# State of Nevada

## Oracle Identity and Access Management Upgrade

## Technical Proposal

## RFP No. 3490

Due Date: October 31, 2017 @ 2:00 PM

Applications Software Technology, LLC

1755 Park Street, Suite 100 | Naperville, Illinois 60563 | 1.888.278.0002 | www.astcorporation.com

Applications Software Technology, LLC

October 31, 2017

Gideon Davis
Purchasing Officer
State of Nevada, Purchasing Division
515 E. Musser Street, Suite 300
Carson City, NV 89701

*Re: RFP No. 3490, Oracle Identity and Access Management Upgrade*

Dear Mr. Davis:

Applications Software Technology LLC (AST) is pleased to have the opportunity to propose our firm's solution for the State of Nevada's (the State's) above referenced Oracle Identity Management and Access Management Upgrade. As a mature and proven Oracle partner and select Oracle Pillar Partner, focusing on Oracle IDM, SOA, BPM, WebCenter, Cloud and J2EE technologies, AST maintains among the highest levels of experience in end-to-end implementations of the latest version the Oracle Identity & Access Management Suite of products. We have successfully delivered & supported enterprise-wide deployments and upgrades of Oracle Identity Management & Access Management Suite components (OID, OVD, OUD, OIM, OIF, OAM, OAAM, OSSO and OES) in varied complex environments acorss the industry verticals.

We are among an elite group of Oracle Platinum Partners, ensuring the State that our proposed team is comprised of certified experts in all aspects of Oracle IAM and supporting technologies. The State will benefit greatly from our past success with large-scale CJIS and Identity and Access Management projectss for entities such as Cook County, IL; Underwriters Laboratories, IL; College of American Pathologists, IL; City of Los Angeles - Department of Water and Power, CA; Pinellas County, FL; City of Modesto, CA.; and LA METRO, CA. In AST, the State of Nevada will find a customer-focused and results-oriented partner with an in depth knowledge of Public Sector business practices.

We believe that after you have reviewed this proposal, we will have conveyed our thorough understanding of the State's needs, and established our qualifications to assist you in this mission critical project. Should you have any questions regarding our proposal, please feel free to contact Ms. Jennifer Ryerson, Senior Vice President of Public Sector Business Development at (480) 325-9418 or via e-mail to jryerson@astcorporation.com. We are excited about this opportunity and look forward to forming a successful long-term partnership with the State of Nevada.

Sincerely,

Shyam Kumar

Shyam Kumar
Vice President, Middleware
Applications Software Technology, LLC

# 1 TITLE PAGE

| Part IA – Technical Proposal | |
|---|---|
| RFP Title: | Oracle Identity and Access Management Upgrade |
| RFP: | 3490 |
| Vendor Name: | ***Applications Software Technology, LLC*** |
| Address: | ***1755 Park Street, Ste 100***<br>***Naperville, IL  60563*** |
| Opening Date: | November 1, 2017 |
| Opening Time: | 2:00 PM |

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Years of **Experience**

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Three Years Running

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Cloud-**Certified** Employees

Oracle University Partner

25+
**Specializations**

| | |
|---|---|
| Cloud ERP & HCM | CPQ |
| Cloud CX & Service | Database |
| BI Cloud Service | SOA/BPM |
| EPM/PBCS | WebCenter |
| Identity Management | Industry |

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## VENDOR INFORMATION SHEET FOR RFP 3490

**Vendor Shall:**

A) Provide all requested information in the space provided next to each numbered question. The information provided in Sections V1 through V6 shall be used for development of the contract;

B) Type or print responses; and

C) Include this Vendor Information Sheet in Section III of the Technical Proposal.

| | | |
|---|---|---|
| V1 | Company Name | Applications Software Technology, LLC |

| | | |
|---|---|---|
| V2 | Street Address | 1755 Park Street, Ste 100 |

| | | |
|---|---|---|
| V3 | City, State, ZIP | Naperville, IL 60563 |

| | | | |
|---|---|---|---|
| V4 | Telephone Number | | |
| | Area Code: 630 | Number: 778-1180 | Extension: |

| | | | |
|---|---|---|---|
| V5 | Facsimile Number | | |
| | Area Code: 630 | Number: 778-1179 | Extension: |

| | | | |
|---|---|---|---|
| V6 | Toll Free Number | | |
| | Area Code: 888 | Number: 278-0002 | Extension: |

| | |
|---|---|
| V7 | ***Contact Person for Questions / Contract Negotiations, including address if different than above*** |
| | Name: Jennifer Ryerson |
| | Title: Senior Vice President, Public Sector Business Development |
| | Address: 1755 Park Street, Ste 100 Naperville, IL 60563 |
| | Email Address: jryerson@astcorporation.com |

| | | | |
|---|---|---|---|
| V8 | Telephone Number for Contact Person | | |
| | Area Code: 480 | Number: 325-9418 | Extension: |

| | | | |
|---|---|---|---|
| V9 | Facsimile Number for Contact Person | | |
| | Area Code: 630 | Number: 778-1179 | Extension: |

| | | |
|---|---|---|
| V10 | ***Name of Individual Authorized to Bind the Organization*** | |
| | Name: Shaji Zechariah | Title: President |

| | | |
|---|---|---|
| V11 | Signature ***(Individual shall be legally authorized to bind the vendor per NRS 333.337)*** | |
| | Signature: Shaji Zechariah | Date:10/27/17 |

***Desired but not required.***

## ***ALL ELSE REMAINS THE SAME FOR RFP 3490.***

***Vendor must sign and return this amendment with proposal submitted.***

Vendor Name: Applications Software Technology, LLC

Authorized Signature: Shop Zechariah

Title: President Date: 10/27/17

This document must be submitted in the "State Documents" section of vendors' technical proposal.

## ATTACHMENT A – CONFIDENTIALITY AND CERTIFICATION OF INDEMNIFICATION

Submitted proposals, which are marked "confidential" in their entirety, or those in which a significant portion of the submitted proposal is marked "confidential" **shall not** be accepted by the State of Nevada. Pursuant to NRS 333.333, only specific parts of the proposal may be labeled a "trade secret" as defined in NRS 600A.030(5). All proposals are confidential until the contract is awarded; at which time, both successful and unsuccessful vendors' technical and cost proposals become public information.

In accordance with the submittal instructions of this RFP, vendors are requested to submit confidential information in separate files marked "**Part IB Confidential Technical**" and "**Part III Confidential Financial**".

The State shall not be responsible for any information contained within the proposal. If vendors do not comply with the labeling and packing requirements, proposals shall be released as submitted. In the event a governing board acts as the final authority, there may be public discussion regarding the submitted proposals that shall be in an open meeting format, the proposals shall remain confidential.

By signing below, I understand it is my responsibility as the vendor to act in protection of the labeled information and agree to defend and indemnify the State of Nevada for honoring such designation. I duly realize failure to so act shall constitute a complete waiver and all submitted information shall become public information; additionally, failure to label any information that is released by the State shall constitute a complete waiver of any and all claims for damages caused by the release of the information.

This proposal contains Confidential Information, Trade Secrets and/or Proprietary information.

***Please initial the appropriate response in the boxes below and provide the justification for confidential status.***

| **Part IB – Confidential Technical Information** | | | |
|---|---|---|---|
| YES | | NO | X |
| **Justification for Confidential Status** | | | |
| | | | |

| **Part III – Confidential Financial Information** | | | |
|---|---|---|---|
| YES | X | NO | |
| **Justification for Confidential Status** | | | |
| AST, LLC is a privately held company and it is not required to make the Financial Statements provided with this response public knowledge. | | | |

Applications Software Technology, LLC

Company Name

Shaji Zechariah

Signature

Shaji Zechariah — 10/27/17

Print Name — Date

**This document shall be submitted in Section IV of vendor's technical proposal**

# ATTACHMENT B – VENDOR CERTIFICATIONS

Vendor agrees and shall comply with the following:

(1) Any and all prices that may be charged under the terms of the contract do not and shall not violate any existing federal, State or municipal laws or regulations concerning discrimination and/or price fixing. The vendor agrees to indemnify, exonerate and hold the State harmless from liability for any such violation now and throughout the term of the contract.

(2) All proposed capabilities can be demonstrated by the vendor.

(3) The price(s) and amount of this proposal have been arrived at independently and without consultation, communication, agreement or disclosure with or to any other contractor, vendor or potential vendor.

(4) All proposal terms, including prices, shall remain in effect for a minimum of 180 days after the proposal due date. In the case of the awarded vendor, all proposal terms, including prices, shall remain in effect throughout the contract negotiation process.

(5) No attempt has been made at any time to induce any firm or person to refrain from proposing or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal. All proposals shall be made in good faith and without collusion.

(6) All conditions and provisions of this RFP are deemed to be accepted by the vendor and incorporated by reference in the proposal, except such conditions and provisions that the vendor expressly excludes in the proposal. Any exclusion shall be in writing and included in the proposal at the time of submission.

(7) Each vendor shall disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict shall be disclosed. By submitting a proposal in response to this RFP, vendors affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest shall automatically result in the disqualification of a vendor's proposal. An award shall not be made where a conflict of interest exists. The State shall determine whether a conflict of interest exists and whether it may reflect negatively on the State's selection of a vendor. The State reserves the right to disqualify any vendor on the grounds of actual or apparent conflict of interest.

(8) All employees assigned to the project are authorized to work in this country.

(9) The company has a written equal opportunity policy that does not discriminate in employment practices with regard to race, color, national origin, physical condition, creed, religion, age, sex, marital status, sexual orientation, developmental disability or handicap.

(10) The company has a written policy regarding compliance for maintaining a drug-free workplace.

(11) Vendor understands and acknowledges that the representations within their proposal are material and important, and shall be relied on by the State in evaluation of the proposal. Any vendor misrepresentations shall be treated as fraudulent concealment from the State of the true facts relating to the proposal.

(12) Vendor shall certify that any and all subcontractors comply with Sections 7, 8, 9, and 10, above.

(13) The proposal shall be signed by the individual(s) legally authorized to bind the vendor per NRS 333.337.

Applications Software Technology, LLC

Vendor Company Name

Shaji Zechariah

Vendor Signature

Shaji Zechariah — 10/27/17

Print Name — Date

**This document shall be submitted in Section IV of vendor's technical proposal**

## ATTACHMENT J – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or shall be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federally appropriated funds have been paid or shall be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

By: Shop Zechariah 10/27/17

Signature of Official Authorized to Sign Application Date

For: Applications Software Technology, LLC

Vendor Name

Oracle Identity and Access Management Upgrade

Project Title

**This document shall be submitted in Section IV of vendor's technical proposal**

## 4.5 VENDOR LICENSING AGREEMENTS

***The State's project is an Oracle IDM Upgrade project, and therefore no additional or new software will be implemented. Licensing of the Oracle IDM solution being upgraded will continue to be governed by the State's existing license.***

## 4.6 ORACLE CERTIFICATIONS

***AST is an Oracle certified Platinum Partner specialized in Oracle Identity and Access Management. Oracle America, Inc. does not issue physical certificates denoting our Partner status, however, we have included a link to AST's profile on the Oracle Partner Network which confirms our status as a Platinum Partner.***

***https://solutions.oracle.com/scwar/scr/Partner/SC2PP-ASTCORPORATION.html***

# 5 System Requirements

*Vendors shall explain in sufficient detail how the vendor shall satisfy the DETR's project requirements described below. If subcontractors shall be used for any of the tasks, vendors shall indicate what tasks and the percentage of time subcontractor(s) shall spend on those tasks.*

*Vendors must place their written response(s) in **bold/italics** immediately following the applicable RFP question, statement and/or section.*

## 5.1 Computing Platform

*3.2.1 Application environment: Java8, Spring, Hibernate and Weblogic Server 12c*

*3.2.2 Operating system environment: Linux*

*3.2.3 Database environment: Oracle Exadata*

*3.2.4 IAM environment: Oracle IAM Suite*

*3.2.4.1 Oracle Identity Manager*

*3.2.4.2 Oracle Internet Directory*

*3.2.4.3 Oracle Access Manager*

*3.2.4.4 Oracle Adaptive Access Manager*

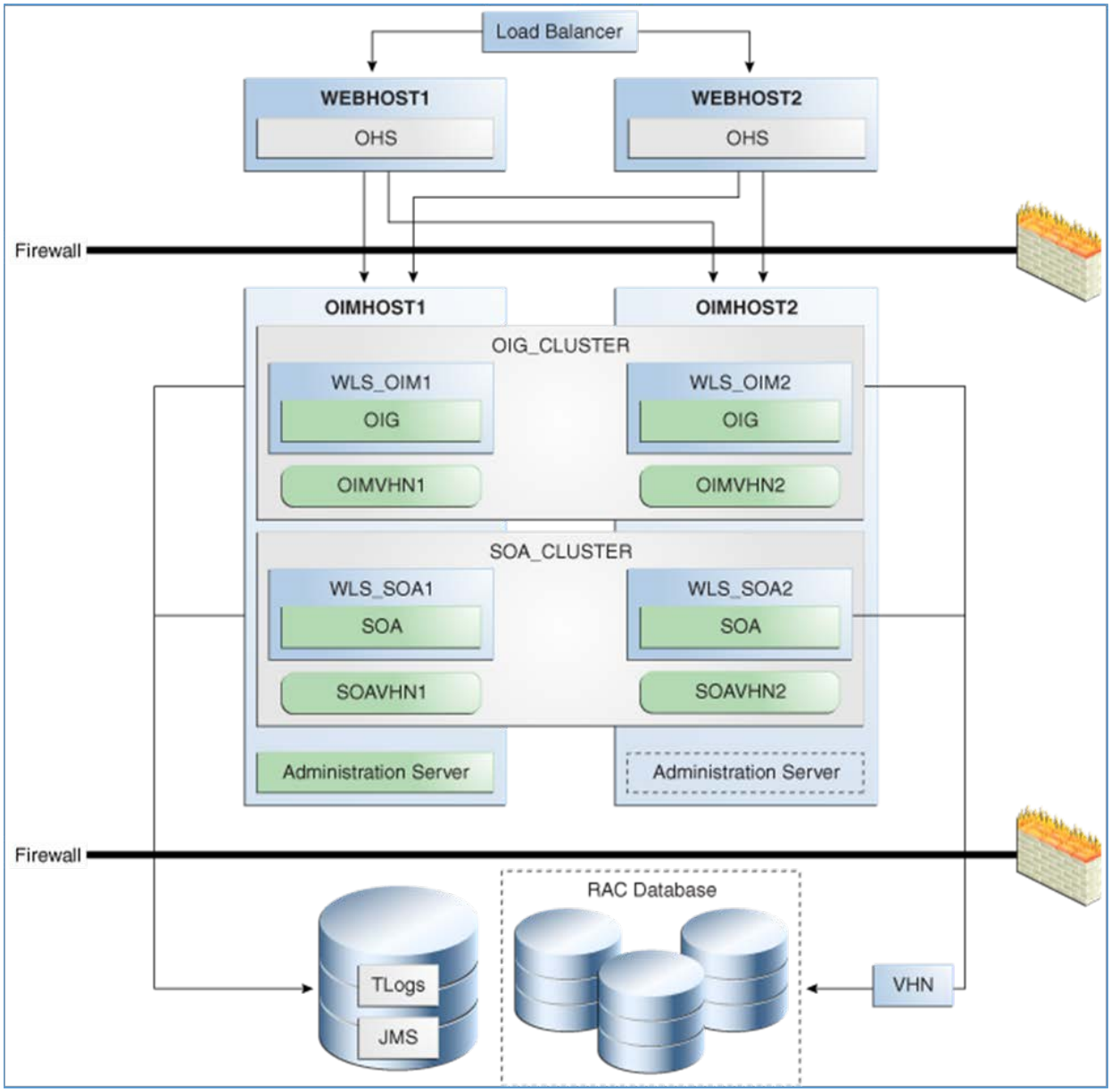
*3.2.4.5 Oracle Virtual Directory*

***AST has experience in building IAM environments on the Linux platform and Oracle Exadata as the database platform. For building the environment AST follows the Oracle's recommended Enterprise Deployment (EDG) guide for Middleware. Listed below are the typical steps followed in building a highly available (HA) environment -***

***i. Install Oracle Database 12c Software with Oracle Real Application Clusters***
***ii. Install and configure the application by following instructions in an Oracle Standard installation guide.***
***iii. Install and configure Oracle HTTP Server in the same domain***
***iv. Configure a third- party load balancer, or Oracle HTTP Server/Oracle Traffic Director.***
***v. Scale out the topology (machine scale out) Oracle Fusion Middleware***
***vi. Configure high availability for the Administration Server***

***AST also recommends building dynamic clusters for automated scaling for a typical HA environment. Below is a sample high-level architecture diagram***

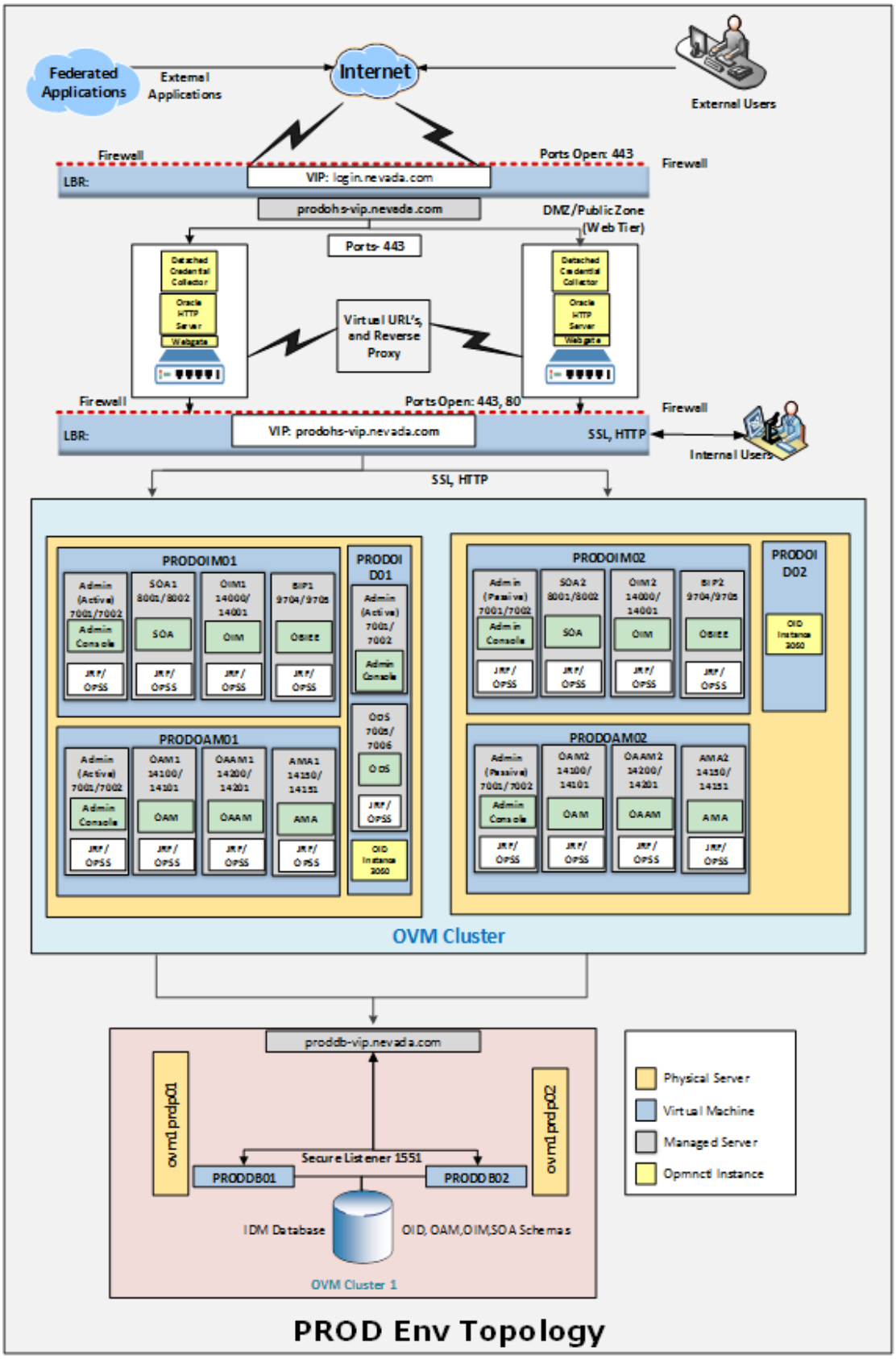
***Sample –OIG high availability Architecture***




***Our implementation approach includes the review and validation of the Oracle component certification matrix for the IDM components and recommends the correct choice of the Operating System. For example, the Oracle IAM suite 12c supports Red Hat Enterprise Linux 6 and 7 only.***

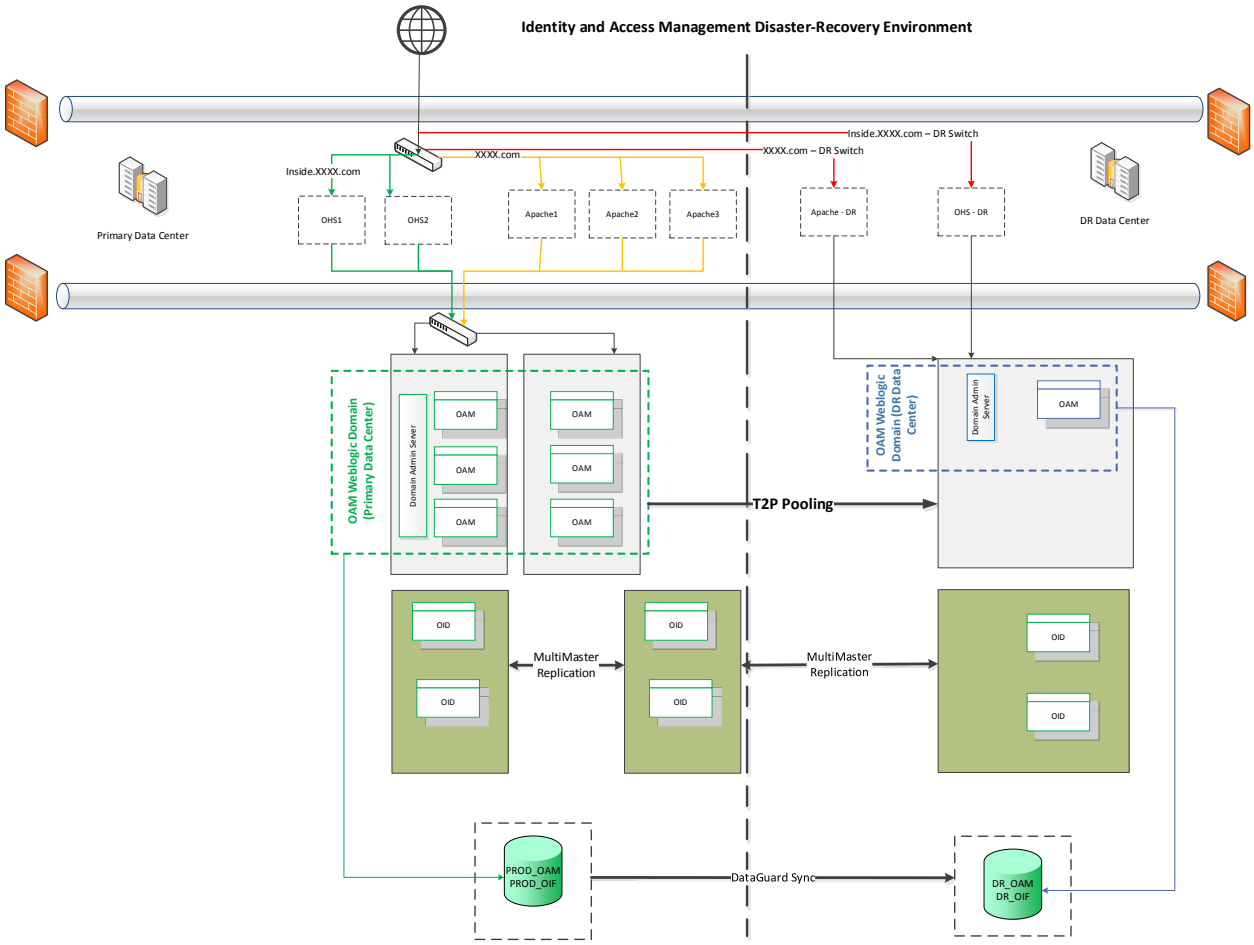
***AST works with the client to perform a capacity planning analysis for the infrastructure and determines the required hardware specifications needed for the servers and databases. AST creates a topology diagram for each of the environments clearly depicting the number of Virtual machines, physical hosts, virtual IP and WebLogic cluster which may be required to scale up to the needs of the State.***

***Sample – Production Environment Topology***



***If necessary, AST also works with the client to define a Disaster Recovery environment.***

***Sample –Disaster Recovery Environment Architecture***




## 5.2 TECHNICAL REQUIREMENTS

*System requirements will be evaluated and developed in conjunction with state staff by the vendor in the initial stages of the project.*

***AST will work closely with the State staff to perform an assessment. During the assessment phase AST will meet the different teams of the State including Helpdesk, Business Users, HR, Administrators, and Application owners to gather requirements and understand IDM setup and known issues. AST will conduct and participate in JAD sessions to collect the required information and will collect the Technical Requirements for the project. The following deliverables will be created during this phase -***

1. ***Requirements Specification Document***
2. ***Presumptive Architecture Document***
3. ***Infrastructure Provisioning Sheet***

## 5.3 FUNCTIONAL REQUIREMENTS

*See Section 4, Scope of Work.*

***Please see our response to the Section 4, Scope of Work in Section 6 of this response.***

## 5.4 SECURITY STANDARDS

*3.5.1 Vendor must adhere to Oracle recommended, documented, and accepted best practices and standards regarding the installation, configuration, and tuning of the IAM software.*

***AST follows the Oracle Enterprise Deployment Guide (EDG) for installation and configuration of IAM components which adheres to industry best practices and standards. For performance tuning AST follows the Oracle Recommendations for performance tuning the components. For OID for example, AST uses the Oracle provided wizard for capturing the correct tuning parameters. OVD caching is set up for further enhance the performance. For OAM and OIM, Oracle provides specific guidelines and AST follows them to tune the system as per the State's needs.***

*3.5.2 System shall meet State security standards for transmission of personal information as outlined in NRS 205.4742 and NRS 603A.*

***Oracle IAM Suite meets the State security standards for transmission of personal information as outlined in NRS 205.4742 and NRS 603A. The Oracle IAM suite supports common encryption algorithms to prevent, impede, delay or disrupt access to any data, information, image, program, signal or sound;***

*3.5.3 Protection of sensitive information shall include the following:*

*3.5.3.1 Sensitive information in existing legacy applications shall encrypt data as is practical.*

***Oracle IAM Suite provides provision for encrypting and decrypting data in any system. It supports both symmetric and asymmetric encryptions including wide number of algorithms like 3DES, RSA and so on.***

*3.5.3.2 Confidential personal data shall be encrypted.*

***Oracle IAM Suite provides provision for encryption of confidential data using common industry standard algorithms for data in flight. For encrypting Data at Rest, AST recommends use of tools such as Transparent Data Encryption or Audit and Database Firewall.***

*3.5.3.3 Any electronic transmission of personal information shall comply with NRS 603A.215 (2 & 3).*

***Oracle IAM Suite complies with NRS 603A.215 (2 & 3) for transmission of electronic personal information. The solution is capable of using encryption to ensure the security of electronic transmission outside of the system, if needed.***

*3.5.3.4 Sensitive data shall be encrypted in all newly developed applications.*

***Oracle IAM Suite supports encryption of data.***

*3.5.4 All information technology services and systems developed or acquired by agencies shall have documented security specifications that include an analysis of security risks and recommended controls (including access control systems and contingency plans).*

***AST will document all required security specifications including the analysis of security risks and any identified recommended controls.***

*3.5.5 Security requirements shall be developed at the same time system planners define the requirements of the system. Requirements shall permit updating security requirements as new threats/vulnerabilities are identified and/or new technologies implemented.*

***AST will develop all security requirements at the same time, when the requirements are defined for the system. The requirements can be updated as the new security requirements may arise because of new threats or vulnerabilities.***

*3.5.6 Security requirements and evaluation/test procedures shall be included in all solicitation documents and/or acquisition specifications.*

***AST will include the Security requirements and evaluation/test procedures shall be included in all solicitation documents.***

*3.5.7 Systems developed by either internal State or contracted system developers shall not include back doors, or other code that would cause or allow unauthorized access or manipulation of code or data.*

***AST will not write code or configure systems which may have back doors or other code that would cause or allow unauthorized access or manipulation of code or data.***

*3.5.8 Security specifications shall be developed by the system developer for approval by the agency owning the system at appropriate points of the system development or acquisition cycle.*

***AST will develop the security specifications for approval by the agency owning the system at appropriate points of the system development or acquisition cycle.***

*3.5.9 All system development projects shall include a documented change control and approval process and shall address the security implications of all changes recommended and approved to a particular service or system. The responsible agency shall authorize all changes.*

***AST's Project Manager will establish a change management process in working with the State Project Manager. This will ensure that a documented change control and approval process will address the security implications of all changes recommended and approved to a particular service or system. The responsible agency shall authorize all changes.***

*3.5.10 Application systems and information that become obsolete and no longer used shall be disposed of by appropriate procedures. The application and associated information shall be preserved, discarded, or destroyed in accordance with Electronic Record and Record Management requirements defined in NRS and NAC 239, Records Management.*

***AST will make sure that Application systems and information that become obsolete and are no longer used shall be disposed of by appropriate procedures. Post the upgrade of Oracle IAM suite, the existing security infrastructure will be recommended for decommissioning.***

