**S. Bibha**

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**Summary:**

* **14 years of experience** in software testing, which includes Manual, Automation and Performance testing.
* **Automation** using **Python and Java-Selenium**
* Involved various testing stages and process or techniques like system testing, regression Testing, sanity testing, conformance testing, compatibility testing, load testing and stress testing, Performance testing, GUI testing, UAT and **SIT** (System Integration Testing) or **End to End testing.**
* Understanding the requirement and Preparing test cases using word and excel templates, reviewing test cases, Test case execution, analyzing log files, Report Bugs, Test summary report, product support and Preparing **RTM (Requirement Traceability Matrix)**
* Involved in testing activities following different Software Development Life Cycles (SDLCs) like **Waterfall**, **V-Model** and **Agile Scrum methodology.**
* **Strong** knowledge and hands on experience in **SQL**.
* Experience working on **Android, iOS**, **Windows**, **Linux, Solaris Servers/platforms.**
* Preparation of **test environment in windows and Unix/Linux/Solaris** Servers which includes **Installation** and **configuration of Web-Server or apache-tomcat, Sybase Server, SCP/SMP Server, Application Server, VMS server, Switches, Charging System.**
* Experience in Test management & defect tracking tools such as **HP-QC**, **HP-ALM, BugZilla, Requeste, Rational Clear-Quest, JIRA, Target Process, GIT, Jenkins, QUIX.**
* Experience with **Oracle, Sybase, MySQL, MS SQL** and **Postgress databases.**
* Experience in database tools like TOAD, SQL-Developer, SQL-Advantage,

DB-Visualizer, Rapid SQL, SQL Server Management Studio2012.

* Done **Load, Stress and Performance testing** using **JMeter.**
* Testing **Web Services/APIs/XML/WSDL requests** using **SOAP UI** and **JMeter.**
* Testing features and **and automating** with **REST APIs,** **JSON** and **POSTMAN .**
* Experiencein extensively testing **IVR calls** and **functionalities.**
* Experience in giving **test estimation** for **CRs, site issues and** User Stories**.**
* Experience in working in different SDLCs like **Waterfall**, **V-Model and Agile-Scrum**.
* Experience in Preparing **Flow Diagram** using **MS-Visio.**
* Involved in **RCA (Root Cause Analysis)** and Clear and detailed documentation of Issues.
* Strong **knowledge** of **telecom domain** and protocols/standards like **GSM (MAP) SS7 (ISUP, SCCP), IN (INAP, CAMEL, WIN), SIP, WiFi, charging** and **billing etc.**
* Knowledge of **Networking** concepts and protocols like **TCP/IP, IPV4, IPV6, LAN, WAN, Virtualization etc.**
* Knowledge of **Healthcare standards, HIPAA** and **FDA regulations.**
* Worked in telecom testing tools like **EAST** (to configure **protocol message parameters** according to the call flow) and used protocol analyzer tool **Wireshark.**
* Knowledge of **Continuous Integration** process.
* Testing the Bug-Fixes provided for site issues and Provide **support to developers** during **Bug fixing** for critical features.
* To provide the technical supervision to team members whenever required.
* Good communication and quick learner.
* Strong analytical, troubleshooting and problem solving skills.

**Technical Skills:**

Operating System Linux, Solaris, iOS, Android, Windows

Scripting Language PERL, SHELL, Python, Gherkin

Framework Python's unittest, TestNG, BDD(Cucumber)

Database Oracle 9i /10g/11g, Sybase 12.5, MySQL 5.1.52, Postgress

Protocols GSM (MAP), SS7 (ISUP, SCCP), IN (INAP, CAMEL, WIN), SIP, SDP, TCP/IP.

Tools EAST, Rational Clear Quest, Selenium, BugZilla, JIRA, Confluence, SVN, VSS, CVS, HP-ALM, Target Process, Wire shark, Putty, Secure CRT, Beyond Compare, Edit Plus, WIN SCP, TOAD, DB-Visualizer, SQL Server Management Studio2012, PyCharm, Eclipse, Maven, Visual Studio1.60.0, SOAP UI, SOAP UI Pro, Advanced Rest Client, Postman, JMeter, QUIX, GIT, Jenkins, VMware-VSphere, VCSU(Virtual Connect Support Utility), IOMeter, splunk, SAINTS, QTest

Products Soft Switch (ss1b), Access/Trunk/Signaling GATEWAY (MSG 9000), IAD, IP Phones, SIP Application Server, Media Server.

