

**Pre Bid Queries for Functional Testing and System Performance with Load Testing of
Mobile Application**

| Sr. No. | Section in RFP | Sub section in RFP | Excerpts from the RFP | Page No. | Detailed query | Response by SSL Team |
|---------|--|--------------------|--|----------|---|---|
| 1 | Scope of Work | | Scope of Work: SSL is in process of enhance new mobile trading application for its retail and discount brokerage clients by using TCS BaNCS Front & Back Office API and other Fintech Integration. | 13 | Kindly specify the count and details of other Fintech Integration details | Front and Back Office API details with count will be provided after on boarding the bidder. 10 K Concurrent connections for which we are looking to do performance testing. |
| 2 | Annexure-3 Technical Criteria | | Evaluation Criteria-CMMI Level 3 or higher | 25 | Kindly clarify the requirement of CMMI Level 3 certification | Quality Kiosk is having CMMI Level 3 certification hence the said clarification is not required. |
| 3 | Functional Testing | | Estimated Test Scenarios/Test Cases counts | 15 | Kindly clarify whether NSDL will provide number of test count or test scenarios for testing | SSL will provide test count and test scenarios for testing in coordination with consultant. |
| 4 | Eligibility Criteria Pre-Qualification (Stage 1) | | The bidder should have an average annual turnover of Rs. 70 Crore for the last 3 financial years (2021-22, 2022-23 and 2023-24). Individual company turnover only. | 7 | We kindly request to consider the average annual turn over as 150 crore for the last 3 financial years. | SSL is not agreed to change the said criteria. |
| 5 | Eligibility Criteria Pre-Qualification (Stage 1) | | The bidder should have provided testing services to at least three Broking/ Securities Market trading organizations or commercial banks | 7 | We kindly request to amend this point as "The bidder should have provided testing services to at least three Broking/ Securities Market trading organizations or commercial banks (minimum 1000 branches) over the last 3 years and the yearly | SSL is not agreed to change the said criteria. |

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| | | | (minimum 1000 branches) over the last 7 years. | | engagement value on testing should be above 20 crore. | |
| 6 | Technical Evaluation (Stage 2) | Bidder Capabilities | Years in Testing Services for Broking/ Securities Market Trading Applications | 8 | Incorporation of certificate doesnot give have vertical details . Hence we request to amend this point as " Years in Testing Services in India " | We need existencace of bidder in Testing services. It is not specific for any domain like broking / securities market. |
| 7 | Performance Testing Expertise | Experience with Concurrent User Load in Broking/ Securities market Trading Applications | >1,50,000 users – 15 Marks 50,000-100,000 users – 12 Marks 30,000 -50,000 users – 8 Marks | 8 | We kindly to consider the experience of this validation in the last 3 years only. | Bidder should confirm that they had done concurrent user load testing and provide the evidence for the same. There is no specific years constraint from SSL side. |
| 8 | Domain Expertise | Functional Testing in Broking/ Securities market Trading Applications | 5 Marks per implementation for Broking/ Securities market trading platforms like TCS BaNCS, Omnesys, Class, ODIN ,Ibeats and FIX Protocol, Algo Trading Engines, (Max 5 references). Evidence: Client references, Testimonials | 8 | We understand each reference will be given as 5 marks each and minimum 2 references to be given to get maximum marks of 10 . | We expect minimum reference of 5clients. Trading application names had given for reference. Preferring bidder who had done Functional testing for these most popular trading applications. |
| 9 | | Root Cause Analysis and Bottleneck Identification using APM Tools | Use of leading APM tools (Dynatrace, App Dynamics, New Relic) in at least 5 Broking/ Securities market trading platforms – 1 Marks per project (Max 5 Marks). | 8 | We request to consider evidence - client reference/ PO/ details in test report on referring any of these tools. | Not Applicable |