*3.5.11 Software development projects shall comply with State Information Security Consolidated Policy 100, Section 4.7, Software Development and Maintenance and State Standard 131, "Security for System Development".*

***AST makes sure that the norms for Security for System Development be followed for project execution duration as described below.***

*3.5.11.1 Separate development, test and production environments shall be established on State systems.*

***AST will build three IAM environments namely DEVELOPMENT, TEST, and PRODUCTION.***

*3.5.11.2 Processes shall be documented and implemented to control the transfer of software from a development environment to a production environment. New hardware/software is not introduced into a production environment until it is fully tested and accepted by the State.*

***AST follows the standard Software Development Lifecycle Process and any changes to the system are first done in the DEVELOPMENT environment, followed by propagating the change to the TEST environment. Then the system integration testing and user acceptance testing is carried out. Once the results are satisfactory enough, the AST PM works with the State to create a plan to move this to the production environment. Various check gates are created in working with State's staff to ensure that there is no software from being directly introduced into the Production Environment directly.***

*3.5.11.3 Development of software and tools shall be maintained on computer systems isolated from a production environment.*

***AST consultants will use a local desktop for development of software. There will not be any software or tools on the production environment.***

*3.5.11.4 Access to compilers, editors and other system utilities shall be removed from production systems.*

***AST will make sure that the access to compilers, editors and other system utilities shall be removed from production systems.***

*3.5.11.5 Controls shall be established to issue short-term access to development staff to correct problems with production systems allowing only necessary access.*

***AST's Project Manager will work with State staff to establish controls to issue short-term access to development staff to correct problems with production systems, allowing only necessary access.***

*3.5.11.6 Security requirements and controls shall be identified, incorporated in and verified throughout the planning, development, and testing phases of all software development projects. Security staff shall be included in all phases of the System Development Lifecycle (SDLC) from the requirement definitions phase through implementation phase.*

***AST PM will work with State staff to identify the security requirements and controls and incorporate it throughout the planning, development, and testing phases of all software development projects. AST will make sure Security staff shall be included in all phases of the System Development Lifecycle (SDLC) from the requirement definitions phase through implementation phase.***

# 6 SCOPE OF WORK

***AST's established and award-winning Cloud Platform, Security and Middleware practice enables its customers to rapidly deploy enterprise Identity and Access Management platforms which focus on every aspect of enterprise security, including, Directory Services, Identity Governance, Access Management, Identity as a Service and Mobile Security. We are one of the elite Oracle Platinum Partners Specialized in Oracle Identity Governance Suite and Oracle Access Management Suite.***

***Enterprise Security is one of the core competencies of our award-winning Oracle Middleware Practice. As a Specialized Oracle Platinum Partner, our services focus on every aspect of Enterprise Security.***

***Apart from new IDM implementations AST has also completed several IDM upgrade projects. AST has built an in-house framework for the upgrade projects which automates several processes, eliminates manual errors, and reduces the overall upgrade effort. The framework which consists of several templates and utilities as listed below.***

***The information below provides AST's response and approach to the Scope of Work identified in Section 4 of the RFP.***

*4.4 Planning and Administration*

*4.4.1 Objective*

*The objective of this task is to ensure that adequate planning and project management are dedicated to this project.*

*4.4.2 Activities*

*The awarded vendor shall:*

*4.4.2.1 Work with the State to provide a detailed project plan with fixed deadlines to include, but not be limited to:*

*A. Project schedule including tasks, activities, activity duration, sequencing and dependencies;*

*B. Project work plan for each deliverable, including a work breakdown structure;*

*C. Completion date of each task;*

*D. Project milestones;*

*E. Entrance and exit criteria for specific project milestones; and*

*F. Project organization including a resource plan defining roles and responsibilities for the awarded vendor, subcontractors (if applicable) and State.*

*G. A comprehensive approach for handling communications. Must include, but not be limited to: an approach for generation, documentation, storage, transmission and disposal of all project information.*

*H. Assurance that risks are identified, planned for, analyzed, communicated and acted upon effectively.*

*I. Quality Assurance the vendor must provide assurance that there is a methodology for maintaining quality of the code, workmanship, project schedules and subcontractor(s) activities.*

*J. Change Management Plan and Control Procedures This plan shall be used by the vendor and the State in the design, specification, construction, implementation and support of the system.*

*4.4.2.2 Attend and participate in all project related meetings requested by the State at a location to be determined by the State. Attendance may be in person or via teleconferencing, as mutually agreed to by the project team. These meetings shall follow an agenda mutually developed by the awarded vendor and the State. The awarded vendor*

*shall prepare materials or briefings for these meetings as requested by the State. Minutes shall be taken and distributed by State staff within five (5) working days after the meeting. Minutes may be distributed via facsimile or email.*

*The agenda may include, but not be limited to:*

*A. Review and approval of previous meeting minutes;*

*B. Contractor project status;*

*C. State project status;*

*D. Contract status and issues, including resolutions;*

*E. Quality Assurance status;*

*F. New action items;*

*G. Outstanding action items, including resolutions;*

*H. Setting of next meeting date; and*

*I. Other business.*

*4.4.2.3 Provide written semi-monthly project status reports delivered to State project management by the third (3rd) working day following the end of each reporting period. The format shall be approved by the State prior to issuance of the first semi-monthly project status report. The first semi-monthly report covers the reporting period from the 1st through the 15th of each month; and the second semi-monthly report covers the reporting period from the 16th through the end of the month. The status reports shall include, but not be limited to the following:*

*A. Overall completion status of the project in terms of the State approved project work plan and deliverable schedule;*

*B. Accomplishments during the period, including State staff/stakeholders interviewed, meetings held, Joint Application Development (JAD) sessions and conclusions/decisions determined;*

*C. Problems encountered and proposed/actual resolutions;*

*D. What is to be accomplished during the next reporting period;*

*E. Issues that need to be addressed, including contractual;*

*F. Quality Assurance status;*

*G. Updated MS Project time line showing percentage completed, tasks assigned, completed and remaining;*

*H. Identification of schedule slippage and strategy for resolution;*

*I. Contractor staff assigned and their location/schedule; and*

*J. State resources required for activities during the next time period.*

*4.4.3 Deliverables*

| 4.4 PLANNING AND ADMINISTRATION DELIVERABLES | | | |
|---|---|---|---|
| **DELIVERABLE NUMBER** | **DESCRIPTION OF DELIVERABLE** | **ACTIVITY** | **STATE'S ESTIMATED REVIEW TIME (WORKING DAYS)** |
| 4.4.3.1 | Detailed Project Plan | 4.4.2.1 | 10 |

| **4.4 PLANNING AND ADMINISTRATION DELIVERABLES** | | | |
|---|---|---|---|
| 4.4.3.2 | Attendance at all scheduled meetings | 4.4.2.2 | N/A |
| 4.4.3.3 | Written Semi-Monthly Project Status Report | 4.4.2.3 | 5 |

*4.5 IAM Environments*

*4.5.1 Objective*

*Successful vendor will create three (3) IAM environments consisting of:*

*4.5.1.1 Development*

*4.5.1.2 Test – High availability environment configured to match production environment configuration*

*4.5.1.3 Production – High availability environment*

*4.5.1.4 Migration of existing IAM configurations and data to new environments*

*Migration and upgrade tasks are to be performed according to recommended Oracle infrastructure, Oracle IAM software, and security industry best practices.*

*4.5.2 Activities*

*The awarded vendor shall:*

*4.5.2.1 Evaluate current environment and complete requirements and design*

*A. Evaluate current IAM environments and configurations.*

*B. Make upgrade and configuration recommendations based on evaluations of current IAM environments and configurations in-line with IAM and Oracle best practices.*

*C. Work with DETR staff to complete Environment Requirements and Design.*

*4.5.2.2 Build IAM Development Environment, including installation, setup and integration of the following components, software and related tasks:*

*A. Oracle Internet Directory (OID)*

*B. Oracle Access Manager (OAM)*

*C. Oracle Adaptive Access Manager (OAAM)*

*D. Oracle Identity Manager (OIM)*

*E. Oracle supplied Business Intelligence Publisher Reports for IAM*

*F. Integration of above products*

*G. Migration of artifacts, policies and configuration (OAM, OAAM, OIM and OID)*

*4.5.2.3 Build IAM Test Environment (high availability / clustered) including installation, setup and integration of the following components, software and related tasks:*

*A. Oracle Internet Directory (OID)*

*B. Oracle Access Manager (OAM)*

*C. Oracle Adaptive Access Manager (OAAM)*

*D. Oracle Identity Manager (OIM)*

*E. Oracle Business Intelligence Publisher and OOTB reports*

*F. Integration of above products*

*G. Configuration of secure communication channel between IAM components, web Server and load balancer using SSL*

*H. Migration of User Data*

*I. Migration of artifacts, policies and configuration (OAM, OAAM, OIM and OID)*

*J. Provide support for troubleshooting and testing of custom API and integration points with business applications*

*K. Acceptance Test Support*

*4.5.2.4 Build Production IAM Environment ((high availability / clustered) including installation, setup and integration of the following components, software and related tasks:*

*A. Oracle Internet Directory (OID)*

*B. Oracle Access Manager (OAM)*

*C. Oracle Adaptive Access Manager (OAAM)*

*D. Oracle Identity Manager (OIM)*

*E. Oracle Business Intelligence Publisher and OOTB reports*

*F. Integration of above products*

*G. Configuration of secure communication channel between IAM components, web Serve and load balancer using SSL*

*H. Migration of User Data*

*I. Migration of artifacts, policies and configuration (OAM, OAAM, OIM and OID)*

*J. Go-Live and post go–live Production Support*

*4.5.2.5 Knowledge Transfer*

*A. Provide Architecture and Environment Documentation for IAM environments.*

*B. Oracle IAM System Run-Book*

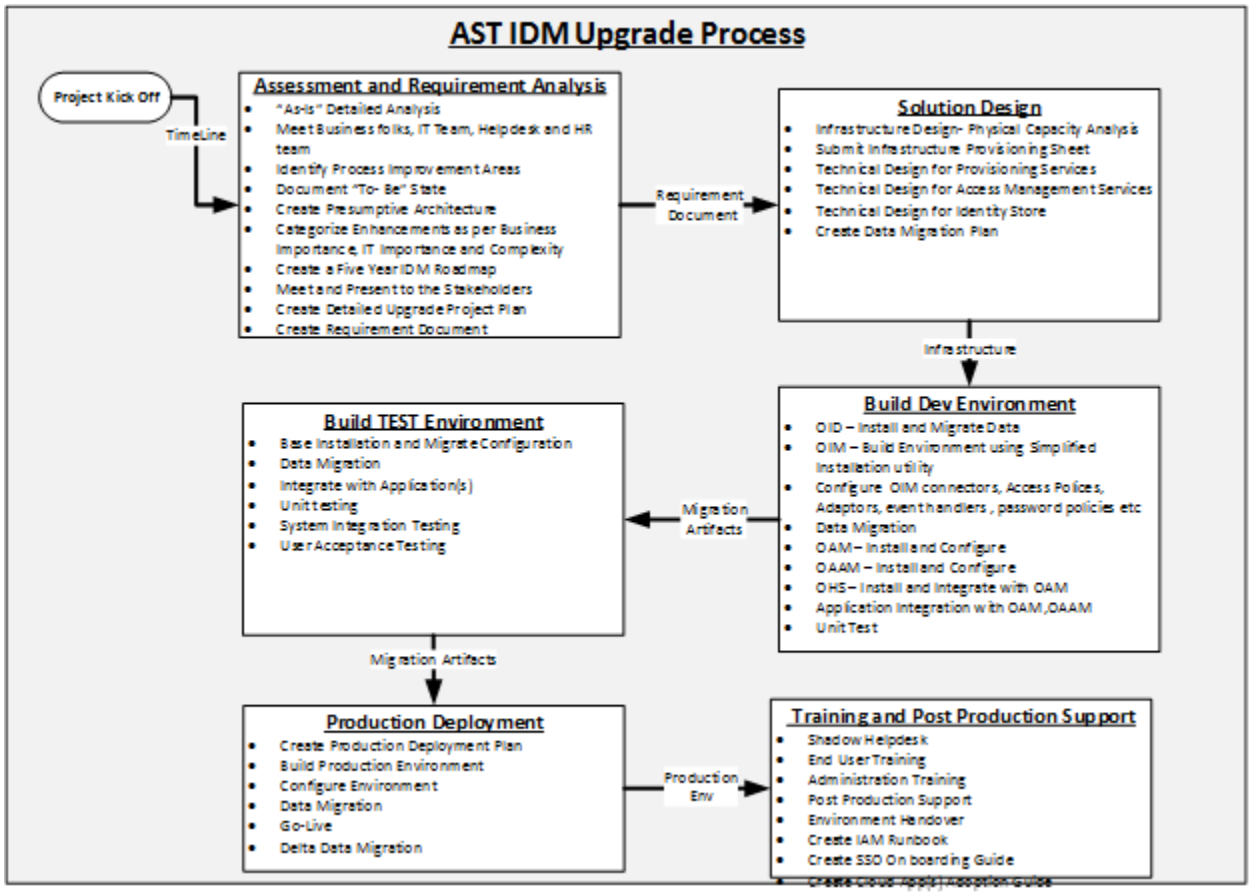
*C. Mentoring, transition and best practices for IAM upgrade*

*4.5.3 Deliverables*

| **4.5 IAM ENVIRONMENTS DELIVERABLES** | | | |
|---|---|---|---|
| **DELIVERABLE NUMBER** | **DESCRIPTION OF DELIVERABLE** | **ACTIVITY** | **STATE'S ESTIMATED REVIEW TIME (WORKING DAYS)** |
| 4.5.3.1 | Evaluate current IAM environments and complete requirements and design | 4.5.2.1 | 5 |

| 4.5 IAM ENVIRONMENTS DELIVERABLES | | | |
|---|---|---|---|
| 4.5.3.2 | Build IAM Development Environment | 4.5.2.2 | 5 |
| 4.5.3.3 | Build IAM Test Environment | 4.5.2.3 | 5 |
| 4.5.3.4 | Build Production IAM Environment | 4.5.2.4 | 5 |
| 4.5.3.5 | Knowledge Transfer | 4.5.2.5 | 5 |

***AST's IDM Upgrade Methodology serves as the overall project governance framework which highlights the different phases of the project. Each phase is executed independently and has distinct tasks to be performed. There are specific deliverables for each phase of the process. These deliverables serve as an input to the next phase.***




***The different phases of the process are:***

## *I. Assessment*

***In this Phase AST works with the client to performing a current-state review to identify the scope of systems and infrastructure components. It performs the following tasks:***

- ***a. Performing a detailed assessment of the current applications and infrastructure for the upgrade needs of the State:***
  - ***i. Access Control, Identity Governance and compliance***
  - ***ii. User Lifecycle Management - Automated Provisioning and De-provisioning of users***
  - ***iii. Authentication, Access Control and Federation of applications***

***iv. Authorization and Role Management***
***v. Identity Stores and databases***
***vi. Auditing , Reporting and Monitoring***
***vii. Advanced Features***

***AST has a repository of questions which helps the enterprises to get started with the assessment quickly. The questionnaire will be modified as per the State's needs and will serve as an input to the assessment report.***

***Sample – IAM AD Provisioning Assessment Questionnaire***

B2 | What is the version of AD?

| S. No. | Question | Status | Response/AST Understanding | Owner | Review Comment | Action Item | Date Updated |
|---|---|---|---|---|---|---|---|
| 1 | What is the version of AD? | Open | | | | | |
| 2 | How many forest and domain in AD | Open | | | | | |
| 3 | How many domain controllers? | Open | | | | | |
| 4 | User classification | Open | | | | | |
| 5 | On-Boarding process of Faculty / Student / External User in AD | Open | | | | | |
| 6 | Userid format in AD for Faculty / Student / External User | Open | | | | | |
| 7 | Process of update for user profile in AD | Open | | | | | |
| 8 | Termination process for Faculty / Student / External User in AD? | Open | | | | | |
| 9 | Process to transfer user from one OU to another OU? Rules around that process? | Open | | | | | |
| 10 | Roles or Groups present in AD? | Open | | | | | |
| 11 | Organization units (OU) available in AD | Open | | | | | |
| 12 | Provisioning evernts in AD? (ADD / UPDATE / DELETE) | Open | | | | | |
| 13 | Which attributes are used for user creation in AD | Open | | | | | |
| 14 | Password policy in AD | Open | | | | | |
| 15 | Password Sync process in AD | Open | | | | | |
| 16 | Process to change user password? | | | | | | |
| 17 | Is there any duplication in userid? | Open | | | | | |
| 18 | Is there are any cusomization for creating User ID / Password | Open | | | | | |
| 19 | Is ther any custom attributes in AD | Open | | | | | |
| 20 | List of custom attributes in AD | Open | | | | | |
| 21 | How Email address get synch to AD / Process for email address creation. | Open | | | | | |
| 22 | Process for updating username / user id | Open | | | | | |
| 23 | Process of OU assigment? Rules around that process? | Open | | | | | |
| 24 | Process of Group/ Role assignment? Rules around that process? | Open | | | | | |
| 25 | Retention policy of users after termination / Delete | Open | | | | | |
| 26 | Disable / Re-enable process of user | Open | | | | | |
| | | | | | | | |
| **Key concern Areas in Current Systems** | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

AD | Exchange | Financial | Business | Mobile | HR | LDAP | Office365

READY

***Sample - IAM Implementation (Access Management) Assessment Questionnaire***

C2 | Open

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | S. No. | Question | Status | Response/AST Understanding | Owner |
| 2 | 1 | Number of Applications in the enterprise | Open | | |
| 3 | 2 | Authentcation Mechanism | Open | | |
| 4 | 3 | Authorization Mechanism | Initial Discussion Complete | | |
| 5 | 4 | User ID Patters | Pending Response | | |
| 6 | 5 | Password policy | Reviewed & Followup Req. | | |
| 7 | 6 | Identity Store of the users | Reviewed & Closed | | |
| 8 | 7 | Roles or Groups needs | Open | | |
| 9 | 8 | User ID Patterns allowed for login | Open | | |
| 10 | 9 | User lockout policy | Open | | |
| 11 | 10 | Disable / Re-enable process of user | Open | | |
| 12 | 11 | User Session timeout policy | Open | | |
| 13 | 12 | Application Timeout policy | Open | | |
| 14 | 13 | Logout Policy | Open | | |
| 15 | 14 | Single Sign On Needs - Cookie/Header/Session | Open | | |
| 16 | 15 | High Availability Needs | Open | | |
| 17 | 16 | Load Balancer Settings needed for Application | Open | | |
| 18 | 17 | Cookie Stickiness Needs | Open | | |
| 19 | 18 | Session Persistence Needs | Open | | |
| 20 | 19 | Federation Protocol - SAML,WS-FED etc | Open | | |
| 21 | 20 | Transient Federation | Open | | |
| 22 | 21 | Attributes needed in Federation Response | Open | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |
| 26 | | | | | |
| 27 | **Key concern Areas in Current Systems** | | | | |
| 28 | | | | | |
| 29 | | | | | |
| 30 | | | | | |
| 31 | | | | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |

Authentication and Federation | User Life Cycle Mgmt | Access Contol | Privileged Accounts | Business Owner | Support Team | Infrastructure Tean ...

***b. Create Assessment Report - AST summarizes its findings and categorizes the new features or enhancements them as per the "Benefit to customer", or "Reduce complexity", or "Increase Operational Efficiency". The items are also categorized on priority, complexity, and implementation effort.***

***Sample – Categorization of IAM Assessment findings***

## Recommendations

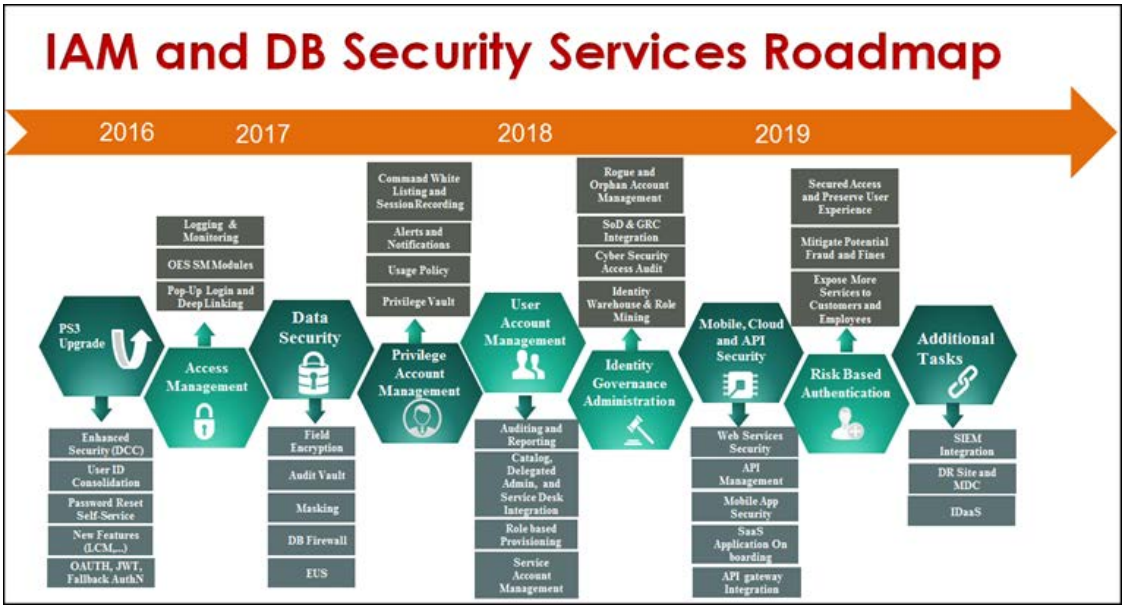
| Business Changes | Benefit to Customer* | Reduce Complexity | Increase Ops Efficiency |
|---|---|---|---|
| Self-Service Process | ★★★ | ★★★ | ★★½ |
| Password Reset | ★★★ | ★★½ | ★★★ |
| Delegated Admin Authz | ★★½ | ★★★ | ★★½ |
| Move Credential Collector to DMZ | ★★½ | ★½½ | ½½½ |

★½½ Low ★★½ Medium ★★★ High

* Benefit to Customer (External users)

***c. Create an IAM roadmap document for the state.***

***Sample – Four-year IAM Strategy Roadmap 1***




***d. Present the findings of the assessment to the Executive Committee. The high-level outline of the presentation will be as below:***

- ***i. Executive Summary***
  - ***Align it to IAM Upgrade requirement drivers***
- ***ii. Architecture Diagram***
  - ***Show current and future state***
- ***iii. Make sure to design for the future***
  - ***On Premise***
  - ***SaaS***
  - ***Cloud***
  - ***Mobile***

## II. Technical Design

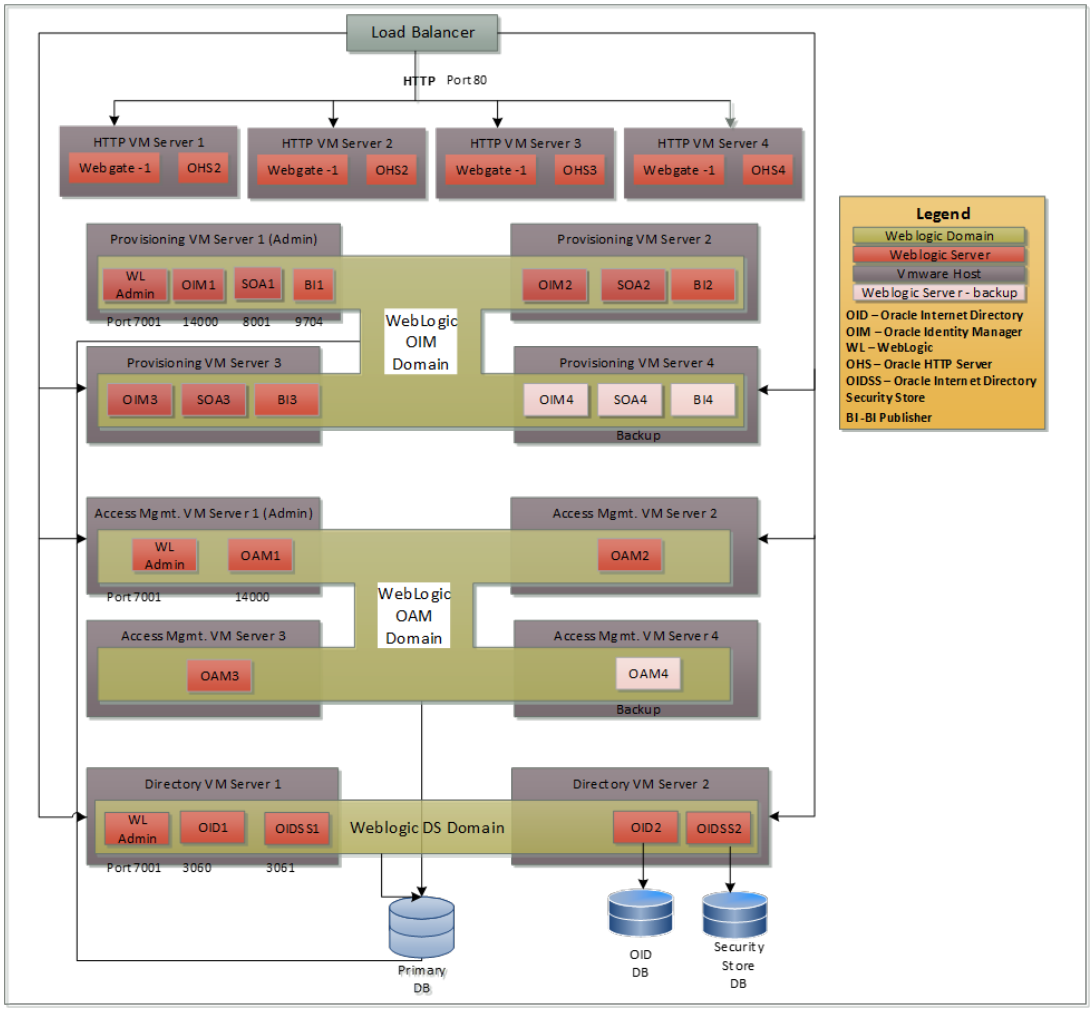
***In this phase AST creates the detailed design for the project. The document includes details for provisioning services, access management services and identity management services. The infrastructure design is also finalized after the capacity planning is done in working with the client. The other important deliverable of this phase is the Hardware Provisioning sheet. In the hardware provisioning sheet, the technical team fills in the required specification needed for the hardware for the upgrade. It takes into consideration the result from capacity planning and requirements for a disaster recovery environment (if any).***