SDLC Water Fall, V-Model, Agile Methodology

**Professional Expérience:**

**Project Title: NR Migration Jun 2024 – Till Date**

**Client: Verizon**

**Location: Irving, TX**

**Role: Senior Test Automation Engineer**

**Roles and Responsibilities:**

* Analyzing requirements and Preparing test scenarios and test cases
* Fetching sample API requests XMLs and test data from Kibana for diffrent NR Retails and Dotcom Clients
* Collecting MTNs from database using VDRT tool and prepare test data
* Execute test cases on different **REST APIs** and verifying functionality using **POSTMAN** tool
* Perform **End To End** Order flow testing for different flows like FRP, DP, Add-A-Line, Upgrade Line and New line flows.
* Developing **automation scripts from scratch** by **Parameterizing and chaining APIs in POSTMAN** to build End-To-End Test Framework which significantly reduced the execution time.
* Compare the BAU and NSA respnses for different APIs using Notepad++ compare Plugin and WinMerge tool.
* Debugging and troublshooting issues by checking the logs and Order Flow/journey in **Kibana** for different Orders
* Checking values in Oracle database using **SQL queries**
* Raising defects and updating status of defect using **Jira**.
* Preparing and analyze Test Metrics to assess readiness to production deployment.
* Preparing Test Report and provide Sign Off on the User Stories or APIs
* Working in coordination with offshore team to complete the assigned tasks.

**Project Title: VOIP (Voice Over Internet Protocol) Nov 2022 – May 2024**

**Client: Verizon**

**Location: Irving, TX**

**Role: Senior Test Automation Engineer**

**Description:**

VoIP services convert your voice into a digital signal that travels over the internet. VoIP can allow you to make a call directly from a computer, a special VoIP phone, or a traditional phone connected to a special adapter. That adapter will convert the analog signal to digital.

**Roles and Responsibilities:**

* Preparing test cases/ test scripts for manual execution in **Qtest** tool.
* Prepare **Requirement Traceability Matrix(RTM)** for mapping Requirement with test cases
* Manually Creating TSO and NON-TSO Enterprise and Location Orders through the XML creator and adding, deleting and modifying the order through XML and/or GUI.
* **Automating** ESAP GUI and PC GUI test cases/ operations with **Java-Selenium, TestNG**, **Maven** and development environment **Eclipse**.
* Automated using **Java OOPs concept**, **Page Object Model** and **Data Driven Testing**.
* Pushing the automation script/code to version control/**repository GIT**.
* Configure the Continuous Integration/Continuous Deployment (**CI/CD**) tool **Jenkins** to trigger the automated suite.
* Working on different User stories and tasks assigned to me in an **Agile-Scrum** system. Prepare test cases on the stories and execute them.
* Verifying data and Values in the Oracle database using **SQL queries**.
* Reporting defects in Jira and updating the status in **Jira** and **Confluence**
* Install software and tools and prepare the setup, analyze and troubleshoot issues.
* Doing Production shakeout or deployment for PC Option1 & Option2, which involves creating and pushing Orders in the Mainframe system
* Participating in daily Stand up calls in the **Agile** Sprint iteration.
* Actively participating in **onsite-offshore** calls and meetings.

**Project Title: Field Art Jun 2021 – Oct 2022**

**Client: Verizon**

**Location: Irving, TX (Remote)**

**Role: Senior Test Automation Engineer**

**Description:**

Field Art has different systems or applications using which we can create different types of jobs, assign jobs to technicians and change the status of the job that is assigned to the technician in order to perform certain tasks.

