REQUEST FOR INFORMATION (RFI)

No. 1000391659

DATA REPLICATION SOLUTION
FOR THE CANADA REVENUE AGENCY

Closing date and time : April 19, 2022, 2:00 PM (EST)

DISCLAIMER

Responding to this Request for Information (RFI) is not a prerequisite to receiving or being eligible to bid on any Request for Proposal (RFP) for this requirement. Any RFP will be advertised on the Government Electronic Tendering Service (GETS) commonly referred to as Buy and Sell (https://buyandsell.gc.ca/).

This RFI is not to be construed as a solicitation for tenders or proposals. No contract or other form of commitment will be entered into based on responses to this RFI. This RFI is not considered as authorization by the Canada Revenue Agency (CRA) to undertake any work that would result in costs to CRA.

Nothing in this RFI shall be construed as a commitment from CRA to issue an RFP for this program. CRA may use non-proprietary information provided in its review and/or in the preparation of any formal RFP. All responses will be held by CRA on a confidential basis (subject to applicable federal legislation) and remain the property of CRA once they have been received.

CRA may reproduce or photocopy or transcribe the response and any non-proprietary supporting documentation for the purpose of its review and/or inclusion in any resulting RFP document. Vendors responding to this RFI are advised to clearly identify which (if any) portions of their responses are proprietary and may be invited to a meeting to further clarify their responses to questions provided in Appendix A and B herein.

The confidentiality of each vendor's response will be maintained.

CRA shall not be bound by anything stated herein. CRA reserves the right to change, at any time, any or all parts of the requirements, as it deems necessary. CRA also reserves the right to revise its procurement approach, as it considers appropriate, either based upon information submitted in response to this RFI or for any other reason it deems appropriate.

This RFI remains the property of CRA at all times and must be returned by the vendor upon request. Vendors not submitting a response must immediately return all printed, graphic and electronic documentation to the point of contact.

Interactive Demonstration Sessions

CRA may at its sole discretion entertain presentations/demonstrations with interested respondents to provide them with the opportunity for a follow-up to their written response to present their capabilities in relation to this RFI.

Respondents that have expressed such interest and have demonstrated via their response to the RFI that their products(s) correspond sufficiently to the product questions as stated

herein may be contacted within 20 business days of the RFI closing date to schedule the presentations/demonstrations.

Presentations/demonstrations will be virtual, utilizing desktop audio video conferencing tools such as WebEx or MS Team.

The time frame for each session will be a maximum of 2 hours.

Respondents must be familiar with the services capabilities to respond to questions at the presentation/demonstration session.

Responses and Enquiries

Responses for questions must be submitted complete and in writing in the order shown. All requests for information in all sections of this document must be answered as concisely as possible while providing all information necessary to understand the proposed solution. Any deviation from the question or requirements that cannot be satisfied by the vendor, must be clearly identified.

Any information of a confidential or proprietary nature contained in a vendor's response should be clearly marked 'PROPRIETARY' or 'CONFIDENTIAL' by item or at the top of each page.

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.

Respondents are requested to submit responses by 2:00PM Eastern Standard Time (EST), April 19, 2022. Responses received after this date/time will not be reviewed.

Electronic submissions are mandatory and should be submitted as one complete package.

Vendors are requested to submit responses to this RFI using the following e-mail

E-mail: fouad.elmellouhi@cra-arc.gc.ca

All enquiries must be submitted via email to the attention of Fouad Elmellouhi at fouad.elmellouhi@cra-arc.gc.ca

CONTEXT

Introduction

The Canada Revenue Agency (CRA) Advanced Analytics Division (AAD) in the Information Technology Branch (ITB) is the Agency's technical lead to modernize CRA's GST/HST risk assessment platform. One of the core components of the project is to have a solution that can replicate data in near real time from different source databases for downstream Business Intelligence (BI) systems to use.

The purpose of this Request for Information (RFI) is to gather information on industry capabilities and availability of a Data Replication solution that can satisfy our business requirements.

The key objectives of the RFI include:

1. Determine vendor capabilities in providing a near real-time Data Replication solution that can meet CRA's requirements.
2. Help CRA understand industry standards, best practices, and/or recommendations in terms of using data replication in a public service environment.
3. Get a better understanding of the current and future trends of Data Replication solution.
4. Provide an opportunity for industry to demonstrate and discuss its software functionalities, capabilities, and constraints.
5. Solicit feedback on options for integrating the solution with different platforms and systems.
6. Solicit feedback on the cost, schedule, level of effort, hardware requirements and technical architecture.

Background Information

The Canada Revenue Agency's Aggressive GST/HST Planning and Refund Integrity Division (AGPRID) aims to identify and, where possible, stop the payment of unwarranted GST/HST refunds. This initiative is expected to modernize the risk assessment of GST/HST returns by implementing near-real-time data replication software for risk assessment as returns are filed. This will permit the deployment of complex risk models that use all of the available data and identify the riskiest accounts and refund claims in near real time without compromising the continuous processing of GST/HST and Income Tax returns.