### *Sample – Hardware Provisioning Sheet*

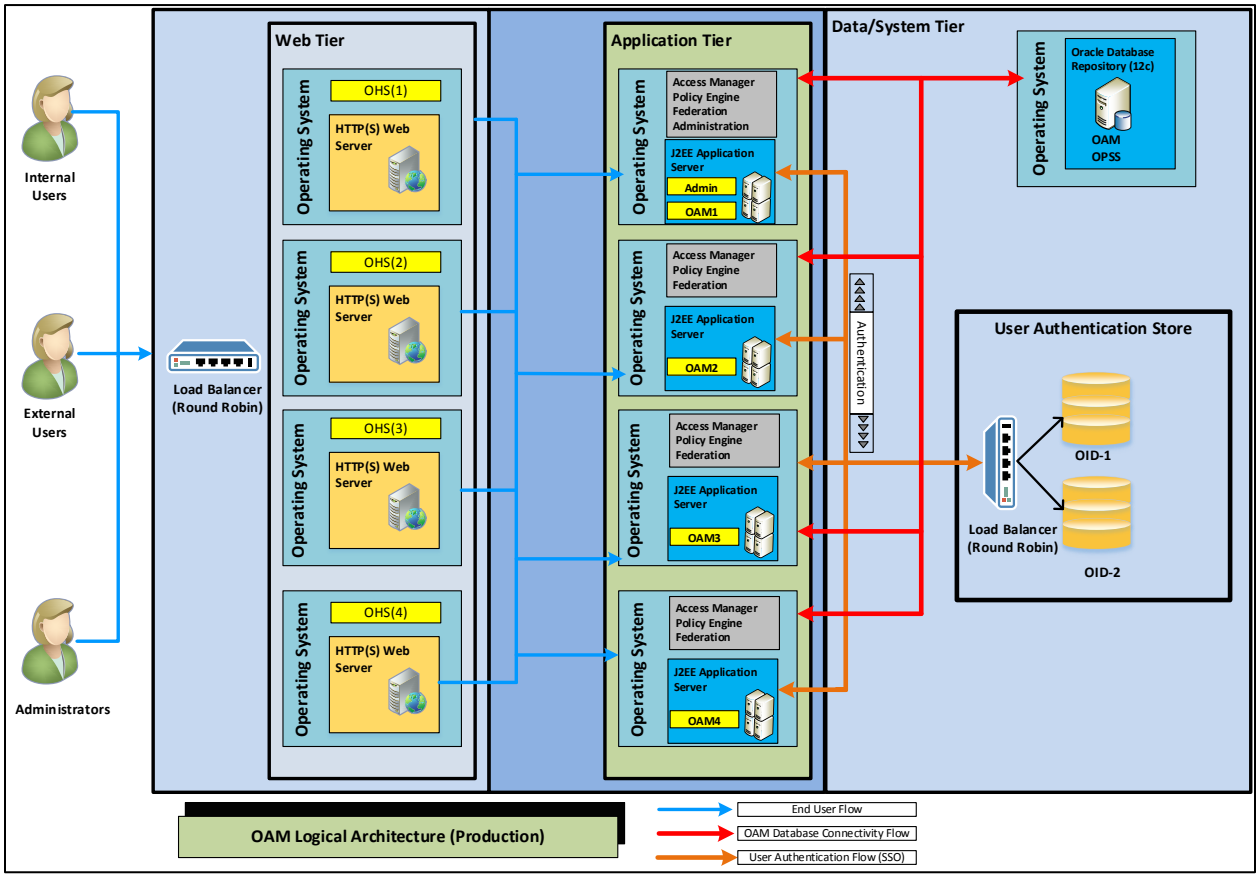
| A | B | C | D | E | F | G | H | M | N | O | P | Q | R | S | T | U | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VM# | Hostname | vCPU | RAM (GB) | OS (GB) | Local HD (GB) | Primary IP | Primary DNS Name | /opt/ora (GB) | /opt/ora mount | /logs (GB) | /logs mount | OS | Software | S/W Version | Port | SSL Port | CA Type |
| | DEV | 18 | 128 | 540 | 1000 | | | 1000 | | 80 | | | | | | | |
| | OAM | | | | | | | | | | | | | | | | |
| 1 | dappoam10 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | Admin - 7001<br>OAM - 14100 | Admin - 7002<br>OAM - 14101 | |
| 2 | dappoam11 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | OAM - 14100 | OAM - 14101 | |
| | OIM | | | | | | | | | | | | | | | | |
| 3 | dappoim10 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Identity Manager | 12.1.0.1 | Admin - 7001<br>OIM - 14000<br>BI - 9704<br>SOA - 8001 | Admin - 7002<br>OIM - 14001<br>BI - 9804<br>SOA - 8002 | |
| 4 | dappoim11 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Identity Manager | 12.1.0.1 | OIM - 14000<br>BI - 9704<br>SOA - 8001 | OIM - 14001<br>BI - 9804<br>SOA - 8002 | |
| | OID | | | | | | | | | | | | | | | | |
| 5 | dappoid10 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Internet Directory | 11.1.1.9.0 | Admin - 7001<br>ODSM - 7005<br>OID - 3060 | OID - 3131 | |
| 6 | dappoid11 | 2 | 16 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Internet Directory | 11.1.1.9.0 | OID - 3060 | OID - 3131 | |
| | OHS | | | | | | | | | | | | | | | | |
| 7 | dappohs10 | 1 | 8 | 60 | 100 | | | 50 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle HTTP Server | 12.2.1.1.0 | HTTP - 80 | | |
| 8 | dappohs11 | 1 | 8 | 60 | 100 | | | 50 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle HTTP Server | 12.2.1.1.0 | HTTP - 80 | | |
| | OAM-OIM + OID DB | | | | | | | | | | | | | | | | |
| 9 | ddblx17 | 4 | 16 | 60 | | | | 300 | Local | | Local | Red Hat Enterprise Linux | Oracle Database | 12.1.0.2.0 | | | |
| | TST | 26 | 172 | 780 | 1400 | | | 1400 | | 120 | | | | | | | |
| | OAM | | | | | | | | | | | | | | | | |
| 1 | tappoam10 | 2 | 14 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | Admin - 7001<br>OAM - 14100 | Admin - 7002<br>OAM - 14101 | |
| 2 | tappoam11 | 2 | 14 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | OAM - 14100 | OAM - 14101 | |
| 3 | tappoam12 | 2 | 14 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | OAM - 14100 | OAM - 14101 | |
| 4 | tappoam13 | 2 | 14 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Access Manager | 12.1.0.1 | OAM - 14100 | OAM - 14101 | |
| | OIM | | | | | | | | | | | | | | | | |
| 5 | tappoim10 | 2 | 14 | 60 | 100 | | | 100 | Local | 10 | Local | Red Hat Enterprise Linux | Oracle Identity Manager | 12.1.0.1 | Admin - 7001<br>OIM - 14000<br>BI - 9704 | Admin - 7002<br>OIM - 14001<br>BI - 9804 | |

VM Totals | VM-NonProd | VM-Prod | VIP-NonProd | VIP-Prod | SRS tickets | Prod-UAT-TST-Hardware Diagram | DEV-Hardware-Diagram | OS Requirements | Database Requirements

### *Sample – Infrastructure Design*



***Sample – Access Management Logical Design***




## III. Build and Implementation

***In this phase AST builds and configures DEV environment. It follows the Oracle Enterprise deployment guide for building the environment. AST recommend use of the latest version of the software for creating the environment. The 12c version of the IAM software has a quick installer, AST recommends using the quick installer for installing the software. Once the configuration is completed and unit testing is finished, the next task is data migration. For data migration and validation, AST uses its own in-house utilities. The details of the utilities can be found further below in the response under AST's Key Differentiators for this project. At the end of the phase AST conducts a demo showcasing the high-level use cases of the project.***

## IV. Verify

***This phase is one of the most critical activities within the implementation cycle. In order to provide comprehensive testing coverage across all business requirements and implemented solutions, AST will conduct the following set of testing activities during the implementation cycle:***

***a. Define Test Strategy and Create Test Plan– At the outset of the project, we will articulate a Test Strategy document that will outline the overall testing approach and execution plan to be followed during the verification phase. This will help all the project stakeholders to get an in-depth understanding as to what will be in testing scope, timeline, resources involved, responsibilities and testing tools and methodologies that will be followed.***

***b. Develop Test Scripts – For every use case defined, we will create corresponding detailed test script documents which will contain information such as navigation steps, test data used, expected results and overall outcome. These test script documents will be provided to the County's business users to help them execute on the verification flows during Systems Integration Testing (SIT) and User Acceptance Testing (UAT) activities.***

***c. Prepare Testing Environments – Before the start of any major testing event, we will prepare and configure testing instances and machines with all the pre-requisite hardware and software required. The project team will also perform a sanity check across solutions in scope to ensure that all base configurations and set up have been completed and key business flows can be processed fine.***

***d. Prepare Key Users for Testing – To all the users who will participate in the test scripts execution activity, we will provide basic overview of the System navigation and specific training in the modules they will be testing. These will ensure smooth execution of the testing events and alleviate any major concerns that the users may have about the System and/or business processes being validated.***

***e. Test Execution – AST will fully facilitate and support execution of major testing activities including:***

- ***i. Unit Testing***
- ***ii. System Integration Testing***
- ***iii. Stress/Performance Testing***
- ***iv. User Acceptance Testing (UAT)***
- ***v. Regression Test (Production Rollout)***

***During these events, we will help the business users execute on all the planned test scenarios, test scripts and recording of the results. On a regular basis, we will provide summary reports on the test execution progress and the nature of the issues identified.***

***f. Results Analysis and Defect Reporting – Once the test execution is finished, we will analyze all the failures and log issues/defects in the tracking logs. We will ensure that all issues have appropriate severity and priority markings and also will work with Oracle as appropriate to make sure that high impacting issues are either resolved in a timely fashion or have an agreeable workaround available.***

***g. Retesting and Closure: As soon as an issue is resolved, we will work with the business users who logged it in the first place to verify/retest the resolution and then take further action as needed. Towards the end of the verification phase, we will work with the project PMO team to make sure that the quality exit criteria are met and the team is ready to move on to the next planned activity in the project cycle. After the user acceptance testing is completed AST conducts a production readiness review with the team.***

## *V. Deploy*

***In this phase AST creates a production deployment plan with each task planned meticulously. The production environment is built as per the Oracle Enterprise Deployment Guide. The standard process of migration of artifacts (deployment manager for OIM and export policy for OAM, OAAM) is followed to configure the production environment. The artifacts from the TEST/UAT environment serve as an input to production build.***

***Sample – Production Deployment Plan***

| | Task Name | % Cor | Duration | Start | Finish | Prede |
|---|---|---|---|---|---|---|
| 1 | **06/23 Release Plan** | **5%** | **15.5 hrs** | **6/23/2017** | **6/23/2017** | |
| 2 | **Pre-Deployment** | **0%** | **0.25 hrs** | **6/23/2017** | **6/23/2017** | |
| 3 | Enable Maintenance Page (Redirect) | 0% | 0.25 hrs | 6/23/2017 | 6/23/2017 | |
| 4 | Disable Monitoring - Keynote & WUP | 0% | 0.25 hrs | 6/23/2017 | 6/23/2017 | |
| 5 | **Backup** | **0%** | **0.25 hrs** | **6/23/2017** | **6/23/2017** | **2** |
| 6 | Server Snapshot -All IAM Servers (00-03) | 0% | 0.25 hrs | 6/23/2017 | 6/23/2017 | |
| 7 | Server Snapshot - Pluto's Servers | 0% | 0.25 hrs | 6/23/2017 | 6/23/2017 | |
| 8 | **CHG15449 - 2.05C Enable SSO for External and Staff Portal-OAM Changes** | **0%** | **2.5 hrs** | **6/23/2017** | **6/23/2017** | **6** |
| 9 | CHG15449-05913: OAM - Enable SSO for External and Staff Portal-OAM Changes-Configure OAM | 0% | 2 hrs | 6/23/2017 | 6/23/2017 | |
| 10 | CHG15449-05946: App Director - Enable SSO for External and Staff Portal-OAM Changes-Appdirector Changes | 0% | 0.5 hrs | 6/23/2017 | 6/23/2017 | 9 |
| 11 | CHG15449-05952: Properties - CHG15449-05913 Enable SSO for External and Staff Portal- Configure properties file | 0% | 0.5 hrs | 6/23/2017 | 6/23/2017 | |
| 12 | CHG15449-05914: OAM - Enable SSO for External and Staff Portal-OAM Changes-Deploy Global Login Page | 0% | 0.5 hrs | 6/23/2017 | 6/23/2017 | 11 |
| 13 | **Web Deployment - 2.05c & Others** | **0%** | **2.25 hrs** | **6/23/2017** | **6/23/2017** | |
| 14 | **Property Files** | **0%** | **0.5 hrs** | **6/23/2017** | **6/23/2017** | **12** |
| 18 | **CHG15447 - 2.05C Enable SSO for External and Staff Portal** | **0%** | **1.75 hrs** | **6/23/2017** | **6/23/2017** | |
| 24 | **CHG 13944 - Digital Scope Project - ELAB changes** | **0%** | **1.5 hrs** | **6/23/2017** | 6/23/2017 | |
| 30 | **CHG 15537 - Change the tab at the top of the website from STS to Consulting** | **0%** | **1.5 hrs** | **6/23/2017** | **6/23/2017** | |
| 32 | **CHG 15653 Customer issues with viewing their test menu online-7200953** | **0%** | **1.5 hrs** | **6/23/2017** | **6/23/2017** | |
| 34 | **CHG14798 - EPP 4.10** | **0%** | **1.5 hrs** | **6/23/2017** | **6/23/2017** | |
| 37 | **Client Server Deployment** | **0%** | **0.5 hrs** | **6/23/2017** | **6/23/2017** | |
| 44 | **OIF Changes (Security OIF Changes for DigitalScope)** | **56%** | **9.25 hrs** | **6/23/2017** | **6/23/2017** | **8** |
| 45 | **CHG 14382 - Appdirector Changes for OIF Server** | **100%** | **2 hrs** | **6/23/2017** | **6/23/2017** | |
| 46 | CHG14382-05508: General - DNS updates for OIF & Digital Scope | 100% | 2 hrs | 6/23/2017 | 6/23/2017 | |

## *VI. Training & Post Production Support*

***AST believes that training is a critical component of an Oracle implementation project. Training and knowledge transfer are integral parts of our methodology and will occur throughout the project's duration. The success of the overall project rests on a well-trained staff that uses the new technology to efficiently perform their tasks. For over 22 years, AST has been providing Oracle training services on all of our applications implementation and upgrade engagements. These training services are included as part of our fixed price bid. All AST consultants have extensive experience teaching the required Oracle modules. Furthermore, our Oracle-certified AST training consultants are themselves expert implementers of Oracle applications, and have in-depth knowledge of the practical aspects of Oracle IDM suite used in state government environments. In addition to being an Oracle Platinum Partner—the highest level of Oracle certification possible—AST is also a certified Oracle Training Partner and an authorized reseller of Oracle University products and services. Oracle education partners are carefully chosen by Oracle for their experience, expertise and teaching skills. This partnership and certification with Oracle ensures that the State will receive the highest level of training and the full complement of Oracle benefits. AST Team will work closely with State Project Manager and Training Leads to construct a training plan, select a training format, and develop training material that will keep a focus on the overall success of the project. AST's training services will provide a more effective project team, better-prepared users and a smoother implementation.***

***Effective documentation and training help facilitate transfer of system knowledge to allow users and the support community to be at maximum efficiency and effectiveness. The goal of this phase is to provide user-friendly and easy-to-access materials and assistance to ensure that users and support staff understand system functions as they relate to day-to-day business processes. The process starts with identifying documentation needs, delivery media and audience. A documentation strategy is developed that may include creation of end user training documents, end user reference materials, or technical reference documents for procedures such as restart, backup and disaster recovery. Complete and detailed project deliverables will be documented throughout the project. AST functional team leads will ensure in this phase that the State's project team has access to the latest user guides during the project from the point of orientation through Go-Live. Specifically, AST delivers the following documents in this phase.***

- ***User Guides***
- ***Administration Guides***
- ***Support Guide***
- ***IAM Run Book***
- ***SSO and Cloud App(s) On Boarding Guide***

***Sample – Contents for SSO On boarding Guide***

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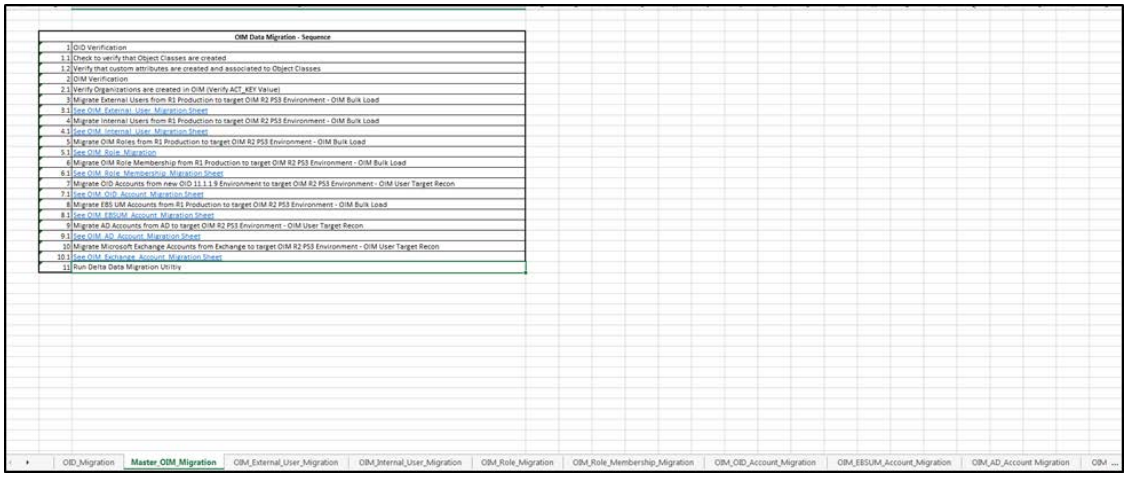
## AST Key's Differentiators for this Project

***Data Migration is one of the keys task for an IDM Upgrade project. As a result of our experience in successfully delivering several IDM upgrade projects, AST has built in utilities for data migration and validation. The use of these tools minimizes the data loss between the environments and also reduce the data discrepancy. Overall, they help to enhance the user experience and minimize post production issues. AST has the following tools in its repository:***

1. ***Data Migration Plan – AST has a built data migration template which suits most of the IDM upgrade implementations. AST will modify this plan during the DEV phase as per the State needs.***

***Sample – Data Migration Plan***



| OIM Data Migration - Sequence | |
|---|---|
| 1 | OID Verification |
| 1.1 | Check to verify that Object Classes are created |
| 1.2 | Verify that custom attributes are created and associated to Object Classes |
| 2 | OIM Verification |
| 2.1 | Verify Organizations are created in OIM (Verify ACT_KEY Value) |
| 3 | Migrate External Users from R1 Production to target OIM R2 PS3 Environment - OIM Bulk Load |
| 3.1 | See OIM_External_User_Migration Sheet |
| 4 | Migrate Internal Users from R1 Production to target OIM R2 PS3 Environment - OIM Bulk Load |
| 4.1 | See OIM_Internal_User_Migration Sheet |
| 5 | Migrate OIM Roles from R1 Production to target OIM R2 PS3 Environment - OIM Bulk Load |
| 5.1 | See OIM_Role_Migration |
| 6 | Migrate OIM Role Membership from R1 Production to target OIM R2 PS3 Environment - OIM Bulk Load |
| 6.1 | See OIM_Role_Membership_Migration Sheet |
| 7 | Migrate OID Accounts from new OID 11.1.1.9 Environment to target OIM R2 PS3 Environment - OIM User Target Recon |
| 7.1 | See OIM_OID_Account_Migration Sheet |
| 8 | Migrate EBS UM Accounts from R1 Production to target OIM R2 PS3 Environment - OIM Bulk Load |
| 8.1 | See OIM_EBSUM_Account_Migration Sheet |
| 9 | Migrate AD Accounts from AD to target OIM R2 PS3 Environment - OIM User Target Recon |
| 9.1 | See OIM_AD_Account_Migration Sheet |
| 10 | Migrate Microsoft Exchange Accounts from Exchange to target OIM R2 PS3 Environment - OIM User Target Recon |
| 10.1 | See OIM_Exchange_Account_Migration Sheet |
| 11 | Run Delta Data Migration Utility |

OID_Migration | Master_OIM_Migration | OIM_External_User_Migration | OIM_Internal_User_Migration | OIM_Role_Migration | OIM_Role_Membership_Migration | OIM_OID_Account_Migration | OIM_EBSUM_Account_Migration | OIM_AD_Account Migration | OIM ...

2. ***OIM Data Migration Utility – This is a java utility which takes care of migrating users, roles, role membership and accounts from the source to the target system.***
   a. ***Migrate User Data: It extracts the user data along with their passwords from the source system and creates a CSV file. It then uploads the user data to the target system.***
   b. ***Migrate OIM Roles: It extracts the user account details from the source system and uploads the roles to the target system.***
   c. ***Migrate Role Membership: It extracts the user role membership data from the source system and uploads the user data to the target system.***
   d. ***Migrate User Account Data: It extracts the user account details from the source system and uploads the user data to the target system.***
3. ***OIM Data Validation Reports Utility – This utility runs several sql queries on the OIM database and generates reports for ensuring the data validation and consistency. The following reports are generated from this utility:***
   a. ***User Validation – It runs the sql queries on the source and target system to generate a list of users which may not have been migrated successfully to the target system. The utility also makes sure that all the internal users from HR system or AD system have an account in OIM system. It also makes sure that the passwords have been successfully carried over from the source OIM system.***

***Sample – User Data Validation Report***

| Users not present in Target OIM system | | | | | |
|---|---|---|---|---|---|
| OIM Source Sytem Details | pappiam00.XXX.org | | | | |
| OIM Source System Database | cdblx17.XXX.org:1171/IAMPRD | | | | |
| OIM Target System Details | pappoim10.XXX.org | | | | |
| OIM Target System Database | cdblx19.XXX.org:1171/IAMPRD | | | | |
| Total Users in Source System | 351101 | | | | |
| Total Users in Target System | 351009 | | | | |
| Count of Users missing in Target System | 92 | | | | |
| List of Users not present in Target System | UserId | Fname | Lname | MiddleName | User Email |
| 1 | AAJAY.SHARMA@ORACLE.COM | Sharma | Aajay | null | AAJAY.SHARMA@ORACLE.COM |
| 2 | ANIL.PATIL@ORACLE.COM | Patil | Anil | null | ANIL.PATIL@ORACLE.COM |
| 3 | SAM.SCOTT@ORACLE.COM | Scott | Sam | null | SAM.SCOTT@ORACLE.COM |
| 4 | CHRIS.SHEEL@ORACLE.COM | Sheel | Chris | null | CHRIS.SHEEL@ORACLE.COM |
| 5 | CHRIS.LOPER@ORACLE.COM | Loper | Chris | null | CHRIS.LOPER@ORACLE.COM |
| 6 | TAN.SCOTT@ORACLE.COM | Scott | Tan | null | TAN.SCOTT@ORACLE.COM |
| 7 | STIGHER@CAPTESTING.ORG | Tigher | Scott | null | STIGHER@CAPTESTING.ORG |
| 8 | RKAYED | Kayed | Rana | null | rana.kayed@aspetar.com |
| 9 | YANICV225 | Valentine | Yanic | null | yvalentine@browardhealth.org |
| 10 | JESHELTON | Shelton | Jennifer | null | Jennifer.Shelton@tricore.org |
| 11 | BREE524 | Daughenbaugh | Brianna rose | null | briannarose514@yahoo.com |
| 12 | SHETHY@UPSTATE.EDU | Sheth | Yesha | null | shethy@upstate.edu |
| 13 | CDICKINSON | Dickinson | Candice | null | Candice.Dickinson@interiorhealth.ca |
| 14 | JANICESAWATSKY | Sawatsky | Janice | null | janice.sawatsky@interiorhealth.ca |
| 15 | AKINNEALEY | Kinnealey | Ann e | null | plam@schosp.org |
| 16 | NANDRES | Andres | Nicole | null | NAndres@communitymedical.org |
| 17 | BOBBISUTTON | Sutton | Bobbi | null | bobbi.sutton@narmc.com |
| 18 | HILK17 | Smith | Katherine | null | katherine.smith@interiorhealth.ca |
| 19 | DARSHANPATEL | Patel | Darshan | null | darshan.patel@midland-memorial.com |
| 20 | SUPTESTUSER4.SUPTESTUSER4@ORACLE.COM | SupTestUser4 | SupTestUser4 | null | |
| 21 | EBRODLAND | Brodland | Elena | null | elena.brodland@interiorhealth.ca |
| 22 | MHATTORI | Hattori | Megan | null | Megan.Hattori@interiorhealth.ca |
| 23 | DERRICK1970 | Saunders | Derrick | null | derricksaunders70@gmail.com |
| 24 | AMGED20062000 | Elmansour | Amged | null | amged20062000@gmail.com |
| 25 | AARAFEH | Arafeh | Ahmad | null | aarafeh1@hotmail.com |
| 26 | TAHIRHASSANIEN | Taher | Taher | null | thassnein@phcc.gov.qa |
| 27 | SARAHW | Watson | Sarah | null | swatson@paml.com |

User Report | User AD Account Report | User Role Report | User EBS Account Report

b. ***Roles Validation – It runs the sql queries on the source and target system to generate a list of roles which may not have been migrated successfully to the target system. It also makes sure that the role memberships for all the users are same in the target and source OIM system.***

c. ***Account Validation – It runs the sql queries on the source and target system to generate a list of accounts assigned to a user which may not have been migrated successfully to the target system. It also makes sure that the assigned accounts for all the users are same in the target and source OIM system.***

***Sample – Account Data Validation Report***

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | AD Accounts not linked for Users Target OIM system | | | | | |
| 2 | OIM Source Sytem Details | pappiam00.XXX.org | | | | |
| 3 | OIM Source System Database | cdblx17.XXX.org:1171/IAMPRD | | | | |
| 4 | OIM Target System Details | pappoim10.XXX.org | | | | |
| 5 | OIM Target System Database | cdblx19.XXX.org:1171/IAMPRD | | | | |
| 6 | Total Users with AD Account in Source System | 791 | | | | |
| 7 | Total Users with AD Account in Target System | 785 | | | | |
| 8 | Count of Users without AD Account in Target System | 6 | | | | |
| 9 | List of Users not having a provisioned AD Account | UserId | Fname | Lname | MiddleName | User Email |
| 10 | 1 | sbrinke@XXX.org | scott | brinker | | sbrinke@XXX.org |
| 11 | 2 | swade@XXX.org | sandy | wade | | swade@XXX.org |
| 12 | 3 | lfiam@XXX.org | lisa | fiam | | lfiam@XXX.org |
| 13 | 4 | dwillis@XXX.org | dave | willis | | dwillis@XXX.org |
| 14 | 5 | mdudek@XXX.org | michael | dudek | | mdudek@XXX.org |
| 15 | 6 | jpendic@XXX.org | java | pendic | | jpendic@XXX.org |

4. ***OID Data Migration Utility - This is a java utility which takes care of migrating users, groups and group memberships from the source to the target system.***

a. ***Migrate User Data: It extracts the user data along with their passwords from the source OID and creates a compatible LDIF file by removing incompatible attributes from the source LDIF. It then uploads the LDIF data to the target system.***
b. ***Migrate Groups: It extracts the group details from the OID system then uploads them to the target system.***
c. ***Migrate Group Membership: It extracts the user group's membership data from the source system then uploads it to the target system.***
d. ***Migrate Servers Security Policies: It extracts the security policy stores from source OID systems and uploads it to the target OID system.***

5. ***OID Data Validation Reports Utility - This utility runs ldap commands (oid compare) to query the OID and generates reports for ensuring the data validation and consistency. The following reports are generated from this utility.***
   a. ***User Validation – It runs oid ldap queries on the source and target system to generate a list of users which may not have been migrated successfully to the target system.***

***Sample – OID User Data Validation Report***

| Users not present in Target OID | | | | | |
|---|---|---|---|---|---|
| OID Source Sytem Details | pappidm00.XXX.org | | | | |
| OIM Target System Details | pappoid10.XXX.org | | | | |
| Total Users in Source System | 351101 | | | | |
| Total Users in Target System | 351011 | | | | |
| Count of Users not present in Target System | 90 | | | | |
| List of Users not present in Target System | UserId | Fname | Lname | MiddleName | User Email |
| 1 | AAJAY.SHARMA@ORACLE.COM | Sharma | Aajay | null | AAJAY.SHARMA@ORACLE.COM |
| 2 | ANIL.PATIL@ORACLE.COM | Patil | Anil | null | ANIL.PATIL@ORACLE.COM |
| 3 | SAM.SCOTT@ORACLE.COM | Scott | Sam | null | SAM.SCOTT@ORACLE.COM |
| 4 | CHRIS.SHEEL@ORACLE.COM | Sheel | Chris | null | CHRIS.SHEEL@ORACLE.COM |
| 5 | CHRIS.LOPER@ORACLE.COM | Loper | Chris | null | CHRIS.LOPER@ORACLE.COM |
| 6 | TAN.SCOTT@ORACLE.COM | Scott | Tan | null | TAN.SCOTT@ORACLE.COM |
| 7 | STIGHER@CAPTESTING.ORG | Tigher | Scott | null | STIGHER@CAPTESTING.ORG |
| 8 | RKAYED | Kayed | Rana | null | rana.kayed@aspetar.com |
| 9 | YANICV225 | Valentine | Yanic | null | yvalentine@browardhealth.org |
| 10 | JESHELTON | Shelton | Jennifer | null | Jennifer.Shelton@tricore.org |
| 11 | BREE524 | Daughenbaugh | Brianna rose | null | briannarose514@yahoo.com |
| 12 | SHETHY@UPSTATE.EDU | Sheth | Yesha | null | shethy@upstate.edu |
| 13 | CDICKINSON | Dickinson | Candice | null | Candice.Dickinson@interiorhealth.ca |
| 14 | JANICESAWATSKY | Sawatsky | Janice | null | janice.sawatsky@interiorhealth.ca |
| 15 | AKINNEALEY | Kinnealey | Ann e | null | plam@schosp.org |
| 16 | NANDRES | Andres | Nicole | null | NAndres@communitymedical.org |
| 17 | BOBBISUTTON | Sutton | Bobbi | null | bobbi.sutton@narmc.com |
| 18 | HILK17 | Smith | Katherine | null | katherine.smith@interiorhealth.ca |
| 19 | DARSHANPATEL | Patel | Darshan | null | darshan.patel@midland-memorial.com |
| 20 | SUPTESTUSER4.SUPTESTUSER4@ORACLE.COM | SupTestUser4 | SupTestUser4 | null | |
| 21 | EBRODLAND | Brodland | Elena | null | elena.brodland@interiorhealth.ca |
| 22 | MHATTORI | Hattori | Megan | null | Megan.Hattori@interiorhealth.ca |
| 23 | DERRICK1970 | Saunders | Derrick | null | derricksaunders70@gmail.com |
| 24 | AMGED20062000 | Elmansour | Amged | null | amged20062000@gmail.com |
| 25 | AARAFEH | Arafeh | Ahmad | null | aarafeh1@hotmail.com |
| 26 | TAHIRHASSANIEN | Taher | Taher | null | thassnein@phcc.gov.qa |
| 27 | SARAHW | Watson | Sarah | null | swatson@paml.com |
| 28 | COLLEENABAD | Abad | Colleen | null | colleen.abad@healthsouth.com |
| 29 | MISSY.ALLRED@IMAIL.ORG | Allred | Missy | null | missy.allred@imail.org |

   b. ***Groups Validation – It runs the ldap queries on the source and target OID to generate a list of groups which may not have been migrated successfully to the target system.***
   c. ***Group Membership Validation – It runs the ldap queries on the source and target OID to generate a list of groups whose members are different.***