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| | | | Evidence: Client Reference | | | |
| 10 | Front end testing | UI/UX Validation | Includes: UI/UX Validation, Janky Frames, Frames Per Second (FPS), Latency Metrics, Rendering Delays, Cross-Device Compatibility, and Accessibility Compliance | 8 | There is no clarity on references or evidence document needed. Hence we request to include details . Ex: Customer experience testing for UI/Ux validation in at least Broking/Securities/Banks & Financial services in the last - 2 years 1- mark for per project (Max 5 marks). Evidence Client refernece / PO. | The siad test scenarios required as a part of earlier project executed by Bidder. |
| 11 | Client Referenes | Testing service | TCoE Order/ Testing Services in past or ongoing experience at Broking/ Securities market Trading /BFSI in India with minimum:Case 1 – At least 35 resources, apart from Bank resources: 10 Marks Case 2 – At least 15 resources, apart from Bank Resources : 05 Marks | 8 | We request to amend this point as " TCoE Order/ Testing Services in past or ongoing experience at Broking/ Securities market Trading /BFSI in India with minimum:Case 1 – At least 35 resources, apart from Bank resources: 10 Marks Case 2 – At least 15 resources, apart from Bank Resources : 05 Marks in the last 3years and each year engagement value is above 15 Crore. | It is related to the count of resources currently available with bidder. Technical evaluation will be done on the same. We will not accept engagement valuation condition. |
| 12 | Client Referenes | Testing service | Presentation on Services asked by SSL | 8 | We request to share the coverage of presentation planned for early preparation.. Does it have demo/ POC/ Methodology.. etc. for 20 marks breakup. | As discussed presentation need to cover only scope of work asked by SSL in RFP for functional and Load testing. Marks will be provided by accordingly to the bidders. |

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| 13 | | | Annexure – 9 - Letter of Acceptance | 37 | Please clarify that in case of QCBS evaluation - Letter of acceptance is not needed as lowest bidder" is not applicable. hence we request to remove or amend this section accordingly. | The said Annexure -9 is mandatory for all the bidders. |
| 14 | Scope of work | Performance testing | SV Creation | 16 | How many SV need to created. Protocol used for API (Rest, SOAP, TCPIP) | Need more clarity. |
| 15 | Scope of work | Performance testing | Load testing | 16 | Order rate & transaction rate for which application need to benchmark in load test | Yes. Orders 40000 per hour and trades 35000 per hour. |
| 16 | Scope of work | Performance testing | Clientside testing | 16 | Number of browser & devices need to consider. Can we assume as 5 devices. | 2 Devices. Android and IOS mobile with latest OS. |
| 17 | General Query | | Data handling | | During the engagement will the QK users be processing/accessing any PII data, if yes please share the guidelines expected for data handling | Test Data will be provided to QK team. For testing no PII data of clients will be provided to the testing team. |
| 18 | General Query | | BCP Requirements | | What are the BCP requirements from vendor side for this engagement | Bidder has to confirm availability of their testing systems and other resources during the testing period. |
| 19 | Scope of Work (SOW) / Service Level Agreement (SLA) for Scope of Work | Force Majeure | The entire clause | 21 | Requiring notification within 5 days of a Force Majeure event is too short. Some events, like widespread natural disasters, might make communication impossible within such a short timeframe. A more reasonable timeframe (e.g., 10-15 days, or "as soon as reasonably practicable") should be considered. While mitigation is reasonable, the clause makes it sound like any failure to mitigate, regardless of the severity | 7 days and it can be further extended at SSL discretion. |

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| | | | | | <p>or cause, disqualifies the Force Majeure claim. This is too strict. It should be "reasonable efforts" to mitigate, and the failure to mitigate should only disqualify the claim if it's a direct and proximate cause of additional losses.</p> <p>Force Majeure events are precisely the situations where disaster recovery and contingency plans are tested. If a plan fails due to the severity of the event, that shouldn't automatically disqualify the Force Majeure claim. The focus should be on whether the Bidder made reasonable efforts to have a plan in place.</p> <p>The clause stating that SSL's decision is "final and binding" in disputes related to Force Majeure is Unilateral and hence unacceptable. This removes any possibility of impartial dispute resolution and gives SSL absolute power. A neutral third-party mechanism (e.g., mediation, Force Majeure events can disrupt testing for much longer, and the decision should not rest solely with one party.</p> | |
| 20 | General Query | General | | | Please specify the version of TCS BaNCS | Version is 14.0.0.0.0 |
| 21 | Scope of work | Performance testing | SSL Users | 13 | Please provide the user distribution across Android and iOS | Android users 6000 and IOS 4000 |
| 22 | Scope of work | Performance testing | SV Creation | 13 | How many SV need to be created. Protocol used for API (Rest, SOAP, TCPIP) | Need more clarity. |
| 23 | Scope of work | Performance testing | Load testing | 13 | Order rate & transaction rate for which application | Order rate: 40K / Hour and Trade Rate: 35K / Hour |

