### Bindu kumari

Email:bindulal2000@gmail.com

LinkedIn: https://www.linkedin.com/in/bindu-lal-30813215/

Phone: 08766541271

#### **SUMMARY**

Worked for 7.6 years in software industry worked as principal QA and as Developer worked on IBM AIX Power8 systems on Network Performance Benchmarking tool for Super Computing and worked as Quality Assurance Engineer on Storage Domain, Device Drivers, SoC nVidia chipsets Device Drivers, Android Kernel and Virtualization (VMware) Technology.

### **Expertise**

- Ness: Quality Assurance on Backup product Veritas-Netbackup -Global Management System (Alta view) complete testing and deployment on Azure Kubernetes Services.
- IBM-ISL: Development of IBM-ISL Internal Network Performance Benchmarking tool "NetOP" on different network protocols for AIX Power8 Processors.
- EMC2: Quality Assurance of Backup and Recovery product like EMC 2 NetWorker and Avamar.
- NVIDIA: Embedded Kernel and Device Driver Testing like Tegra ChipSetT20/AP20 BSP Smart book/Smartphone.
- PILLAR DATA ORACLE: Storage Testing on SAN, NAS, iSCSI and RAID [RAID 5 and RAID 10] technology.
- VMWARE: Performance, System, Regression and Functional Testing on VMKernel Device Driver iSCSI, products like ESX 3.5 to 5.x Server and Virtual Center testing and development environments and also various features of VMware products like virtual machine establishment, cloning, HA-DRS, Storage VMotion, DR,TCP/IPv2...etc

### PROFESSIONAL EXPERIENCE.

Ness Digital Engineering - Pune Designation: Principal QA Engineer Duration:02-May-2022 to Till Date

IBM ISL Embassy Golf Link (EGL), Bangalore Designation: Staff Software Engineer Band -7A Duration: 10-April-2013 to 04-May-2015

EMC2 Data Storage Corporation Pvt Limited, Bangalore.

**Designation**: Software QA Engineer **Duration**: 6-Oct-2010 to 5-April-2013

NVidia Graphics Pvt Ltd, Pune. Designation: Software QA Engineer. Duration: 28-Mar-2010 to 30-Sep-2010.

Calsoft Pvt. Ltd, Pune

Designation: Senior Software QA Engineer.

Duration: 30-Oct-2007 (intern 6 months) to 8-Mar-2010 Clients: VMware Pvt Ltd: Software Quality Enginee Pillar Data Oracle: Senior Software Engineer

#### PROFESSIONAL EXPERIENCE:

### **Ness Digital Engineering Pune**

Role: Principal Quality Engineer

**Project Assignment:** GMS-Testing and Deployment on-Prem and AKS **Platform**:Vmware (On-Prem) and Azure Kubernetes Services(AKS)

## **Achievements:**

Owned epic on Multi-Domain job's fetching details from multi-domain

Created setup using Vmware-ITA and GMS a.ka Alta view

Performed different Netbackup - backups and restore

Created multiple test cases or cover the whole features around job's and Alta view to deliver a bug less product.

Complete deployment to deliver GMS on Azure Kubernetes Services while configuring Kubernetes Cluster and Postgres db with Ingress Controller.

Complete Deployment on NBSAAS GMS on-prem as microservices with Docker and Kubernetes cluster on baremetal. Created test cases using Horizon and uploaded TC's accordingly.

#### IBM ISL Embassy Golf Link (EGL), Bangalore

Role: Development Engineer (Staff Software Engineer Band-7A)
Project Assignment: Development and Enhancement of NetOP.

Platform: AIX Power8 Super Computers.

### Achievements;

Owned NetOP and given continuous support to various teams using NetOP as Network Performance tool for Power8 release.

Enhanced NetOP to use Udapl Protocol using AIX built-in perf libraries.

Enhanced NetOP to use RDMS and DMS protocol.

Fine Tuned NetOP to transfer IP packets over FC channels.

Submitted a code for NetOP to calculate Confidence Interval using Standard deviation formula.

Provided Fixes for IPv6 network data transmission.

Introduced different flags for usage of NetOP for different packet sizes.

Setting meetings and understanding the requirements from teams like: TCP/IP, VIO, IPv6, R2R...etc fine tuning NetOP accordingly. Fixing Bugs assigned from different teams and updating on CQ and bugzilla.

Submitted whitepapers on NetOP usage to different team globally given presentation to new teams for the usage of NetOP as their Network Performance Benchmarking testing tool and attracted various new clients.

Presented a paper on "NetOP supporting integrating TCP/IP packet to run on FC channels".

Written and presented a document to all the NetOP users as how it works with different packet sizes, how to calculate the Confidence Intervals [CI], supports Udapl libs.

#### EMC2 Data Storage Corporation Pvt Limited, Bangalore.

Role: Quality Assurance Engineer (QA)

Project Assignment: Scalability, Reliability and Performance of EMC2 Backup & Recovery Product "Networker"

Platform: Windows 2012, Windows 2k8, Linux, Solaris.

#### Description:

The EMC® NetWorker products is World's 1st largest Backup and recovery suite of storage management software that Provides backup, recovery, and other services to computers with a wide variety of Operating systems and data types. NetWorker products for different operating

Systems are interoperable. This provides the flexibility to design storage Management system that works best with the current computing environment.

### Achievements:

EMC2 NetWorker Backup: Ensure Performance, Stability and Reliability of the product.

Worked on Performance benchmarking Windows 2012 ReFS changes in VSS (Volume Shadow Copy) with NetWorker.Automation: using python and shell scripting.

Created Reliability automation script for creating 100 VM's at one time and kick starting the the installation .

