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**Expertise Summary**

* **8+** years of diverse experience in Quality Assurance mainly as **a Performance Engineer/ Tester /Lead & QA Analyst.**
* Experience working in Different domains like **Banking, Education Services,Insurance, Health care, Retail sectors** and **Power Systems** with a unique combination of skill set in solving complex quality assurance challenges, and implementing solutions that work.
* Extensive knowledge in Performance Test Life Cycle, Strong knowledge of Software Development Life Cycle (**SDLC**) and well acquainted with Software Testing Life Cycle (**STLC**).
* Good experience in **ApplicationTesting** and **QualityAssurance** of **web based applications, Client Server, SOA (Service Oriented Architecture), DB**and **Mobile Applications**.
* Expertise in Gathering performance test requirements from the client and designed Performance Tests for Benchmark, Baseline, Load, Stress, Endurance, Failover, Spike and Configuration Tests Etc.,
* Proficient in distinct phases of Performance testing like **Smoke, Load, Stress, scalability, stability, volume, Spike, stress, database, failover, and longevity testing**.
* Expertise in preparing Performance Test Strategy, Creating Test Plans, Creating Test Summary Reports, Creating Test Cases, Creating Test Scripts and Analysis for Performance Testing.
* Hands on Experience in **HP Load Runner, HP Performance Centre** and **HP ALM** as a Commercial Tool and **JMeter** as an Open Source Tool.
* Experienced in Creating a Load Runner Environment by configuring all components: **VuGen**, **Controller**, **Analysis**, **LoadGenerator**and**JMeter.**
* Extensive experience in determining the systems configuration for **LoadRunner**, involved in negotiating with HP and In Commercial talk for HP **LoadRunner** to the client.
* Extensively used most of the Load Runner protocols for testing Client server applications (Internal & External Faced).
* Expertise with run time settings/recording options and general options in **HPLoadRunner**.
* Proficient at identifying, debugging and fixing **Vugenscripterrors, Designing Scenarios, Developing Robust Scripts**, Maintaining Performance Test Suits and Designing Reusable Test Frameworks and Suits.
* Used Various Monitoring tools like **HP LoadRunner Monitoring, HP Performance Centre Monitoring, CA Wily Introscope, HP Site Scope, Dynatrace, App Dynamics, HP Diagnostics, JVisual VM &JConsole. etc**.
* Monitored the Applications in **End User Experience perspective, Overall Application Performance perspective**, **Business Transaction Performance perspective** and**Application Infrastructure PerformancePerspective.**
* Monitored **Hardware, Memory, Memory Pools, Apache, JVM, Web Servers, App Servers, DB Servers and Network** etc., using Monitoring tools.
* Experience in collecting the Windows and Linux counters of **Webservers** and **Application Servers** like **Memory**, **CPU**, **Network** and **Heap Usage** and also experience in Tracking and Reporting of defects using **DefectTrackingTools** such as **HP**/**MercuryQualityCentre**and **JIRA**.
* Analyse**LoadRunner** test results and report any discrepancies against **SLA's**.
* Experienced in detecting bottlenecks such as very high **CPU** usage, memory leaks and communicated with the developers to optimizing the code.
* Experience in writing complex **SQLQueries**, extract data from **Oracle**, **MS**-**SQLServer** and **IBMDB2 Data base**.
* Expert knowledge of Identifying and Analysing the Bottlenecks in **Performance testing, Web Performance Throughput, Server Response Time and Network Latency.**
* Analysed post performance test results and identified the bottlenecks in the wide array of applications, interfaces, and adaptors in n-tier architecture.
* Involved in Performance Tuning of the applications using Various Monitoring tools, Bottleneck finding, **Performance Tuning**, **Deployment** and **Retesting.**
* Performed tests and analysis such as load test, spike test, stress test, endurance test, performance bottleneck test, benchmark test, baseline test etc. using HP Load Runner on **web server, application server** and **database server** at various levels and loads**.**
* Practiced tester of web application running Load Balancers with several types of logic for distributing incoming **HTTP** requests.
* Ability to successfully manage multiple projects and meet deadlines effectively through a combination of business and technical skills.
* Expert in doing performance testing in agile and Waterfall Methodology.Raised and Tracked Defects using **JIRA, QC tools**. Also, attended Scrum stand up meetings and taken part in various Sprints for projects.
* Strong analytical **skills**, **logical**, **presentation skills** with **effective communication skills.**

