

IT Professional Technical Services

SITE Program

T#:14ATM

Request for Offers (RFO)

For Technology Services

Issued By

MN.IT Services@ Minnesota Department of Human Services

Project Title: MNSure Audit and Compliance Project

Categories: Database Administration / Development and Architecture (Team)

Vendor must be approved in both categories to be eligible to respond to the RFO.

Business Need

- The MNSure IT system has federal and state statutory and regulatory requirements that mandate safeguarding of consumer data. These include Minnesota Statutes 62V.06, Subd. 8(a), MARS-E, Health Insurance Portability and Accountability Act (HIPAA), and Health Information Technology for Economic and Clinical Health (HITECH). For effective oversight of safeguards over consumer data, the MNSure IT system has in place various capabilities, this project will expand upon the current capabilities.
- The State of Minnesota is seeking services and system architecture for reviewing requirements, designing an ETL architecture and implementing Cloudera Hadoop based solutions for data ingest.
- The project will be done in three overall phases with the following focus per phase:
 - Phase 1 - Installation and configuration of required Cloudera software.
 - Phase 2 – Security and Reporting configuration and integration.
 - Phase 3 – Stream Analytics.

Project Schedule and Deliverables

- Project Start Date: 11/9/2015
- End Date: 06/30/2016

Phase 1: Infrastructure Build and Search Capabilities 11/09/2015 – 11/30/2015

Phase 2: Security and Reporting implementation 11/09/2015 – 01/31/2016

Phase 3: Streaming Analytics implementation 2/01/2016 – 6/30/2016

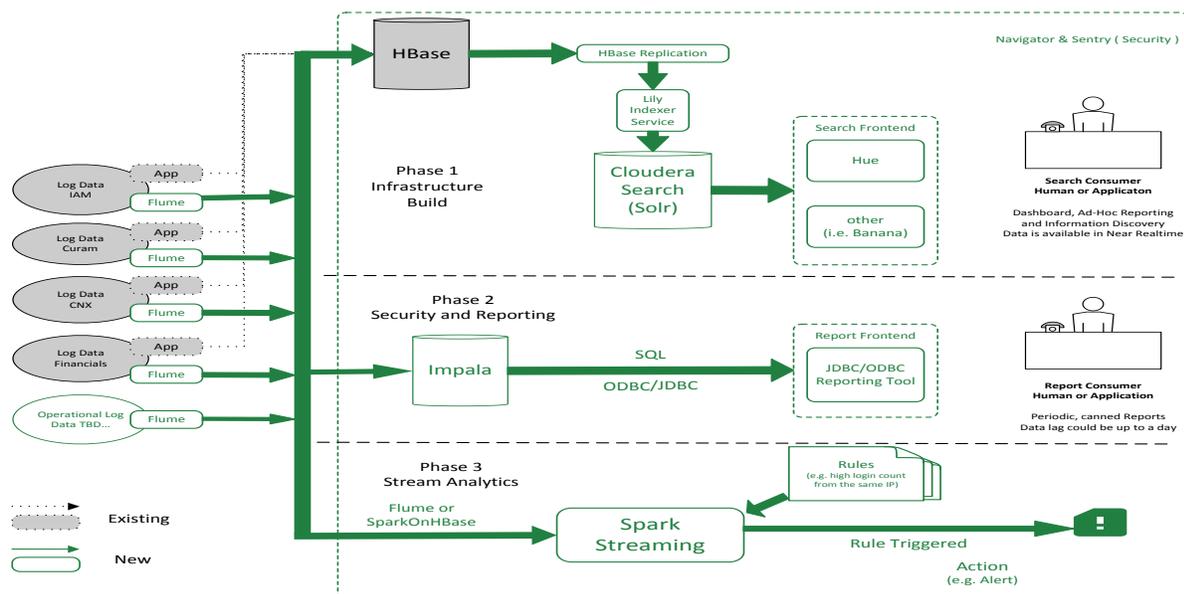
Project Environment

It is expected vendor teams will work on-site at the Dept. of Human Services building in St. Paul during normal work hours of 8am - 4:30pm.