Requirements

1. Replicate data from a source database (Db2 for z/OS) to a target database (could be a variety of types from Db2 to PostgreSQL)
2. Perform data transformation in the data replication process from a source database to a target database
3. Perform full table replication from a source to ensure new, updated, and existing data is replicated to a target database
4. Perform more efficient data replication methods like key-based incremental replication, transactional replication, and log-based replication with the ability to support historical data.
5. Support on-premises, cloud-based, and hybrid cloud architectures
6. Handle high end-to-end data volume
7. Minimize replication resource consumption on the source databases
8. Ability to scale up new data sources with minimal effort
9. Able to support high availability
10. Fault tolerance functionality
11. Adapt to changes at the source (e.g., tables, columns, etc.) with minimal effort
12. Audit trail capability as it relates to the tool and the administration of the replication process
13. Role-based access to perform different administrative functions

Potential Use Cases:

Describe how your solution can be used to implement the following use cases:
- Replicate data from Db2 for z/OS to on-premise and cloud target databases
- Minimize replication resource consumption on the source databases
- Add additional sources for replication with minimal disruption
- React to a column change at the source

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.

Constraints to be considered for the proposed solution

Official Languages - Must meet 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 – user interfaces, functionality and documentation in English and French.

Accessibility – Must meet the Government of Canada standard under the Accessible Canada Act (accessible via the following hyperlink https://laws-lois.justice.gc.ca/eng/acts/A-0.6/).

Privacy - Must 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/).

User access – Must support limiting user access (user profiles) and configuration.

RFI Questions:

Responders are required to answer RFI questions in Appendix A and B .

Appendix A – General Questions

The following questions are representative of the type of information the CRA is seeking as it considers how to structure any RFP that might follow this RFI process.

Vendors must note that this list of questions is not exhaustive; vendors are invited to provide any additional information that might prove useful and/or beneficial to the CRA in preparing any subsequent RFP.

Vendors that provide written feedback may be invited to a one-on-one consultation session with CRA representatives. This session would allow vendors to provide additional feedback pertaining to this RFI as well as to explain comments made in their written submission.

	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	Provide two examples where your solution was implemented. Include implementation time, common success factors, and obstacles in standardizing this solution.
	A.2 – Licensing
A.2.1	What are the available licensing models, including maintenance and support models?
A.2.2	How is your solution's price constructed? (e.g., site licences, concurrent users, data volume (per record replicated), etc.)
	A.3 – Training, Documentation, and Support
A.3.1	What type of technical documentation do you provide for your application (e.g., white paper, installation and configuration instruction, release notes, user guides, etc.)?
A.3.2	Describe the different types of training you provide for this type of solution.
A.3.3	Do you offer standard and customized training?
	A.4 – Deployment and Technical Support
A.4.1	Describe your release schedule, including major and minor enhancements of your software. How often do you release software updates? How does the upgrade impact the implementation of existing services?
A.4.2	Does your solution include 3rd party or open source software? If so, please list them.
A.4.3	Describe the activities and the type/level of expertise required to maintain the solution on an ongoing basis.
A.4.4	Describe your maintenance and support offerings (e.g., pre-deployment, post-deployment, consulting, after-hour support, 7/24 on-call support, etc.)
	A.5 – Functional
A.5.1	Describe what functional components are included in the base solution and what additional components are available.

A.5.2	Is there any customization required before the system is operational. Can this be done by a customer or does it require vendor setup?
A.5.3	Describe any special supporting IT infrastructure, capacity, or environmental dependencies required by your solution.
A.5.4	Presuming the necessary IT infrastructure was already in place, how long would it take to install your solution, configure it, and make it ready for production?

Appendix B – Technical Questions

The following questions are representative of the type of information the CRA is seeking as it considers how to structure any RFP that might follow this RFI process.

Vendors must note that this list of questions is not exhaustive; vendors are invited to provide any additional information that might prove useful and/or beneficial to the CRA in preparing any subsequent RFP.

Vendors that provide written feedback may be invited to a one-on-one consultation session with CRA representatives. This session would allow vendors to provide additional feedback pertaining to this RFI as well as to explain comments made in their written submission.

B.1 –	General Technical Questions
B.1.1	Does your solution support a cloud and/or hybrid implementation? How does it integrate with on premise legacy systems?
B.1.2	Describe the architecture of your solution including components that need to be deployed to replicate data, user interfaces, clustering, high availability, and scalability features.
B.1.3	Describe different backup, recovery, and fault tolerance options available in your solution. In case of failure, how fast and easy is it to get the system back in production?
B.1.4	Describe the footprint/impact that your solution would have on a source to be replicated in terms of CPU usage, server components, or remote components required. Are there any options that could minimize resource consumption?
B.1.5	Describe any capabilities for performance monitoring for your solution.
B.2 –	Replication Options
B.2.1	List the different types of sources (database, files, etc.) your solution is able to replicate from as a source and replicate to as a target.
B.2.2	Describe the various options for data replication (full load, incremental key-based, transactional, log-based, etc.) that your solution supports.
B.2.3	Can your solution replicate a subset of a database and/or a subset of a table in a database? If so, describe how.
B.2.4	Can your solution transform data from the sources to the targets? If so, describe the functionality that would allow data to align with the target database structure or format. Are there any processes that would allow for complex data transformation?
B.2.5	Describe the process how your solution handles data element changes (adding/modifying tables/columns).

B.2.6	Can your solution implement replication rules like excluding rows/columns from the source? If so, describe the process.
B.3 –	**Security, Audit, Logging**
B.3.1	Describe your solution's security features in detail.
B.3.2	Describe your solution's authentication and authorization options.
B.3.3	Explain how your solution can integrate with existing authentication and authorization systems.
B.3.4	Describe how security patches and fixes are implemented on your solutions.
B.3.5	Provide all available security certifications and assessments for the proposed solution, if any.