***Sample Group Membership Discrepancy Report***

| | A | B | C |
|---|---|---|---|
| 1 | Group Membership Discrepancy Report | | |
| 2 | OID Source Sytem Details | pappidm00.XXX.org | |
| 3 | OIM Target System Details | pappoid10.XXX.org | |
| 4 | Totak Groups with different members | 8 | |
| 5 | List of Groups with different members in Target System | Group Name | UserId |
| 6 | 1 | LabEmployee | AAJAY.SHARMA@ORACLE.COM |
| 7 | | | ANIL.PATIL@ORACLE.COM |
| 8 | | | SAM.SCOTT@ORACLE.COM |
| 9 | | | CHRIS.SHEEL@ORACLE.COM |
| 10 | | | CHRIS.LOPER@ORACLE.COM |
| 11 | | | TAN.SCOTT@ORACLE.COM |
| 12 | | | STIGHER@CAPTESTING.ORG |
| 13 | | | RKAYED |
| 14 | | | YANICV225 |
| 15 | | | JESHELTON |
| 16 | | | BREE524 |
| 17 | 2 | LabAdmin | SHETHY@UPSTATE.EDU |
| 18 | | | CDICKINSON |
| 19 | | | JANICESAWATSKY |
| 20 | | | AKINNEALEY |
| 21 | | | NANDRES |
| 22 | | | BOBBISUTTON |
| 23 | | | HILK17 |
| 24 | 3 | LabStaff | DARSHANPATEL |
| 25 | | | SUPTESTUSER4.SUPTESTUSER4@ORACLE.COM |
| 26 | | | EBRODLAND |
| 27 | | | MHATTORI |
| 28 | | | DERRICK1970 |
| 29 | | | AMGED20062000 |
| 30 | | | AARAFEH |
| 31 | 4 | SelfServiceAdmin | TAHIRHASSANIEN |
| 32 | | | SARAHW |
| 33 | | | COLLEENABAD |
| 34 | | | MISSY.ALLRED@IMAIL.ORG |

# 7 COMPANY BACKGROUND AND REFERENCES

*Vendors shall place their written response(s) to Section 5, Company Background and References in **bold/italics** immediately following the applicable RFP question, statement and/or section. This section shall also include the requested information in Section 5.2, Subcontractor Information, if applicable.*

## 7.1 VENDOR INFORMATION

*5.1.1 Vendors shall provide a company profile in the table format below.*

| Question | Response |
|---|---|
| Company name: | ***Applications Software Technology, LLC*** |
| Ownership (sole proprietor, partnership, etc.): | ***Limited Liability Company*** |
| State of incorporation: | ***Delaware*** |
| Date of incorporation: | ***Founded 1995 as Applications Software Technology Corporation; re-organized as Limited Liability Company in December 2016*** |
| # of years in business: | ***22*** |
| List of top officers: | ***Pravin Kumar, CEO***<br>***Shaji Zechariah, President*** |
| Location of company headquarters, including City and State: | ***Naperville, IL*** |
| Location(s) of the office that shall provide the services described in this RFP: | ***Santa Clara, CA*** |
| Number of employees locally with the expertise to support the requirements identified in this RFP: | ***0*** |
| Number of employees nationally with the expertise to support the requirements in this RFP: | ***20*** |
| Location(s) from which employees shall be assigned for this project: | ***With more than 375 employees stationed around the world, we can mobilize the right resources, skills, and innovative Oracle solutions to help clients improve operational efficiency, performance, and their bottom line.*** |

*5.1.2 Please be advised, pursuant to NRS 80.010, a corporation organized pursuant to the laws of another state shall register with the State of Nevada, Secretary of State's Office as a foreign corporation before a contract can be executed between the State of Nevada and the awarded vendor, unless specifically exempted by NRS 80.015.*

***AST is currently registered with the State of Nevada's Secretary of State's Office. Business License Details are provided below.***

*5.1.3 The selected vendor, prior to doing business in the State of Nevada, shall be appropriately licensed by the State of Nevada, Secretary of State's Office pursuant to NRS76. Information regarding the Nevada Business License can be located at http://nvsos.gov.*

| Question | Response |
|---|---|
| Nevada Business License Number: | ***NV20171005288*** |
| Legal Entity Name: | ***Applications Software Technology, LLC*** |

*Is "Legal Entity Name" the same name as vendor is doing business as?*

| | | | |
|---|---|---|---|
| Yes | ***X*** | No | |

*If "No", provide explanation.*

***N/A***

*5.1.4 Vendors are cautioned that some services may contain licensing requirement(s). Vendors shall be proactive in verification of these requirements prior to proposal submittal. Proposals that do not contain the requisite licensure may be deemed non-responsive.*

***AST's proposed services do not contain licensing requirements as described above.***

*5.1.5 Has the vendor ever been engaged under contract by any State of Nevada agency?*

| | | | |
|---|---|---|---|
| Yes | ***X*** | No | |

*If "Yes", complete the following table for each State agency for whom the work was performed. Table can be duplicated for each contract being identified.*

| Question | Response |
|---|---|
| Name of State agency: | ***Department of Motor Vehicles*** |
| State agency contact name: | ***Todd Devito*** |
| Dates when services were performed: | ***August 2012-July 2013*** |
| Type of duties performed: | ***Installation and Configuration of Oracle Business Intelligence Upgrade Bundle*** |
| Total dollar value of the contract: | ***$1,601,584*** |

| Question | Response |
|---|---|
| Name of State agency: | ***Department of Motor Vehicles*** |
| State agency contact name: | ***Bill Bernard*** |
| Dates when services were performed: | ***July 14, 2016*** |
| Type of duties performed: | ***Provide Oracle Unlimited Learning Subscriptions*** |
| Total dollar value of the contract: | ***$59,097.15*** |

*5.1.6 Are you now or have you been within the last two (2) years an employee of the State of Nevada, or any of its agencies, departments, or divisions?*

| Yes | | No | ***X*** |
|---|---|---|---|

*If "Yes", please explain when the employee is planning to render services, while on annual leave, compensatory time, or on their own time?*

*If you employ (a) any person who is a current employee of an agency of the State of Nevada, or (b) any person who has been an employee of an agency of the State of Nevada within the past two (2) years, and if such person shall be performing or producing the services which you shall be contracted to provide under this contract, you shall disclose the identity of each such person in your response to this RFP, and specify the services that each person shall be expected to perform.*

***AST does not employ any person with the characteristics described above.***

*5.1.7 Disclosure of any significant prior or ongoing contract failures, contract breaches, civil or criminal litigation in which the vendor has been alleged to be liable or held liable in a matter involving a contract with the State of Nevada or any other governmental entity. Any pending claim or litigation occurring within the past six (6) years which may adversely affect the vendor's ability to perform or fulfill its obligations if a contract is awarded as a result of this RFP shall also be disclosed.*

*Does any of the above apply to your company?*

| Yes | | No | ***X*** |
|---|---|---|---|

*If "Yes", please provide the following information. Table can be duplicated for each issue being identified.*

| Question | Response | |
|---|---|---|
| Date of alleged contract failure or breach: | | |
| Parties involved: | | |
| Description of the contract failure, contract breach, litigation, or investigation, including the products or services involved: | | |
| Amount in controversy: | | |
| Resolution or current status of the dispute: | | |
| If the matter has resulted in a court case: | Court | Case Number |
| | | |
| Status of the litigation: | | |

*5.1.8 Vendors shall review and provide if awarded a contract the insurance requirements as specified in Attachment D, Insurance Schedule for RFP 3490.*

***AST meets the minimum insurance requirements specified in Attachment D, Insurance Schedule for RFP 3490 as demonstrated by the sample Certificates of Insurance on the following page.***

ACORD

# CERTIFICATE OF LIABILITY INSURANCE

OP ID: RC

DATE (MM/DD/YYYY) 03/23/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
John J. Matsock & Assoc. Inc.
1750 N Washington Street
Naperville, IL 60563
Steven L. Monteith

CONTACT NAME: SANDY WADE
PHONE (A/C, No, Ext): 630 778 1180 FAX (A/C, No):
E-MAIL ADDRESS: swade@astcorporation.com
PRODUCER CUSTOMER ID #: APPLI-7

INSURED: APPLICATIONS SOFTWARE TECHNOLOGY CORPORATION, SERENE AST LLC, APPLICATIONS SOFTWARE TECHNOLOGY LLC, TAILWIND AST SUB CORPORATION, TAILWIND AST HOLDING CORPORATION 1755 PARK ST STE 100 NAPERVILLE, IL 60563

| INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|
| INSURER A : HARTFORD CASUALTY INS COMPANY | 29424 |
| INSURER B : ACE INSURANCE COMPANY | 22691 |
| INSURER C : HISCOX | 10200 |
| INSURER D : | |
| INSURER E : | |
| INSURER F : | |

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL INSR | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | | |
|---|---|---|---|---|---|---|---|---|---|
| | GENERAL LIABILITY | | | | | | | | |
| A | X COMMERCIAL GENERAL LIABILITY | | | 83UUNVV0612 | 03/01/2017 | 03/01/2018 | EACH OCCURRENCE | $ | 1,000,000 |
| | CLAIMS-MADE X OCCUR | | | | | | DAMAGE TO RENTED PREMISES (Ea occurrence) | $ | 300,000 |
| | | | | | | | MED EXP (Any one person) | $ | 10,000 |
| A | X CONTRAC LIABILITY | | | 83UUNVV0612 | 03/01/2017 | 03/01/2018 | PERSONAL & ADV INJURY | $ | 1,000,000 |
| C | X FOREIGN LIABILITY | | | PHFD38395117001 | 09/14/2016 | 03/01/2018 | GENERAL AGGREGATE | $ | 2,000,000 |
| | GEN'L AGGREGATE LIMIT APPLIES PER: | | | | | | PRODUCTS - COMP/OP AGG | $ | 2,000,000 |
| | POLICY X PRO-JECT LOC | | | | | | | $ | |
| | AUTOMOBILE LIABILITY | | | | | | COMBINED SINGLE LIMIT (Ea accident) | $ | 1,000,000 |
| | ANY AUTO | | | | | | BODILY INJURY (Per person) | $ | |
| | ALL OWNED AUTOS | | | | | | BODILY INJURY (Per accident) | $ | |
| | SCHEDULED AUTOS | | | | | | PROPERTY DAMAGE (PER ACCIDENT) | $ | |
| A | X HIRED AUTOS | | | 83UUNVV0612 | 03/01/2017 | 03/01/2018 | | | |
| A | X NON-OWNED AUTOS | | | 83UUNVV0612 | 03/01/2017 | 03/01/2018 | | $ | |
| | | | | | | | | $ | |
| | X UMBRELLA LIAB X OCCUR | | | | | | EACH OCCURRENCE | $ | 5,000,000 |
| A | EXCESS LIAB CLAIMS-MADE | | | 83RHUVV0663 | 03/01/2017 | 03/01/2018 | AGGREGATE | $ | 5,000,000 |
| | DEDUCTIBLE | | | | | | | $ | |
| | X RETENTION $ 10,000 | | | | | | | $ | |
| A | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below | N/A | | 83WEBX0846 CORP OFFICERS EXCLUDED | 03/01/2017 | 03/01/2018 | X WC STATU-TORY LIMITS OTH-ER | | |
| | | | | | | | E.L. EACH ACCIDENT | $ | 1,000,000 |
| | | | | | | | E.L. DISEASE - EA EMPLOYEE | $ | 1,000,000 |
| | | | | | | | E.L. DISEASE - POLICY LIMIT | $ | 1,000,000 |
| C | CRIME | | | UC21417949 | 03/01/2017 | 03/16/2017 | | | 1,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

ILLUSTR

****ILLUSTRATION PURPOSES*****

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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# CERTIFICATE OF PROPERTY INSURANCE

DATE (MM/DD/YYYY): 1/17/2017

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PRODUCER
Arthur J. Gallagher Risk Management Services, Inc.
2 Westchester Park Dr 3rd Fl
White Plains NY 10604

CONTACT NAME:
PHONE (A/C, No, Ext): 914-696-3700
FAX (A/C, No): 914-696-1010
E-MAIL ADDRESS:
PRODUCER CUSTOMER ID: APPLSOF-01

| INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|
| INSURER A : Massachusetts Bay Insurance Company | 22306 |
| INSURER B : | |
| INSURER C : | |
| INSURER D : | |
| INSURER E : | |
| INSURER F : | |

INSURED
Tailwind AST Holding Corporation
1755 Park Street, Suite 100
Naperville IL 60563

COVERAGES CERTIFICATE NUMBER: 731364864 REVISION NUMBER:

LOCATION OF PREMISES / DESCRIPTION OF PROPERTY (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | POLICY NUMBER | POLICY EFFECTIVE DATE (MM/DD/YYYY) | POLICY EXPIRATION DATE (MM/DD/YYYY) | COVERED PROPERTY | LIMITS |
|---|---|---|---|---|---|---|
| | PROPERTY | | | | BUILDING | $ |
| | CAUSES OF LOSS / DEDUCTIBLES | | | | PERSONAL PROPERTY | $ |
| | BASIC / BUILDING | | | | BUSINESS INCOME | $ |
| | BROAD / CONTENTS | | | | EXTRA EXPENSE | $ |
| | SPECIAL | | | | RENTAL VALUE | $ |
| | EARTHQUAKE | | | | BLANKET BUILDING | $ |
| | WIND | | | | BLANKET PERS PROP | $ |
| | FLOOD | | | | BLANKET BLDG & PP | $ |
| | | | | | | $ |
| | | | | | | $ |
| | INLAND MARINE | TYPE OF POLICY | | | | $ |
| | CAUSES OF LOSS | | | | | $ |
| | NAMED PERILS | POLICY NUMBER | | | | $ |
| | | | | | | $ |
| A | CRIME | 1849181 | 1/10/2017 | 1/10/2018 | Limit: | $$1,000,000 |
| | TYPE OF POLICY | | | | | $ |
| | | | | | | $ |
| | BOILER & MACHINERY / EQUIPMENT BREAKDOWN | | | | | $ |
| | | | | | | $ |
| | | | | | | $ |
| | | | | | | $ |

SPECIAL CONDITIONS / OTHER COVERAGES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Evidence of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/17/2017

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**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

PRODUCER
Arthur J. Gallagher Risk Management Services, Inc.
2 Westchester Park Dr 3rd Fl
White Plains NY 10604

CONTACT NAME:
PHONE (A/C, No, Ext): 914-696-3700 FAX (A/C, No): 914-696-1010
E-MAIL ADDRESS:

| INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|
| INSURER A : Underwriters at Lloyd's London | 15792 |
| INSURER B : | |
| INSURER C : | |
| INSURER D : | |
| INSURER E : | |
| INSURER F : | |

INSURED APPLSOF-01
Tailwind AST Holding Corporation
1755 Park Street, Suite 100
Naperville IL 60563

**COVERAGES** **CERTIFICATE NUMBER:** 1851525375 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL INSD | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | |
|---|---|---|---|---|---|---|---|---|
| | COMMERCIAL GENERAL LIABILITY | | | | | | EACH OCCURRENCE | $ |
| | CLAIMS-MADE OCCUR | | | | | | DAMAGE TO RENTED PREMISES (Ea occurrence) | $ |
| | | | | | | | MED EXP (Any one person) | $ |
| | | | | | | | PERSONAL & ADV INJURY | $ |
| | GEN'L AGGREGATE LIMIT APPLIES PER: | | | | | | GENERAL AGGREGATE | $ |
| | POLICY PRO-JECT LOC | | | | | | PRODUCTS - COMP/OP AGG | $ |
| | OTHER: | | | | | | | $ |
| | AUTOMOBILE LIABILITY | | | | | | COMBINED SINGLE LIMIT (Ea accident) | $ |
| | ANY AUTO | | | | | | BODILY INJURY (Per person) | $ |
| | OWNED AUTOS ONLY / SCHEDULED AUTOS | | | | | | BODILY INJURY (Per accident) | $ |
| | HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY | | | | | | PROPERTY DAMAGE (Per accident) | $ |
| | | | | | | | | $ |
| | UMBRELLA LIAB / OCCUR | | | | | | EACH OCCURRENCE | $ |
| | EXCESS LIAB / CLAIMS-MADE | | | | | | AGGREGATE | $ |
| | DED / RETENTION $ | | | | | | | $ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N | | | | | | PER STATUTE / OTH-ER | |
| | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) N / A | | | | | | E.L. EACH ACCIDENT | $ |
| | If yes, describe under DESCRIPTION OF OPERATIONS below | | | | | | E.L. DISEASE - EA EMPLOYEE | $ |
| | | | | | | | E.L. DISEASE - POLICY LIMIT | $ |
| A | Cyber Liability & Tech E&O | | | B1262FI1080317 | 1/10/2017 | 1/10/2018 | Limit | $15,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**CERTIFICATE HOLDER**

Evidence of Coverage

**CANCELLATION**

**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.**

AUTHORIZED REPRESENTATIVE

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# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/17/2017

**THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.**

**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

PRODUCER
Arthur J. Gallagher Risk Management Services, Inc.
2 Westchester Park Dr 3rd Fl
White Plains NY 10604

CONTACT NAME:
PHONE (A/C, No, Ext): 914-696-3700 FAX (A/C, No): 914-696-1010
E-MAIL ADDRESS:

| INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|
| INSURER A : Ironshore Specialty Insurance Co | 25445 |
| INSURER B : | |
| INSURER C : | |
| INSURER D : | |
| INSURER E : | |
| INSURER F : | |

INSURED APPLSOF-01
Tailwind AST Holding Corporation
1755 Park Street, Suite 100
Naperville IL 60563

**COVERAGES** **CERTIFICATE NUMBER:** 317858048 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL INSD | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | |
|---|---|---|---|---|---|---|---|---|
| | COMMERCIAL GENERAL LIABILITY | | | | | | EACH OCCURRENCE | $ |
| | CLAIMS-MADE OCCUR | | | | | | DAMAGE TO RENTED PREMISES (Ea occurrence) | $ |
| | | | | | | | MED EXP (Any one person) | $ |
| | | | | | | | PERSONAL & ADV INJURY | $ |
| | GEN'L AGGREGATE LIMIT APPLIES PER: | | | | | | GENERAL AGGREGATE | $ |
| | POLICY PRO-JECT LOC | | | | | | PRODUCTS - COMP/OP AGG | $ |
| | OTHER: | | | | | | | $ |
| | AUTOMOBILE LIABILITY | | | | | | COMBINED SINGLE LIMIT (Ea accident) | $ |
| | ANY AUTO | | | | | | BODILY INJURY (Per person) | $ |
| | OWNED AUTOS ONLY / SCHEDULED AUTOS | | | | | | BODILY INJURY (Per accident) | $ |
| | HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY | | | | | | PROPERTY DAMAGE (Per accident) | $ |
| | | | | | | | | $ |
| | UMBRELLA LIAB / OCCUR | | | | | | EACH OCCURRENCE | $ |
| | EXCESS LIAB / CLAIMS-MADE | | | | | | AGGREGATE | $ |
| | DED / RETENTION $ | | | | | | | $ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N | | | | | | PER STATUTE / OTH-ER | |
| | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) N / A | | | | | | E.L. EACH ACCIDENT | $ |
| | If yes, describe under DESCRIPTION OF OPERATIONS below | | | | | | E.L. DISEASE - EA EMPLOYEE | $ |
| | | | | | | | E.L. DISEASE - POLICY LIMIT | $ |
| A | Management and Company Liability<br>Employment Practices Liability<br>Fiduciary Liability | | | 003040500 | 1/10/2017 | 1/10/2018 | Limit:<br>Limit:<br>Limit: | $5,000,000<br>$3,000,000<br>$1,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**CERTIFICATE HOLDER**

Evidence of Insurance

**CANCELLATION**

**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.**

AUTHORIZED REPRESENTATIVE

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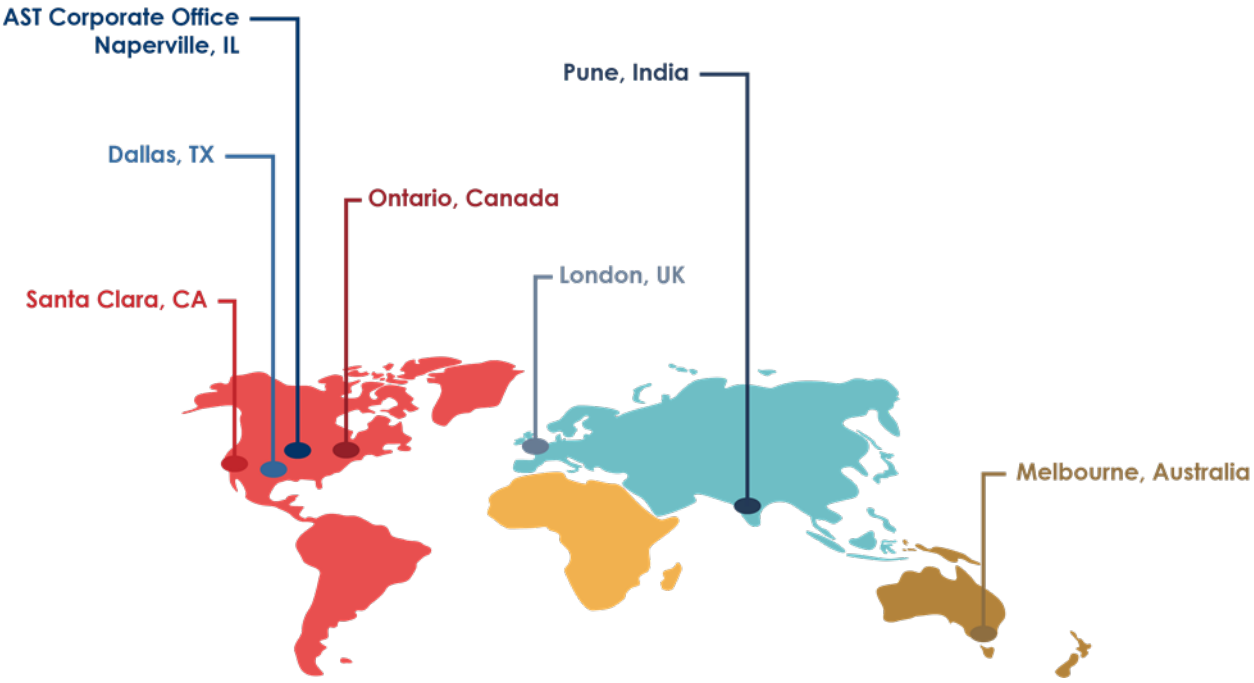
*5.1.9 Company background/history and why vendor is qualified to provide the services described in this RFP. Limit response to no more than five (5) pages.*

***Applications Software Technology, LLC (AST) was established in 1995 as a specialized Oracle systems integrator with the objective of helping customers realize the full potential of their investment in Oracle Applications and Technology. Led by former senior members of Oracle Corporation, AST believes that successful implementations of enterprise wide systems depend on an equal measure of software expertise and a complete understanding of the client's business processes. For more than 2 decades, we have concentrated on select key industry verticals, so that we are able to speak the language of our customers, understand their daily business issues and pain-points, and leverage our Oracle product expertise to solve their complex business process problems. We foster long-term relationships with our clients in order to complement their strengths and natural business insights, resulting in effective and trouble-free project execution. We have consistently delivered consulting services of the highest quality and as a result, are recognized as a premier systems integrator and Oracle's "Pillar" partner for many product lines including Oracle Fusion Middleware and Identity and Access Management products.***

***AST is a global company with headquarters in Naperville, IL. Additionally, we operate out of locations in Santa Clara, CA; Dallas, TX; Pune, India; Melbourne, Australia; and London, UK.***




***AST is a one-stop-shop for ALL Oracle Services, both on premise and cloud. With more than 400 employees stationed around the world, we can mobilize the right resources, skills, and innovative Oracle solutions to help clients improve operational efficiency, performance, and their bottom line.***

***Over the past 20+ years, we have grown from a boutique Oracle E-Business Suite Systems Integrator to a global Oracle consultancy with expertise across Oracle's complete portfolio of cloud solutions—Oracle Cloud, Oracle ERP Cloud, Oracle EPM Cloud, Oracle SCM Cloud, Oracle HR Cloud, Oracle Customer Experience Cloud, Oracle Analytics Cloud, and Oracle SOA Cloud Services. In addition, we offer award winning solutions and support for Business Process Management, Internet of Things (IoT), Mobility, Identity and Access Management, as well as Enterprise Portal and Content Management.***

***Our service delivery and project management method utilizes a proven methodology - Enterprise Domain Model (EDM) that is a thorough approach to achieving successful Oracle implementations by embracing, controlling, coordinating, and driving each component of an engagement. Anchored in PMI standards, and tailored for Oracle Cloud, EDM puts appropriate emphasis on key areas that are particularly challenging for transformational enterprise applications implementations.***

***A combination of our experienced staff and involved Executive management ensure that the full potential of our proven EDM methodology is realized on every engagement. Key benefits of EDM include:***

- ***Measurable Performance Milestones that eliminate surprises and risks to the project***
- ***Well-defined approach to software configuration that eliminates costly customizations***
- ***Integrated Quality Assurance process and Quality Gate Checks in every phase of the project***
- ***Substantial emphasis on change management & knowledge transfer***
- ***Extensive repository of re-useable tools and templates***

## Industries Served

***AST is recognized for its focus on delivering insightful business solutions for the industries we serve. We have purposefully concentrated on a select number of Industry verticals so that we can speak the language of our customers, have a deep appreciation of their issues, and help solve their most complex business problems. It is this combination of Oracle product expertise and industry-specific knowledge that enables us to undertake transformational projects for our customers. Our pre-built solutions, accelerators and methodologies prove our expertise and adds value to our engagements.***

***The following are the twelve (12) industries where we operate and consistently transact business of over $1M per year for each of the product areas identified.***

| | Public Sector | Utility & Energy | High Tech | Media | BFSI | Mass Transit | Not-for-Profit | Mfg. | Life Science | Retail | Airport | Service |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ERP (On-Premise) | ★ | ★ | | | | ★ | | ★ | ★ | | ★ | |
| Cloud ERP/HCM | ★ | ★ | ★ | ★ | | ★ | ★ | ★ | ★ | | ★ | ★ |
| BI & Big Data | ★ | ★ | ★ | | | ★ | ★ | ★ | | | | ★ |
| EPM | ★ | ★ | ★ | | ★ | ★ | ★ | | | | ★ | |
| Middleware | ★ | ★ | ★ | | | ★ | ★ | ★ | ★ | | ★ | |
| CX | ★ | ★ | ★ | ★ | ★ | ★ | | | ★ | ★ | ★ | ★ |
| MDM/EDQ | ★ | ★ | ★ | ★ | ★ | ★ | | | | ★ | ★ | ★ |
| Managed Services | ★ | ★ | ★ | | | ★ | ★ | | | | ★ | ★ |

***We have a history of tackling the most challenging Oracle implementation and support initiatives with an unprecedented record of achievement:***

- ***Hundreds of projects completed on-time and on-budget***
- ***Extraordinary percentage of repeat customers***
- ***5 Oracle Excellence Awards***

## Oracle Partnership

***Commensurate with AST founders' history with Oracle Corporation and our singular focus on implementing only Oracle software, AST has earned a valued and trusted relationship with Oracle sales and software development teams over the past 2 decades. As early adopters of new Oracle technologies, our team is regularly in close contact with Oracle's Product Development teams for quick resolution of issues and release of software patches.***

***AST also encourages its employees to be thought leaders and contribute to the Oracle ecosystem through blogs, white papers and conference presentations. As a result, our employees are well recognized in their respective specialty and they frequently come up with solutions to solve business problems and fill gaps in standard Oracle software; several of our employees have been certified as "Oracle Ace."***

***Our consultants also work closely with organizations dedicated to the advancement of Oracle Applications and technologies, such as the Oracle Applications User group (OAUG). We bring our product and industry expertise to the Oracle ecosystem to showcase our project experience and promote the best practices with specific industries and businesses. AST's culture of thought leadership and knowledge sharing not only enriches the Oracle user community, but helps our consultants attain valuable soft skills and leadership qualities which they in turn demonstrate on client projects.***

## Oracle Identity Management Experience

***AST's established and award-winning Cloud Platform, Security and Middleware practice enables its customers to rapidly deploy enterprise Identity and Access Management platforms which focus on every aspect of enterprise security, including Identity as a Service, Directory Services, Identity Governance, Access Management, and Mobile Security. We are one of the elite groups of Oracle Platinum Partners Specialized in Oracle Identity Governance Suite and Oracle Access Management Suite.***

ORACLE Platinum Partner
Specialized
Oracle Identity Governance Suite 11g

ORACLE Platinum Partner
Specialized
Oracle Access Management Suite Plus 11g

***At our Center of Excellence, we have invested in building the highest level of competency in both our best practices and reusable services/components repositories to speed-up the time-to-implementation for any Security project. With years of experience implementing Oracle Security technologies and a successful track record of delivering quality solutions, we are recognized as Oracle's go-to partner for the Public Sector marketplace.***

***AST has completed several large transformational program implementations for a number of our customers, for a variety of unique needs. In addition, AST has extensive experience working on large and complex Oracle Identity and Access Management (IAM) implementations in various enterprise environments. The table below identifies some of our clients with large Oracle IAM footprints, implemented recently.***

| Customer | IDM Technology Implemented | Number of IDM Users (Staff/Non-Staff) |
|---|---|---|
| *College of American Pathologists* | *Identity and Access Management* | *40,000* |
| *Cook County, IL* | *API Gateway, OES, SOA, BPM, ADFS* | *1,000* |

| | | |
|---|---|---|
| *Los Angeles County Metropolitan Transportation Authority (Metro), CA* | *IDM, SOA, WebCenter* | *9,000* |
| *City of Los Angeles Department of Water and Power, CA* | *Identity and Access Management* | *10,000* |
| *Underwriters Laboratories* | *Identity and Access Management, SOA, BPM* | *17,000* |
| *Bechtel Marine Propulsion Corporation* | *Identity and Access Management, WebLogic, E-Business Suite, Hyperion* | *4,500* |
| *HNI Corporation* | *Identity and Access Management* | *6,000* |
| *Northern Trust* | *Identity and Access Management - OES* | *2,000* |

***Only AST can uniquely provide the critical expertise required to assess your current environment and develop a sophisticated, modern identity and access management program built on the existing Oracle Identity Management platform. We offer the State:***