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| | | | | | need to benchmark in load test | |
| 24 | Scope of work | Performance testing | Load testing | 13 | Is the Load testing expected from single location/bandwidth or multiple location/bandwidth? | Load Testing from Single Location. Concurrent users no. is 10K. |
| 25 | Scope of work | Performance testing | Clientside testing | 13 | Number of browser & devices need to consider | 2 Devices. Android and IOS mobile with latest OS. |
| 26 | Scope of work | Performance testing | Clientside testing | 13 | For client side testing, mobile devices will be provided by SSL or same need to be arranged by Vendor? | Mobile devices need to arrange by vendor. |
| 27 | Scope of work | Performance testing | | 13 | Is the Performance testing to be conduted for Back office users as well? If yes, please specify the count of users | Yes. 10K users |
| 28 | Scope of work | Performance testing | | 13 | Is the application connected to any third party systems like Payment Gateways? (Yes/No), If Yes: Please specify | Yes. Razorpay |
| 29 | Scope of work | Performance testing | | 13 | Does SSL prefer open source tools or licensed commercial tools. | Licensed Commercial Tool |
| 30 | Scope of work | Performance testing | | 13 | What engagement model is expected by Client: 1. Onsite (If Yes; kindly specify location) 2. Complete Off Shore 3. Hybrid Please suggest | 3 hybrid |
| 31 | Scope of work | Performance testing | | 13 | Is performance testing environment is equivalent to produciton of less than that? | Testing Environment less than production |
| 32 | Scope of work | Performance testing | System and System for Tools | 10 | Will Required hardware for Load Injectors be provided by SSL? | Vendor has to arrange the required Hardware and software. |
| 33 | Scope of work | Performance testing | System and System for Tools | 10 | Does SSL have any monitoring tool? If yes, please specify | SSL is not having any monitoring tool. |
| 34 | Scope of work | Performance testing | | | Please share high level project plan and tentative timeline for Performance Testing | 3 Months Timer Period for whole project |

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| 35 | Scope of work | Performance testing | | | Any turnaround time agreed with developer with respect to defect fixes post test execution (P1, P2) | Developer and Testing team has to work together to complete defect fixed and testing part within 3 months. |
| 36 | Scope of Work (SOW) / Service Level Agreement (SLA) for Scope of Work | Dispute Resolution | The entire clause | 20 | The payment should be tied to the successful completion of contractual obligations, not the resolution of potential disputes. Please consider separating these two aspects | The clause will remain as is, and no changes will be made. |
| 37 | Scope of Work (SOW) / Service Level Agreement (SLA) for Scope of Work | Exit Clause | The entire clause | 21 | <p>The one-week termination notice period is very short. For any termination of the Agreement a written notice of not less than sixty (60) days will be required.</p> <p>Could you please provide a detailed Service Level Agreement (SLA) outlining the specific performance metrics and acceptance criteria that will be used to evaluate the Services?</p> <p>What is the process for reporting, documenting, and resolving incidents of non-performance? Will the Bidder have an opportunity to respond to and rectify alleged incidents before termination is considered?</p> <p>Could you please define what constitutes a 'reasonable number of incidents' that would lead to termination? Will this be a specific number, or will it depend on the severity of the incidents?</p> <p>What constitutes a 'satisfactory report'?</p> | The clause will remain as is, and no changes will be made. |

