Hai Tuan Nguyen

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SUMMARY:

Thermal Test engineer with 8+ years of hands-on testing experience in hardware validation, thermal testing, and system integration at Cisco. Proven expertise in test automation, scripting, and quality assurance methodologies. Strong background in Linux environments, programming languages (C, Python), and collaborative engineering workflows. Seeking to leverage transferable testing skills in Cisco network infrastructure and AI deployment solutions.

EXPERIENCE

Thermal Test Engineer   09/2017-present

Cisco, CA (3 years as contractor then as regular fulltime employee since early 2000)
- Designed and executed comprehensive test plans for thermal validation and system performance testing across CPU, GPU, and memory components.
- Developed automated test scripts using Bash and Linux environments for regression testing and continuous validation.
- Collaborated with cross-functional engineering teams (HW, SW, Support) to reproduce and troubleshoot complex system faults and performance issues.
- Built and maintained testbeds for hardware qualification and software release validation.
- Generated detailed test reports and quality metrics analysis to improve product quality during R&D phases.
- Performed functional testing, platform testing, and solution testing across diverse hardware configurations.
- Moderated the cloud-based PMP management software Jira or OpenProject for tracking and planning collaborative project development workflow.
- Maintained, updated and integrate SQLite database for thermal test results as a resource for Jira and OpenProject.
- Build and prepare mocked-up prototype with various DAQ and Sensors integration for thermal test on new blades, rack servers, chassis to fine tune air cool and liquid cooling algorithm for feasible study of proof of concept (POC).

Production Line Lead   09/2015-05/2016

Flextronics in Milpitas, CA
- Managed quality assurance processes across multiple production stages ensuring zero-defect manufacturing
- Responsible for maintaining continuous operation of testing stations including SMT machine, ICT, 5DX, JTag debug, and mechanical assembly
- Implemented test automation workflows and troubleshooting procedures to prevent production delays
- Coordinated with engineering teams to resolve hardware and software integration issues
- Developed testing protocols and quality metrics to meet shipping quotas and delivery timelines

RELEVANT TESTING PROJECTS

UCS Server/Blade Thermal Test Automation   2024-Present
- Collaboratively with a Software developer to design an automation Framework for automating various tests using Python and various scripts to reduce testing time down by 15% for all fine tune fan algorithm process.
- Proposed and implement OpenProject as framework for scheduling, track and storage for test database.
- Validated fan algorithm and fine tune the algorithm to ensure system components in specification.

Network and Thermal Performance Testing Server/Blade MLOM and VIC for Intersight   2021-2023
- Developed and trained other test engineer on how to do traffic test for UCS blades/rack server MLOM and VIC using Iperf3 and Pktgen as well as traffic generator like Spirent.
- Setup and configure various UCS manager and Intersight policies for MLOM and VIC network adapter to help deployed rack server and blade in data center infrastructure/environment for services.

- Test UCS rack server and blades with Fabric Interconnect, and Fex extender to expanse the addition and deployment of additional server in data center infrastructure.
- Developed small, automated scripts or ansible playbook for command line interface to network operating systems focused on client and server interaction between terminal server, Cisco switches and Cisco routers.

EDUCATION

MS., Aerospace Engineering and Mechanical Engineering, San Jose State University   08/2012
- *Master's Project: Developed GPU-accelerated computational solver using open source libraries, demonstrating proficiency in parallel processing and software optimization*
- Relevant Coursework: Systems Engineering, Computer Programming, Data Analysis, Mathematical Modeling

B.S., Aerospace Engineering and Mechanical Engineering, San Jose State University   08/2010
- *Exemplary Academic Achievement Honors, 2010 to 2011*
- Strong foundation in mathematical modeling, system analysis, and engineering problem-solving

SKILLS

Testing & Quality Assurance:
Manual Testing, Automated Testing, Regression Testing, Functional Testing, Platform Testing, Solution Testing, System Integration Testing, Test Plan Development, Quality Assurance Methodologies, Debugging, Troubleshooting

Scripting & Programming:
Python (developing), C/C++, Bash Scripting, Linux Shell Scripting, Test Automation Scripts

Operating Systems & Platforms:
Linux (Red Hat, Ubuntu), Network Operating Systems (NXOS), Windows, Instruments SCPI (Telnet protocol)

Test Tools & Automation:
LabVIEW, Custom Test Automation Scripts, Git, Test Data Analysis Tools, Traffic Generation Concepts, DAQ

Hardware & Network Testing:
Network Test Equipment, System Validation, Performance Testing, Thermal Testing, CPU/GPU/Memory Stress Testing, Testbed Design and Maintenance

Development & Collaboration Tools:
MS Office Suite (Word, Excel, PowerPoint), Technical Documentation, Database Management (MS Access, SQL basics), Cross-functional Team Collaboration (Webex)

CORE COMPETENCIES

- **Thermal Test Methodologies:** Test planning, execution, and validation across hardware and software systems
- **Test Automation:** Scripting and automation framework development for thermal and traffic testing
- **Cross-functional Collaboration:** Proven ability to work with engineering teams (SW, HW, Support) for fault reproduction and resolution
- **Problem-solving:** Strong analytical skills for debugging and troubleshooting complex technical issues
- **Development Focus:** Focus on quality metrics and specification satisfaction and compliance through rigorous testing processes
- **Continuous Learning:** Actively developing skills in network testing and modern non-destructive practices
- **Communication Languages:** Fluent in English and Vietnamese