**Technical Experience:**

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| **Testing Tools** | HP Load Runner 8.0, 9.5, 11.0, 11.50, 12.02,12.5,12.53. HP Performance Centre 11.0,11.5, 12, ALM, HP Quality Centre, JMeter 2.5, 2.7, 2.8, 2.9, 2.10, SOAP UI and QTP |
| **Languages** | Microsoft C#, C, C++, visual basic |
| **Markup/Scripting Languages** | DHTML, CSS, JQuery, JavaScript, XML, HTML |
| **Web Technologies** | HTML, CSS, jquery, word press |
| **Packages** | MS-Office, Adobe Photoshop CS5,Dreamweaver, flash, Illustrator, In Design |
| **RDBMS** | MS SQL, Microsoft Access, SQL Server, Oracle Database |
| **Operating Systems** | UNIX,Windows 98, 2003 Server, Windows NT/2000/XP. Windows 7. |
| **Monitoring Tools** | PerformanceCentre,CA Wily Introscope, HP SiteScope, Dynatrace, HP Diagnostics. App Dynamics |

**Work Experience :**

**Performance Test Lead May 2016 to Present,**

**Citizens Bank,Cranston, RI.**

**Responsibilities:**

* Assisted Testing Lead in coordinating and leading automation and load test efforts and derived load model by comparing and analysing test and production environment.
* Involved in analysing the requirements from Business Analyst and determined they are captured correctly and Interpreting Performance test requirements.
* Developed Test plans to ensure accomplishment of load-testing objectives.
* Tested application performance across workflows determined, if the application can perform satisfactorily in a production environment.
* Responsible for Script Creation (**VUGEN**), **Execution**(**Controller**) and **Analysis** / **Reporting**.
* Performed **Baseline, Load** and **Stress Testing** Using **LoadRunner 11.52/12.50/12.53** and Presented Performance statistics to the Team.
* Extensively worked on the **VUGen** scripting in **WebHttp**/**Html**, Mobile-Web protocol and Web services (**SOAP**) **Protocol** in **LoadRunner**.
* **UploadedScripts**, **CreatedTimeslots**, **CreatedScenarios**, **maintainedscripts** and Run the Load Tests in performance **Centre**/**ALM**. Analysed Test results Response time, Transaction per Seconds and Throughput per graphs.
* Developed and Implemented load and stress tests with **LoadRunner**, and present performance statistics for the Application Teams.
* Extensively worked on Performance monitoring and analysed the response time Memory leaks, hits/Sec and throughput graphs.
* Analysed various graphs generated by **LoadRunner** Analysis and Communicated bottlenecks to Concerned Teams.
* Used **Dynatrace, AppDynamics** and JVisualVM tools for profiling the application to find out where the performance issue resides.
* Did deep diagnostics using **DynaTraceTool**, **MonitoredDB** and Application Servers to trouble.
* Monitored hardware capacity ensures the necessary resources are available for testing.
* Worked closely with software engineering team members in order to tune and optimize product stability and performance.
* Assisted in application tuning and infrastructure capacity requirements to support high-volume peak periods of traffic.
* Identified which queries were taking too long and optimizing those with Database Tuning performance and Worked with Database administrator to index database to improve performance of the Applications.
* Performed Baseline test, stress test and high volume of users using **Jmeter 2.8/2.10** and monitored the performance of the load test on the system and measured database response time, Http request, Login and proxy server.
* Installed and **configured** application through profiling tools such as **VisualVM**, **Jconsole** and Monitored Linux resources during the load test.
* Finding Bottlenecks and solving the issues on Linux servers using different monitors.
* Monitored resource utilizations such as; **CPU** usage % of Memory occupied in **VM Stat I/O StatJVM**, **Thread**, System Processing time and latency in **Linux** Responsible for collecting the frequency **JVMHeap** and Garbage collection cleaned up in WebSphere during Test execution Ran Benchmark such as; **CPU, Disk, I/O** memory and **Graphicstests**. Analysed Measuring Response time, **TPS**/ Throughput under load through a **LAN** connection for mobile Application. Tracking Network traffic and Server capacity.
* Communicated with team members to discuss test reports.
* Participated in Defects to discuss the bottlenecks and Attended in a walk-through meeting, weekly status meeting and send weekly report status to the manager.