**Roles and Responsibilities:**

* Preparing manual test cases/ test scripts for different user stories, in **QTest** tool.
* Prepare **Requirement Traceability Matrix(RTM)** for mapping Requirement with test cases
* Executing the manual test cases and updating status in QTest tool
* **Automating** the test cases Using **Selenium** tool
* Preparing test scenarios or feature files using **Gherkin** Language in the **BDD (Cucumber)** framework using Visual Studio tool.
* Executing the automated test cases using **Visual Studio**.
* Checking in the automation scripts to **Git Repository**
* Configuring **Jenkins** and running the individual feature files and also the regression suite.
* Assigning, unassigning, changing status of jobs by executing **SQL queries** on **Oracle** database and also through **SOAP UI**.
* Installing APKs on Android device and testing various Applications/features on the **Android device**
* Reporting defects and updating the status of defects in **JIRA and** creating Story filter and Defect filter in **JIRA** using **JQL.**
* Attending the Sprint Planning meetings and daily Stand up calls in the **Agile** process and updating the status of work
* Working in coordination with the Offshore team to complete various assigned tasks.
* Sending daily Status Report and Sign Off emails after every Sprint.

**Project Title: RFA (Radio Frequency Ablator) May 2020 – Jun 2021**

**Client: Abbott Laboratories**

**Location: Plano, TX**

**Role: Senior Test Automation Engineer**

**Description:**

Radio Frequency Ablator is an Ionic Radio Frequency Generator which is used to reduce chronic pain in different parts of patient’s body. It provides different types of treatments like Sensory, Motor, Lesion, Pulsed and Simplicity by applying which pain is reduced by killing the pain generating tissues in the body.

**Roles and Responsibilities:**

* Preparing objectives (test cases) for different requirements, in test management tool SAINTS
* Executing the manual test cases and updating status in SAINTS tool
* Testing the UI and different software and hardware functionality of the RF Generator device
* Checking different parameters like frequency, pulse width, voltage, impedance etc. in **Oscilloscope** for different mode of treatment
* Preparing **automation scripts** to automate the test cases or objectives using **Python**
* Pushing the automated scripts to **bitbucket**
* Executing the automation scripts using SAINTS
* Raising defects and updating the status of the defect in **JIRA**
* Preparing **Protocol documentation** according to **FDA regulations.**
* Participating in the daily stand up call in the **Agile**-**Sprint** process
* Taking part in the meetings and discussions with the management and updating the status

**Project Title: Remote Care Aug 2019 – Apr 2020**

**Client: Abbott Laboratories**

**Location: Plano, TX**

**Role: Senior Test Automation Engineer**

**Description:**

Remote Care provides the patient and clinician a new feature for securely adjusting a patient’s Implantable Pulse Generator(IPG) settings remotely while interacting in a video teleconference.

**Roles and Responsibilities:**

* Preparing objectives/ test cases/ test steps for different requirements, in SAINTS tool
* Making sure the iPad/iPod/iPhone is on the correct iOS version, if not, upgrade to the correct **iOS**
* Downloading the Clinician Programmer and Patient Controller build from Nexus server/repository and Installing build/app on the **iOS platform**
* Executing the test cases and updating status in test management tool SAINTS
* Doing GUI, sanity, functionality and compatibility testing of the app **in different versions of iOS**
* Executing Regression test cases using Ranorex tool
* Verifying the data and values in **Postgres database (** in **Azure cloud),** using **SQL** queries.
* Obtaining the app logs and session logs through iTunes and debugging & troubleshooting issues
* Raising defects and updating the status of the defect in **JIRA**
* Participating in the daily stand up call with the team in the **Agile-Sprint** process
* Taking part in the meetings and discussions with the management and updating the status

**Project Title: Transfer Your Service (TYS) Dec 2018 – July 2019**

**Client: Verizon**

**Location: Irving, TX**

**Role: Senior Test Automation Engineer**

**Description:**

Transfer Your Service is a service which enables the customer to transfer a line from a consumer account to a Business account. It could be relinquisher initiated or assumer initiated

**Roles and Responsibilities:**

* Preparing manual test cases for **End To End** scenarios for the user stories, in QTest tool.
* Prepare **Requirement Traceability Matrix(RTM)** for mapping Requirement with test cases
* Doing **End To End** and **UAT** testing and updating status in **QTest** tool
* Retrieving test data using VDRT tool
* Executing the test cases on different **Retail**/**Point Of Sales (POS)** applications.
* Execute the Regression automation test cases
* Executing **SQL Queries** on Oracle DB to validate data
* Checking and analyzing logs using **Kibana** tool
* Reporting defects and updating the status of defects in **JIRA and** creating US filter and Defect filter in **JIRA** using **JQL.**
* Attending the daily Stand up calls in the **Agile** process and updating the status of work
* Working in coordination with the Offshore team to complete various assigned tasks.
* Sending daily Status Report and Sign Off emails after every Sprint.