Created scripts in python to monitor CPU and Memory utilization.

Submitted Performance paper of "Networker on ReFS Vs Others FS" to Sales team and Clients.

Worked on every new feature from TDS writing, planning, scope till Test case Execution.

Performance baseline of CSV (Cluster Shadow Volume) with NTFS Clusters.

Performance benchmarking of Distributed File System Replication with different NetWorker Main builds.

Performance Measurement of Storage Space with Virtual disk of ReFS File System volume.

Written Technical write-up on Scalability and Reliability for Cloning Feature.

Scalability of Immediate clone, w.r.t the incremental load it can withstand.

Worked on Scalability of NetWorker using Dedupe (Data Domain) technology.

Scalability of Immediate clone with Dedupe Devices w.r.t the Sequential clone on Advance File Type Devices.

Worked on Reliability of Data Recovery, with different scenarios on Windows2012, Linux, and Solaris Platform. NetWorker Directed Based Recovery. SID, Clone based Recovery.

# NVidia Graphics Pvt Ltd, Pune.

Role: Software QA Engineer (QA)

Project Assignment: Embedded Device Driver Tegra ChipSetT20/AP20 BSP Smartbook/SmartPhone

Platform: Linux ubuntu 10.

## Achievements -

Embedded Device driver testing creating, test case creation and execution on tegra chipset.

Flashing via different media: eMMC card, NAND flashing and NFS.

Configuring and testing wifi and Ethernet on embedded devices.

Streaming testing using Flash plugins and omxplayer.

Camera testing and Graphics driver testing.

ALSA Driver validations.

Embedded BSP testing manual.

#### Calsoft Pvt ltd, Pune.

# Client Name: Pillar Data Oracle Pvt Ltd

Role: Senior Software QA Engineer

Project: Pillar Data NAS -SAN Storage.(System Storage Testing)

Platform: Linux ubuntu 10.x.

#### **Achievements:**

System and Functional testing of NAS and SAN Storage Domain with Pillar Axiom using CLI and GUI for configuration.

Testing DNS, ADS, Kerberos authentication and NTLM.

Creating Fileserver, File System...etc on the NAS Axiom Storage.

NFS exports and CIFS shares.

LUNS, Hosts, and Slammer Ports on SAN Axiom Storage.

Fileserver Cloning, LUN cloning.

Data Replication on Inmage, for File Replication, volume replication and Exchange.

Test Cases on Storage, defects filing, defects verification.

NDMP backup management.

SATA and FC bricks.

Benchmark tools like IOmeter and Strom.

iSCSI testing, creating test designs for iSCSI, Learning customer's scenarios and creating Test Plans accordingly.

Tools and Technologies Used: - SAN, NAS, NFS, CIFS, RAID Levels 0,1,5 SATA and FC, Fileserver, File System, Cloning FS, LUN Creation and cloning, FC switches and SFF (Storage System Fabrics), Wire Shark, InMage, Mercury QC.

#### Client Name: VMware Pvt Ltd, Bangalore (Onsite)

Role: Senior Software QA Engineer

Project Assignment #1: VMware Networking (System Testing)

Platform: ESX 4.x, 5.x, ESXi (hyper visor)

Achievements:

Stress testing for VMware ESX Server

Stress testing across different hardware vendors such as HP. Dell and IBM.

Application stress testing such as DB-hammer, Exchange on different GOS.

Combination stress testing with different ESX features such as VMotion, HA-DRS.

Load and performance testing using different tools such as IOmeter, LoadSim, Web Bench... etc.Server and CPU Qualification

Cross functionality checking such as Vmotion, Storage Vmotion, and DRS-HA clusters.

VMware API testing using VI and VC client to check for status of storage, battery, BIOS and other hardware. Hot adding of CPU, Memory for supported GOS.

VMware 4.0 and ESXi 4.0 Networking Module. Networking Generic System and Functional test cases on Classic 4.0 and Embedded.

Performed IPv6 test cases on system and function testing.

Networking System Nic Configuration, NicSpeedDuplexConfig and Blade switch Classic , VLAN - Traffic Shaping, FaultInjectionVMCos 4.0 and Embedded.

Worked on Networking System, VMotion Classic 4.0 and Embedded

Worked on VMotion on DVS, IPv6, DVFilter, and Regression Classic 4.0 and Embedded. .

System and functional tools like – netperf, Iperf, tcp-dump wireShark,

DVS (Distributed Virtual Switch), Virtual Switches, PVLAN, DVFilter, FPT, IPV6, TCPIPv2.

### Project Assignment#2: Vmkernel Storage Testing.

Role: Software QA Engineer

Platform: ESXi (hypervisor)

### **Achievements:**

Regression, Functional and Performances Testing of Linux Kernel Device Drivers –SCSI device drivers of VMware

Creating Automation Scripts for Testing (Scripting in Perl and Bash Scripting).

Maintaining and running the automation Scripts required for the testing.

Gathering test requirements, developing, implementing and executing test plans, Test reports, Test summaries.

Experienced on VMware Virtual Client, Virtual Data Center, and VMware ESXServer.

Worked on release of subsequent Builds of ESXServer, Visor, and ThinESX including Beta releases.

Experience in conducting performance testing on various SCSI Drivers and parallel run for automated testing.

Developing integration testing strategy and tracking the test plans and test specification.

Hands on QA/Testing (Regression) on LUN, Rescan, scan and IOCTLS

#### **EDUCATION**

Symbiosis International University MSC (CA) (2006-2008)	68%
St Francis De Sales College Nagpur University Bachelor of Computer Science (BCS) (2004-2006)	68%
XII I.S.C in the year of 2003	66%
X from I.C.S.E. Board in the year 2001	75%