**Environment: Load runner 12.53/12.50, JMeter 2.8/2.10 Performance Centre 11.5,HP ALM, DynaTrace, AppDynamics,JVM, Web logic 11g, Windows XP, VUgen, Web methods Integration Servers, Windows 2008, Windows Vista**

**Performance Test Lead June 2014 to April 2016,**

**Educational Testing Service, Princeton, NJ.**

**Responsibilities:**

* Worked as Performance Test Lead and executed various performance test conditions using **LoadRunner** **11.0/11.50**
* On-shore, Off-shore Team co-ordination and submitting the Deliverables based on timelines.
* Reviewed the Architecture and Performance requirements with the Business Users.
* Designed the test plans that include **scope**, **test strategies**, **test scenarios** and **types** of tests to be executed.
* Created the scripts using **VirtualUserGenerator.**
* Used **IPSpoofing** to emulate the real-world load where load balancer is used to distribute the load among different servers.
* Enhanced the scripts by parameterizing large and complex test data to accurate depict production trends, correlating dynamic data etc.
* Effectively involved in running the Performance Tests from the Standalone Controller Machine.
* Extensively Used **JMeter 2.9** for **WebServicestesting** and other Unit **testing’s**.
* Extensively Involved in distributing the Load across the Load Generators while running the Tests on the Controllers using Frequency of **BusinessTransactions**, **Number of Users**, **NumberofMDRV** process to Launch, Number of Scripts, Hardware Configurations each **LG** in to Consideration.
* Performed Dynamically Updating the **Scripts, Data Files** while Running the Tests.
* Executed Web Services using **Web**&**JavaProtocols**, also wrote Custom Code to capture the Request and Response Associated that helps in tracking the Issues when a service fails.
* Responsible for analysing applications and components behaviour with heavier loads and optimizing server configurations.
* Provide support to the development team in identifying real world use cases and appropriate workflows.
* Measured performance units like response times, throughput etc. for web systems optimization. Built servers based on the system performance cycle and metrics.
* Monitored the Server’s CPU Utilization and used Heap memory status by using Monitoring tools like **HP Sitescope**, **HpDiagnostics** and Performed in-depth analysis to isolate points of failure in the application.
* Wrote unit tests in Java to test my Framework developed to test Web Services.
* Tested performance of **Tomcat, Web sphere, web logic, F5 etc**.
* Gathered **OracleAWR** Reports from DBAs and provided to the developer for analysis.
* Monitored system resources such as **CPUUsage**, **% of Memory Occupied**, **VMStat** and **I/O Stat** using **UNIX** commands like **top, vmstat, svmon** and **netstat**.
* Analysed**JVM** Heap and **GC** logs during test execution.
* Analysed the results by using Load Runner Analysis and prepared the result report by customizing the graphs.
* Involved in defect tracking, reporting and coordination with various groups from initial finding of defects to final resolution using **QualityCentre** (**QC**).
* Prepared a detail test schedule and **TestMetrics** on a weekly basis for the project members to know the status of the Testing.
* Updating the Stake holders about the performance results by generating reports using analysis.