**Project Title: SDP (Service Delivery Platform) Aug 2016 – Dec 2017**

**Client: Verizon**

**Location: San Diego, CA**

**Role: Test Automation Engineer**

**Description:**

SDP (Service Delivery Platform) provides Machine to Machine (M2M) platform. The Verizon M2M platform solution helps you Manage connectivity for your 2G, 3G and 4G LTE M2M devices through a unified portal. It helps Provision service, troubleshoot connectivity, monitor and manage usage, run reports and configure alerts to notify you of exceptions to business as usual. It provides a platform to automate provisioning, monitoring and control of wireless M2M devices.

**Roles and Responsibilities:**

* Responsible for testing various machine-to-machine(M2M) applications and communication platforms.
* Preparing test cases based on user stories, executing them.
* Doing **Web Services/API** testing using **SOAP UI** or equivalent tool.
* Developed utilities using **python scripting** to validate response from SOAP UI or Web Service testing.
* Written **Python scripts** to Configure and **trigger automated** integration test environments via **Jenkins,** which includes **connecting to the Database and fetching the build number from the tables, trigger the build deploy and trigger the execution of the regression suit and sending emails using python script**
* Parsing **JSON data using python**
* **Web GUI** automation using Java, **TestNG**, Maven, Eclipse and **Selenium** **Web Driver.**
* Executing the **Automation** Test Cases/scripts **on AWS Platform** using **Docker.**
* Backend Testing using **SQL Queries** on MS SQL Server databases
* **Performance/ Load/Stress testing on APIs** using **JMeter.**
* Testing on various **provisioning** operations.
* Doing **Regression Testing**.
* Configuring **CI/CD** setup using **Jenkins**.
* Debugging and troubleshooting issues using tools like **Splunk.**
* Logging defects using **JIRA**, and verify the fixes provided for defects and production issues.
* Supported testing during SDP release deployments or Verizon Enterprise Release (ER) deployments
* Provide quality **documentation** and status updates.

 **Environment:**  SQL, Python, XML, Java, Selenium

**Project Title: One View Apr 2015 – July 2016**

**Client: Hewlett Packard Enterprise**

**Location: Palo Alto, CA**

**Role: Networking Test Automation Engineer**

**Description:**

OneView converged is designed to accelerate IT operations for managing servers, storage, and network resources that delivers a unified and consistent management experience across servers, storage, and networking. OneView converged manages various entities in the Data Centre such as Storage, Network, Enclosure, Servers etc. from a single pane. It maintains audit records and track all related converged infrastructure assets and resources runs on top of the hardware, such as a private cloud.

**Roles and Responsibilities:**

* Involved in setting up the test environment.
* Creating appliances /VM (Virtual Machine) using **VMware-VSphere** tool and configuring it.
* Updating the firmware version using **VCSU** (Virtual Connect Support Utility) tool.
* Preparing system test cases on different features and maintaining them in **HP-ALM** and **executing** the **regression test** cases **using HP-ALM**.
* Verify the hardware configurations of the enclosures which include servers, interconnects in the lab.
* Automated test cases using Python. Modified the **python** scripts as per the changes in the features and optimized the python scripts. Checking in the script in **Git Hub**.
* Executing automated test cases using **Jenkins**.
* Testing functionalities through **REST APIs** and **JSON** using Advanced Rest Client/**POSTMAN** tool.
* Logging defects in defect tracking tool, QUIX.
* Verifying the fixes given for defects.
* Filling up daily time sheet and sending weekly report.

**Environment:** Java, Linux, TCP/IP, IPV4, IPV6, Python

**Project Title: OCS (Online Charging System) Aug 2012 – Feb 2015**

**Client: Claro -Peru**

**Location: Bangalore**

**Role: Senior Software Engineer**

**Description:**

It's a convergent charging system mainly used for pre-paid billing and post-paid billing which supports voice and data charging. CGW will support both data as well as voice, currently it's supporting only data charging and SCP is doing the voice charging. RTCC system supports post-paid charging. ODCS system provides the GUI interface for customer care to create and manage the packages in billing system for pre-paid and post-paid subscribers. ODCS system also enables the subscriber to provision package and query about packages in subscriber account.

