REQUEST FOR INFORMATION (RFI)

EVENT PROCESSOR SOLUTION

PURPOSE OF THE REQUEST FOR INFORMATION:

This is not a bid solicitation. This RFI will not necessarily result in any procurement action. A contract will not result from this activity.

The Canada Revenue Agency (CRA) is seeking feedback from the vendor community on the availability of an Event Processor solution to streamline and centralize the processing and storage of events.

Vendors are requested to provide specific responses to the product questions outlined herein. Vendors are requested to provide product whitepapers if available.

The objective of this Request for Information (RFI) is to gather the most current information possible from industry on the different Event Processor solutions as it relates to the CRA's vision to implement a standard approach for managing events going forward.

The key objectives of the RFI include:

1. Receive responses from the vendor community about available solutions;
2. Get a better understanding of the current and future trends; and
3. Vendors who establish via their response to the RFI how their products(s) meet the solution requirements may be invited to provide an interactive demonstration and discuss in detail how their solutions meet the listed requirements.

Introduction

The Canada Revenue Agency (CRA) Business & Enterprise Solutions Directorate (BESD) Division in the Information Technology Branch is the Agency's lead for investigating an Event Processor solution for the Agency to facilitate information sharing between CRA's applications while improving security, interface standardization and scalability.

Objective of Request For Information

The purpose of this Request for Information (RFI) is to gather information on industry capabilities related to processing of events.

The CRA is exploring the possibility of acquiring an Event Processor tool(s) to standardize and lay the foundation for utilizing event processing and event data to increase self-service, detect fraud, and improve the services offered to taxpayers and benefit recipients.

Background Information

The CRA is noticing a shift in government, industry and client expectations as to how services are offered and how information is shared. Through public opinion research (POR), the CRA understands that clients/taxpayers are looking for more ease of use and reassurance when it comes to communicating with the Agency. Moving towards an event driven architecture will help to address the client/taxpayers' communication concern with the Agency. The main objective is to streamline the information exchange process while improving security, interface standardization and scalability.

At the core, the CRA is expecting to achieve the following benefits from the centralized events processing solution:

- Facilitate information sharing across GC departments
- Faster development and reduced costs because the solution does not have to be rebuilt each time

- Simplified and less costly BI services as data is available from a single source
- Decision making as key information is available in one place to everyone who needs it
- Improved ability to detect fraud faster
- The ability to make more accurate and timely decisions and to correlate and analyze events to identify patterns
- Enhance the analytics and reporting abilities across the Agency

Requirements

The new solution is expected to eliminate service and maintenance costs associated with standalone processes, and provide the opportunity to store and manage event data at a centralized location.

Capabilities:

- ***Receive/Deliver*** – receive/deliver events from/to different applications in a standard format
- ***Display*** – Prepare events for displaying certain events in applications such as My Account.
- ***Store/Archive*** – ability to store/archive events data in database
- ***Evaluate*** – apply business rules to handle events
    - ***Take action*** – Each event will be actioned as per the rules and registration details. Forward event data to event delivery component.
    - ***Consolidate*** – correlate events, either notify subscribers or create a new event.
- ***Subscription service*** – Allows subscribers to register to events and manage their subscription and preferences.
    - ***Manage message*** – Retrieving subscriber's preferences, invoking necessary services to prepare the message, delivering to delivery systems like email, text etc.
- ***Rules management*** – Ability to manage events processing rules including, but not limited to, pre-defined patterns, validation, filtering etc. Rules need to be stored in a centralized rules repository.
- ***Reporting, Analytics*** – Reporting on event processing from an operational, performance measurement, and business analytics view.