**Environment: Load Runner 11.0/11.50,JMeter2.9, Performance Centre 11.0, Quality Centre 10.0,HP Sitscope,HpDiagnostics** **,IBM SOA, .Net, Web Services, MQ, XML, HTML, MS SQL Server, MS IIS Server.**

**Sr. Performance Engineer October 2012 to May 2014,**

**Allstate Insurance Company, Northbrook, IL.**

**Responsibilities:**

* Worked with the Business Analysts to determine Business Requirements and set standards for Performance Evaluation in **Agile methodology**.
* Involved in designing **Load**, **Stress** and **Failover** Testing scenarios based on **SLA** for various systems and future load projections.
* Performed Load, Stress and endurance **testing** using **LoadRunner& JMeter**
* Well versed in using Load Runner's Components and Wrote Scripts on various protocols such as **Web**, **WebServices**, **AJAX** and **Ajax** true client.
* Responsible for monitoring the system under Test and analysing results for identifying performance bottlenecks.
* Involved in executing the scenarios and monitoring the server response timings monitoring throughput **Hits**/ **Sec** and **Trans**/**Sec**.
* Worked closely with **BusinessOwners**, **Architects**, and **Developers** to do pro-active Capacity planning.
* **Monitoring** / **Tuning** to make sure the applications are scalable and available to the growing business needs.
* Acted as coordinator for performance testing activities with the client as well as with offshore team to provide maximum testing support.
* Analysed Online Monitor Graphs like **RuntimeGraphs**, **TransactionGraphs**, **WebResourceGraphs**, and **SystemResourceGraphs**.
* Analyzed all the various performance metrics involved in the test run like **Webresources**, **CPU**, **Memory**, **RequestAnalysis**, DB Connection Pool, and Thread Pool etc.
* Pinpointed the bottlenecks present in different layers of the Application and Identified Memory Leak in the App and made recommendations to overcome the same.
* Monitor testing using monitoring tools using **Dynatrace** and **WilyInteroscope** etc.
* Used **Dynatrace** and **WilyIntroscope** Extensively to monitor all the Tiers for Determining any performance Bottlenecks.
* Create a Dashboard in **Dynatrace** Diagnostics per project needs.
* Worked on **P1** Tickets related to out of memory, exception occurred on production by using Dynatrace Diagnostics to identify the Performance bottlenecks.
* Used diagnostic tools along with load runner to identify the issues in the application.
* Collected different performance metrics from various components of systems, analyzed performance data and presented Test reports to various audience from technical groups to Senior Management and Executives.
* Created Performance test completion reports.
* Cooperated and performed with development group to resolve the difficulties came across in a test execution.
* Analysed various graphs while running and after the load test (**Runningvusers**, **transactionresponsetime**, **Throughput**, **Hitspersecond**, **Errorstatistics** and **Errordescriptiongraphs**.
* Involved in audit meetings and got an initiative to reach **QA** testing goals. Prepare and present statuses (**Daily, Weekly, monthly, post release etc**).

**Environment: Load runner 9,52/11.0,JMeter 2.7, Performance Centre 9.52/11.0, DynaTrace, Wily Introscope, SQL Server Management Studio, Web logic 11g, Windows XP, Web methods Integration Servers, Windows 2008, Windows Vista, Web applications, Portal applications, XML files,CMS.**