**Roles and Responsibilities:**

* Prepare the test environment/bed having **Linux/Solaris** Servers and deploy the patch released to system test on the test bed.
* Involved in **Smoke, Sanity, Functionality, Regression** and **End-to-End testing** or **SIT (System Integration Testing)**.
* Experience **leading** a small **team** of 4 to 5 members.
* Wrote **Perl script to automate** the Sanity cases.
* Involved in **Web-service API testing** between multiple nodes using **SOAP UI** and **JMeter** by **XML** request and response.
* **Performance/ load testing** using **JMeter.**
* **Preparing test cases** using word and Excel template, **reviewing** and **executing** test cases for new CRs.
* Writing **end to end test cases** for user acceptance testing.
* Involved in **estimation** for small **CRs.**
* Preparing **Requirement Traceability Matrix (RTM)**
* Checking the Values in database using **SQL Queries** and checking the logs to ensure success or failure for any operation.
* Raising bugs using Requeste tool.
* Verifying the fixes provided for site issues.
* **GUI testing** of Web pages and validating functionality through web.
* **Web GUI** automation using **Selenium** **Web Driver** which includes **Selenium automation script creation** and **script execution.**
* Involved in testing **Subscriber Provision** and Voucher Management in Pre-paid Database.
* Involved in testing of Subscriber Management for Pre-paid and Post-paid subscriber.
* Involved in testing of user-payer relationship and different type of container testing.
* Involved in testing of different packages for Pre-paid and Post-paid subscriber.
* Updating daily work report and effort in the PMS.

**Environment:** C++, Java, Linux, Solaris, Sybase, Python, Selenium, IN-INAP, CAMEL.

**Project Title: SCAP (Seam-Less Capture) June 2011 – July 2012**

**Client: Cable & Wireless Panama, Vodafone Fiji**

**Location: Bangalore**

**Role: Senior Software Quality Engineer**

**Description:**

Some HPMN network denies the latch in of their roamers into certain VPMN (Host network) using SOR. Because of this, VPMN loses the revenues due to these roamers. SCAP is a node which is implemented in VPMN that makes the in-roamer to latch in even though the SOR is present at HPMN. It can be implemented in Active or Passive Mode or Advanced Capture Mode. It can act against Active SOR or Passive SOR.

**Roles and Responsibilities:**

* Preparation of the Test Setup which involves the installation SDS6.0, IRDB, SDS7.0, and the Application Server. Configure all the component
* **Preparing test cases** using Excel template on the call flows and other requirements
* Review of test cases prepared by others
* Train my juniors on how to prepare the environment and how to write test cases.
* Preparing Test Scripts using **EAST Tool**. Executing the test cases using EAST tool.
* Checking the Values in database using **SQL Queries** and checking the logs/trace to ensure success or failure for any operation
* Checking the correctness of the message parameters using **Wireshark**
* Reporting the bugs using **JIRA** and **Target Process**.
* Modifying the routing logic written in **Perl** according to the **call flow**
* Have done **sanity, Functionality, Regression, GUI testing** and also **statistical analysis**.
* Preparing **System Test Report** and Test List.
* Taking part in daily stand up calls and Retrospective meetings in **Agile** process

**Environment:** Linux, Java, Oracle, GSM-MAP, SS7- SCCP.

**Project Title: VOT (Tele Voting) Oct 2009 – May 2011
Client: TTSL**

**Location: Bangalore**

**Role: Senior software Test Engineer**

**Description:**

This is a VAS product based on NGN Network and UP10 platform, meant for Reality shows and Pre-Poll Predictions. It has several features and 3 models for voting e.g. web, ivr and sms. VOT is based on 4 major components, SCP (Service control point), SMP (Service management point), and DB and AS (application server).VOT Application server Connects to SS and Media gateway and other network elements in NGN network. In Web/Dashboard all the prefix, area code, program information, media house information are configured and call result, winner information and statistics reports are displayed. For IVR call, call is initiated by user and call comes to SS and SS instructs the UP10(SCP) to trigger Parlay71 service, and based on the user input data call is connected and tones are played from the media server and call results are stored in DB after the call termination. For SMS voting, user generated sms comes to the SMSC, and SMSC sends that to IMP, IMP instructs SCP to trigger pstn971 service and stores the result in DB and sends the response.