- ★ ***A customer-centric approach that starts with assessing your organization's identity and access management needs and focuses on delivering business results.***
- ★ ***Proven implementation and project management methodologies designed to set your organization up for successful business transformation.***
- ★ ***A proven team that understands the unique requirements and enterprise security challenges of the verticals we serve, in particular, State and Local Governments. Our team has performed similar work for large Governments including the City of Los Angeles, City of Detroit, and Cook County, IL.***
- ★ ***Access to critical support from Oracle's technical and product development teams. Our Pillar Partner status gives us the ability to escalate problems with the software and facilitate issue resolution to the benefit of our clients.***
- ★ ***Committed Executive support to ensure excellence in delivery. This level of engagement has played a large role in ensuring our customers' success.***

***As our references will attest, our IAM experience includes, but is not limited to:***

- ***Conducting Identity and Access Management Implementation assessments;***
- ***Creating Implementation roadmaps;***
- ***Conducting Gap fit analyses of existing systems;***
- ***Creating architectural roadmaps for IAM/IDM Implementations for enterprise;***
- ***Creating software compatibility Matrices for Oracle IDM Suite and clients' applications;***
- ***Building clustered environments for high-availability;***
- ***Building Disaster Recovery environments for maximum-availability;***
- ***Upgrading existing Oracle IDM stack (10g or 11g) to 11gR2/PS3 or 12c environment;***
- ***Self-Service, User Reservation and User Registration;***
- ***Creating custom SPML services for integrating legacy application and extending OIM's Password;***
- ***Creating various custom components for OIM and adapters;***

- ***Creating plugins and event handlers for achieving business-specific requirements, such as user ID generation, random password assignment, and event-based email notification to individuals, groups and mailboxes;***
- ***Integrating OIM with target resources, such as Database, E-Business Suite, PeopleSoft, Microsoft AD, MS Exchange, Seibel, Mainframe (RACF) and other systems using standard Oracle connectors for provisioning user identities and assigning responsibilities in target resource based on their OIM roles;***
- ***Integrating OIM with source systems, such as HRMS and PeopleSoft, using standard Oracle connectors modified to meet business requirements like creating identifies based on employee designation and department, updating and disabling identities due to change in designation, etc. through trusted reconciliation;***
- ***Setting up roles and workflow for role-based responsibility assignment in the target application;***
- ***Setting up workflows for request-based provisioning;***
- ***Setting up out-of-box and custom reports for auditing needs, such as enterprise-wide user access detail, when and who granted access to user, when access to a system was revoked, etc.;***
- ***Supporting OIM environments with more than a quarter-million external and internal users;***
- ***Building coarse/fine-grained security using Oracle Entitlement Server;***
- ***Integrating applications with Oracle Access Manager for Single Sign-on functionalities;***
- ***Providing Desktop SSO solutions that integrate Windows Native Authentication;***
- ***Integrating cross-domain applications and federated applications using Oracle Identity federation;***
- ***Building Mobile applications security and secure WebServices using Oracle WebServices Manager (OWSM);***
- ***Technical and functional training;***
- ***Level 2 and Level 3 production support.***

*5.1.10 Provide a brief description of the length of time vendor has been providing services described in this RFP to the public and/or private sector.*

***AST has been providing services to the Public and Private Sector since 1995 (22 + years).***

*5.1.11 Financial information and documentation to be included in accordance with Section 10.5, Part III – Confidential Financial Information.*

*5.1.11.1 Federal Tax Identification Number*

***See Part III-Confidential Financial Information.***

## 7.2 SUBCONTRACTOR INFORMATION

***AST does not intend to utilize the services of subcontractors for this project. All work will be performed by full-time AST employees.***

## 7.3 BUSINESS REFERENCES

***AST has proudly developed a reputation as a "go-to" partner for Oracle applications implementations in the Public Sector. This reputation has been built on a proven track record of success in completing all***

***projects on-time, on-budget, and to the complete satisfaction of our clients. Our clients have always found our commitment to their success, product knowledge, and quality of our resources as our key strengths.***

***AST takes the satisfaction of its customer seriously and conducts independent customer surveys from time to time to make sure our efforts and intentions match our customers' expectations. The outcome of the most recent customer survey conducted by A.T. Kearney on behalf of AST in July/August of 2016, recorded a customer satisfaction levels in the upper ninety percent range.***

***We understand that not everything can be anticipated at the onset of any project and that our client's internal priorities and constraints will most likely shift during a long engagement, especially within the Public Sector. AST takes great care in highlighting these potential risks to our clients so that together we can be better prepared to deal effectively with unforeseen events and system issues. By selecting AST as your partner, you will gain more than just a consultant, you gain a committed and trusted business partner as evidenced by the following letters of recommendation from long-time AST customers.***

DEPARTMENT OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT
**Mark Edingburg**
Interim Executive Director
69 West Washington, Suite 2600 ● Chicago, Illinois 60602 ● (312) 603-8180

**TONI PRECKWINKLE**
PRESIDENT
**Cook County Board of Commissioners**

RICHARD R. BOYKIN
1st District

ROBERT B. STEELE
2nd District

JERRY BUTLER
3rd District

STANLEY MOORE
4th District

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8th District

PETER N. SILVESTRI
9th District

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10th District

JOHN P. DALEY
11th District

JOHN A. FRITCHEY
12th District

LARRY SUFFREDIN
13th District

GREGG GOSLIN
14th District

TIMOTHY O. SCHNEIDER
15th District

JEFFREY R. TOBOLSKI
16th District

SEAN M MORRISON
17th District

Ricardo Lafosse
Cook County Department of Homeland Security and Emergency Management
69 W. Washington Street, Suite 2600
Chicago, IL 60602
March 20, 2017

Shyam Kumar
Vice President, Cloud Platform, Security & Middleware
AST LLC
1755 Park Street, Suite 100
Naperville, IL 60563

Dear Shyam Kumar:

On behalf of the Cook County CISO's Office, I would like to express our gratitude to AST LLC for the work performed and expert advice provided throughout the implementation of the Enterprise Service Bus. That project and the quality work that AST has done have become the model for future projects.

Throughout the months leading up to the December 22, 2016 go-live date, AST had proven their expertise in security while working to meet CJIS security requirements for the project. They have provided our team with timely and valuable advice in regards to the security design and implementation.

Furthermore, we found the AST project team to be extremely easy to work with. They quickly adapted and adhered to our internal security procedures and policies. They were able to effectively leverage our security tools to validate and verify the ESB system security.

It was a pleasure working with AST to build a cohesive team and we look forward to our continued relationship. I wish you and AST the very best. Thank you for working with us to make the project a great success.

Sincerely,

Ricardo Lafosse
Chief Information Security Officer

$ Fiscal Responsibility ● Innovative Leadership ● Transparency & Accountability ● Improved Services

CITY OF BURBANK
275 EAST OLIVE AVENUE, P.O.BOX 6459, BURBANK, CALIFORNIA 91510-6459
www.ci.burbank.ca.us

February 3, 2016

Mr. Shaji Zechariah
Executive VP
AST Corporation
1755 Park Street, Suite 100
Naperville, IL 60563

Dear Mr. Zechariah,

On behalf of the City of Burbank, I wish to express my appreciation for the outstanding work performed by AST since 2005.

I want to recognize AST's ability to complete all of the projects on time and under budget, right from the first engagement of Oracle E-Business Suite 11i migration, followed by R12 Upgrade, HCM Suite and Budgeting implementation, and multiple system enhancements. The City is also very appreciative of the ongoing Managed Services support services. AST's consultants have demonstrated the highest level of professionalism without exception and performed tasks with great skill and dedication.

AST has delivered on every aspect of their commitments to the City in general, and particularly by consistently keeping our organization apprised of the latest Oracle advancements; helping the City decipher between which items would either address mandatory maintenance or updates, provide a strategic advantage, or not be required for our future direction. I would state without hesitation that AST's in-depth knowledge of the Oracle solutions combined with extensive Public Sector experience were key to the success of our projects and have strengthened our partnership.

I wish you and AST good luck in all your future endeavors and am confident that the City will continue to benefit from our relationship with AST Corporation.

Sincerely,

Medik Ghazikhanian
Assistant Information Technology Director
City of Burbank
(818) 238 -5153

**INFORMATION TECHNOLOGY DEPARTMENT**

PHONE (818) 238-5080 FAX (818) 238-5104

Metro

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

February 5, 2016

Mr. Shaji Zechariah
Executive VP
AST Corporation
1755 Park Street, Suite 100
Naperville, IL 60563

Dear Mr. Zechariah,

I want to express my appreciation for the quality of Oracle services that AST has provided to Los Angeles Metropolitan Transit Authority through many successful projects since 2004.

We have relied on AST's consulting expertise for multiple implementations, upgrades, and managed services initiatives. In each case, we have been impressed and extremely satisfied with the work ethic and the knowledge of your consultants. AST's staff has shown a high level of skills across multiple solution footprints including Oracle E-Business Suite, Identity management, Oracle Business Intelligence, SOA, Content Management and Middleware, and the new oracle hardware solutions. I am looking forward to the rollout of Metro's BI project that AST is implementing to further enhance our Analytics capabilities.

AST and the LA Metro have developed a strong relationship, allowing us to navigate our ever-changing needs. AST has shown great flexibility, attention to detail, a commitment to success, and knowledge of the Transit and Public Sector; allowing appropriate solutions to be formed and delivered in a timely manner.

We look forward to a continued partnership and success in the future.

Sincerely,

**2/5/2017**

**Mehul Kumar**
Metro Los Angeles
SR. Engineering Manager
Information Technology Services

213.922.2344 W | 818.451.5152 C
metro.net | facebook.com/losangelesmetro | @metrolosangeles

*5.3.1 Vendors shall provide a minimum of three (3) business references from public sector clients related to Oracle IDM implementation, upgrade, support or other Oracle IDM related projects within the last five (5) years.*

*5.3.2 Business references shall show a proven ability of:*

*5.3.2.1 Developing, designing, implementing and/or transferring a large-scale application with public and/or private sectors;*

*5.3.2.2 Developing and executing a comprehensive application test plan;*

*5.3.2.3 Developing and implementing a comprehensive training plan;*

*5.3.2.4 Experience with comprehensive project management;*

*5.3.2.5 Experience with cultural change management;*

*5.3.2.6 Experience with managing subcontractors; and*

*5.3.2.7 Development and execution of a comprehensive project management plan.*

*5.3.3 Vendors shall submit Attachment E, Reference Questionnaire to their business references.*

*5.3.4 It is the vendor's responsibility to ensure that completed forms are received by the Purchasing Division on or before the deadline as specified in Section 9, RFP Timeline for inclusion in the evaluation process. Reference Questionnaires not received, or not complete, may adversely affect the vendor's score in the evaluation process.*

*5.3.5 The State reserves the right to contact and verify any and all references listed regarding the quality and degree of satisfaction for such performance.*

***AST has submitted the Attachment E Reference questionnaires to the clients identified below where we have performed similar Identity and Access Management projects. As required, these forms have been submitted directly to the State.***

| Client | Contact Submitting Attachment E | Project Description |
|---|---|---|
| ***City of Los Angeles, Department of Water and Power, CA*** | ***David Alexander<br>Chief Information Security Officer<br>Enterprise Cybersecurity Services<br>213-367-4211<br>David.Alexander@ladwp.com*** | ***Oracle IDM environment Upgrade for LADWP*** |
| ***Sanitation Districts of Los Angeles County, Ca*** | ***Phil Headley<br>IT Director<br>(562) 908-4288 x1008<br>pheadley@lacsd.org*** | ***Oracle IDM Implementation in conjunction with Oracle ERP Implementation.*** |
| ***Los Angeles County Metropolitan Transportation Authority*** | ***Mehul Kumar<br>IT Manager<br>213- 922-2344<br>KUMARM@metro.net*** | ***Oracle IDM and Access Management Implementation*** |
| ***City of Modesto, CA*** | ***Kevin Harless<br>IT Supervisor<br>(209) 571-5548<br>kharless@modestogov.com*** | ***Install SSO components on new servers and configure SSO for Oracle EBS instance. Create and Configure OAM, OID and DMZ environments*** |
| ***College of American Pathologists, IL*** | ***Scott Brinker<br>Cyber Security Manager<br>847-832-7338<br>sbrinke@cap.org*** | ***AST completed the initial implementation of the Oracle IDM and subsequently updated the entire Oracle security stack to the latest release.*** |

## 7.4 Vendor Staff Skills and Experience Required

***Our Oracle IAM technical consultants have worked very closely with the Oracle engineering team in the ongoing development of the Oracle Identity and Access Management Suite. Multiple patch releases have been generated as a result of our requests and the challenges we've faced on existing projects. We were one of the early adopters of the integration of Oracle Identity and Access Manager 11g with ERP systems like E-Business Suite, PeopleSoft, Banner and Siebel, both as a source and target, and have worked with client and partners to facilitate these integrations.***

***We are proposing consultants for the State's Oracle IAM implementation contract who have extensive assessment experience implementing and upgrading the OIAM Suite of products (OIM, OAM, OAAM, OIF, OVD, OUD, OID and OES).***

*5.4.1 Project Manager Qualifications*

*The Project Manager assigned by the awarded vendor to the engagement shall have:*

*5.4.1.1 Demonstrated current and relevant experience managing Oracle software upgrade or implementation project for public sector clients;*

*5.4.1.2 A minimum of four (4) years of project management experience, within the last ten (10) years, in government or the private sector;*

*5.4.1.3 A minimum of three (3) years of experience, within the last ten (10) years, managing systems architecture and development projects;*

*5.4.1.4 A minimum of two (2) years of experience with systems analysis and design;*

*5.4.1.5 A minimum of two (2) years of experience with systems development and implementation;*

*5.4.1.6 Completed at least one (1) project within the past three (3) years that involved designing business processes and procedures and developing new systems to support the new business processes; and*

*5.4.1.7 Completed at least one (1) project within the past three (3) years that involved communication and coordination of activities with external stakeholders.*

***Our proposed Project Manager for this engagement is Mr. Shyam Kumar. Mr. Kumar is AST's Vice President of Middleware, and a Certified IDM consultant with over eighteen years of industry experience in middleware technologies. He is a business technology leader with extensive experience in program management, and demonstrated ability to lead and deliver successful implementations for large IT programs. He has managed global programs for fortune-100 companies; driving and motivating the global team to meet critical business objectives.***

| | |
|---|---|
| ***Demonstrated current and relevant experience managing Oracle software upgrade or implementation project for public sector clients*** | ***Mr. Kumar has managed Oracle Middleware and OIM/OAM projects for several large Public Sector clients including Cook County, IL, the City of Los Angeles Department of Water and Power, and Los Angeles County Metropolitan Transportation Authority.*** |
| ***A minimum of four (4) years of project management experience, within the last ten (10) years, in government or the private sector*** | ***Mr. Kumar has served as a Project Manager for Public Sector Oracle Middleware projects since 2010 (7 years).*** |
| ***A minimum of three (3) years of experience, within the last ten (10) years,*** | ***Mr. Kumar has over 18 years' experience managing systems architecture and development projects.*** |

| | |
|---|---|
| ***managing systems architecture and development projects*** | |
| ***A minimum of two (2) years of experience with systems analysis and design*** | ***Mr. Kumar has over 18 years' experience with systems analysis and design with Middleware technologies.*** |
| ***A minimum of two (2) years of experience with systems development and implementation*** | ***Mr. Kumar has over 18 years' experience with systems analysis and design with Middleware technologies.*** |
| ***Completed at least one (1) project within the past three (3) years that involved designing business processes and procedures and developing new systems to support the new business processes*** | ***Mr. Kumar has completed successful implementation of the Oracle Identity and Access Management Suite for the City of Los Angeles Department of Water and Power and Los Angeles County Metropolitan Transportation Authority within the past (3) years. These projects both involved designing business processes and procedures and developing new systems to support the new business processes.*** |
| ***Completed at least one (1) project within the past three (3) years that involved communication and coordination of activities with external stakeholders*** | ***Mr. Kumar served as the Project Director on the implementation of the Oracle Identity and Access Management Suite for the City of Los Angeles Department of Water and Power and Los Angeles County Metropolitan Transportation Authority within the past (3) years. His primary role in these projects was to communicate and coordinate activities among the AST team, client personnel and external stakeholders.*** |

*5.4.2 Technical Lead Qualifications*

*The technical lead assigned by the awarded vendor shall have:*

*5.4.2.1 Demonstrated current and relevant experience managing Oracle IAM software upgrade or implementation project for public sector clients;*

*5.4.2.2 A minimum of four (4) years of experience in systems development, design and programming of automated systems working with Oracle IAM software;*

*5.4.2.3 A minimum of two (2) years of experience developing Internet applications;*

*5.4.2.4 A minimum of two (2) years of experience managing systems architecture and systems development projects; and*

*5.4.2.5 Completed at least (1) project within the past three (3) years that involved conducting a pilot implementation and determining the readiness of the system production.*

***Our proposed Technical Lead for the State of Nevada's IDM Upgrade projects is Mr. Ramdas Chakkungal. Mr. Chakkungal is an Oracle IDM certified consultant with more than 14 years of IT experience in Enterprise Application Integration design, development and maintenance activities. He has experience working on integration with Oracle Suite of products like Oracle Identity and Access Management Suite, ORMS, ORPM and OSIM. Mr. Chakkungal is a SUN certified JAVA programmer, with in-depth knowledge of Oracle/BEA Weblogic Integration 9.2 MP2, BEA Weblogic Portal, J2EE Webservices and SOA. He has been recognized by clients with two "Certificates of Appreciation" and is an excellent team player.***

| | |
|---|---|
| ***Demonstrated current and relevant experience managing Oracle IAM*** | ***Mr. Chakkungal has more than 6 years' experience leading Oracle IAM software upgrade and implementation projects for public*** |

| | |
|---|---|
| ***software upgrade or implementation project for public sector clients*** | ***sector clients such as City of Los Angeles Department of Water and Power, Greater Orlando Aviation Authority and West Virginia University.*** |
| ***A minimum of four (4) years of experience in systems development, design and programming of automated systems working with Oracle IAM software*** | ***Mr. Chakkungal has over 14 years' experience in systems development, design and programming of automated systems working with Oracle IAM software.*** |
| ***A minimum of two (2) years of experience developing Internet applications*** | ***Mr. Chakkungal has over 14 years' experience developing internet applications.*** |
| ***A minimum of two (2) years of experience managing systems architecture and systems development projects*** | ***Mr. Chakkungal has over 14 years' experience managing systems architecture and systems development projects.*** |
| ***Completed at least (1) project within the past three (3) years that involved conducting a pilot implementation and determining the readiness of the system production*** | ***Mr. Chakkungal has completed 3 projects within the last 3 years including Underwriters Laboratories, College of American Pathologists, and City of Los Angeles Department of Water and Power that involved conducting a pilot implementation and determining the readiness of the system production.*** |

## 7.5 Vendor Staff Resumes

*A resume shall be completed for each proposed individual on the State format provided in Attachment H, Proposed Staff Resume, including identification of key personnel per Section 12.3.19, Key Personnel.*

***We have included resumes for all proposed project personnel in the State format provided in Attachment H, Proposed staff Resume in Section 8***

## 7.6 Preliminary Project Plan

*5.6.1 Vendors shall submit a preliminary project plan as part of the proposal, including, but not limited to:*

*5.6.1.1 Gantt charts that show all proposed project activities;*

*5.6.1.2 Planning methodologies;*

*5.6.1.3 Milestones;*

*5.6.1.4 Task conflicts and/or interdependencies;*

*5.6.1.5 Estimated time frame for each task identified in Section 4, Scope of Work; and*

*5.6.1.6 Overall estimated time frame from project start to completion for both vendor and State activities, including strategies to avoid schedule slippage.*

***Our Preliminary Project Plan including the elements identified above is included in Section 9.***

*5.6.2 Vendors shall provide a written plan addressing the roles and responsibilities and method of communication between the contractor and any subcontractor(s).*

***As previously stated, AST does not intend to subcontract any work on this project for the State of Nevada.***

*5.6.3 The preliminary project plan shall be incorporated into the contract.*

***Upon selection, AST and the State will mutually develop a Statement of Work which will include a detailed preliminary project plan which will be incorporated into the contract.***

*5.6.4 The first project deliverable is the finalized detailed project plan that shall include fixed deliverable due dates for all subsequent project tasks as defined in Section 4, Scope of Work. The contract shall be amended to include the State approved detailed project plan.*

***AST agrees that the first project deliverable will be the finalized detailed project plan including fixed deliverable due dates for all subsequent project tasks. If necessary, the contract can be amended to include the State approved detailed project plan.***

*5.6.5 Vendors shall identify all potential risks associated with the project, their proposed plan to mitigate the potential risks and include recommended strategies for managing those risks.*

***No project is perfect, and Identity Management engagements of this complexity are not without problems or risks. Common risks we've encountered over 2 decades working with State and Local Governments include resource constraints, inter-personal and inter-organizational relationships, political considerations, personal commitments, etc. Although project risk cannot be entirely eliminated, their impact can be reduced through early identification and management.***

***AST's methods for managing risk are continuous, from a project's commencement through completion, with a proactive rather than reactive focus. Starting with the initial project strategy phases, our team looks for opportunities where we can prevent risks that are foreseeable and mitigate negative impact and negative cost on a project. As project conditions change, the chance of risk can rise and fall, and the potential for new risks are introduced which will require identification, analysis and prioritization (see the Risk Assessment process). In addition to escalation processes and as part of our continual risk management and monitoring effort, a "risk review" is conducted, composed of formal monitoring and reassessment activities. The goal of this review is to put the project team in a better, more proactive rather than reactive position. The review also seeks to provide the correct amount of focus on each risk and allocate the appropriate staff at the right time. After a risk review, the project team should have a list of current risks, their status, level of impact, and actions required for mitigation and resolution.***

*5.6.6 Vendors shall provide information on the staff that shall be located onsite in Carson City. If staff shall be located at remote locations, vendors shall include specific information on plans to accommodate the exchange of information and transfer of technical and procedural knowledge. The State encourages alternate methods of communication other than in person meetings, such as transmission of documents via email and teleconferencing, as appropriate.*

***AST's approach to implementations such as the one being proposed for the State is to have our key resource such as PM and Architect perform work on-site during the critical phase of the project. We feel this approach lends itself well to better collaboration between the State and AST project team members and facilitates comprehensive knowledge sharing which in turn helps the State staff feel more confident using and supporting the applications once the project is complete.***

***The State will need to provide adequate workspace and infrastructure for the consultants assigned to the project (including, but not limited to, desktop computers, telephone, internet, connection, remote VPN access to all project related applications to network and existing documentation). Such access must be available within 2 days of the start of a consultant on the project. The table below outlines typical resource requirements:***

| | |
|---|---|
| ***Number of workstations*** | ***Not Required if City allows AST laptop connections to its network*** |
| ***Number of desks*** | ***Up to 2-3*** |
| ***Number and size of dedicated rooms for the project*** | ***1*** |
| ***Telephones*** | ***1 (Can be shared depending on co-location of the desks)*** |
| ***Network accessibility needs*** | ***Internal as well as VPN for all consultants (Up to 7 staff members)*** |
| ***White boards*** | ***2*** |
| ***Flip charts*** | ***VPN to connect to the City network remotely include offshore*** |
| ***Power requirements*** | ***Connections for desktops/laptops*** |

## 7.7 PROJECT MANAGEMENT

*Vendors shall describe the project management methodology and processes utilized for:*

*5.7.1 Project integration to ensure that the various elements of the project are properly coordinated;*

***Strong Project Management is pivotal to delivering well communicated, timely and successful projects that deliver project scope within the established schedule and budget. In the Public Sector and State Government, Project Managers play a unique and crucial role given the number of stakeholders and varying opinions that can influence the direction or outcome of the project. One of AST's key distinguishing features is our consistent and unsurpassed record of executing complex Public Sector projects to a timely and economical conclusion. Our team understands that not everything can be anticipated at the onset of any project and that government's internal priorities and constraints often shift during a long engagement. Therefore, our project management approach for the State, as it has been for all of our Public Sector clients, is collaborative and driven by organizational objectives. We begin every project with the end in mind-establishing clearly defined goals and scope, the necessary infrastructure to monitor progress and mitigate risks, and effective communication protocols to facilitate informed and prompt decisions and promote buy-in.***

***The foundation of AST's EDM Implementation Methodology is a comprehensive process, with standard methods, controls, oversight, and guidelines to ensure that the State's project will be conducted in a disciplined, proven, well-managed, and consistent manner. It is rooted in the Project Management Institute's (PMI) 5 Phases of Project Management: Initiation, Planning, Execution, Control and Closing.***

***Project Initiation activities will begin at the point of project award when the assigned AST team will be brought together to begin preparing for onsite activities. During this time period, the project management team ensures the entire implementation team is apprised of the final contracted scope of work, budget and timeframes. Project team members are expected to familiarize themselves with any available information about the client, its culture, and the project itself. The assigned AST Project Manager will develop and distribute a Project Orientation Guide to all team members which includes a complete review of the Statement of Work as well as project logistics such as transportation arrangements, lodging, client dress code, and other critical information.***

***During AST's Define phase, AST's Project Team will work with the State's management team to review the project governing processes. AST will conduct a Project Kickoff Meeting to make sure all project team members have a common understanding of the goals, objectives, and expectations of the project.***

## *Status Reporting*

***Status Reporting is vital to the success of a project. A status report helps to provide all members of the project with details of how the project is progressing with the scope of the project timeline. But more than just indicate which activities are currently ahead or behind schedule, status reports provide an opportunity to analyze the current status and its impact on the project as a whole.***

***Team leads will be required to create weekly status reports to communicate the status of their team's progress to the AST Project Managers and other team members. At the start of the project, AST's Project Manager will outline status reporting requirements for the team.***

***From time to time a more formal executive status report may need to be presented to the Executive Committee of the project. Key performance indicators that may be included in this executive level report could include:***

- ***Evaluation of project progression against plan***
- ***Evaluation of effectiveness of the controlling processes for handling issues***
- ***State clarity of scope***
- ***Budgetary impact of scope changes***
- ***Timeline impact of scope changes***
- ***Effectiveness of processes identified to manage risk***
- ***Effectiveness of risk mitigation plans***
- ***Evaluation of the project's Actual Cost v. Projected Budget Cost***
- ***Earned Value Analysis of deliverables***
- ***Effectiveness of team***
- ***Analyzing quality issues uncovered during each phase***
- ***State Report Card***
- ***Assessment of the State's ability to support itself after go-live***

*5.7.2 Project scope to ensure that the project includes all the work required and only the work required to complete the project successfully;*

***To establish a strong foundation from the outset of the project, AST will work with the State to define and document project governance expectations in a Project Charter document. AST reaffirms the scope of the project, once the project team, and especially the Project Management Officer (PMO) has been established. The PMO discusses and co-creates a project charter to clearly articulate scope, project controls, success factors, governance processes, deliverable review and approval processes, and other key aspects of the project. AST develops a draft based upon its understanding, discusses it with the client, and modifies the document to match the combined understanding that results from these discussions. The project charter becomes the primary source of truth that the PMO utilizes to direct the project throughout the engagement. The Project Charter will be loaded to the ProjectFIT™ system and should also be required reading for all project team members who enter the engagement after the initial kickoff meeting.***

*5.7.3 Time management to ensure timely completion of the project. Include defining activities, estimating activity duration, developing and controlling the project schedule;*

***During the Define Stage of the project, AST's Project Manager, in conjunction with the State's Project Manager and Steering Committee, will finalize a detailed, resource-loaded Microsoft Project based Project Plan reflecting all tasks, milestones, and deliverables as well as tasks specific to Project Management, Quality Assurance, Change Management, and Training. To accomplish this, AST's Project Manager will start with the preliminary Project Schedule that has been provided in Section 9.***

***Using this plan as the basis allows us to then add tasks derived from the final agreed scope/approach, tasks unique to the State and/or required to address third party components, and the related work effort. The project management team further edits the plan to include actionable name/task descriptions, task start and end dates, dependencies, duration and work effort. Included in this iterative planning process are activities conducted at the working team level to review assignments, resources and resource allocations. This additional review and resulting insights are added to the plan's resource schedule to ensure that, in the end, the plan reflects resource allocations, availability and tasks owners as well as task/work related details.***

***The finalization of the Project Plan is an iterative cycle of planning, reviewing, refining and editing. This helps to ensure involvement of the working team members in determining time commitments and understanding the effort, tasks, sequence and dates that will be used to govern the project schedule and ultimately ensure on-time delivery.***

***Once tasks, resource, dates and related details are finalized the plan is ratified and approved to establish a project schedule that can be used to manage and control the project as well as evaluate condition changes that can impact critical path, milestones and overall project schedule health. This management of the actual plan includes weekly updates by the project management to reflect percentage completion, new tasks dependencies, new resource assignments, revised start and/or end dates as well as actual hours worked by resource/by task.***

*5.7.4 Management of contractor and/or subcontractor issues and resolution process;*

***Identification and resolution of issues is a key element of our management approach that occurs through the project. The project team led by the AST project manager will maintain an active log of issues including business process flow issues, system issues, infrastructure issues, Oracle SRs, patches and patch-sets. Issues will be defined and logged by the project team and classified as system, business flow, infrastructure or others in order to streamline the resolution process. This log will be maintained in ProjectFIT™.***