The successful responder will work directly with MN.IT Services staff to implement:

- Solution will be implemented in Development, Systems Test, Acceptance Test and Production environments.
- Solution will leverage Cludera Enterprise Software Suite, Oracle Big Data Appliance and other technologies currently implemented in the State of Minnesota network and data center.

Project Architecture and Software solution.



Project Deliverables

This engagement will implement a reporting, search and analytics solution to meet the defined business need. The high level architecture has been designed and the selected vendor will work with MN.IT staff to implement.

This engagement will be deemed successful once the following deliverables have been met and approved by state.

Phase 1 Deliverables

1. Written assessment of current and future Hadoop requirements.
2. Design Cloudera Certified architecture based on Customer requirements.
3. Installation of Cloudera Manager and CDH software, both provided under separate licenses, on State of Minnesota infrastructure.
4. Written assessment of the State of Minnesota's current and future ingestion requirements.
5. Review the State of Minnesota's current Hadoop cluster to include data sources, typical jobs, and SLAs.
6. Design an architecture based on the State of Minnesota's requirements including Hadoop, HBase, Solr, etc.
7. Design a Solr (Cloudera Search) schema and collection based on data elements present in the MNsure Audit HBase environment.
8. Design a Solr (Cloudera Search) index pipeline using the Lily Indexer in both batch and service (near real-time) modes. The source of this index will be the MNsure Audit HBase environment.
9. Design and implement a prototype Search Dashboard in Hue that allows users access to the Solr (Cloudera Search) collection created as part of section 3.3.2.

Phase 2 Deliverables:

1. Design and creation of reference implementations for identified data sources.
2. Design and implement data lineage and traceability solution using Cloudera Navigator.
3. Design and implement Hadoop, HBase, Impala and Spark audit functionality using Cloudera Navigator.
4. Design and implement role based authorization schema using Apache Sentry.
5. Integration of the security solution with current Identity and Access Management Directory using the Kerberos protocol.

6. Design and implement Cloudera Impala software. Implementation will accommodate at least two standard JDBC/ODBC reporting tools to generate required audit reports to meet the defined business need.

Phase 3 Deliverables:

1. Design and implement a framework for developing stream analytics on Spark.
2. Complete performance tests and benchmarks on the newly provisioned environment and assist with improvements to map-reduce algorithms where requested.
3. Design and implement a sample pipeline for streaming log data through Flume into Spark.
4. Design and implement a sample Spark Streaming application that provides near real-time analytics of audit log data.

The vendor will deliver documentation, which will include the following information:

1. The State of Minnesota's requirements for ETL/Ingestion.
2. Assessment of current processes.
3. Implemented solution operational procedures, "run book".
4. Implementation and configuration procedures.
5. Solution architecture including which Hadoop technologies (Hadoop, HBase, Solr, etc.).
6. Configuration changes based on the State of Minnesota's requirements.

Responsibilities Expected of the Selected Vendor

The selected vendor will be required to:

- Provide weekly documentation and status updates through MN.IT @ MNSure project managers
- Provide training and knowledge transfer and product documentation where required by MN.IT @ MNSure
- Provide input and track against the project work plan

Required Skills (to be scored pass/fail)

Required **Minimum** Qualifications

Key members of the proposed team must have experience with the following technology:

- 2 plus years' experience with Hadoop
- 2 plus years' experience with HBase
- 2 plus years' experience with Flume
- 1 plus years' experience with Kafka
- 1 plus years' experience with Lily Indexer Service
- 1 plus years' experience with Cloudera Search or Solr
- 1 plus years' experience with Impala including JDBC/ODBC integration to BI and reporting tools
- 1 plus years' experience with Spark
- 1 plus years' experience with Spark Streaming
- 1 plus years' experience with Cloudera Navigator
- 1 plus years' experience with Sentry
- 1 plus years' experience with Kerberos
- 1 plus years' experience with configuring integrations to LDAP or AD

Desired Skills

Subject to the Request for Offers evaluation process, points will be scored based on the following criteria if the required skills are met:

- Subject matter expertise in security, audit data and research
- Experience in coaching or team development situations
- Business requirements analysis
- Production experience with Hadoop and related systems including distributed systems and data management.
- Experience with installing, tuning and optimizing, and monitoring Hadoop and ecosystem components for a production environment.
- Experience with data ingestion pipeline design, Hadoop information architecture, data modeling and data mining, machine learning and advanced data processing.
- Ability to mentor, document, and share best practices with key stakeholders
- Experience with real-time analytics using Spark.

