

## **Annexure 18 - Detailed Scope**

### **Scope**

Bank want to implement API management solution which would build the foundation needed to manage the entire API lifecycle along with targeted tools to help different stakeholders efficiently complete the work required to move APIs through each step. Bidder should provide turnkey solution for publishing various external and internal APIs along with the capability of secure consistent and modern API gateways functionality for existing back-end services hosted anywhere. The solution should provide various insights related to API consumption and health. Solution be capable of automatic onboarding to help Bank managing/running the API program.

Detailed of the solution requirement is provided in the Annexure- 11 of the RFP document. Bidder need to provide, implement and manage the entire API management solution for the period of five years.

The Application should be sized for Active- Active cluster at DC & Active-Active cluster at DR so that the solution and infrastructure can fall back on each other. DC – DR replication should be available as part of the solution so that in case of switch over the complete solution should seamlessly work.

Proposed solution should be highly scalable architecture, initially supporting 1000 transactions per second (TPS) considering average payload of 30 Kb and 500 concurrent users. Bidder should also create test and development setup for 6 users simulating near production functionalities

The API Management & Security Implementation Services are designed to deploy API Management & Security in Bank of Baroda's information technology ("IT") environment to help:

- a. Centrally manage security across multiple API's.
- b. API Life Cycle Management: Registering, Onboarding, Access Control, Throttling and Metering.
- c. Provide runtime policy enforcement, API virtualization and orchestration at the edge
- d. Enable modeling of Service Level Agreements, including limits per application
- e. Access Control using Mutual Authentication with Encrypted Payload and OAuth 2.0.
- f. Application Registration (API Key Issuance and approval).

- g. Partners access to web service via role and/or policy models
- h. Streamline access to business APIs and data.
- i. OAuth 2.0 /Open ID Connect Token Management.
- j. Integration with external systems example: Billing System etc.
- k. Design and Architect full API Solution Suite.
- l. Install and Configure instance of the APIM solution in HA: Active-Active in DC & DR Environment.
- m. Design & Develop API's end points based on defined business logic.
- n. Deliver 10 Complex, 10 Medium and 20 Simple Services (Includes Modular Assertions and Services).
  - i. Complex
    - API end points with Mutual Authentication/Oauth 2.0 Work Flow/Payload Encryption /Decryption
    - Orchestration up to 4 Backend Services
  - ii. Medium:
    - Orchestration up to 2 Backend Service, utilizing assertions
  - iii. Simple:
    - Replicated similar set of Complex and Medium Services.
- o. Publish Two Policies by integrating API (APIM) / API Portal products and demonstrate the full cycle.
- p. Develop Solution Design, detailed Architecture, Implement, operate and develop Test Plan document.

The scope of services will be bound by the following scope limits both in Non-Production and Production:

<b>Activities</b>	<b>Scope Limit</b>
Install and configure APIM solution including access management	In Scope
Complete Integration among various modules of APIM solution	In Scope
Integration with external systems	In Scope

Deliver 10 Complex, 10 Medium and 20 Simple Services (Includes Modular Assertions and Services).	In Scope
Set up & deliver complete API lifecycle for initial set of identified API's	In Scope
Design and Architect Overall APIM Solution supporting 1000 TPS.	In Scope
Document & knowledge base creation for all activities performed during the implementation phase	In Scope
Manage the APIM solution setup (excluding Hardware) for the period of the contract	In Scope
Setup T&D, Sandbox Environment #	In Scope

# refers to -	<p><i>Bank may implement sandbox environment on cloud/on-prem. For this purpose, Bank will procure cloud/on premise IT infrastructure. The sandbox environment should provide the following capabilities:</i></p> <ul style="list-style-type: none"> <li>• <i>virtualised API's/stubs</i></li> <li>• <i>self service capabilities,</i></li> <li>• <i>community/discussion forums</i></li> <li>• <i>documentation of API's</i></li> <li>• <i>on-boarding of fintech partners/developers</i></li> <li>• <i>analytics of API usage</i></li> </ul>
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Since this is going to be a testing & evaluation environment licensing ideally should be non-production.

If Bidder has no experience in implementing proposed APIM solution, in such case the implementation should be done only through OEM resources/services.

### **Proof of Concept (POC)**

Bidders as part of technical evaluation have to demonstrate Proof of Concept (POC) of their Application Programming Interface Management solution. POC will be based on the following conditions:



**Request for Proposal - For Supply, Implementation and Maintenance of Application Programming Interface Management (APIM) Solution RFP Reference No. : BCC:IT:PROC:109:69 dated 5th September 2017. Addendum 1 - dated 22<sup>nd</sup> September 2017**

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- i) All and any cost associated with demonstrating the POC (including provision of Servers, technical resources, travel cost, boarding cost etc.) will be to the account of the Bidder and bank will not bear any cost.
- ii) Bank reserve its right to extend / shorten the period of POC where needed.
- iii) Bidders who have failed in the POC will automatically stand disqualified technically.