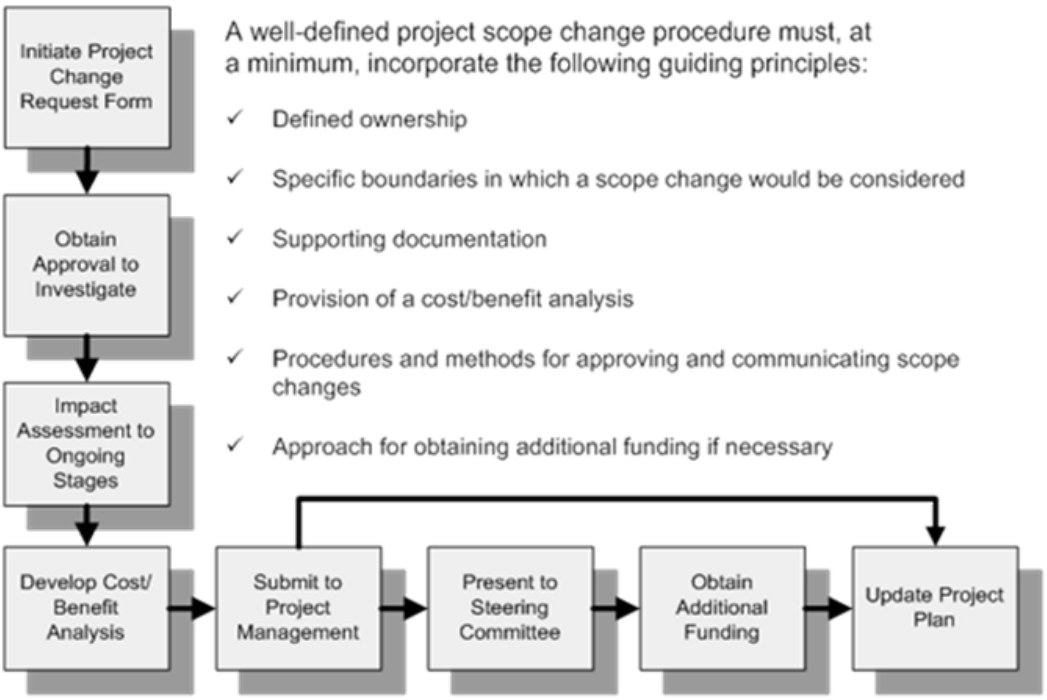
***As part of the issue resolution process, each issue is categorized by severity and type, and assigned an owner. The issue log indicates when the issue was assigned and when it is expected to be resolved. Any issue that extends beyond the expected resolution date will be escalated to determine impact and, if appropriate, a more aggressive mitigation plan. If the Project Team cannot resolve the issue on its own (i.e. a policy or regulatory issue), it may be escalated to the Steering Committee to resolve. Once resolved, the issue is closed on the issue log and any appropriate documentation is saved in the repository.***

*5.7.5 Responding to and covering requested changes in the project time frames;*

***To minimize the risk of compromising project budget and milestones, and to help facilitate change control, we will work with the State to establish rigorous change control procedures for the implementation project. Our change control process involves identifying changes to the project scope, analyzing the impact, presenting the level of effort and adjusting the work plan to include approved changes.***

***Once the scope of the project is reviewed and finalized by the State and our Project Manager, any change that would affect the scope, timeline, resources or cost is captured on a Project Change Request (PCR) document. The PCR contains a description of the desired change, the business reason for the change, alternatives to the desired change, and estimates of time or cost to incorporate the change and any other pertinent information.***

***The framework for the change control process is illustrated in the diagram below.***




***It is critical to keep changes to a minimum so as to not negatively impact the strategy stage that will have been defined by the State and AST in the initial days and weeks of the project. Our Account Manager and Project Manager will assist the State's project management in preparing operational and contingency plans for any unplanned events. The contingency plan will provide a decision framework to deal with unexpected delays in the project. The plan will be used only if an issue arises that cannot be resolved in a timely manner and would delay the project schedule.***

***We recognize that all Project Team members have a responsibility for managing scope from project inception to final project sign-off. We will communicate this in the Project Team Kick-Off and, in our Change Management practices, will incorporate information about the change request process into project awareness communications to the State user community.***

*5.7.6 Responding to State generated issues;*

***AST employs a two-pronged approach to Issue Management. One aspect is to identify and resolve issues as early as possible in order to minimize downward impact as described in our response to 5.7.4 above. The second aspect, which is equally important, is the importance of having the AST team working side-by-side with our State counterparts to collaborate on the issues and ultimately resolution. AST views Issue Management as another Interactive Knowledge opportunity to support the State's self-sustainability.***

***AST's issue management process and plan is integrated with our proven EDM Implementation methodology and leverages the tools in our ProjectFIT™ system. As with many of our processes in the Define Stage, the Issue Management process is rolled out early in the project and starts with team training on issue identification, tracking, management and escalation processes and the supporting tools during the Project Onboarding Workshop. This training includes the topics and techniques related to issue identification with an emphasis on exposing the project team to the various sources where issues originate. These sources integrate to the issue management process and include other Project Governance processes such as Risk Management, Configuration Management, Deliverable submission/approval as well as various project events and activities such as testing, training, meetings and quality reviews.***

***Once the team is trained they are able to access the Issue Tracking Tool and open, update and review status of issues. Team members will be able to update specific fields related to actions, priority, target closure dates and assignments. As part of a regular weekly meeting top high priority issues are reviewed and worked by the team to progress these items to closure. Throughout the week team leads and the PMO review overall issue metrics, trends and status of specific issues for updates and closure. Additionally, the Top 5 open issues are presented during the Steering Committee meeting, increasing communication, visibility and actions need to support the team in closing issues. Issues that are delaying or can potentially delay project milestone progress and/or critical to project success are also escalated as needed to the Steering Committee.***

***AST's approach to issue tracking is focused on ensuring a standardized method of issue management exists that can be used to manage and control issues, issue assignment/closure and support consistent communication. This standardization, along with the approach of empowering project team members to identify issues as they are encountered, is an important component of our risk management and project governance approach as it supports early identification and active management of issues that can negatively affect project success. Additionally, it increases project team and stakeholder visibility, accountability and shared responsibility to actively identify, manage and address issues to closure. For the PMO, this process and the use of our ProjectFit™ system provides a means to assess overall project health, schedule and/or resource impact based on issue volume, assignments, trends and overall resource and time available to address the issues.***

***If the State chooses not to use the Project FIT tool, two of the work products that are used for logging and monitoring the issues are the Issue and Risk Reporting Form and the Issue and Risk Log.***

*5.7.7 Cost management to ensure that the project is completed within the approved budget. Include resource planning, cost estimating, cost budgeting and cost control;*

***AST's project management team will create a project budget based on delivery schedules, resource loading and project milestones. All work done on the project is tracked against this project budget, variations are evaluated and corrective action taken to ensure that there is no over-run. The management team also uses multiple tools to compare incurred costs to work completed and the remaining work. AST is proud of our proven record of delivering projects within agreed upon budgets for all of our Public Sector customers.***

***Our invoicing process is based on the results of deliverable submission and approval. Once a deliverable has been approved by AST for submission, the State of Nevada will have a pre-negotiated number of days to review the deliverable and provide feedback to AST. AST will make any necessary changes to the deliverable and will submit an Acceptance Certificate to the State. A signed Acceptance Certificate***

***marks the completion of the deliverable and triggers invoicing based upon negotiated terms of payment.***

*5.7.8 Resource management to ensure the most effective use of people involved in the project including subcontractors;*

***Project staffing will be managed according to the staffing chart, which ensures resources are brought onto the project at times that are optimum based on the activities and project lifecycle. Team leads are responsible for overseeing the assignments within their teams from inception through completion, escalating issues that cannot be resolved within their team, and validating the overall quality of each component and deliverable.***

*5.7.9 Communications management to ensure effective information generation, documentation, storage, transmission and disposal of project information; and*

***During Project Execution, AST's management team will be directing and managing all aspects of the implementation. AST will use our ProjectFIT™ system to track all project-related information including status, progress, collaboration, documentation and artifacts. ProjectFIT™ is a world-class digital collaborative workspace that provides continuous insight into project health. Content within the repository is freely accessible to designated team members and has been designed to facilitate effective communication among the entire project team. Project Team members from both AST and State of Nevada, as well as project stakeholders, benefit from a centralized location for all relevant project details.***

*5.7.10 Risk management to ensure that risks are identified, planned for, analyzed, communicated and acted upon effectively.*

***AST employs a detailed and comprehensive risk management approach based upon predicting project risks and suggesting mitigating strategies, based on experience, and knowledge, integrated into our IDM Upgrade Methodology. Our methods for managing risk are continuous, from a project's commencement through completion, with a proactive rather than reactive focus where risks are identified, logged, prioritized and assessed for impact and probability of occurring before they become an issue. Additionally, each risk is associated with a mitigation plan that allows the team to actively monitor the risk and take the requisite actions, if required, to mitigate conditions that could impact scope, schedule, costs, quality and overall project success.***

***Although project risk cannot be entirely eliminated, it can be reduced through early identification and management. Recognizing this, AST leading practice risk identification and mitigation process is rolled out early in the project with team training on risk identification, tracking, management and escalation processes and the supporting tools. Included in this roll out is a preliminary proactive identification of risks via an initial risk identification workshop. This workshop starts with an AST provided list of typical risk based on implementing Oracle's Identity and Access Management solution in the Public Sector. This list is supplemented with the results of the workshop which will add the State's insights into issues that impeded project success on internal projects as well as risks unique to the State's experience today with organization transformation, change and new system initiatives. Recognizing that risks can result from various sources, AST's risk management process and plan is integrated with other Project Governance processes as well as Project events and activities that similar to the Issues Management Process, enable early identification of risk across the project lifecycle, tasks and activities.***

***AST's standardized methodology for risk management leverages our ProjectFit™ system to automate the entry, tracking, management and communication of risks. Reports from the system are used in***

***regularly schedule PMO project meetings to support review and monitoring of top high priority/high probability of occurring risks, overall risk metrics, trends and status of specific risks for updates. This active focus on risk management by the PMO enables the team to assess impact on the overall project in relation to a specific risk as well as activation of mitigation plans if deemed necessary by the PMO. Presentation to the Steering Committee of top high probability/impact risks is also facilitated on a recurring basis to increase communication, visibility and actions need to support the project team in addressing risks before they become issues.***

## 7.8 QUALITY ASSURANCE

*Vendors shall describe the quality assurance methodology and processes utilized to ensure that the project shall satisfy State requirements as outlined in Section 4, Scope of Work of this RFP.*

***Independent project reviews are an important quality assurance tool that AST periodically employs to support successful management of a project. A trained Quality Assurance Manager who is not connected to the day-to-day activities of the project can be assigned to provide a fresh perspective on the project plan and the status of the project. Using a series of pre-built questionnaires, the QA Manager will perform quality audits during critical stages within the project lifecycle:***

- ***To assure that all key deliverables and actions of the gate have been completed in compliance with recommended practices and to the customer's satisfaction***
- ***To enable project management to continuously communicate the process and build quality directly into the project***
- ***To provide a tool to effectively manage project expectations and monitor customer satisfaction***

***The QA Manager will collect knowledge assets and lessons learned at the end of each phase of the State's project. Doing so provides quick access and insights into key deliverables which can inform the later stages of the project.***

***In addition to the Project Reviews, every deliverable created throughout the project, whether a Document or Technical Code, undergoes a thorough peer review process to ensure that the deliverable meets the standards and guidelines established by the State and AST for the project. Every document will undergo strict revision control as per guidelines established at the start of the project. The Project Manager will continuously monitor and ensure that proper controls are enforced and adhered to by the entire team.***

## 7.9 CONFIGURATION TOOLS

*Vendors shall describe the methodology, processes and tools utilized for:*

*5.9.1 Control of changes to requirements, design and code;*

***To help facilitate change control, AST will work with the State to establish rigorous change control procedures for the upgrade project. Our change control process involves identifying changes to the project scope – be it requirements, design, or code - analyzing the impact, presenting the level of effort and adjusting the work plan to include approved changes.***

***Once the scope of the project is reviewed and finalized by the State and our Project Manager, any changes to configuration are captured on a Project Change Request (PCR) document. The PCR contains***

***a description of the desired change, the business reason for the change, alternatives to the desired change, and estimates of time or cost to incorporate the change and any other pertinent information.***

***Moreover, once the requirements, design, or code are finalized, any subsequent change is documented with change history in the corresponding delivered documents.***

***In case of code changes, release notes are updated. The code changes are managed thru the version control system of the State's choice. Code changes are subject to review and approval for designated reviewer.***

***Design changes are documented and are subject to the Architecture Review Board's approval.***

*5.9.2 Control of interface changes;*

***For a successful project delivery, the AST Project Manager will work closely with the State Project Manager to coordinate the activities planned for different functional groups identified in the project plan. Key transitions during the project lifetime are carefully planned and the handover between groups is aligned with knowledge transfer session and acceptance review sessions to ensure that the transition is seamless. Having the right representation of all involved groups is essential. We will work with the State to ensure that all roles and responsibilities are documented for the project team to carry out their tasks effectively. Any changes to the team and the interaction between them is actively tracked, documented, reviewed, and incorporated in overall project plan.***

*5.9.3 Traceability of requirements, design and code;*

***AST uses a Requirements Traceability Matrix (RTM) to link requirements throughout the validation process with design and code and test cases. This ensures that all requirements defined for a system are tested in the test protocols.***

***Sample RTM***

| Requirement ID | Technical Design | Code | Test Cases | Comments |
|---|---|---|---|---|
| 1 | OIM #2 | OIM AD connector | OIM-TST-ID004 | This is a configuration setting in OIM |

*5.9.4 Tools to help control versions and builds;*

***AST has experience in working with several version control systems and is flexible enough to work which the State may have. AST is well very well versed in using BitBucket or GitHub for source code management.***

*5.9.5 Parameters established for regression testing;*

***AST will work with the State project team to ensure that the Oracle IDM upgrade is transparent to the end users and that all the end user functionalities continue to work as-is while the technical stack is upgraded. To that effect, it is recommended that the State create a baseline of functional flows for all the applications integrated with Oracle IDM stack so that post go-live acceptance testing can be compared to the behavior prior to go-live on the older IDM stack.***

***Once the test scenarios are identified and documented, detailed test cases are developed which are traced back to the requirements and the design elements. The AST team will work with the State to establish these test scenarios, traceable test cases and acceptance criteria.***

*5.9.6 Baselines established for tools, change log and modules;*

***Setting up a baseline before a particular system is changed as part of the IDM upgrade project is essential for successful project delivery. It not only helps create the acceptance criteria but also prevents the project team from engaging in tasks outside of the IDM upgrade project's purview and scope. All changes, once the baseline is established, are documented in detail.***

***AST will work with the State team to compile a "known issues log" before the IDM upgrade tasks are implemented in any IDM environment. The issues log also tracks the closure date along with the action taken.***

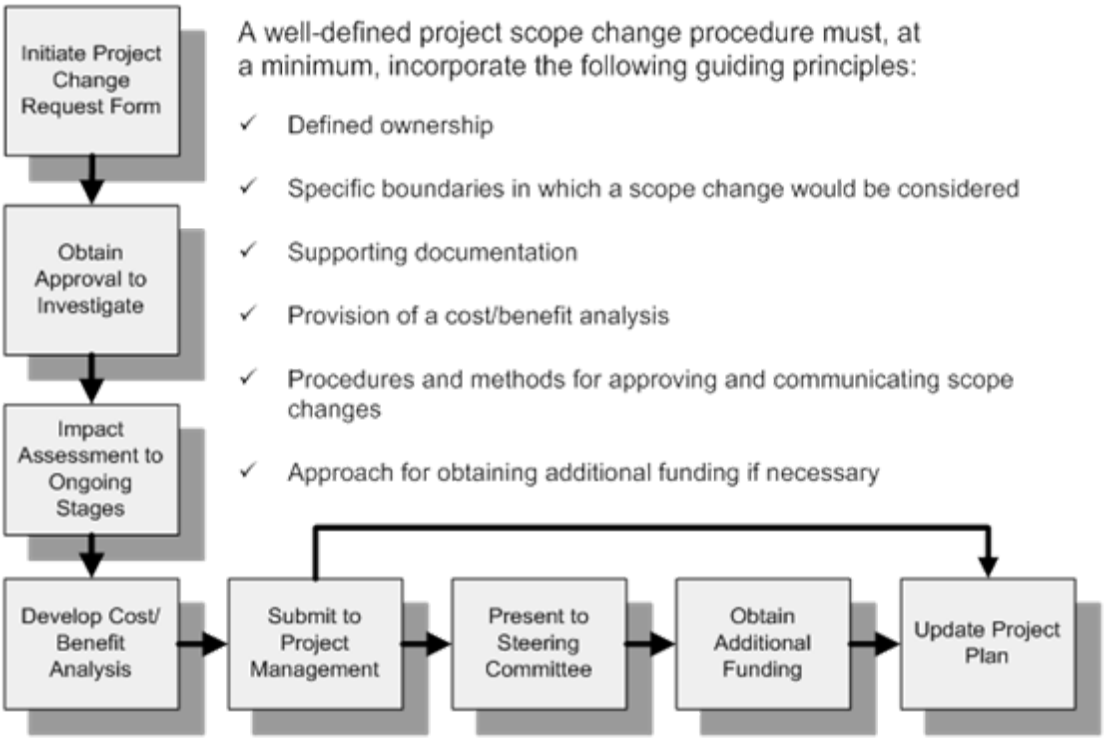
*5.9.7 Documentation of the change request process including check in/out, review and regular testing;*

***During the course of the IDM upgrade project, AST team will work with the State to conduct the review sessions after each key phase – development, design, system integration, and acceptance. Each review results in documenting the changes identified or proposed, action taken (ex – code change controlled thru check-out, change, review, check-in and deployment), and closure signoff.***

***All the testing events are planned and documented in the project plan itself. The results of each testing event are documented including the retesting – reason and results along with history. All iterations around a change requested or identified as a result of a review – be it code change or a design change - are documented along with action taken and results achieved.***

*5.9.8 Documentation of the change control board and change proposal process; and*

***AST's framework for the change control process is illustrated in the diagram below.***




*5.9.9 Change log that tracks open/closed change requests.*

***Here is a sample of the log that can be used by the project team to track changes due to various issues identified, resolution timeline, and status.***

| No. | Issue Description | State Owner | AST Owner | Open Date | Closed Date | Status (Open, Closed) | Status Details |
|---|---|---|---|---|---|---|---|
| DETR-IDM-001 | Identify the issue in simple terms and assign primary owners. Track the progress history. | | | | | | |
| DETR-IDM-002 | | | | | | | |
| DETR-IDM-003 | | | | | | | |

## 7.10 Project Software Tools

*5.10.1 Vendors shall describe any software tools and equipment resources to be utilized during the course of the project including minimum hardware requirements and compatibility with existing computing resources as described in Section 2.3, Current Computing Environment.*

***AST intends to use the following Open Source tools during the course of the project.***

- ***Notepad ++***
- ***Putty***
- ***Xming***
- ***Winscp***
- ***SQL Developer***
- ***Eclipse***
- ***SOAP UI***
- ***Postman***

*5.10.2 Costs and training associated with the project software tools identified shall be included in Attachment I, Project Costs.*

***There are no associated costs of training required with the use of the tools identified above.***

# 8 PROPOSED STAFF RESUMES

***We are proposing consultants for the State's Oracle Identity Management Upgrade project who have extensive assessment experience with the OIAM Suite of products (OIM, OAM, OAAM, OIF, OVD, OUD, OID and OES). The following table provides an overview of their Oracle Identity Management product experience, and the role they will play on this project. Our consultants maintain strong relationships with the Oracle Engineering and Support A-team, which helps in resolving any product issues quickly.***

| Proposed Consultant | Project Role | Years of Experience |
|---|---|---|
| **Shyam Kumar** | Project Manager | 19+ |
| **Ramdas Chakkungal** | Technical Lead | 14+ |
| **Pierre Paniagua** | Sr. Consultant - OAM | 7+ |
| **Akeel Sayyad** | Sr. Consultant - OIM | 12+ |
| **Shashikant Singh** | IDM QA Consultant | 6+ |

# PROPOSED STAFF RESUME FOR RFP 3490

***A resume must be completed for all proposed prime contractor staff and proposed subcontractor staff.***

| | |
|---|---|
| **Company Name Submitting Proposal:** | ***Applications Software Technology, LLC*** |

| ***Check the appropriate box if the proposed individual is prime contractor staff or subcontractor staff.*** | | | |
|---|---|---|---|
| **Contractor:** | ***X*** | **Subcontractor:** | |

| ***The following information requested pertains to the individual being proposed for this project.*** | | | |
|---|---|---|---|
| **Name:** | ***Shyam Kumar*** | **Key Personnel: (Yes/No)** | ***Yes*** |
| **Classification; i.e., Project Manager, Implementation Lead, etc.** | ***Project Manager*** | | |
| **# of Years in Classification:** | ***11*** | **# of Years with Firm:** | ***7*** |

## BRIEF SUMMARY OF PROFESSIONAL EXPERIENCE

***Information should include a brief summary of the proposed individual's professional experience.***

With more than 18 years of experience in Oracle Middleware technologies, Mr. Kumar's experience includes management of global IT projects for Fortune 100 companies, driving and motivating a global team to meet critical business objectives. He is an Oracle Certified IDM consultant and Oracle (Sun) Certified Enterprise Architect, with a focus in architecture and design, consulting, implementation and delivery, project management, and planning of enterprise applications deployment.

## RELEVANT EXPERIENCE

***Information required should include: timeframe, company name, company location, position title held during the term of the project/position and software/hardware used during the project engagement.***

**Cook County, IL** **02/2016 – Present**

Project Director – CJIS Security Implementation; Oracle Enterprise Service Bus

**Underwriters Laboratory, IL** **12/2014 – Present**

Project Director –Oracle Identity Management and Portal

**City of LA - DWP, CA** **06/2013 – 12/2014**

Project Director –Oracle Identity Management.

**LA- METRO, CA** **06/2013 – 12/2014**

Project Director –Oracle Identity Management and WebCenter

**College of American Pathologists, IL** **09/2011 – 09/2013**

Project Manager –Security Project Implementation; Oracle Identity and Access Management.

**Greater Orlando Aviation Authority, FL** **09/2010 – 06/2012**

Program/Solution Architect – Oracle SOA Enterprise Architecture.

**OfficeMax, Inc., IL** **02/2010 – 09/2010**

Program/Delivery Manager – eCommerce Program Development.

**Kohl's Corporation, WI** **03/2009 – 02/2010**

Program Manager – Kohls.com Multi-Channel Commerce.

**SuperValu Inc., MN/ID** **03/2008 – 01/2010**

Program Manager – Portal and Integration Service/SOA.

**Albertsons.com EAI & Component Services, ID 01/2006 – 02/2008**

Manager/Senior Consultant – Multiple Integration Projects.

**General Motors, UK** **04/2003 – 12/2003**

Technical Lead – GME-Portal WebTop Application.

**Transco (British Gas), UK** **08/2002 – 02/2003**

Technical Lead/Onsite Coordinator – Design and Development.

**Majoris Systems, India** **02/2000 – 06/2002**

Senior Software Development Engineer

## EDUCATION

***Information required should include: institution name, city, state, degree and/or Achievement and date completed/received.***

Mr. Kumar holds a Bachelor of Production Engineering and Management degree from the National Institute of Technology in Jamshedpur, India.

## CERTIFICATIONS

***Information required should include: type of certification and date completed/received.***

PMP (Project Management Professional)
SUN-Certified Enterprise Architect
Oracle Identity Manager Pre-Sales Consultant.

## HARDWARE/SOFTWARE SUMMARY (BE SPECIFIC)

***Information required should include: environments, hardware, software, tools and databases.***

Oracle IDM Suite (10g, 11g, 11gR2), Oracle SOA Suite 10g/11g, WebCenter Suite 11g, BPM Suite 11g, WebLogic Application Server, WebLogic Portal Server, WebLogic Integration Server, (ATG) eCommerce Server, Sun-One Portal Server, 9/10iAS (OC4J), JBOSS Application/SOA Severe, Blue Martini eCommerce Framework, JAVA/J2EE Technologies, Oracle Database.

## REFERENCES

***A minimum of three (3) references are required, including name, phone number, fax number and email address.***

City of Los Angeles, Department of Water and Power, CA
Mr. Rafik Alsawalhy
Enterprise Software Support Manager
213-367-3206
Rafik.Alsawalhy@ladwp.com

Los Angeles County Metropolitan Transportation Authority
Mr. Mehul Kumar
IT Manager
213- 922-2344
KUMARM@metro.net

College of American Pathologists, IL
Mr. Scott Brinker
Cyber Security Manager
847-832-7338
sbrinke@cap.org

# PROPOSED STAFF RESUME FOR RFP 3490

***A resume must be completed for all proposed prime contractor staff and proposed subcontractor staff.***

| | |
|---|---|
| **Company Name Submitting Proposal:** | ***Applications Software Technology, LLC*** |

| ***Check the appropriate box if the proposed individual is prime contractor staff or subcontractor staff.*** | | | |
|---|---|---|---|
| **Contractor:** | ***X*** | **Subcontractor:** | |

| ***The following information requested pertains to the individual being proposed for this project.*** | | | |
|---|---|---|---|
| **Name:** | ***Ramdas Chakkungal*** | **Key Personnel: (Yes/No)** | ***Yes*** |
| **Classification; i.e., Project Manager, Implementation Lead, etc.** | ***Technical Lead*** | | |
| **# of Years in Classification:** | ***12*** | **# of Years with Firm:** | ***6*** |

## BRIEF SUMMARY OF PROFESSIONAL EXPERIENCE

***Information should include a brief summary of the proposed individual's professional experience.***

Mr. Chakkungal is an Oracle Certified consultant with over twelve years of IT experience in Enterprise Application design, development, and administration and infrastructure maintenance activities. He has extensive experience in managing Weblogic products right from Weblogic 8.1 till Weblogic 10.3.6. He has experience in administering Oracle Fusion Middleware products like OIM, OAM, OES, OIF, OHS, SOA, OSB, BAM, and Oracle Data Integrator. He has been recognized by clients with two "Certificates of Appreciation" and is an excellent team player.

## RELEVANT EXPERIENCE

***Information required should include: timeframe, company name, company location, position title held during the term of the project/position and software/hardware used during the project engagement.***

**Northern Trust, IL** **09/2016 – Present**

IDM Consultant **–** OES, OVD,AD

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**Underwriters Laboratories, IL** **09/2015-09/2016**

IDM Consultant - OIM,OAM,OIF,OVD,OID

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**College of American Pathologist, IL** **04/2015– 09/2015**

Senior Middleware Administrator- Oracle SOA/Webcenter

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**College of American Pathologist, IL** **07/2014 – 04/2015**

Senior SOA Consultant – Oracle SOA Suite

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**Los Angeles Department of Water and Power, LA 10/2013 – 07/2014**

Senior Middleware(SOA, IDM) Developer/Administrator

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**National Association of Boards of Pharmacy, IL 05/2013-10/2013**

Senior Consultant - Oracle OAF Implementation

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**College of American Pathologists, IL** **09/2012 – 05/2013**
Senior SOA Consultant – Oracle SOA/ADF Implementation

**West Virginia University, WV** **04/2012 – 08/2012**
Senior SOA Middleware Administrator and Infrastructure Support

**Greater Orlando Aviation Authority, FL** **09/2011 – 10/2011**
Senior SOA Consultant – Airport Integrated Data Broker, Production Support, Infrastructure Support

**National Association of Boards of Pharmacy, IL07/2011 – 09/2011**
J2EE Consultant – Production Support

**GSKSource** **01/2011 – 07/2011**
Project Engineer – Portal Application

**SuperValue** **01/2010 – 01/2011**
Project Engineer – Deployment Model Program

**SuperValue** **01/2009 – 07/2010**
Project Engineer – Oracle Retail Implementation

**Albertsons** **10/2007 – 12/2008**
Project Engineer – Enterprise Application Integration

**Albertsons** **04/2006 – 09/2007**
Project Engineer – Enterprise Application Integration Maintenance and Enhancement

**Albertsons** **11/2005 – 03/2006**
Project Engineer – Enterprise Components and Integration Services

**Albertsons, Inc.** **07/2005 – 10/2005**
Project Engineer – PAC User Maintenance

**Albertsons, Inc.** **03/2005 – 06/2005**
Project Engineer – Purchase Advantage Card on B2A

**Analytics India, Pvt. Ltd.** **03/2004 – 11/2004**
Project Engineer – HIN Web Module

**Analytics India, Pvt. Ltd.** **11/2003 – 03/2004**
Project Engineer – HIN Handheld

## EDUCATION

***Information required should include: institution name, city, state, degree and/or Achievement and date completed/received.***

Master of Science, Computer Science
Bachelor of Science, Physics

## CERTIFICATIONS

***Information required should include: type of certification and date completed/received.***

Oracle Identity Governance Suite 11g Essentials
Oracle IT Architecture Release 3
Oracle SOA Implementation Certified
Oracle ADF Implementation Certified
Java Programmer, Sun.

## HARDWARE/SOFTWARE SUMMARY (BE SPECIFIC)

***Information required should include: environments, hardware, software, tools and databases.***

Oracle Technologies
Oracle SOA Suite, ADF, OIM, OAM,OES,OIF,OID,OUD, WebLogic Integration Server(WLI), WebLogic Application Serve, Java, J2EE, JDBC, JNDI, RMI, Servlets, JMS, JSP, EJB (2.0, 3.0), Struts, XML, Web Services, AJAX and SOA, Sterling Commergent

Database
Oracle 11g, 10g, PostgreSQL 8.1.3, MySQL, SQL Server

Operating System
Windows XP, 2000, NT 4.0/95, Unix, Linux

Design Skills
J2EE Design Patterns, UML, Enterprise Architect - EA (UML Modeling Tool)

Architecture
J2EE, Jakarta Struts Framework, MVC.