Process Schedule

Deadline for Questions	10/26/2015, (noon) CST
Anticipated Posted Response to Questions	10/28/2015, (noon) CST
Proposals due	10/29/2015, (noon) CST
Anticipated proposal evaluation begins	10/30/2015
Anticipated proposal evaluation & decision	11/02/2015 (noon) CST

Questions

Any questions regarding this Request for Offers should be submitted via e-mail according to the date and time listed in the process schedule to:

Name: Deb Meier

Organization: MN.ITServices@MNSure&DHS
Email Address: Debra.meier@state.mn.us

Questions and answers will be posted via an addendum to the RFO on the Office of MN.IT Services website (<http://mn.gov/buyit/14atm/rfo/active.html>) according to the process schedule above.

Other persons ARE NOT authorized to discuss this RFO or its requirements with anyone throughout the selection process and responders should not rely on information obtained from non-authorized individuals. If it is discovered a Responder contacted other State staff other than the individual above, the responder's proposal may be removed from further consideration.

The STATE reserves the right to determine if further information is needed to better understand the information presented. This may include a request for a presentation.

RFO Evaluation Process

- Completeness of Submission (5%)
- Desired Skills (25%)
- Project Approach, Resumes, Expert Knowledge (40%)
- Cost (30%)

This Request for Offers does not obligate the state to award a work order or complete the assignment, and the state reserves the right to cancel the solicitation if it is considered to be in its best interest. The Organization reserves the right to reject any and all proposals.

Submission Format

The proposal should be assembled as follows:

1. Cover Page

Vendor Name
Vendor Address
Vendor City, State, Zip
Contact Name for Vendor
Contact's direct phone/cell phone (if applicable)
Contact's email

2. Required and Desired Skills

Complete the chart below and copy/paste into your proposal, noting who from your team can demonstrate the required skill and where on their resume they have this experience.

REQUIRED SKILLS Pass/Fail If pass/fail requirements are not met, the State will discontinue further scoring of the proposal.	What team member has this skill and what job on resume was this skill demonstrated/used?
2 plus years' experience with Hadoop	
2 plus years' experience with HBase	
2 plus years' experience with Flume	
1 plus years' experience with Kafka	
1 plus years' experience with Lily Indexer Service	
1 plus years' experience with Cloudera	

Search or Solr	
1 plus years' experience with Impala including JDBC/ODBC integration to BI and reporting tools	
1 plus years' experience with Spark	
1 plus years' experience with Spark Streaming	
1 plus years' experience with Cloudera Navigator	
1 plus years' experience with Sentry	
1 plus years' experience with Kerberos	
1 plus years' experience with configuring integrations to LDAP or AD	

DESIRED SKILLS (scored)	What team member has this skill and what job on resume was this skill demonstrated/used?
Subject matter expertise in security, audit data and research	
Experience in coaching or team development situations	
Business requirements analysis	
Production experience with Hadoop and related systems including distributed systems and data management.	
Experience with installing, tuning and optimizing, and monitoring Hadoop and ecosystem components for a production environment.	
Experience with data ingestion pipeline design, Hadoop information architecture, data modeling and data mining, machine learning and advanced data processing.	
Ability to mentor, document, and share best practices with key stakeholders	
Experience with real-time analytics using Spark.	

3. Project Approach, Resumes, Expert Knowledge

- A. Based on your companies experience, please describe the project approach you will use to complete the deliverables as well as the team structure you envision to staff this project. This narrative should include:
- Key Staff to be assigned to the project, their roles in this project, and include resumes of those persons identified.