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| | | | | | Who is responsible for creating this report, and what criteria will be used for its evaluation? | |
| 38 | | | A new clause to be added in the RFP/Agreement. Scope of Work (SOW) / Service Level Agreement (SLA) for Scope of Work | | <p>The RFP provides for the indemnity obligations of the bidder however, it is silent on the overall liability of the bidder hence we propose to incorporate below clause considering the principles of commercial contract: In no event, parties shall be liable for any indirect, special, consequential or incidental damages or loss of revenue or business profits, however caused, even if advised of the possibility of such damages.</p> <p>Notwithstanding the foregoing, SSL agrees that bidder's liability (whether in contract, tort (including negligence)) hereunder for damages, regardless of the form of action, shall not exceed the total amount paid for services under the applicable SOW for preceding six (6) months under which the claim arise. the foregoing</p> | no change |

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| | | | | | limitations of liability shall apply notwithstanding the failure of essential purpose of any limited remedy herein. | |
| 39 | Scope of Work | Functional Testing | Test Execution Web and Andriod | 15 | Please mention the number of web browsers on which the functional testing needs to be carried out | No WEB Browsers functionality need to test. |
| 40 | Scope of Work | Functional Testing | Test Execution Web and Andriod | 15 | Please mention the number of mobile devices on which functional testing needs to be carried out. Please mention the name of preferred mobile devices | 2 Mobile devices. Android and IOS with latest OS. |
| 41 | Scope of Work | Functional Testing | Test Execution Web and Andriod | 15 | Is there a scheduled timeline to complete the functional testing rounds? | 3 Months Timer Period for whole project |
| 42 | Scope of Work | Functional Testing | Test Execution Web and Andriod | 15 | Please let us know if detailed requirements of the system are available | Hardware and Software need to arrange by successful bidder for testing. |

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| 43 | Scope of Work | Functional Testing | Test Execution Web and Andriod | 15 | Scope is to perform end to end funtional testing of the web and mobile applications and its integrations(TCS bancs, payment and thid party). We assume functional testing of TCS bancs application is out of scope. Please confirm | Testing of new mobile app by using TCS API need to check. TCS BaNCS application is out of scope but API performance is part of testing. |
| 44 | Scope of Work | Functional Testing | Test Execution Web and Andriod-3.1.3 | 15 | Number of test cases mentioned in the table is 6000 . As per our experience, approx number of cases for one interface(say web) would be around 10K. Please let us know of any assumptions you have made to arrive at 6000 number. | It is pertaining to Mobile application and cosidering only 6000 scenario. |
| 45 | Scope of Work | Functional Testing | Test Execution Web and Andriod-3.2 and 3.3 | 15 | In functional testing, test case counts considered in round 2 and round 3 are reduced. Is the assumption that full round of testing need is not expected to be carried out post defect fixings for round 2 and 3? | In all round test cases will be the same except for exceptional cases. |
| 46 | Scope of Work | Functional Testing | Test Execution Web and Andriod 3.4 | 15 | Please confirm that a sanity testing round is planned after the 3 rounds of UAT completion. This make for 4 round of testing | Yes sanity check is before 3 rounds and which will conducted manually. It will not consider new additional round. |
| 47 | Scope of Work | Functional Testing | Test Execution Web and Andriod 3.4 | 15 | Please confirm how many browser and mobile platform to be considered for 3 rounds of UAT. | 2 Mobile platforms Android and IOS. Two Mobile applications(Retail and Sharepa) |
| 48 | Scope of Work | Functional Testing | Compatability Testing of 2 apps- 4 | 15 | Please clarify if you need the complete test execution round to be performed on IOS (2 devices)and android(2 devices) seperately? This make in total of 4 round of test execution. Please confirm | Testing of new mobile applications will done on IOS and Android. Bidder can do the same thing combinely but ensure that functionality of app on both OS need to provide same response. |