## REFERENCES

***A minimum of three (3) references are required, including name, phone number, fax number and email address.***

City of Los Angeles, Department of Water and Power, CA
Mr. Rafik Alsawalhy
Enterprise Software Support Manager
213-367-3206
Rafik.Alsawalhy@ladwp.com

College of American Pathologists, IL
Mr. Scott Brinker
Cyber Security Manager
847-832-7338
sbrinke@cap.org

Underwriters Laboratories
Mr. Manny Singh
Manager, Identity and Access Management
847-274-9720
Manny.Singh@ul.com

# PROPOSED STAFF RESUME FOR RFP 3490

***A resume must be completed for all proposed prime contractor staff and proposed subcontractor staff.***

| | |
|---|---|
| **Company Name Submitting Proposal:** | ***Applications Software Technology, LLC*** |

| ***Check the appropriate box if the proposed individual is prime contractor staff or subcontractor staff.*** | | | |
|---|---|---|---|
| **Contractor:** | ***X*** | **Subcontractor:** | |

| ***The following information requested pertains to the individual being proposed for this project.*** | | | |
|---|---|---|---|
| **Name:** | ***Pierre Paniagua*** | **Key Personnel: (Yes/No)** | ***No*** |
| **Classification; i.e., Project Manager, Implementation Lead, etc.** | ***Sr. Consultant OAM*** | | |
| **# of Years in Classification:** | ***5*** | **# of Years with Firm:** | ***5*** |

## BRIEF SUMMARY OF PROFESSIONAL EXPERIENCE

***Information should include a brief summary of the proposed individual's professional experience.***

Mr. Paniagua brings significant experience in developing, deploying and supporting Oracle Identity and Access Management suite of products. He has been involved in projects that have many different technologies, providing him with the versatility and skill to make him a successful consultant. He has knowledge in a large array of areas, tools, technologies, and other kinds of software. He has also successfully submitted a white paper and has presented at Collaborate. He is a great team player, an incredibly hard worker, and is always willing to go the extra mile to get the work done and to help out others..

## RELEVANT EXPERIENCE

***Information required should include: timeframe, company name, company location, position title held during the term of the project/position and software/hardware used during the project engagement.***

**Martin Brower, IL 07/2017 – 08/2017**

Consultant – Identity and Access Management

Built out two Highly Available OVD Environments for development and production and integrated their AD with the OVD in order to improve performance on their custom application logins.

- Built 11.1.1.9 OVD Environments
- Integrated OVD with AD
- Integrated Application Server with OVD for authentication

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**College of American Pathologists, IL 10/2016 – Present**

Consultant – Identity and Access Management

The project was an upgrade project where we were to upgrade the existing 11gR1 Environment to the latest 11gR2 PS3 version. The upgrade was done in parallel to the existing R1 environment and it included a full data migration process as well across five different environments. The project has extended past its initial upgrade go-live to extra phases where we will develop and implement new features.

- Built 11gR2 PS3 OAM Environments using Oracle LCM
- Full OAM Configuration Migration from existing R1 Environment to new R2 Environment
  - EBS SSO
  - OBIEE SSO
  - Custom Portal SSO
- Built 11gR2 PS3 OIM Environments using Oracle LCM
- Built 11.1.1.9 OID Environments
- Built 12.2.1.2.0 OHS Environments

Full OHS Configuration Migration from existing 11g Environment to new 12c Environment
Developed and implemented a full data migration plan for both OIM and OID Data from the existing environment to the brand new built environment
Supplied training and training material

**College of American Pathologists, IL 04/2016 – 10/2016**

Consultant – Identity and Access Management

Production support. Resolve critical production issues, Implement change requests, Perform Environment Security Scans, Environment Tuning, and work with Oracle Support. Assist on IDM Upgrade planning

**Bechtel Marine Propulsion Corporation, NY 08/2015 – 04/2016**

Consultant – Identity and Access Management

Implemented Multi-Data Center High Availability using Oracle Access Manager 11gR2PS2 (11.1.2.2.5)
Migrated Oracle BI Publisher applications and reports from 10g infrastructure to new 11g infrastructure
Developed and recompiled 10g Oracle Forms and Reports to work on brand new 11g infrastructure
Assisted on daily tasks involving OAM, OHS and OID

**College of American Pathologists, IL 03/2014 – 08/2015**

Consultant – Oracle Middleware Support

Resolve critical production issues, Install new IAM environments, Implement change requests, Perform Environment Security Scans, Write Test Scripts, Performance Testing, Environment Tuning, Work with Oracle Support

**College of American Pathologists, IL 03/2013 – 03/2014**

Consultant Oracle Identity and Access Management Implementation

Assisted with software compatibility matrix for Oracle IAM components and CAP applications, to ensure the right fit prior to integration

Developed multi-phased implementation roadmap

Built an agile security platform that can be extended to any CAP applications and system; enables seamless integration and interoperability

Designed & implemented fine-grained access control using Oracle Entitlement Server which will be leveraged for iStore, Enterprise Portal and Delegated Administration implementation for eLABS systems

Provide Post-Production Support

**National Assn. of Boards of Pharmacy, IL 03/2012 – 10/2013**

Consultant-License Verification and Clearinghouse

- Data conversion of multiple entities from the current Clearinghouse system.
- Developed a user interfaces for external and internal users of the clearinghouse
- Implement web service to verify licenses real time accessing member boards database and pull disciplinary actions
- Integrate license verification, Testing, and ELTP programs to the new Clearinghouse system.
- Integrate existing clearinghouse application with NPDB-HIPDB provided QRXS interface to report to NPDB-HIPDB on licensure, disciplinary actions and sanctions taken on pharmacists, technicians, interns, wholesale distributors, pharmacies, practicing in NABP's member states and jurisdictions.

**AST Corporation, IL 02/2012 – 05/2012**

Associate Consultant – Internal Website Application Project (ADF, PSP)

**DeVry University, IL 2010**

Student – Senior Project: Held responsible for writing the code for the hardware to interface with the software, in C programming language

**Automotive Product Research 2004**

Technical Advisor – Collaborated with others to achieve specific goals in buying and selling automotive OEM electronic and hydraulic components; Setup complete systems including PCs and network; Troubleshot equipment

## EDUCATION

***Information required should include: institution name, city, state, degree and/or Achievement and date completed/received.***

Bachelor of Science, Computer Engineering Technology

## CERTIFICATIONS

***Information required should include: type of certification and date completed/received.***

Oracle Access Management Suite Plus 11g Certified Implementation Specialist (1Z0-479).

## HARDWARE/SOFTWARE SUMMARY (BE SPECIFIC)

***Information required should include: environments, hardware, software, tools and databases.***

Oracle Technologies
Oracle IDM Suite 11g, ADF, PSP, OAF, OAM, OIM, OES, SQL, PL/SQL, EBS, OTM, J2EE, OID, OVD, OUD, Oracle Forms and Reports

Hardware & Operating Systems
AC/DC Circuit Analysis, Read/Write Schematic Diagrams, Soldering/De-Soldering, Filters, Microsoft Windows 98/XP/Vista/7/10, Linux

Languages
Ruby, C/C++ Windows and Linux, Assembly, Java, VHDL, PLC Logic, SQL, UNIX

Other Software
JDeveloper 10g & 11g, Toad, SQL Developer, PVCS, Putty, Microsoft Office, Microsoft Visio, Microsoft Visual Studio, Microsoft DOS, GNU, PLC LogixPro500, MATLAB, Circuit Maker, Multisim v. 9, 10, Quartus II 6.0.

## REFERENCES

***A minimum of three (3) references are required, including name, phone number, fax number and email address.***

College of American Pathologists, IL
Mr. Scott Brinker
Cyber Security Manager
847-832-7338
sbrinke@cap.org

# PROPOSED STAFF RESUME FOR RFP 3490

***A resume must be completed for all proposed prime contractor staff and proposed subcontractor staff.***

| | |
|---|---|
| **Company Name Submitting Proposal:** | ***Applications Software Technology, LLC*** |

| ***Check the appropriate box if the proposed individual is prime contractor staff or subcontractor staff.*** | | | |
|---|---|---|---|
| **Contractor:** | ***X*** | **Subcontractor:** | |

| ***The following information requested pertains to the individual being proposed for this project.*** | | | |
|---|---|---|---|
| **Name:** | ***SHASHI KANT SINGH*** | **Key Personnel: (Yes/No)** | ***No*** |
| **Classification; i.e., Project Manager, Implementation Lead, etc.** | ***IDM Consultant*** | | |
| **# of Years in Classification:** | ***6 Years 8 Months*** | **# of Years with Firm:** | ***1 Year*** |

## BRIEF SUMMARY OF PROFESSIONAL EXPERIENCE

- Oracle IDM professional with over 6 years of experience. majorly worked on application and enterprise based Integration using Oracle FMW products (OIM/OUD/OID/OAM) and java technology
- Associated with clients CAP, UL, Vodafone, Charles Schwab, NAB, Telenor for various development/integration/migration projects
- Coordinated on QA roadmaps and testing, performed code reviews

## RELEVANT EXPERIENCE

Serene-An AST Company, PUNE (10/2016 – till date)
Sr. Software Engineer

- Developed custom utility (encrypted password) for QnA migration OIM11gR2PS3
- OIM 11gR2PS3 environment built via LCM, Patching via LCM
- Scale out OIM/OAM nodes, GTC implementation
- Built Oracle Unified Directory (OUD 12c) environment along with OUDSM configuration
- Configured OUD directory Server and proxy Server instances
- Developed custom java utility for OID-OUD migration (users/groups)
- Worked on OUD virtualization
- Executed Recon/Task Archival in OIM 11gR2
- Worked on custom audit application based on ADF
- Application Host and DB host migration in OIM 11gR2
- Coordinated effectively with Oracle to fix product related issues and identifying bugs

Vodafone, PUNE (06/2015 – 09/2016)
Sr. Software Engineer

- Involved in development of GA & DevOps Releases
- End to End UDF customization, sandbox & custom ADF bean implementation
- Build & Deployment automation via Jenkins Tool
- Event Handlers and Schedule task implementation
- Developed custom Java utility (replacement of OIM OOB functionality)
- Implemented various production CRQs/Demands/PBIs/Incidents
- Involved in SR communication with Oracle to fix product related issues

Charles Schwab, PUNE (07/2014 – 06/2015)
Software Engineer

- Integrated around 120+ disconnected applications in 9i and 11g R2PS2
- Worked on AD connector and Mainframe connector integration
- Developed Flat File cleaning utility to perform Flat File reconciliation
- Implemented Access Policies, Event Handlers and Schedule Tasks
- Developed custom JAVA Tool to verify/correct the data discrepancy from OIM and different Target system
- Integrated web service to generate SSR while disablement functionality
- Implemented Organization/Business Reports in BI

NAB, MUMBAI (08/2013 – 07/2014)
Developer

- UDF implementation in OIM 11gR2PS2
- Created sandboxes for OIM 11gR2PS2 UI customization
- Registered Even Handlers, Data validator with Notification Templates
- Integrated OID connector 11.1.1.6, DBAT Connector with OIM 11gR2PS2
- Worked on OAM 11gR2PS2 SSO solution while integrating native application
- Involved in development, handover and Upgrade phases
- Implemented Access Policies, Event Handlers and Schedule Tasks

Telenor, PUNE (02/2012 – 08/2013)
Jr. Software Engineer

- Implement OIM Custom API and web services interface for integration with OIM
- Design and develop Custom UI interface to interact with and consume OIM Custom API and web services
- Design and Implement SSO solution for web application using OAM 10G
- Created Reports in BI Publisher using RTF template
- Involved in development, handover, support and Upgrade phase

Telenor, PUNE (02/2011 – 08/2013)
Jr. Software Engineer

- Designed/Implemented code in java for various module - MIMAS and TAB
- Implemented Cron Job Scheduling mechanism for Application and database as well.
- Implemented Log Extractor/Splitter using UNIX shell scripting
- Configured Apache with tomcat in Linux
- Configured HTTPS with Apache-tomcat
- Implemented running java code using UNIX shell script

## EDUCATION

Master in Computer Application, HBTI Kanpur U.P. July 2009
Bachelor of Science (Math Hons.), BHU Varanasi U.P. July 2006

## CERTIFICATIONS

Oracle Identity Manager 11g: Develop Identity Provisioning Ed 1 PRV December 2011
ITIL V3 Foundation Certified April 2011

## HARDWARE/SOFTWARE SUMMARY

| | |
|---|---|
| Oracle FMW Products | OIM 11gR2PS3, OIM 11gR2PS2BP06, OIM 11gR2,9i, OUD 12c, WebLogic 10.3.6<br>Oracle HTTP Server 11gR1(11.1.1.5) |
| Databases/Directory Servers | Oracle 11gR2, PostgreSQL, AD, OID |
| Languages | Java, JSP, HTML, PL/SQL & Unix Scripting, XUL |
| Hardware & Operating Systems | Flavors of Linux and Windows |
| Methodologies | Agile, Scrum, DevOps |
| Tools | Eclipse, Oracle JDeveloper, SQLDeveloper, TOAD |

## REFERENCES

***A minimum of three (3) references are required, including name, phone number, fax number and email address.***

# PROPOSED STAFF RESUME FOR RFP 3490

***A resume must be completed for all proposed prime contractor staff and proposed subcontractor staff.***

| | |
|---|---|
| **Company Name Submitting Proposal:** | ***Applications Software Technology LLC*** |

| ***Check the appropriate box if the proposed individual is prime contractor staff or subcontractor staff.*** | | | |
|---|---|---|---|
| **Contractor:** | ***X*** | **Subcontractor:** | |

| ***The following information requested pertains to the individual being proposed for this project.*** | | | |
|---|---|---|---|
| **Name:** | ***Sayyad Akeel*** | **Key Personnel: (Yes/No)** | ***No*** |
| **Classification; i.e., Project Manager, Implementation Lead, etc.** | ***Senior OIM Consultant*** | | |
| **# of Years in Classification:** | ***10*** | **# of Years with Firm:** | ***1*** |

## BRIEF SUMMARY OF PROFESSIONAL EXPERIENCE

***Information should include a brief summary of the proposed individual's professional experience.***

- **13.5** years of strong software development experience.
- Certified Identity And Security Technical Specialist
- In-depth understanding of Software development life cycle and implementation.
- Extensive experience of **10+** years in designing and deployment of solutions for managing Cloud identities, Enterprise identities, Customer & Group Enterprise identities using Oracle, Sun, Novell, CA products.
- Thorough understanding of LDAP and security protocols like SSL, SASL, etc.
- Proficient in C#.NET, Java and PL/SQL.
- Extensive knowledge of enterprise applications & experience in developing secure, scalable & robust solutions.
- Wide exposure to applications in the telecom, banking and healthcare verticals
- Ability to automate manual processes using variety of scripting languages.
- Exceptional communication skills.
- Ability to handle pressure and get the job done on time

## RELEVANT EXPERIENCE

***Information required should include: timeframe, company name, company location, position title held during the term of the project/position and software/hardware used during the project engagement.***

**AST, India** **11/2016 – till date**

Lead Architect – Oracle IAM

Looking after upgrade of enterprise Oracle IAM deployment (OIM, OAM, OES, OIF) for one of the safety consulting and certification company **Underwriters Laboratory, USA**.

**Vodafone Shared Services, UK/India** **12/2013 – 10/2016**

Lead Architect – Vodafone WIAM platform. Core member of solution design team at Vodafone Group.

Handled design architecture of Group Enterprise Identity Management platform based on Oracle 11g IAM products (OIM, OAM, OIF) for one of the largest global communication service providers Vodafone Group.

**Tech-Mahindra, India** **01/2013 – 11/2013**

Sr. Solution Architect – Oracle IAM

Planned & designed architecture of huge Oracle IAM (OIM, OAM) based Customer Identity management solution for one of the largest cable operators **Ziggo, Netherlands**.

**Persistent Systems Ltd, Japan/USA/India 01/2007 – 11/2012**

Project Lead – Oracle IAM

Delivered multiple successful projects (OIM, OAM, OIF, OES, OAAM, Coherence, Sun IDM, Open-AM) based Identity management solutions for various clients across the globe.

## EDUCATION

***Information required should include: institution name, city, state, degree and/or Achievement and date completed/received.***

| Degree | School/University Name | Date of Graduation |
|---|---|---|
| Bachelor Of Engineering (Information Technology) | Shivaji University, Kolhapur, India | May 2004 |

## CERTIFICATIONS

***Information required should include: type of certification and date completed/received.***

- Certification - Microsoft Certified Professional-2006
- Certification- Novell Identity And Security Advanced Technical Specialist-2011

## HARDWARE/SOFTWARE SUMMARY (BE SPECIFIC)

***Information required should include: environments, hardware, software, tools and databases.***

| | |
|---|---|
| Operating Systems | Solaris, Cent OS, Windows NT/XP/2000/2003, RHEL |
| Languages | Java, XML, HTML/DHTML, PL/SQL, VC++,C# |
| Tools | Development Tools: Net Beans, MS Visual Studio, Sharepoint, DB Artison, Toad, PL/SQL Developer, SpotLight, Eclipse, IntelliJ IDEA |
| | Development Libraries: Scansoft Libraries |
| | Parsing Tools: MSXmlParser |
| | Build Tools: Installshield |
| | Version Control Tools: Rational ClearCase, Visual Source Safe, WinCVS |
| | Project Management Tool: MS Project, Trac |
| Enterprise Software | Novell Identity Manager, Novell RBPM, Sun Identity Manager, Sun Access Manager/Open SSO enterprise, Oracle Identity Manager, Oracle Access Manager, Oracle Identity Federation, Oracle Entitlement Server |
| | Oracle: 8i,9i,10g, TimesTen, Spatial, UltraSearch, TimeSeries, Coherence |
| Databases | Oracle, MS-Access, MySQL |
| Standards & Protocols | LDAP, SNMP, TCP/IP, HTTP, J2EE, SSL, SOAP, REST,X509,SASL,SPML,SAML2,WS-*, OAuth, OpenID |
| Application Servers | IBM WebSphere, Sun Application Server, JBoss, Apache Tomcat, Jetty |
| Web Servers | Apache HTTP Server, IBM HTTP Server, Microsoft IIS, Pramati |
| Directory Servers | Sun Java System Directory Server 5.x,6.x, Oracle Internet Directory 10g, OpenDS, Novell e-Directory 8.x |
| Load Balancers | Ace, F5, Alteon, Netscaler |

**REFERENCES**

***A minimum of three (3) references are required, including name, phone number, fax number and email address.***

Mr. Andy Marshall- Program Manager, Vodafone Group-UK
Contact- Andy.Marshall@vodafone.com
Mr. Stefan Wilms – Technology Manager, Vodafone Group- Germany
Contact- Stefan.wilms@vodafone.com
Mr. Manny Singh- Program Manager, Underwriters Laboratories- USA
Contact- Manny.singh@ul.com

# 9 PRELIMINARY PROJECT PLAN

***We have provided on the following page the initial project plan which will be finalized in working with State staff and will serve as a baseline during the initial phase of the project. The plan provides the Project Tasks, Deliverables, Dates and Milestones.***

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | **State of Nevada DETR - Oracle Identity and Access Management Upgrade Services** | **119 days** | **Mon 1/15/18** | **Thu 6/28/18** |
| 2 | **Planning and Administration Deliverables** | **11 days** | **Mon 1/15/18** | **Mon 1/29/18** |
| 3 | **Define Project Governance Structure** | **3 days** | **Mon 1/15/18** | **Wed 1/17/18** |
| 4 | Semi-monthly Status Reporting and Monitoring | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 5 | Issue Reporting and Escalation | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 6 | Risk Analysis and Management | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 7 | Communication Management | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 8 | Review and Update the Governance Details | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 9 | Plan Project Kick-Off | 3 days | Mon 1/15/18 | Wed 1/17/18 |
| 10 | **Review Project Scope and Deliverables** | **3 days** | **Thu 1/18/18** | **Mon 1/22/18** |
| 11 | Review Project Management Methodology | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 12 | Review/Update Project Plan | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 13 | Review Deliverables and Timeline | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 14 | Identify Project Org Chart | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 15 | Review Roles and Responsibilities | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 16 | Identify Repository for Project Deliverables | 3 days | Thu 1/18/18 | Mon 1/22/18 |
| 17 | **Change Management and Communication Strategy** | **3 days** | **Tue 1/23/18** | **Thu 1/25/18** |
| 18 | Identify Change Management Strategy | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 19 | Create Change Management and Communication Strategy | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 20 | **Create and Update Project Plan** | **5 days** | **Tue 1/23/18** | **Mon 1/29/18** |
| 21 | Implementation Strategy | 1 day | Tue 1/23/18 | Tue 1/23/18 |
| 22 | Change Management Strategy | 2 days | Tue 1/23/18 | Wed 1/24/18 |
| 23 | Risk Mitigation Strategy | 2 days | Tue 1/23/18 | Wed 1/24/18 |
| 24 | Update Project Plan | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 25 | Review and Approve Project Charter | 2 days | Fri 1/26/18 | Mon 1/29/18 |
| 26 | Review & Approve Project Plan | 1 day | Fri 1/26/18 | Fri 1/26/18 |
| 27 | **Solution & Infrastructure Review** | **3 days** | **Tue 1/23/18** | **Thu 1/25/18** |
| 28 | Revisit/Identify H/W | 2 days | Tue 1/23/18 | Wed 1/24/18 |
| 29 | Review External System Dependency | 2 days | Tue 1/23/18 | Wed 1/24/18 |
| 30 | Purchase IAM Software | 1 day | Tue 1/23/18 | Tue 1/23/18 |
| 31 | Create/Update Detailed UseCase Templates | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 32 | Create/Update Detailed Design Templates | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 33 | **M: Detailed Project Plan (4.4.3.1)** | 0 days | Mon 1/29/18 | Mon 1/29/18 |
| 34 | **M: Written Semi-Monthly Status Report (4.4.3.3)** | 0 days | Mon 1/15/18 | Mon 1/15/18 |
| 35 | **IAM Environments Deliverables** | **113 days** | **Tue 1/23/18** | **Thu 6/28/18** |
| 36 | **Requirement Analysis** | **13 days** | **Tue 1/23/18** | **Thu 2/8/18** |
| 37 | **Project Management** | **12 days** | **Tue 1/23/18** | **Wed 2/7/18** |
| 38 | **Ongoing Tasks / Deliverables** | **12 days** | **Tue 1/23/18** | **Wed 2/7/18** |
| 39 | Schedule and facilitate Project Team Meetings - Semi-Monthly | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 40 | Prepare and publish Project Meeting Agendas and Materials | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 41 | Maintain and communicate Project Issue Log | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 42 | Maintain and communicate Project Plan | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 43 | Prepare and publish Project Meeting Agenda and Meeting Summary | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 44 | Maintain Project Budget | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 45 | Prepare and provide Semi-Monthly Project Status Reports | 12 days | Tue 1/23/18 | Wed 2/7/18 |
| 46 | **Functional Requirements Analysis** | **8 days** | **Tue 1/23/18** | **Thu 2/1/18** |
| 47 | Provisioning/De-provisioning Requirements Review | 3 days | Tue 1/23/18 | Thu 1/25/18 |
| 48 | Review SSO Requirements of Integrated Applications | 3 days | Fri 1/26/18 | Tue 1/30/18 |
| 49 | Self Service Requirements Review | 2 days | Fri 1/26/18 | Mon 1/29/18 |
| 50 | Reporting Requirements Review | 1 day | Fri 1/26/18 | Fri 1/26/18 |
| 51 | Review customizations in the current IAM Implementation | 3 days | Mon 1/29/18 | Wed 1/31/18 |
| 52 | Adaptive Access Management Requirements Review | 2 days | Mon 1/29/18 | Tue 1/30/18 |
| 53 | Create/Update process flows | 2 days | Wed 1/31/18 | Thu 2/1/18 |
| 54 | Create/Update use cases | 2 days | Wed 1/31/18 | Thu 2/1/18 |
| 55 | **Non-Functional Requirements Analysis** | **2 days** | **Fri 2/2/18** | **Mon 2/5/18** |
| 56 | Technical Requirements Analysis | 2 days | Fri 2/2/18 | Mon 2/5/18 |
| 57 | Hardware Sizing and Capacity Planning | 2 days | Fri 2/2/18 | Mon 2/5/18 |
| 58 | **Training Requirements and Strategy** | **2 days** | **Tue 2/6/18** | **Wed 2/7/18** |
| 59 | Identify Training Needs | 1 day | Tue 2/6/18 | Tue 2/6/18 |
| 60 | Create Training Plan | 2 days | Tue 2/6/18 | Wed 2/7/18 |
| 61 | Requirements Specification Documentation | 3 days | Tue 2/6/18 | Thu 2/8/18 |
| 62 | **M: Training Strategy Document Created** | 0 days | Wed 2/7/18 | Wed 2/7/18 |
| 63 | **M: Requirements Specification Document Created** | 0 days | Thu 2/8/18 | Thu 2/8/18 |
| 64 | **Solution Design** | **16 days** | **Fri 2/2/18** | **Fri 2/23/18** |
| 65 | **Project Management** | **15 days** | **Fri 2/2/18** | **Thu 2/22/18** |
| 66 | **Ongoing Tasks / Deliverables** | **15 days** | **Fri 2/2/18** | **Thu 2/22/18** |
| 67 | Schedule and facilitate Project Team Meetings - Semi-Monthly | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 68 | Prepare and publish Project Meeting Agendas and Materials | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 69 | Maintain and communicate Project Issue Log | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 70 | Maintain and communicate Project Plan | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 71 | Prepare and publish Project Meeting Agenda and Meeting Summary | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 72 | Maintain Project Budget | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 73 | Prepare and provide Semi-Monthly Project Status Reports | 15 days | Fri 2/2/18 | Thu 2/22/18 |
| 74 | **Infrastructure Design** | **3 days** | **Tue 2/6/18** | **Thu 2/8/18** |
| 75 | Physical Architecture Layout | 2 days | Tue 2/6/18 | Wed 2/7/18 |
| 76 | Network Design | 1 day | Thu 2/8/18 | Thu 2/8/18 |