- Contingency staffing plan that demonstrates respondent's capacity to maintain the quality of the project throughout the life of the contract.
 - B. Respondents should include the name of one vendor reference who can speak to the vendor's work on a similar project. Include the company name and address, reference name, reference email, reference direct phone number and a brief description of the project completed.
 - C. In a narrative format, please answer the following: Based on your expert knowledge and experience completing projects similar in nature, what do you think will be the most risky part of this project and how will you manage to mitigate this risk? What do you feel is missing from the project plan or deliverables to make this a successful project?
- 4. Cost Proposal: Include a separate document labeled "Cost Proposal"**
- This is a fixed bid project. **In a separate file**, provide a chart breaking down the cost per phase, with a total cost at the bottom of the chart. Provide a chart with cost broken down by the number of expected hours and each resources hourly rate. Payment will be made at the end of each phase once the State has accepted the deliverables for that phase of work.
- 5. Conflict of interest statement as it relates to this project**
- 6. Additional Statement and forms:**
 Required forms to be returned or additional provisions that must be included in proposal
1. Affirmative Action Certificate of Compliance (if over \$100,000, including extension options) <http://www.mmd.admin.state.mn.us/doc/affaction.doc>
 2. Equal Pay Certificate Form (if proposals exceeds \$500,000, including extension options) <http://www.mmd.admin.state.mn.us/doc/equalpaycertificate.doc>
 3. Affidavit of non-collusion <http://www.mmd.admin.state.mn.us/doc/noncollusion-2.doc>
 4. Certification Regarding Lobbying (if over \$100,000, including extension options) <http://www.mmd.admin.state.mn.us/doc/lobbying.doc>

Proposal Submission Instructions

- **Response Information:** The proposal must be transmitted via e-mail no later than the date and time noted in the PROCESS SCHEDULE section in this document. Email to:
 - Deb Meier, MNsure IT Lead Project Manager
 - Debra.meier@state.mn.us
 - Email subject line must read: MNsure Audit and Compliance
- A copy of the response must also be sent to MNIT.SITE@state.mn.us for vendor performance tracking.
- You must submit an email with your response or email notification that you will not respond to MNIT.SITE@state.mn.us. Failure to do either of these tasks will count against your program activity and may result in removal from the program.

General Requirements

Proposal Contents

By submission of a proposal, Responder warrants that the information provided is true, correct and reliable for purposes of evaluation for potential award of this work order. The submission of inaccurate or misleading information may be grounds for disqualification from the award as well as subject the responder to suspension or debarment proceedings as well as other remedies available by law.

Liability

Indemnification

In the performance of this contract by Contractor, or Contractor's agents or employees, the contractor must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the state, to the extent caused by Contractor's:

- 1) Intentional, willful, or negligent acts or omissions; or
- 2) Actions that give rise to strict liability; or
- 3) Breach of contract or warranty.

The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Contractor may have for the State's failure to fulfill its obligation under this contract.

Disposition of Responses

All materials submitted in response to this RFO will become property of the State and will become public record in accordance with Minnesota Statutes, section 13.591, after the evaluation process is completed. Pursuant to the statute, completion of the evaluation process occurs when the government entity has completed negotiating the contract with the selected vendor. If the Responder submits information in response to this RFO that it believes to be trade secret materials, as defined by the Minnesota Government Data Practices Act, Minn. Stat. § 13.37, the Responder must: clearly mark all trade secret materials in its response at the time the response is submitted, include a statement with its response justifying the trade secret designation for each item, and defend any action seeking release of the materials it believes to be trade secret, and indemnify and hold harmless the State, its agents and employees, from any judgments or damages awarded against the State in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives the State's award of a contract. In submitting a response to this RFO, the Responder agrees that this indemnification survives as long as the trade secret materials are in possession of the State.

The State will not consider the prices submitted by the Responder to be proprietary or trade secret materials.

Conflicts of Interest

Responder must provide a list of all entities with which it has relationships that create, or appear to create, a conflict of interest with the work that is contemplated in this request for proposals. The list should indicate the name of the entity, the relationship, and a discussion of the conflict.

The responder warrants that, to the best of its knowledge and belief, and except as otherwise disclosed, there are no relevant facts or circumstances which could give rise to organizational conflicts of interest.

