenance, Memory games, Drawing shapes using Qt and yaml, D-bus implementation for Glusterfs using Python(research and design).

Technical skills

Basic	GO, SQL, Javascript
Intermediate	PYTHON, HTML, Linux kernel, Data structures and algorithms, Shell scripting, File systems, HTML, CSS
Advanced	C, C++
Development Tools	vim, git, gdb(debugging), gcc(compiler), bash
Operating System	Gnu/Linux, Windows
Courses	Red Hat Certified System Administrator(RHCSA) and CCNA Crash course

Experience

Sep 2016–Present	**Software Engineer II**, CISCO, Bangalore. Working on Cisco Customer Care Business Unit (CCBU) which is reinventing the customer care through innovative cloud and premise software solutions. This also includes industry leading solutions in contact center, messaging and self service as well as the recently introduced SaaS offering Cisco Spark.

July 2015–Aug 2016	**Associate software engineer**, REDHAT, Bangalore.
	Working on GlusterFS, a distributed file system and collaborated more with the upstream communities.

Detailed achievements:
- Won various awards for resolving customer escalations, good connection and team playing among peers, providing the best ideas for the design of the project(s).
- Implemented some features(Projects mentioned above) which increased sales and fixed more bugs for GlusterFS.
- Improved regression tests which increased the stability and reviewed changes in code and the environment that will affect system performance.
- Experience working in Distributed systems, Agile/Scrum Software development methodologies and gained better knowledge on Algorithms(Programming).
- Have done glusterfs packaging for different Linux flavours, automating scripts which reduced lot of manual effort that every release needs.
- Engaging more with open source communities.
  - GlusterFS
  - Fedora
  - Syslog-ng
  - Mozilla

Jan 2015–Jul 2015	**Summer Intern**, REDHAT, Bangalore.
	Worked as a Software Engineering intern on GlusterFS.

- Fixed more than 150 coverity issues in GlusterFS(C).
- Ported logs to a new framework for Gluster components(C and Python).
- Implemented parser to separate logs(Shell Scripting).
- Fixing functional bugs and reviewing code changes(C).
- Automating GlusterFS build scripts(Python).

Memberships and Associations

2011–present	**Executive member**, *Computer Society of India (CSI)*.
	Gave lectures about various tools, newer technologies and conducted various technical events.
2011–present	**Executive member**, *Students Creative Association(SCA)*.
	SCA is a literary organization that was formed by the school pass-outs of the year 2008. The vision of this association is to impart literary ideologies and competitive charisma to the students all over. Have judged and conducted various events with SCA.

Technical ventures and Awards

2014	Won first in state level Paper presentation(Meemicc) for the topic "Visualising data on the Bigdata world."
2014	Won second in National level project design contest(Yukthi).
2013	Received cash prize for first place in state level coding event(Blitzmac).
2013	Received cash prize for first place in state level paper presentation(Blitzmac).
2012	Attended "CCNA workshop" conducted by Network bulls.
2012	Consistently won overall awards for academic and extra curricular activities in college.
2011	Attended code-quest, bug smashers, matho-matrix and has won third place.

2009	School topper and third in Educational district during Board exams.
2008,2009	Top Achiever Award for overall performance.

Extra- and Co- curricular activities

2015	Student chairman and Placement coordinator of CSE department, SKCET.
2014	Event secretary of the national level technical symposium, Cybernova'14.
2014	Nominee of Google student ambassador.
2014	Won 1st in National level photography contest(Meemicc).
2013	Acted as a judge for the event YE Special.
2013	Event head for Smrithi'13, cybernova'13.
2012	Organised "Entrepreneur week" and "Young Expressions".
2010	Recipient of "Staff Merit Award" given by NIA institutions.
2009	Recipient of "Towards Leadership Award" given by Lion's club for social responsibilities.
	Won various places in Quiz, Elocution and Essay writing in various levels.
	Collected funds for the Needy people and organised various Health awareness Camps.

Languages

Tamil	**Mothertongue**
English	**Read, write, speak**

Interests

- Exploring places
- Cooking
- Blogging(Beginner)
- Programming
- Running
- Gardening