**Sr. Performance EngineerJanuary 2011 to September 2012,**

**Sony Electronics Inc, San Diego, CA.**

**Responsibilities:**

* Assisted Testing Lead in coordinating and leading automation and load test efforts and derived load model by comparing and analysing test and production environment.
* Managed and coordinated performance test activities for various projects.
* Developed performance test strategy based on the analysis of design document and requirements.
* Implemented software quality assurance standards and processes for performance testing.
* Analysed requirements and translated them into performance test plan, gathered past application response time metrics and business transactions from production support team for developing realistic test scenarios and load models.
* Gathered user requirements, create **TestPlans** and **TestScenarios** designs.
* Prepared **Test Strategies, Test Plan** and **Test Cases** as per the business requirements and Use Cases.
* Provided Test Estimates for various phases of the project.
* Worked with developers and application owners to develop test success criteria.
* Developed and enhanced scripts using **LoadRunnerVuGen** and design scenarios using Controller to generate realistic load on application under test, customized and debugged recorded scripts to mimic end user business transactions.
* Used **JMeter** for web services performance testing.
* Analysed and correlated system statistics to identify bottlenecks and performance issues.
* Setup monitors for server resources, network services, and application services using Introscope.
* Replicating the Issues in multiple environment upon testing/retesting them on progresses.
* Analysed test results and provides explanations of results to help in the tuning process.
* Involved in Load Testing of various modules and software application using LoadRunner.
* Developed **Vuser** Scripts in **Web**\**HTTP**, **Web Services** and **Click**&**Script Protocols**.
* Test Scripts generation in Load Runner, Customization of scripts with required logic, correlation, parameterization, pacing, logging options and preferences.
* Executed **Load**, **Stress**, **Benchmark** and **Endurance** Tests.
* Preparation of **LoadGenerators** and **test execution, tracking metrics** such as **TPS**, **ResponseTime**,
* Transaction **Graphs, Run Time Graphs** and **Resource Graphs**.
* Analysed the results of the Load test using the Load Runner Analysis tool, looking at the online monitors and the graphs and identified the bottlenecks in the system.
* Updated test metrics, test plans, and documentation at each major release and performed Regression testing using **LR** scripts.
* Performed **QA** Process management, identified **functional**/**Code** changed vs. business impact and Re-Executed Performance tests before releasing to production.
* Reported and tracked defects in **JIRA**.
* Worked closely with software developers and take an active role in ensuring that the software components meet the highest quality standards.
* Generating detailed Test Reports and presenting them to Project Team.
* Responsible for multiple rounds of Performance Testing after system refinement.
* Preparation of Final Test Reports and coordinating **QAsign**-**off** for each project.
* Supported Production team to understand and execute the processes.

**Environment: Quality Centre, HP Load Runner 9.5, JMeter 2.6, App Dynamics,Java, Oracle, Share point, IBM Mainframe, Site scope, Wily Interoscope, Java, JavaScript, JSP Servlets, JDBC, C, VBScript, TSL, XML, HTML, MS Office, SQL, PL/SQL, Siebel, WSDL, SOA, Web Services, WebSphere, Unix and Windows.**

**Performance Engineer June 2010 to December 2010.**

**Client: National Grid, Solihull, UK.**

**Responsibilities:**

* Requirement Gathering, Estimation Assessments and created Test Plans and Test Scenarios design for all the releases.
* Discussing with the business analyst to find key business scenarios for performance testing.
* Worked as Performance Test Engineer and executed various performance test conditions using **LoadRunner.**
* Reviewed the Architecture and Requirements of the system.
* Reviewed the Performance requirements with the Business Users.
* Played a major role in helping the business understand the load, stress criteria and helped them identify the critical scenarios on an application from an end user view.
* Extensively used Load Runner web **HTTP/HTTPS** and Web services protocol for testing Client server applications.
* Developed the Performance Test Plan & Scope documents and Performance Test Cases.
* Created the scripts using Virtual User Generator to simulate the function of the services being tested.
* Enhanced the scripts by **parameterizingdata**, **correlatingdynamic** data etc.
* Executed Web Services using **WebProtocols**, also wrote Custom Code to Capture the Request and Response Associated which helps in tracking the Issues when a service fails.
* Performed Load and Stress tests with **LoadRunner** and presented performance statistics to application teams and provided recommendations of how and where performance can be improved.
* Monitored the Server’s **CPUUtilization** and the used Heap memory status by using
* Used Monitoring tools like **Sitescope**, **NMON**&**WilyIntroscope**.
* Involved in configuring Site Scope Monitors (**Web logic domains, clusters & DB Connection pools**) to **LR controller scenario**.
* Analysed test results using **HPLoadRunnerAnalysis** tool on-line graphs and reports and looked for **performancedelays**, **network** or **clientdelays**, **CPUperformance, I/O delays**, **databaselocking**, or other issues at the **databaseserver.**
* Analysed the results by using **LoadRunner** Analysis and prepared the result report by customizing the graphs.
* Identified and analysed memory leaks at each component level.
* Coordinated with offshore performance testers and assigned them day to day tasks.
* Handled multiple projects and lead to successful completion on time by successful coordination.
* Reported and tracked defects using **QualityCentre**.
* Moderated **DailyDefect** Review meetings with Development Team to review the defects raised by **QA** team and status of the existing / open defects.
* Involved in the Implementation review meetings.
* Comparing the results to baseline and providing the results comparison chart to the development team.
* Following up with development team for defect fixes and avail them a re-execution.
* Reviewed and published the Final Consolidated Performance Test Report.