An organizational conflict of interest exists when, because of existing or planned activities or because of relationships with other persons, a vendor is unable or potentially unable to render impartial assistance or advice to the State, or the vendor's objectivity in performing the contract work is or might be otherwise impaired, or the vendor has an unfair competitive advantage. The responder agrees that, if after award, an organizational conflict of interest is discovered, an immediate and full disclosure in writing must be made to the Assistant Director of the Department of Administration's Materials Management Division ("MMD") which must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. If an organization conflict of interest is determined to exist, the State may, at its discretion, cancel the contract. In the event the responder was aware of an organizational conflict of interest prior to the award of the contract and did not disclose the conflict to MMD, the State may terminate the contract for default. The provisions of this clause must be included in all subcontracts for work to be performed similar to the service provided by the prime contractor, and the terms "contract," "contractor," and "contracting officer" modified appropriately to preserve the State's rights.

IT Accessibility Standards

All documents and other work products delivered by the vendor must be accessible in order to conform with the State Accessibility Standard. Information about the Standard can be found at: <http://mn.gov/mnit/programs/policies/accessibility/>.

Preference to Targeted Group and Economically Disadvantaged Business and Individuals

In accordance with Minnesota Rules, part 1230.1810, subpart B and Minnesota Rules, part 1230.1830, certified Targeted Group Businesses and individuals submitting proposals as prime contractors will receive a six percent preference in the evaluation of their proposal, and certified Economically Disadvantaged Businesses and individuals submitting proposals as prime contractors will receive a six percent preference in the evaluation of their proposal. Eligible TG businesses must be currently certified by the Materials Management Division prior to the solicitation opening date and time. For information regarding certification, contact the Materials Management Helpline at 651.296.2600, or you may reach the Helpline by email at mmdhelp.line@state.mn.us. For TTY/TDD communications, contact the Helpline through the Minnesota Relay Services at 1.800.627.3529.

Veteran-Owned Preference

In accordance with Minn. Stat. § 16C.16, subd. 6a, (a) Except when mandated by the federal government as a condition of receiving federal funds, the commissioner shall award up to a six percent preference on state procurement to **certified small businesses** that are **majority-owned and operated by veterans**.

In accordance with Minn. Stat. § 16C.19 (d), a veteran-owned small business, the principal place of business of which is in Minnesota, is certified if it has been verified by the United States Department of Veterans Affairs as being either a veteran-owned small business or a service disabled veteran-owned small business, in accordance with Public Law 109-461 and Code of Federal Regulations, title 38, part 74.

To receive a preference the veteran-owned small business must meet the statutory requirements above by the solicitation opening date and time.

If you are claiming the veteran-owned preference, **attach documentation, sign and return the Veteran-Owned Preference Form with your response to the solicitation**. Only eligible veteran-owned small businesses that meet the statutory requirements and provide adequate documentation will be given the preference.

Foreign Outsourcing of Work Prohibited

All services under this contract shall be performed within the borders of the United States. All storage and processing of information shall be performed within the borders of the United States. This provision also applies to work performed by subcontractors at all tiers.

Work Force Certification

For all contracts estimated to be in excess of \$100,000, responders are required to complete the Affirmative Action Certificate of Compliance and return it with the response. As required by Minnesota Rule 5000.3600, "It is hereby agreed between the parties that Minnesota Statute § 363A.36 and Minnesota Rule 5000.3400 - 5000.3600 are incorporated into any contract between these parties based upon this specification or any modification of it. A copy of Minnesota Statute § 363A.36 and Minnesota Rule 5000.3400 - 5000.3600 are available upon request from the contracting agency."

Equal Pay Certification

If the Response to this solicitation could be in excess of \$500,000, the Responder must obtain an Equal Pay Certificate from the Minnesota Department of Human Rights (MDHR) or claim an exemption prior to contract execution. A responder is exempt if it has not employed more than 40 full-time employees on any single working day in one state during the previous 12 months. Please contact MDHR with questions at: 651-539-1095 (metro), 1-800-657-3704 (toll free), 711 or 1-800-627-3529 (MN Relay) or at compliance.MDHR@state.mn.us.