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| 49 | Scope of Work | Functional Testing | Compatability Testing of 2 apps- 4 | 15 | Please clarify if you need the compatability test on web browsers. If yes how many? | No WEB Browsers functionality need to test. |
| 50 | Scope of Work | Functional Testing | Application to be tested | 16 | Would there be any need for service virtualization of the third party applications /payment interfaces or otherwise? | No service for virtualisation is required. |
| 51 | Scope of Work | Functional Testing | Application to be tested | 16 | We assume there would be a dedicated environment available for functional testing. Any information on the environment readiness would be helpful | UAT environment will be available for Functional and Load Testing. |
| 52 | Scope of Work | Functional Testing | Application to be tested | 16 | Please confirm if all the third party/payment integration application would be available in the UAT environment during the testing phase? | All third party integration will be available on UAT. For payment integration we can test but we can take exception for load testing. |

| Type/ Section | Queries | Response by SSL Team |
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| Load and Performance Testing | Please confirm if the mobile app for Retail Trading is also TCS BaNCS and hosted on cloud? | We are going to develop new Mobile Trading APP for Retail developed by Rupeeseed by using TCS API. Setup is on AWS cloud |
| Load and Performance Testing | For Technical Evaluation, pls confirm if usage of any APM is fine as there are other APM tools in use apart from Appdynamics: like Dynatrace or New relic like manage engine, splunk and Site247. | APM tool need to implement by PTTeam. |
| Load and Performance Testing | Please confirm if Load generator machines will be provided to PT team. | Load Generator machines need to arrange by PT Team. |
| Load and Performance Testing | Please confirm if any existing APM tools are integrated and in use in organisation which will be provided to PT Team. | NO. We don't have tool. |
| Load and Performance Testing | What is your tool preference- Open source tools or commercial/licensed tools? | Commercial License Tools preferred |
| Functional Testing | How many rounds of testing needs to be performed? | As per RFP rounds need to consider |
| Functional Testing | Will regression testing part of the scope of work? | Yes Regression testing is part of scope of work |
| Functional Testing | How many devices needs to be considered for Android and iOS? | 2 Devices Android and IOS. |
| Functional Testing | How many back-office reports are in scope? Please share the list of the back-office reports. | Tentative 15 reports |

| Sr No | Pre-Bid Query | Response by SSL Team |
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| 1 | Could you confirm the list of applications that are in scope for testing? | Only two Mobile Trading Applications. |
| 2 | Which environments are designated for testing?(QA, UAT, Pre-Prod, DR environments) | UAT Environment for Testing |
| 3 | Does the scope of testing include web applications, or is it limited to mobile applications only? | NO. It is only for Mobile Application. |
| 4 | What is the expected timeline for completing functional testing ? | All testing need to be completed within 3 months |
| 5 | Could you clarify whether the project will follow the Waterfall or Agile methodology? | Agile methodology |
| 6 | If Agile methodology is followed, what is the expected release plan ? | 3 Months |
| 7 | If Waterfall methodology is followed, what is the Go-Live plan ? | NA |

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| 8 | Will the testing resources be required to work on-site or off-site ? | For Manual Functional Testing on site official required. |
| 9 | Who will provide the mobile devices required for testing? | Bidder has to arrange the devices. |
| 10 | Could you specify the preferred mobile devices for testing ? | IOS and Android with latest Operating Systems |
| 11 | Required apk with Unpinned SSL and proxy enabled. | With SSL certificate |
| 12 | If Flutter based application, need flow wise APIs. | In coordination with Application team, SSL will provide flow wise API. |
| 13 | If request and response packets are passed in encrypted format.Required logic of the same, if it is not feasible then disable encryption for these packets. | In coordination with Application team, SSL will disable encryption for the packets. |
| 14 | If any fields values are passed in encrypted format. Required logic of the same, if it is not feasible then need to disable. | SSL will provide the details in coordination with application vendor |
| 15 | If any 2FA is there. Then need to remove like Security Question, Passcode, captcha, OTP, MPIN? | For testing the application 2FA etc will get disabled. |
| 16 | Incase if application is validating mobile number and IMEI number for login, need to disabled the validation. | There is no validation of Mobile number and IMEI number for Login. Kindly note the same. |
| 17 | Who will provide the licence of Dynatrace? | Successful Bidder has to arrange license for Dynatrace |