Potential Use Cases: Describe how your solution can be used to implement following use cases:

- Legacy mainframe Applications using event-driven Architecture
- To mimic Business Process Modelling
- Fraud Detection

Appendix A – General Questions

A.1 - General Information	
A.1.1	Describe how your solution meets the Government of Canada standard under the Official Languages Act (accessible via the following hyperlink http://laws-lois.justice.gc.ca/eng/acts/o-3.01/). Specifically, describe in what capacity your solution provides user interface functionality and documentation in English and French.
A.1.2	Describe how your solution meets the Government of Canada standard under the Privacy Act (accessible via the following hyperlink http://laws-lois.justice.gc.ca/eng/acts/p-21/).
A.1.3	Provide 3 examples where your solution was implemented with multiple different applications Include implementation time, common success factors, and obstacles in standardizing this solution.
A.2 -Licensing Questions	
A.2.1	What are the available licensing models including maintenance and support models?
A.2.2	How your solution’s price is constructed (e.g. site licenses, concurrent users, named users, third party module/ database etc.)
A.3 – Training, Documentation and Support	
A.3.1	What type of technical documentations do you provide for your application (e.g. white paper, installation and configuration instruction, release notes, etc.)?
A.3.2	Describe the different types of training you provide for your solution.
A.3.3	Do you offer standard and customized training courses?
A.4 – Deployment and Technical Support	
A.4.1	Describe your release schedule, including major and minor enhancements of your system. How often do you release software updates? How does the upgrade impact the implementation of existing services?
A.4.2	Describe if any third party/parties services are required for implementation or support.
A.4.3	Describe the activities and the type/level of expertise required to maintain the solution on an on-going basis.
A.4.4	Describe your maintenance and support offerings (i.e., pre-deployment, post-deployment, consulting after-hours support, 7/24 on-call support, etc.).
A.5 – Functional questions	
A.5.1	Describe what functional modules (components) are included in the base solution and what additional functional modules (components) are available.
A.5.2	Is there any customization required before the system is operational? Can this be done by the customer or does it require vendor setup?
A.5.3	Presuming the necessary IT infrastructure was already in place, how long would it take to install your solution, configure and make it ready for production use?

Appendix B – Technical Questions

B. 1 – General Technical Questions	
B.1.1	List and describe all the features and repositories that comprise your solution. Which open source and proprietary protocols, data formats are supported by your solution?
B.1.2	Describe the architecture of your solution including description of solution platform, storage, database management system, clustering, high availability and scalability features.
B.1.3	Does your solution support a cloud and/or hybrid implementation? How does it integrate with on premise legacy applications?
B.1.4	List all third party products and open source components in your system. Include a version number where applicable.
B.1.5	Describe different backup, recovery and fault tolerance options available in your solutions. In case of failure, how fast and easy it is to get system back in production?
B.1.6	Does your solution provide visual modelling tool (GUI) for developers?
B.2 – Events Processing Questions	
B.2.1	Describe how publish- subscribe can be implemented by your solution in the context of event-driven architecture. How are subscriptions and preferences of subscribers managed by your solution?
B.2.2	Describe in detail your solution's process of receiving and sending events between internal and external applications.
B.2.3	Describe how events are being stored, searched, categorized and archived for the purpose of tracking, auditing and generating pre-defined or custom reports?
B.2.4	Describe how event rules are implemented in your solution such as predefining patterns, validation, filtering events etc. Does your solution provide a repository for business rules?
B.2.5	Describe how your solution performs correlation, pattern matching and aggregation on events?
B.2.6	Describe how data transformation and mapping is done between different data formats and protocols by your solution.
B.2.7	Describe the types of reports that can be generated using your solution. Are the reports customizable?
B.2.8	Describe your solution's logging capability for debugging and auditing purposes.
B.2.9	Are there restrictions in your solution on maximum number of event notifications that can be sent or received? Please explain
B.2.10	Can your system be configured without service interruption? Are there any limitations?
B.2.11	Does the solution use a rule based event notification? If yes, are users able to define an event criteria using complex string patterns/expressions to trigger a specific actions to be taken? What types of actions are supported? (SMS, Email, customized actions, etc.).
B.3 –Integration Questions	
B.3.1	Is the integration of solution supported by services? If so, what type of services ex. Web services, EJB, .NET remoting, queues etc.?
B.3.2	What services directories (ex. UDDI) can the solution integrate with?
B.3.3	Are there integration adapters that are provided with the solution? If so, please identify.
B.3.4	Are there security APIs for application level integration?
B.3.5	Is it equally viable/ cost effective from small to large implementations?
B. 4 – Security Questions	
B.4.1	What privacy and security regulatory compliance standards does the solution meet?
B.4.2	Describe your solution's security features in detail.
B.4.3	Describe your solution's authentication and authorization options

