MADHU B

9845079844 — madhu.adiga@gmail.com — www.linkedin.com/in/madhu-b-26a420bs

PROFESSIONAL SUMMARY

Senior QA Test Specialist with 14+ years of expertise in telecom software testing across 2G/3G/4G network elements. Proven track record in performance, system, and endurance testing of enterprise telecom products at Hewlett Packard Enterprise. Expert in containerized testing environments (Kubernetes/OCP), protocol testing (Diameter, M3UA, SS7, SIP), and API automation. Holds 2 US patents in IoT sensor reliability and device updates. Skilled in leading test strategies for complex telecom switching, signaling, and IoT platforms serving major global carriers.

TECHNICAL SKILLS

Testing Expertise: Performance Testing, Endurance Testing, System Testing, Functional Testing, Regression Testing, API Testing, Protocol Testing
Protocols: Diameter (Swx, Sh, S6a/S6d), M3UA, SS7 (MTP, ISUP, SCCP, TCAP), SIP, HTTP, MQTT, CoAP, LwM2M, LoRA oneM2M
Test Tools: Postman, SOAP UI, JMeter, SIMULAP, Seagull, SIPP, Wireshark, INET Spectra, MGTS
Automation & CI/CD: Jenkins, Git, SVN, Ansible, Copilot (test automation), Helm Charts
Test Management: HP ALM (Quality Center), JIRA, Spira, Synergy, PIRATE
Container Platforms: Kubernetes, OpenShift (OCP 4.12/4.14/4.16), Microsoft Azure, Docker, Helm
Operating Systems: Linux (RHEL 7.x/8.x), Unix, Windows, NSK
Databases: EDB Postgres, SQL
Programming/Scripting: Basic shell Scripting
Methodologies: Agile, STLC (Software Test Life Cycle), Test Strategy Development

PROFESSIONAL EXPERIENCE

Senior QA Test Specialist August 2011 – Present
Hewlett Packard Enterprise (HPE) *Bengaluru, Karnataka*

- Lead system test validation for 4G HPE iHSS on containerized platforms (OCP 4.12/4.14/4.16), serving AT&T USA, AT&T Mexico, Cisco, Truphone, and Altan, ensuring 99.99% availability for production deployments
- Architected and executed comprehensive test strategies for containerized iHSS migration from RHEL 7.9 to 8.6, including Helm-based upgrades, performance validation, and multi-pod deployment testing
- Designed functional and system test cases for new features based on FRS, creating JMeter/SIMULAP test scripts that reduced regression testing time by 60% through automation
- Implemented automated regression testing using Copilot for HPE cIHSS database, achieving 70% automation coverage and reducing manual testing effort by 45%
- Conducted performance benchmarking of IHSS on KNET corosync vs UDPU configurations, identifying 25% throughput improvement and optimizing deployment recommendations
- Validated Diameter Gateway and SS7 container deployments using multus networking, ensuring protocol compliance across 3G/4G network integration points
- Monitored CI/CD pipeline regression results in Jenkins, establishing quality gates that reduced production defects by 35%
- Led endurance testing campaigns exceeding 72+ hours, validating system stability under peak loads of 10K+ transactions per second

Key Projects at HPE:

- **HPE Universal IoT Platform (2017-2019):** Performed system and functional testing of web-based IoT platform supporting HTTP, MQTT, CoAP, LwM2M, and LoRA protocols. Developed test plans, executed performance tests for 5000+ concurrent LwM2M devices, and validated OneM2M standard compliance using Postman and JMeter
- **Intelligent Network Service (INS) Platform:** Validated wireline/wireless services for AT&T, Vodafone, and Telecom Italia using SS7, M3UA, SIP, and Diameter protocols. Created and executed functional test cases and regression suites
- **WiFi Authentication Gateway & RTMS:** Tested authentication solutions for SoftBank and DOCOMO Japan, performing functional and regression testing with HP Quality Center for bug tracking and validation

Test Engineer Prior to 2011
Tech Mahindra Pvt Ltd *Bengaluru & UK*

- Executed end-to-end testing for British Telecom's 21CN Wholesale NIT multivendor environment, validating SIP, MTP, ISUP, SCCP, TCAP, and M3UA protocols on Ericsson AXE-10 softswitch
- Performed system testing of Alcatel SSG 5070 Signaling Server and Motorola MSSC CDMA gateway, including feature testing, regression testing, and performance testing
- Prepared test procedures, INET scripts, and test environment setups for complex telecom switching scenarios
- Analyzed protocol traces using Wireshark, segregated CDRs, and managed defect reporting and tracking processes

PATENTS

- **US Patent US10810061B2:** System and methods of enhanced data reliability of IoT sensors to perform critical decisions using peer sensor interrogation
- **US Patent US20220027140A1:** IoT Device Update - Novel methodologies for secure and efficient IoT device firmware updates

EDUCATION

Master of Science in Telecommunication and Software Engineering
Birla Institute of Technology, India

Bachelor of Engineering in Telecommunication Engineering
JNN College of Engineering, Shimoga — VTU, Belgaum (Karnataka)