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 77 | Environment Availability, Back-Up & Archives Design | 1 day | Thu 2/8/18 | Thu 2/8/18 |
| 78 | **OIM Design Update** | **11 days** | **Fri 2/9/18** | **Fri 2/23/18** |
| 79 | Provisioning and De Provisioning (EBS FND Updates) | 2 days | Fri 2/9/18 | Mon 2/12/18 |
| 80 | Self Service Updates | 2 days | Tue 2/13/18 | Wed 2/14/18 |
| 81 | Auditing Design | 1 day | Thu 2/15/18 | Thu 2/15/18 |
| 82 | Reporting Design | 1 day | Fri 2/16/18 | Fri 2/16/18 |
| 83 | Webservices security Design (OIM) | 2 days | Mon 2/19/18 | Tue 2/20/18 |
| 84 | Password Policy | 1 day | Wed 2/21/18 | Wed 2/21/18 |
| 85 | Custom Code Design | 2 days | Thu 2/22/18 | Fri 2/23/18 |
| 86 | Governance Control Design | 1 day | Fri 2/9/18 | Fri 2/9/18 |
| 87 | **OAM Design update** | **7 days** | **Fri 2/9/18** | **Mon 2/19/18** |
| 88 | Single Sign On/Webgate Changes | 4 days | Fri 2/9/18 | Wed 2/14/18 |
| 89 | Oauth / Federation | 3 days | Thu 2/15/18 | Mon 2/19/18 |
| 90 | **OAAM Design Update** | **2 days** | **Tue 2/20/18** | **Wed 2/21/18** |
| 91 | OAAM Policy Set | 2 days | Tue 2/20/18 | Wed 2/21/18 |
| 92 | OAAM OTP Anywhere | 2 days | Tue 2/20/18 | Wed 2/21/18 |
| 93 | OAAM KBA | 2 days | Tue 2/20/18 | Wed 2/21/18 |
| 94 | **OVD Design** | **6 days** | **Thu 2/15/18** | **Thu 2/22/18** |
| 95 | OVD Adapters Design Update | 6 days | Thu 2/15/18 | Thu 2/22/18 |
| 96 | Data Migration Design | 8 days | Fri 2/9/18 | Tue 2/20/18 |
| 97 | Technical Design Documentation | 8 days | Tue 2/20/18 | Thu 3/1/18 |
| 98 | **M: Solution Design Document Created (OIM)** | 0 days | Thu 3/1/18 | Thu 3/1/18 |
| 99 | **M: Solution Design Document Created (OAM)** | 0 days | Thu 3/1/18 | Thu 3/1/18 |
| 100 | **M: Evaluate current IAM environments and complete requirements and design (4.5.3.1)** | 0 days | Thu 3/1/18 | Thu 3/1/18 |
| 101 | **Build DEV Environment** | **29 days** | **Tue 2/20/18** | **Fri 3/30/18** |
| 102 | **Install & Configure - Development Environment** | **29 days** | **Tue 2/20/18** | **Fri 3/30/18** |
| 103 | **Project Management** | **25 days** | **Fri 2/23/18** | **Thu 3/29/18** |
| 104 | **Manage Ongoing Tasks / Deliverables** | **25 days** | **Fri 2/23/18** | **Thu 3/29/18** |
| 105 | Schedule and facilitate Project Team Meetings - Semi-Monthly | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 106 | Prepare and publish Project Meeting Agendas and Materials | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 107 | Maintain and communicate Project Issue Log | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 108 | Maintain and communicate Project Plan | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 109 | Prepare and publish Project Meeting Agenda and Meeting Summary | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 110 | Maintain Project Budget | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 111 | Prepare and provide Semi-Monthly Project Status Reports | 25 days | Fri 2/23/18 | Thu 3/29/18 |
| 112 | ***Infrastructure Enablement*** | **4 days** | **Tue 2/20/18** | **Fri 2/23/18** |
| 113 | Complete Load Balancer and Firewall Configuration | 2 days | Tue 2/20/18 | Wed 2/21/18 |
| 114 | Create SSL Certificates for Secured System Communication | 2 days | Thu 2/22/18 | Fri 2/23/18 |
| 115 | Configure Database for IDM Schema Install | 2 days | Thu 2/22/18 | Fri 2/23/18 |
| 116 | **Base Environment Installation** | **9 days** | **Mon 2/26/18** | **Thu 3/8/18** |
| 117 | Install OIM, OAM, OID, OHS, OVD, Webgate, OAAM | 8 days | Mon 2/26/18 | Wed 3/7/18 |
| 118 | Complete Environment Baseline Testing | 1 day | Thu 3/8/18 | Thu 3/8/18 |
| 119 | **Oracle Internet Directory Configuration** | **5 days** | **Fri 3/9/18** | **Thu 3/15/18** |
| 120 | Configure OID | 2 days | Fri 3/9/18 | Mon 3/12/18 |
| 121 | Data Migration | 3 days | Tue 3/13/18 | Thu 3/15/18 |
| 122 | **OID Data Migration** | **2 days** | **Fri 3/16/18** | **Mon 3/19/18** |
| 123 | User | 2 days | Fri 3/16/18 | Mon 3/19/18 |
| 124 | Groups | 2 days | Fri 3/16/18 | Mon 3/19/18 |
| 125 | **OVD Configuration** | **4 days** | **Tue 3/20/18** | **Fri 3/23/18** |
| 126 | Adaptor Configuration | 3 days | Tue 3/20/18 | Thu 3/22/18 |
| 127 | Caching | 1 day | Fri 3/23/18 | Fri 3/23/18 |
| 128 | **Oracle Identity Manager Configuration** | **16 days** | **Fri 3/9/18** | **Fri 3/30/18** |
| 129 | **Install and configure Connectors** | **6 days** | **Fri 3/9/18** | **Fri 3/16/18** |
| 130 | Install and Configure AD Connector | 3 days | Fri 3/9/18 | Tue 3/13/18 |
| 131 | Install and Configure OID Connector | 3 days | Wed 3/14/18 | Fri 3/16/18 |
| 132 | **OIM Configuration** | **10 days** | **Mon 3/19/18** | **Fri 3/30/18** |
| 133 | Implement business rules for provisioning/de-provisioning | 3 days | Mon 3/19/18 | Wed 3/21/18 |
| 134 | Plugins | 2 days | Thu 3/22/18 | Fri 3/23/18 |
| 135 | MDS | 2 days | Mon 3/26/18 | Tue 3/27/18 |
| 136 | Post/Pre Processors Adaptors | 1 day | Wed 3/28/18 | Wed 3/28/18 |
| 137 | Access Policies | 1 day | Wed 3/28/18 | Wed 3/28/18 |
| 138 | Password Policy | 1 day | Wed 3/28/18 | Wed 3/28/18 |
| 139 | Auditing Controls | 1 day | Thu 3/29/18 | Thu 3/29/18 |
| 140 | Reporting | 2 days | Thu 3/29/18 | Fri 3/30/18 |
| 141 | Self Service Implementation (Password Reset, Self Reg, Request Catalog, Request Tracking and access manager | 2 days | Mon 3/19/18 | Tue 3/20/18 |
| 142 | Configure Auditing and Reporting | 1 day | Mon 3/26/18 | Mon 3/26/18 |
| 143 | **OIM Data Migration** | **12 days** | **Fri 3/9/18** | **Mon 3/26/18** |
| 144 | Data Cleansing | 5 days | Mon 3/19/18 | Fri 3/23/18 |
| 145 | OIM UDF creation | 2 days | Fri 3/9/18 | Mon 3/12/18 |
| 146 | Users data migration | 10 days | Tue 3/13/18 | Mon 3/26/18 |
| 147 | Roles data migration | 10 days | Tue 3/13/18 | Mon 3/26/18 |
| 148 | Accounts data migration | 10 days | Tue 3/13/18 | Mon 3/26/18 |
| 149 | Unit Test Automated Role Based Provisioning/De-provisioning, Self Service and Data Synchronization | 3 days | Tue 3/13/18 | Thu 3/15/18 |
| 150 | **OAM Configuration** | **6 days** | **Mon 2/26/18** | **Mon 3/5/18** |
| 151 | Verify Patches and Apply the Patches | 2.5 days | Mon 2/26/18 | Wed 2/28/18 |
| 152 | Domain Creation | 0.5 days | Wed 2/28/18 | Wed 2/28/18 |

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 153 | Security Store Script | 1 day | Thu 3/1/18 | Thu 3/1/18 |
| 154 | OAMAdministrator role creation | 0.5 days | Fri 3/2/18 | Fri 3/2/18 |
| 155 | ID Store Configuration with OID | 0.5 days | Fri 3/2/18 | Fri 3/2/18 |
| 156 | Server Classpath Configuration | 0.5 days | Fri 3/2/18 | Fri 3/2/18 |
| 157 | Create Webgate artifacts (2)( 1 per instance) | 1 day | Fri 3/2/18 | Fri 3/2/18 |
| 158 | System configuration for OAM -Set Session time out /Front end URL for OAM Server etc | 1 day | Mon 3/5/18 | Mon 3/5/18 |
| 159 | **OHS Installation & Configuration** | **3 days** | **Tue 3/6/18** | **Thu 3/8/18** |
| 160 | OHS Installation & Creation of Two Domains | 1 day | Tue 3/6/18 | Tue 3/6/18 |
| 161 | Webgate Configuration | 1 day | Wed 3/7/18 | Wed 3/7/18 |
| 162 | OHS Module Conf Configuration | 1 day | Thu 3/8/18 | Thu 3/8/18 |
| 163 | **Sanity Testing of OAM & OHS** | **1 day** | **Fri 3/9/18** | **Fri 3/9/18** |
| 164 | Sample Page hosted on OHS | 0.5 days | Fri 3/9/18 | Fri 3/9/18 |
| 165 | OAM Access Tester | 0.5 days | Fri 3/9/18 | Fri 3/9/18 |
| 166 | Performance Tune OAM | 1 day | Mon 3/12/18 | Mon 3/12/18 |
| 167 | Performance Tune OHS | 1 day | Mon 3/12/18 | Mon 3/12/18 |
| 168 | Performance Tune Webgate | 1 day | Mon 3/12/18 | Mon 3/12/18 |
| 169 | **Configure SSO Applications** | **10 days** | **Tue 3/6/18** | **Mon 3/19/18** |
| 170 | Communicate Downtime Plan | 1 day | Tue 3/6/18 | Tue 3/6/18 |
| 171 | Custom applications | 10 days | Tue 3/6/18 | Mon 3/19/18 |
| 172 | OIM | 1 day | Tue 3/6/18 | Tue 3/6/18 |
| 173 | **OAAM Configuration** | **11 days** | **Tue 3/13/18** | **Tue 3/27/18** |
| 174 | Set up one time password | 2 days | Tue 3/13/18 | Wed 3/14/18 |
| 175 | Secure OAAM Webservices | 1 day | Thu 3/15/18 | Thu 3/15/18 |
| 176 | Verify CSR Cases capability | 1 day | Thu 3/15/18 | Thu 3/15/18 |
| 177 | Set up KBA and OTP Challenge Scenraios | 2 days | Fri 3/16/18 | Mon 3/19/18 |
| 178 | Set up OAAM base policies | 1 day | Tue 3/20/18 | Tue 3/20/18 |
| 179 | Set up Rule context evaluation | 2 days | Wed 3/21/18 | Thu 3/22/18 |
| 180 | Configure Groups | 2 days | Wed 3/21/18 | Thu 3/22/18 |
| 181 | Configure Policy Set | 2 days | Fri 3/23/18 | Mon 3/26/18 |
| 182 | Enable autolearning for OAAM | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 183 | Create Configurable Actions | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 184 | Configure Predictive Analysis | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 185 | Configure OAAM for offline mode | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 186 | Configure OAAM Jobs | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 187 | Configure Logging | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 188 | Configure Archive and Purging Procedures | 0.5 days | Tue 3/27/18 | Tue 3/27/18 |
| 189 | **M:Build IAM Development Environment (4.5.3.2)** | 0 days | Fri 3/30/18 | Fri 3/30/18 |
| 190 | **Build TEST Environment** | **20 days** | **Tue 3/20/18** | **Mon 4/16/18** |
| 191 | **Install & Configure - TEST Environment** | **20 days** | **Tue 3/20/18** | **Mon 4/16/18** |
| 192 | **Project Management** | **20 days** | **Tue 3/20/18** | **Mon 4/16/18** |
| 193 | **Manage Ongoing Tasks / Deliverables** | **20 days** | **Tue 3/20/18** | **Mon 4/16/18** |
| 194 | Schedule and facilitate Project Team Meetings - Semi-Monthly | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 195 | Prepare and publish Project Meeting Agendas and Materials | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 196 | Maintain and communicate Project Issue Log | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 197 | Maintain and communicate Project Plan | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 198 | Prepare and publish Project Meeting Agenda and Meeting Summary | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 199 | Maintain Project Budget | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 200 | Prepare and provide Semi-Monthly Project Status Reports | 20 days | Tue 3/20/18 | Mon 4/16/18 |
| 201 | ***Infrastructure Enablement*** | **4 days** | **Tue 3/20/18** | **Fri 3/23/18** |
| 202 | Complete Load Balancer and Firewall Configuration | 2 days | Tue 3/20/18 | Wed 3/21/18 |
| 203 | Create SSL Certificates for Secured System Communication | 2 days | Thu 3/22/18 | Fri 3/23/18 |
| 204 | Configure Database for IDM Schema Install | 2 days | Thu 3/22/18 | Fri 3/23/18 |
| 205 | ***Base Environment Installation*** | **3 days** | **Mon 3/26/18** | **Wed 3/28/18** |
| 206 | Install Java,WebLogic,OID,OAM,OAAM,OIM,Webgate | 3 days | Mon 3/26/18 | Wed 3/28/18 |
| 207 | **OID Configuration** | **2 days** | **Thu 3/29/18** | **Fri 3/30/18** |
| 208 | Configure OID | 2 days | Thu 3/29/18 | Fri 3/30/18 |
| 209 | **OID Data Migration** | **2 days** | **Mon 4/2/18** | **Tue 4/3/18** |
| 210 | User Migration | 2 days | Mon 4/2/18 | Tue 4/3/18 |
| 211 | Groups Migration | 2 days | Mon 4/2/18 | Tue 4/3/18 |
| 212 | **OVD Configuration** | **1 day** | **Mon 4/2/18** | **Mon 4/2/18** |
| 213 | Adapter Configuration | 1 day | Mon 4/2/18 | Mon 4/2/18 |
| 214 | ***OIM Configuration*** | **7 days** | **Tue 4/3/18** | **Wed 4/11/18** |
| 215 | OIM Configuration Migrations | 7 days | Tue 4/3/18 | Wed 4/11/18 |
| 216 | Data Migration | 5 days | Tue 4/3/18 | Mon 4/9/18 |
| 217 | ***OIM Data Migration*** | **1 day** | **Thu 4/12/18** | **Thu 4/12/18** |
| 218 | Users | 1 day | Thu 4/12/18 | Thu 4/12/18 |
| 219 | Roles | 1 day | Thu 4/12/18 | Thu 4/12/18 |
| 220 | **OAM Configuration Migrations** | **9 days** | **Thu 3/29/18** | **Tue 4/10/18** |
| 221 | OAM Config Migration | 1 day | Thu 3/29/18 | Thu 3/29/18 |
| 222 | Pack the Domain on the Secondary Node | 4 days | Fri 3/30/18 | Wed 4/4/18 |
| 223 | Create the Domain Structure on the clustered Nodes on the Secondary Environment | 1 day | Thu 4/5/18 | Thu 4/5/18 |
| 224 | Unpack the Domain on the clustered Nodes on the Secondary Environment | 1 day | Fri 4/6/18 | Fri 4/6/18 |
| 225 | Install Nodemanager on clustered nodes on the Secondary Environment | 1 day | Mon 4/9/18 | Mon 4/9/18 |
| 226 | Verify clustered nodes on the Secondary Environment | 1 day | Tue 4/10/18 | Tue 4/10/18 |
| 227 | **Migrate OAAM Configuration** | **6 days** | **Thu 3/29/18** | **Thu 4/5/18** |
| 228 | Perform Prerequisite | 1 day | Thu 3/29/18 | Thu 3/29/18 |

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 229 | System Snapshot export/import | 3 days | Fri 3/30/18 | Tue 4/3/18 |
| 230 | Performance Tune and Apply best practices | 2 days | Wed 4/4/18 | Thu 4/5/18 |
| 231 | **M: Build IAM Test Environment (4.5.3.3)** | 0 days | Mon 4/16/18 | Mon 4/16/18 |
| 232 | **Control** | **50 days** | **Tue 3/20/18** | **Mon 5/28/18** |
| 233 | Create Test Strategy and Plan | 5 days | Tue 3/20/18 | Mon 3/26/18 |
| 234 | Review and Approve Test Strategy and Plan | 2 days | Tue 3/20/18 | Wed 3/21/18 |
| 235 | **Test Case Development** | **18 days** | **Thu 3/22/18** | **Mon 4/16/18** |
| 236 | High Availability and Environment Baseline Test Cases | 4 days | Thu 3/22/18 | Tue 3/27/18 |
| 237 | Account Provisioning/De-provisioning Test Cases | 5 days | Wed 3/28/18 | Tue 4/3/18 |
| 238 | Account Management, Self- Service and Data Synchronization Test Cases | 5 days | Wed 4/4/18 | Tue 4/10/18 |
| 239 | Single Sign On/Federation Test Cases | 4 days | Wed 4/11/18 | Mon 4/16/18 |
| 240 | **Conduct Integration Testing** | 7 days | Tue 4/17/18 | Wed 4/25/18 |
| 241 | **Conduct Performance Testing** | 4 days | Thu 4/26/18 | Tue 5/1/18 |
| 242 | **Apply Environment Tuning and Optimization** | 3 days | Wed 5/2/18 | Fri 5/4/18 |
| 243 | **Support User Acceptance Testing** | 15 days | Thu 5/3/18 | Wed 5/23/18 |
| 244 | Prepare Final Written Report for System Verification | 3 days | Thu 5/24/18 | Mon 5/28/18 |
| 245 | **M: Integration Test Scripts Created** | 0 days | Mon 4/16/18 | Mon 4/16/18 |
| 246 | **M: System Integration Testing Completed** | 0 days | Wed 4/25/18 | Wed 4/25/18 |
| 247 | **M: UAT Completed** | 0 days | Mon 5/28/18 | Mon 5/28/18 |
| 248 | **M:Test Report Created** | 0 days | Mon 5/28/18 | Mon 5/28/18 |
| 249 | **Training** | **17 days** | **Tue 4/17/18** | **Wed 5/9/18** |
| 250 | **Training Documentation** | **13 days** | **Tue 4/17/18** | **Thu 5/3/18** |
| 251 | Create Environment Installation and Configuration Document | 5 days | Tue 4/17/18 | Mon 4/23/18 |
| 252 | Create IAM System Support Documentation (For Technical Staff) | 4 days | Tue 4/24/18 | Fri 4/27/18 |
| 253 | Create IAM Operational Guide (For IAM Admins) | 4 days | Mon 4/30/18 | Thu 5/3/18 |
| 254 | **Conduct Training** | **4 days** | **Fri 5/4/18** | **Wed 5/9/18** |
| 255 | Conduct IAM System Implementation Technical Training for Technical Staff | 2 days | Fri 5/4/18 | Mon 5/7/18 |
| 256 | Conduct Training for System Admins and Help Desk | 2 days | Tue 5/8/18 | Wed 5/9/18 |
| 257 | **M: Training Document Created** | 0 days | Thu 5/3/18 | Thu 5/3/18 |
| 258 | **M: IAM Suite Training for Admins and Helpdesk Completed** | 0 days | Wed 5/9/18 | Wed 5/9/18 |
| 259 | **M: Technical Staff Training Completed** | 0 days | Wed 5/9/18 | Wed 5/9/18 |
| 260 | **Production** | **33 days** | **Tue 4/17/18** | **Thu 5/31/18** |
| 261 | **Install & Configure - Production Environment** | **12 days** | **Tue 4/17/18** | **Wed 5/2/18** |
| 262 | Infrastructure Enablement | 2 days | Tue 4/17/18 | Wed 4/18/18 |
| 263 | Install and Configure Base Production Environment | 7 days | Thu 4/19/18 | Fri 4/27/18 |
| 264 | Migrations | 3 days | Mon 4/30/18 | Wed 5/2/18 |
| 265 | Create Release Plan | 5 days | Tue 5/15/18 | Mon 5/21/18 |
| 266 | Project GO/NO-GO | 2 days | Tue 5/29/18 | Wed 5/30/18 |
| 267 | **GO-LIVE** | 1 day | Thu 5/31/18 | **Thu 5/31/18** |
| 268 | **M: Build Production IAM Environment (4.5.3.4)** | 0 days | Thu 5/31/18 | Thu 5/31/18 |
| 269 | **M: Release Plan Created** | 0 days | Thu 5/31/18 | Thu 5/31/18 |
| 270 | **M: GO LIVE** | 0 days | Thu 5/31/18 | Thu 5/31/18 |
| 271 | **Post Production Warranty Support (4 weeks)** | **20 days** | **Fri 6/1/18** | **Thu 6/28/18** |
| 272 | Production Support | 20 days | Fri 6/1/18 | Thu 6/28/18 |
| 273 | Create Support Manuals | 10 days | Fri 6/1/18 | Thu 6/14/18 |
| 274 | Transition Training | 10 days | Fri 6/15/18 | Thu 6/28/18 |
| 275 | **M: Knowledge Transfer (4.5.3.5)** | 0 days | Thu 6/28/18 | Thu 6/28/18 |

# 10 Other Informational Material

***Enterprise Security is one of the core competencies of our award-winning Oracle Middleware Practice. As a Specialized Oracle Platinum Partner, our services focus on every aspect of Enterprise Security.***

***We've helped many organizations provide users with secure access to resources and assets, including:***

- ***Access Management Service: Solutions for securing applications, data, web service and cloud-based services, including single sign-on.***
- ***Authorization Services: Solutions for securing resources and fine-grained access controls.***
- ***Identity Governance: Comprehensive implementation services enabling identity compliance and providing users with many features, from self-service registration to privileged account management.***
- ***Directory Implementation Services: A complete set of capabilities.***
- ***Mobile Security Services: To adopt, deploy, and manage data without interfering with personal phone use.***
- ***Governance, Risk Management, and Compliance: Services to assist in GRC.***
- ***API Security: Specialized service to secure APIs.***
- ***Database Security/Auditing: Solutions for database security and auditing requirements.***
- ***Managed and Hosting Service: Hosting and managed service for iDaaS.***

***To further demonstrate AST's Oracle Identity and Access Management qualifications, we have provided Case studies for four comprehensive Identity and Access Management projects AST completed for the City of Los Angeles, Department of Water and Power, Cook County, IL, the College of American Pathologists, and LA County MTA.***

## Los Angeles Department of Water and Power

***The City of Los Angeles employees over 25,000 people and its Department of Water and Power (LADWP) was established more than 100 years ago to deliver reliable, safe water and electricity to 3.8 million residents and businesses in Los Angeles. LADWP provides its 666,000 water customers and 1.4 million electric customers with quality service at competitive prices.***

***LADWP, together with AST LLC, partnered to solve major business problems surrounding identity management and access control. The project involved integrating LADWP's major IT systems in order to synchronize user identities across the enterprise and provide each user with a single password for all systems. The complexity of LADWP's existing systems required a solution with capabilities to integrate a wide array of technologies, while providing a stable and proven platform for future growth. LADWP selected Oracle's Identity and Access Management Suite and Oracle Unified Directory (OUD) to meet these needs. LADWP's OUD implementation is one of the largest in any public sector or utility enterprise, with more than 1.9 Million users, 2,000 concurrent logins and greater than 50K transactions each day.***

***With this project, LADWP sought to achieve the following goals:***

- ***Build an enterprise Identity and Access management environment using Oracle IAM suite, which could be extended to the City's other applications and agencies;***
- ***Build an enterprise user repository with synchronization across multiple sites to be used as the single source of identity for all the citizens of Los Angeles using OUD and OVD;***
- ***Consolidate user data spread across multiple directory systems into a single user repository under Oracle Unified Directory;***
- ***Complete automation of identity provisioning, de-provisioning and access control based on business rules and policy control using Oracle Identity Manager for PeopleSoft HR, Siebel CRM, Enterprise Active Directory, IBM mainframe, Microsoft Exchange and Oracle Unified Directory;***
- ***Provide robust, standards-based integration of authentication and Single Sign-On for cloud applications such as Google Vault and BMC Remedy;***
- ***Improve the customer experience and security by implementing Single Sign-On for all major systems including LADWP's external customer website (www.ladwp.com), Oracle WebCenter (internal collaboration portal), Unified Content Management System, Siebel CRM, Oracle Business Intelligence and Reporting (OBIEE), BMC Remedy (SAS-model ticketing system) and Google Applications including Google Vault (email archiving system);***
- ***Ensure 99.99% availability of the systems by building a Disaster Recovery IDM environment based on Oracle's Maximum Availability Architecture to support continuity of services and seamless session failover;***
- ***Build a platform which can support LADWP's large customer base of 1.9 million users with a peak load of 10K active sessions.***

*"Credit for the success of this implementation clearly goes to AST, Oracle and all DWP staff who participated through-out this project. AST has demonstrated thorough leadership and deep expertise in the Identity Management space and worked as a valued partner to the Department."*

*Rafik Alsawalhy, Project Manager for LADWP*

***Over the course of this 11-month project, AST was able to deliver on time and on budget, while successfully configuring, implementing, and enhancing the Oracle Identity Management Suite of products to LADWP's specifications.***

***Oracle has posted a detailed success story on their website about this implementation. This success story is available at: http://www.oracle.com/us/corporate/customers/customersearch/ladwp-1-oracle-directory-2879160.html***

## Cook County, IL (CJIS Integration and Security)

***Serving more than 40% of Illinois residents, Cook County is responsible for the secure and timely exchange of information with over 30 different agencies. Since each agency has its own set of applications generating and consuming data, the County required secure, scalable and cost-effective integration solution. The primary goal was a system that could safely, orchestrate connectivity across disparate systems, between multiple partners. Cook County has been committed to the DOJs Criminal Justice Information Services (CJIS) policy since 2002. They required not only the ability to automate the acquiring, sharing, and tracking of data from various partners, but to do so according to the best practices guidelines of the Global Standards Council (GSC). The County was dealing with a highly heterogeneous environment, compounded with the need for serious policy and regulatory compliance. They recognized this project as an opportunity to:***

- ***Build a technology infrastructure to allow secure data exchanges among county agencies, other local bodies, state, federal agencies and external partners***
- ***Automated and secure access for criminal justice information sharing between agencies and other select partners***
- ***Getting the right data to the right agency at the right time with end to end audit trail***
- ***Establish norms for securing data at rest and in motion***
- ***Establish CJIS policy compliance, following the recommendations of the CCICJIS Committee for the adoption of best practices based on Global standards (GRA, NIEM, GFIPM)***
- ***Improve data accuracy and remove redundancies***
- ***Eliminate costly point to point integrations***

***AST collaborated closely with Cook County and implemented an Oracle Fusion Middleware platform. Oracle Service Bus, SOA Suite, OWSM, Oracle Audit Vault/Database Firewall, Advanced Security Option are being used to integrate numerous County and external law enforcement agencies for secure information sharing using the Global Standards Council best practices and CJIS policy guidelines.***

COLLEGE of AMERICAN PATHOLOGISTS

Case Study

# Improving Security and Promoting Growth with Identity Management

**College of American Pathologists, Northfield, IL**

College of American Pathologists (CAP) is a leading non-profit organization of board-certified pathologists, serving patients, pathologists, and the public.

**Oracle Technologies**

- Oracle Identity and Access Management Suite
- Oracle Directory Services
- Oracle Identity Manager
- Oracle Access Manager
- Oracle Identity Federation
- Oracle Entitlements Server
- Oracle Virtual Directory

**Services Provided**

- Consolidated identity stores (RedHat LDAP, Tactical OID) into a single Oracle Internet Directory
- Created enterprise-wide identity store view for OID, and Microsoft Active Directory identities leveraging Oracle Virtual Directory
- Delegated administration and user self-service
- Single sign-on for applications, including OBIEE, WebCenter, Hyperion, multiple UCM instances, IPM, UCM Managed Attachment, E-Business Suite, iStore, and SOA

*"Our Oracle Identity and Access Management Suite initiative has been very successful in delivering the key functionality we need to move forward. The success of this complex project is testament to AST's technology and project management expertise, as well as the power of our Oracle solutions."*

Shannon Hoekstra, Senior Manager, Information Systems

## Business Needs

CAP's IT Infrastructure included four legacy and five Oracle environments containing a variety of Oracle applications — EBS, OBIEE, Hyperion, WCS, UCM, IPM, and SOA. These applications had been implemented, but lacked the appropriate integration across the organization, causing operational inefficiencies and numerous business challenges related to version compatibility, security, and compliance.

Without a shared, enterprise-wide identity management solution, it was the responsibility of each application and data owner to manage and maintain access rights for internal users. This was inefficient, and the CAP IT teams lacked the time and expertise to handle the work accurately and rapidly, resulting in internal users having multiple identities across different applications.

Lacking automation around user on-boarding, provisioning, and de-provisioning processes, the IT help desk was responsible for ensuring successful and complete on-boarding and de-provisioning; this was costly, inefficient, a security risk, and was becoming an immense challenge due to an increasing employee base.

## Services & Benefits

CAP addressed these challenges and planned for its future growth by partnering with AST Corporation to help lay the foundation for its Enterprise Platform Project (EPP) initiative, and build a secure, common platform for all enterprise-wide Oracle applications. The initial goal was to implement, over a two-year period, a reliable and scalable security infrastructure, one less complex and more secure, and easily integrated with both legacy and EPP applications.

AST implemented the Oracle Identity and Access Management Suite of products, utilizing Oracle IDAM 11gR1 offerings, over multiple phases, to build an enterprise identity management platform and support roadmap. Identity data was consolidated and a centralized identity store was created. Additionally, self-service user registration and profile management, federated identity management, fine-grained portal entitlement, and the EPP applications were integrated with multiple legacy systems.

Upon completion, CAP has an enterprise security platform as a standard for any future system security implementation. The project integrated over 40 legacy and EPP systems across various departments, and phased out legacy LDAP systems, reducing maintenance cost and saving on annual licenses and fees. In early 2013, CAP introduced Oracle iStore, then leveraged single sign-on on its website to provide access to iStore, extending the capability even further.

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*AST LLC supports Oracle Cloud solutions for ERP, CX, HCM, EPM, BI, MDM, Middleware and Security. Our excellent track record and our exclusive focus on Oracle software enable our clients to undertake the most challenging projects with confidence.*

AST

Metro

Case Study

# Supporting Next-Generation Integrated IT Platforms

**Los Angeles County Metropolitan Transportation Authority, Los Angeles, CA**

LA County Metro operates as the third-largest public transportation system in the United States. The Metro system consists of:

- Six lines
- Two rapid transit subway lines
- Four light rail lines
- 80 stations
- More than 360,000 commuters each day

**Oracle Technologies**

- Oracle SOA Suite
- Oracle BPM Suite
- Oracle ADF
- Oracle Database
- Oracle WebCenter Suite
- Oracle Identity & Access Management Suite

**Services Provided**

- Oracle Platform Assessment
- Oracle Middleware Implementation
- Managed Support Services
  - SOA Support
  - Oracle Identity and Access Management Support
  - AP Automation Support

*"A BIG Thanks to AST for helping METRO and bringing all the immense knowledge about the Oracle Middleware Technology platform and providing a comprehensive solution to complex integrated architecture at METRO."*

Mehul Kumar, Project Manager, LA County Metro

## Business Needs

In conjunction with an E-Business Suite upgrade, the Los Angeles County Metropolitan Transportation Authority (Metro) sought to implement an enterprise integration and process automation platform using Oracle SOA/BPM and Oracle IDM Suite. The goals included:

- Create a platform to efficiently and securely exchange data between best-of-breed business applications built on different technologies
- Consistently manage procure-to-pay and quote-to-cash processes across the company's various business units and support long-term growth objectives
- Improve the ability to provide customers, staff, and business partners with convenient access to needed services and information

## Services & Benefits

AST performed a holistic assessment of the full IT landscape—from hardware to applications and integrations—and followed an iterative approach to the overall modernization of the Oracle base environment.

- Built on top of the Oracle Exalogic/Exadata platform using SOA clusters for high-availability
- Oracle applications, middleware, and development tools created a next-generation IT platform which drove operational efficiency, reduced costs across departments, and positioned Metro for continued growth
- Leveraged Oracle SOA Suite to integrate Oracle E-Business Suite, Oracle Imaging, Asset Management and third-party custom applications
- Implemented Oracle Accounts Payable Automation

AST implemented the project efficiently and has been providing managed support services tailored to Metro's unique environment. This has resulted in significant savings for Metro, including:

- Improved order accuracy, profitability and on-time service
- Improved accuracy of invoice processing by 98% with Payables Automation
- Provided customers and partners with convenient and secure access to information
- Implemented a centralized repository for digital content and documents
- Enabled streamlined monitoring and management of software and hardware
- Enabled consistent processes across functional areas, ranging from sales and operations to finance
- Provided a scalable solution that will grow with the organization

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