**Roles and Responsibilities:**

* NGN lab including SS1b, MSG 9000, IAD I524 installation and configuration.
* Installing SMP and SCP and DB Server which includes Linux, Oracle 10g/Sybase 12.5 Database, SMAP and Tomcat.
* Configuring the Web Application server
* Integrating SCP/SMP/DB servers with SS1b and MSG 9000 and IAD I524.
* Capturing and analyzing **SIP** messages using **Wireshark**
* Preparing, reviewing and executing test cases for functional, and performance testing.
* Testing the calls/functionalities through **IVR, Web** and **SMS**.
* Reporting the bugs found, using Rational Clear Quest.

**Environment:** Turbo Linux, C++, Java, Sybase, SIP.

**Project Title: CRBT** (**Coloring Ring Back Tone) Oct 2008 – Oct 2009**

**Client: SINGTEL Singapore, STARHUB Singapore, SMART Indonesia**

**Location: Bangalore**

**Role: Senior software Test Engineer**

**Description:**

CRBT is a PSTN VAS product running on IN platform. The CRBT service allows the calling party instead of the called party to listen to the tone. When a mobile user subscribes to the CRBT service, people who call him/her will hear the special ring back tone chosen by the user rather than the ordinary beep sound. The coloring ring back tone can be a song or music or a humorous speech, and thus it is a personalized value added service for the called party. It is based on SCP, SMP, IMP, Web Server, VMS server and IP/SSP.

**Roles and Responsibilities:**

* Preparation of the Test Environment which involves the installation of Linux, ZXIN OS and Sybase server on a Linux platform.
* Installation of Web Server on Linux Platform, Configuring Switch and VMS server
* Preparing **Data Flow diagram** (detail flow of the requirement) using **MS-Visio**
* Preparing test cases using Word template, especially on charging scenarios. Apart from that also prepared test cases on **Web, IVR, sms** part
* Review of test cases prepared by others.
* Train my juniors on how to prepare the environment and how to write test cases.
* Did testing of **IVR part**, sms, Web, WAP and charging part (CDRs and logs)
* Testing **Web-Service** using **SOAP UI** and **JMeter** using **XML** request and response.
* Testing **Web Site** or **web page** (GUI, Functionality both).
* Have done Back End Testing
* Checking the Values in database using **SQL Queries** and checking the logs/trace to ensure success or failure for any operation.
* Executing the test cases and **reporting** the bugs using **HP QC.**
* Preparing **System Test Report** and Test List, and **Bug Analysis Report**.

**Environment:** Linux, C, C++, Java, Sybase, IN - INAP, SS7-ISUP, GSM-MAP.

**Project Title: PPC (Pre Paid Charging) April 2007 – Sept 2008**

**Client: BSNL**

**Location: Bangalore**

**Role: Software Test Engineer**

**Description:**

PPC service, i.e. Pre Paid Charging service, is a kind of service developed based on CDMA intelligent network platform. It’s a service of 800MHz CDMA digital cellular mobile telecommunications network based on Standard IS826.The user establishes an account by prepaying a certain sum or purchasing a card of a fixed face value (e.g. a rechargeable card) and put a certain money into it as phone charges. When a conversation is established, the system decides whether to receive or reject it according to the balance in the user’s account. During the course of the conversation, real-time charging is performed and the phone charges are deducted from the user’s account so that the charges are prepaid for the user’s conversation and usage of other services. When the user’s balance is insufficient, the conversation will be terminated and the corresponding recording notification will be played.

**Roles and Responsibilities:**

* Preparation of the test bed which includes installation of SCP/SMP, configuration of switch.
* Study of requirements and prepare test items or scenarios.
* Preparing reviewing and executing test cases.
* Testing functionalities through **IVR** and **Web**
* Reporting bugs using BugZilla
* Preparing Test Summary Report and Test List
* Preparation of user manual.

**Environment:** Linux, C, C++, Java, Oracle, CDMA-IN (WIN = Wireless Intelligent Network).

**Education:**

* B.E from BPUT (Biju Patnaik University of Technology)