

Request for Proposal

Hiring of Tech Partner for Security Testing of Blockchain Application developed for the projects undertaken at QCI



QUALITY COUNCIL OF INDIA

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Introduction

Quality Council of India is looking for a Tech Partner for Security Testing/Audit of Blockchain Application developed for projects undertaken at QCI.

QCI invites applications from experienced IT Firms for performing the below mentioned Scope of Work.

Scope of Work:

The Scope of Work for the same shall include:

In blockchain, transactions are replicated at high volume throughout the network, which is often a challenge as this may slow down the network. The following 4 key considerations must be factored in while doing the testing of blockchain application:

1. **Smart contract testing:** Validate the methods for smart contracts in the same way as we do in API testing, including validating the methods, verifying the boundary value, and verifying the conditional statement. Then, the validation of encryption for the smart contract should be sent to another system via a distributed ledger. The unit level testing for QAs is to test all the APIs for the smart contract individually and then perform integration testing.

2. **Node testing:** Blockchain functions in a peer-to-peer distributed network through network nodes using a specific protocol for authentication. It checks with the majority of nodes and approves the block for its validity to make a successful transaction. Hence all heterogeneous nodes must be independently tested.

3. **Performance:** To overcome the performance testing challenge we need to have all the details like network latency based on block size, network size, expected transaction size, and how long a query takes to return the output with specialized authentication protocol. Performance testing is carried out based on these parameters and to overcome the failover with an abrupt peak or a downside, we need to leverage cloud environment features like auto-scaling for chaotic situations.

4. **Security:** It is important to identify the integrity of the network. All transactions are cryptographically encrypted. However, once the identity layer is hacked instantaneous transaction cannot be stopped. Some testing needs to be considered for a secure transaction using blockchain technology by overcoming challenges such as:

- Access and authentication
- Secure hash, consensus algorithm
- Wallet signature method
- Private keys
- OWAPS guideline for mobile and web application
- Vulnerability assessment
- Validating information provided

Reporting:

1. Results shall be provided for every load test run
2. Average Response Time data will be provided for every page under test
3. At the end, a final report would be provided which would list out the performance assessment of the site.

Other Terms:

1. Determining System's performance related requirements, identifying user activities (Individually & Collectively).
2. Developing the "artifacts" which will remain at the completion of Performance Engineering project.
3. Execution, Validation & Debugging of all scripts to conduct Baseline & Benchmarking tests for providing a basis of comparison for all future testing.
4. Performance benchmark to identify the maximum number of concurrent users and sessions application supports under load.
5. Identifying maximum number of business transactions application can sustain in an hour.
6. Response time analysis.
7. Reporting performance improvement areas, performance issues, and performance concern areas.
8. Recommending solutions for the issues
9. Coordinating monitoring activities with performance engineers
10. Verifying the performance fixes
11. Various Load Tests such as Benchmark Test, Baseline Load Tests, Step-Up Test, Stability/Endurance Test, Stress Break Point Test, Stress Failover Test, Scalability Test etc. may be used.
12. QCI will provide support for load test data creation.
13. Load Test data and the environment should be ready before test execution.
14. Load Tests will continue to be executed until the Application's response times and other metrics are good enough for Acceptance by QCI and approved for Signoff.
15. Test report & Analysis for the load tests will be shared with QCI.

Other Terms and Conditions:

1. The Service Provider should have technically qualified and well experienced strong in-house resource base.
2. The cost of all load testing tools shall be borne by the vendor.
3. The Service Provider must be a legal entity registered anywhere in India.
4. The Service Provider must have a valid Service Tax Registration Certificate in India.

Presentation

As a part of Evaluation of proposals submitted by the applicants, QCI may seek further information or a presentation from the Organizations at a short notice for evaluation purposes.

Rejection of Proposal

The application is liable to be rejected if:

- a) Not in prescribed forms and not containing all required details.
- b) Not properly sealed and signed as per requirements.

- c) Received after the expiry of due date and time.
- d) Missing of any supporting document(s) with the Proposal

Technical Proposal

The Technical proposal should contain the following information:

- a) Detailed plan of methodologies and processes devised for actioning the above-mentioned scope of work.
- b) Details of past experience in similar work, if any.
- c) Any other details that the bidder may like to provide.

Financial Proposal

The financial proposal should contain the quotation for security audit for performing the above security/load testing functions of project.

Submission Details

Interested parties may send their Technical and Financial Proposals along with the profile and other details in two separate envelopes inside a sealed envelope super-scribing '**Tech Partner for Security Testing of Blockchain Application**' to Assistant Director(Accounts), Quality Council of India, Institution of Engineers Building, 2nd Floor, 2, Bahadur Shah Zafar Marg, New Delhi 110002 latest by January 6th, 2020, 5 PM.

Annexure-I

Application

Date:

To,
Assistant Director
Accounts & Administration
Quality Council of India
2nd Floor, Institution of Engineers
Bahadur Shah Zafar Marg
New Delhi-110002

Subject: Application for Empanelment for IT/ITES Consultancy Services

Dear Sir,

Having examined the pre-qualification document indicating scope of works, I/We hereby submit our proposal together with all the necessary information and relevant documents for empanelment with QCI for IT/ITES Consultancy Services.

The proposal is made by me/us on behalf of.....
(Company/Firm/Association of individuals) in the capacity of duly authorized to submit the proposal.

I/We understand that QCI reserves the right to reject any proposal without assigning any reasons thereof. I/We undertake that all the information furnished by me/us in the proposal is true to the best of me/our knowledge and belief. If any of the information is found to be false on subsequent verification, I/We undertake that I/We may be excluded from the list of shortlisted Firms.

AUTHORISED SIGNATORY

(Name and Designation)

Name of Firm:

Address:

e-mail id:

Contact details:

Annexure-II

Company Profile:

1	Name of the Applicant Firm	
2	Ownership (Government/ PSU/ Private)	
3	Type of Organization: Partnership firm/ Public Limited Company/ Pvt. Limited Company/ Limited Liability Partnership/Society/Others (please specify and attach proof)	
4	(i) PAN Number (ii) GST Number	
5	Name and Designation of Key Management Person(s)	
6	Date & Year of establishment of firm	
7	Number of years of experience in IT/ITES Consultancy Services	
8	Number of Permanent Employees	
9	Number of Permanent Employees for Consultancy Services	
10	Areas of Consultancy	
11	Core Competency	
12	Any other important information about the organization	
13	Details of the similar assignments with client details and value of the project	

Financial Information

Details	Financial year 2016-17	Financial year 2017-18	Financial year 2018-19
Revenue (in INR Lakh)			
Profit before tax (in INR Lakh)			
Revenue from IT/ITES Consultancy Services (in INR Lakh)			
Other relevant information			

Mandatory supporting documents	<ul style="list-style-type: none">• Auditor certified financial statements for the last three financial years (Please include only the sections on P&L, revenue and the assets, not statements.• Unaudited financial statements certified by the company auditor for the current financial year• Certification by the company auditors supporting the revenue break-up for IT/ITES Consultancy Services
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Signature with Seal