**Environment: LoadRunner 8.1,JMeter2.5,HP SiteScope, NMon, Wily Interoscope, Quality Centre, .Net, Web Services, MQ, XML, HTML, MS SQL Server, MS IIS Server.**

**Performance/QA Tester June 2009 to May 2010, Apollo Hospitals,Chennai,India.**

**Responsibilities:**

* Co-ordinated several meetings with the internal client team.
* Scheduled practice sessions with Business Analysts to understand the business functionality.
* Preparation of the Test Plan, which specifies testing overview, testing approach, testing strategy, roles & responsibilities and scope of testing.
* Interacted with BA Functional and **TechnicalLeads**/**Developers** for understanding the requirements.
* Gathered Test requirements for functional and Performance testing and uploaded in Test Director.
* Developed Test Cases manual and automation scripts using **QTP** and uploaded in **TestDirector8.2**
* Designed the Object Repositories in Repository manager using **QTP8.2**
* Maintained the **QTP** scripts for enhancements and reusability.
* Defined the coding standard while developing the **QTP** scripts using **VBScript**.
* Managed to build the Automated Regression suits for functional regression testing.
* Involved in Performance Testing Worked with Performance team for setting up QA Environment Requirements.
* Tested to find out if targeted user load can perform business processes, Modelled the workload after studying the user activity.
* Designed the **VU-Gen** scripts using **LoadRunnerVU-generator**
* Used the **LoadRunner Web HTTP/HTML Protocol.**
* Captured data from **Vugenscripts** by using **ANSI- C functions, correlation, transaction timings**, verification **checkpoints** and **parameterization**.
* Creating Performance scenarios and scripts for doing multiple iterations.
* Responsible for editing, updating, and maintaining load testing of existing scripts.
* Identified functionality and performance issues, including: deadlock conditions, database connectivity problems, and system crashes under load.
* Configured and used **HPSiteScopePerformance Monitor** to monitor and analyse the performance of the server by generating various reports from **CPUutilization**, **MemoryUsage** to **loadaverage** etc.
* Generated the Application Performance reports and reported to the analysis group of Performance testing for fine tuning the application Performance.
* Analysed**LoadRunner** Metrics and other performance monitoring tools results during and after performance testing on Application server database and generated various Graphs and Reports.
* Responsible for analysing results, reports and charts to see response times of individual transactions with respect to whole applications.
* Extensively used Test Director for test case design, executing tests in **Test Lab, requirements gathering** and **Defect Tracking.**
* Prepared traceability matrix and published the reports.
* Successfully managed the project within the budget and deadline.
* Interacted with Developers to follow up on **Defects**/**Issues**.

**Environment:HPLoadRunner, QTP, Test Director, MS Office, Win Server 2003, HP Sitescope, HP J2EE Diagnostics, Windows, IIS 5, IBM AIX, SQL, DB2, SQL Server, Oracle, UNIX, Siebel, SOA, WebSphere, J2EE.**