B.4.4	Explain how your solution can integrate with existing authentication and authorization systems.
B.4.5	Explain how the data is protected in transit and at rest by your solution.
B.4.6	Describe the safeguards your solution has in place to protect the integrity, and guarantee the non-repudiation of the captured event data and logs
B.4.7	Describe how your solution provides continuous monitoring access to all sensitive data, and raise real time alerts from critical violations
B.4.7	Describe how your solution generates, records, reports and protects audit logs
B.4.7	Describe how security patches and fixes are implemented on your solutions

INTERACTIVE PRESENTATION SESSIONS:

CRA may at its sole discretion request meetings with interested respondents who have clearly addressed the Solution Requirements in their response to CRA to provide them with the opportunity for a follow-up to their written response and to present /discuss their capabilities in relation to this RFI.

Respondents may be contacted within 6 weeks of the RFI closing date to schedule the presentation. An Invite Agenda will be provided to the interested respondents. Specific questions or areas of interest to be covered during the session may also be provided and will be based on responses received.

The on-site presentation session will be located in the National Capital Region. The exact location and timeframe will be detailed in the Invite Agenda. However, at no time will the session exceed 2 hours in length. Respondents will also be asked to provide an electronic version of their presentation material after the presentation session.

The respondent sessions must cover specific details relevant to the key objectives stated within this RFI. As such, representatives attending the session must include Subject Matter Expert(s) in these areas in order to meaningfully respond to questions at the session.

RESPONSES AND ENQUIRIES:

Respondents are advised to clearly identify which portions of their response are proprietary. The confidentiality of each Vendor's response will be maintained. Due to the nature of an RFI activity, respondents must be aware that aspects (that have not been labelled confidential) of their responses may be used as a basis for any subsequent Request for Proposal (RFP), if and when the CRA decides to prepare for any future procurement initiative.

Information provided in response to this RFI will be divulged only to individuals authorized to participate in this RFI activity.

Responses to this RFI will not be used to pre-qualify or otherwise restrict participation in any future procurement process (e.g. an RFP). Responses will not be formally evaluated.

CRA will not reimburse any expenditure incurred in preparing responses and participating in the presentation sessions related to this RFI.

The vendor must provide a contact name, email address and telephone number when submitting their response.

In the event that a response is not sufficiently clear, CRA reserves the right to seek additional information at their sole discretion.

Respondents are requested to submit responses by March 27,2019 at 2 p.m. Eastern Daylight Time. The review of responses will begin after the date and time mentioned above. Responses received after that date may not be reviewed.

Electronic submissions are preferred.

Vendors are requested to submit responses to this RFI using the following e-mail or delivery address:

Canada Revenue Agency
Contracting Division
250 Albert, 8th Floor, Room 8053
Ottawa, ON K1A 0L5
Attn: Alastair Webb
Telephone No: (613) 867-5203
E-mail: alastair.webb@cra-arc.gc.ca

For delivery by hand or by courier, Monday to Friday 8:30am to 3:00pm, please contact Alastair Webb to arrange a drop off time.

Only enquiries which clarify the questions asked or feedback requested may be answered with respect to this RFI.

Glossary of Terms and Acronyms

Term or acronym	Description
API	Application Programming Interface
CRA	Canada Revenue Agency
EJB	Enterprise Java Bean
GUI	Graphical User Interface
UDDI	Universal Description, Discovery and Integration