



***AMENDED, RESTATED AND REVISED  
LEADER REPLACEMENT SYSTEM  
AGREEMENT***

***Schedule 4 to Change Notice Number Seven  
(Statement of Work for  
ForgeRock IAM Enterprise Enablement Project)***

***Inclusive of***

***Attachment 1 (Contractor Assumptions),  
Attachment 2 (ForgeRock IAM Enterprise Enablement  
Pricing Schedules)***

**CalSAWS Consortium,  
a California Joint Powers Authority**

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## **1. INTRODUCTION AND OVERVIEW**

For the purposes of this Schedule 4 to Change Notice Number Seven to the Amended, Restated and Revised Leader Replacement System Agreement For A California Statewide Automated Welfare System ("Agreement") the meaning of all terms used in this Schedule 4 shall have those meanings as set forth in the Agreement, unless otherwise specified herein. Furthermore, all Work performed pursuant to Schedule 4 shall be subject to the terms and conditions of the Agreement, unless otherwise expressly stated in this Schedule 4. Section 1 (Introduction and Overview) describes the scope of Work CONTRACTOR will perform for the design, development, test, and implementation of the ForgeRock Identity and Access Management ("IAM") enterprise enablement solution that would support the 58 CalSAWS Counties ("ForgeRock IAM Enterprise Enablement Solution") and maintenance and operations ("M&O") associated with operating that solution for the CalSAWS System on a cloud-hosted architecture (collectively, the "ForgeRock IAM Enterprise Enablement Project").

The ForgeRock IAM Enterprise Enablement Project is anticipated to build upon the ForgeRock IAM platform foundation deployed as part of the scope of Exhibit W (Statement of Work for CalSAWS Cloud Enablement Project and Interim Maintenance and Operations), which re-platformed the LRS System's Oracle-based IAM platform to the ForgeRock Identity platform. In the ForgeRock IAM Enterprise Enablement Project, the existing foundational IAM services will be expanded upon to enable features across authentication, authorization, identity management, identity governance, API security, external user access, and self-service to support the 58 Counties' migration to the CalSAWS System. This Schedule 4 to Change Notice Number Seven also includes recurring R&A Change Budget Services for Technical Infrastructure services for maintenance and operations of the ForgeRock IAM Enterprise Enablement Solution on the CONSORTIUM's AWS cloud-hosted architecture through September 30, 2021.

## **1.1 SCHEDULE**

The term of this Scope of Work (“SOW”) shall commence during State Fiscal Year 2020/2021 and continue through October 31, 2023.

## **2. SCOPE OF WORK**

This Section 2 describes the Work CONTRACTOR will perform under this SOW. Tasks 1 through 4 describe the Work CONTRACTOR will perform to design, develop, test, and implement the ForgeRock IAM Enterprise Enablement Solution. Task 5 describes the Work CONTRACTOR will perform for maintenance and operations of the ForgeRock IAM Enterprise Enablement Solution.

- 1. Task 1 – CalSAWS IAM Enterprise Features**
- 2. Task 2 – CalSAWS IAM Public Portal Features**
- 3. Task 3 – CalSAWS IAM OCAT Features**
- 4. Task 4 – CalSAWS IAM Identity Migration & Release Management**
- 5. Task 5 – CalSAWS IAM Maintenance and Operations**

To accomplish the ForgeRock IAM Enterprise Enablement Project, CONTRACTOR will work collaboratively with key stakeholders, including Users, and State, Federal, and other external agencies as necessary.

### **2.1 TASK 1: CALSAWS IAM ENTERPRISE FEATURES**

The CONTRACTOR will design, build, test and implement enterprise features for the ForgeRock IAM Enterprise Enablement Solution, including delegated administration, application dashboard service, enterprise application onboarding, API security for data access, session management and single sign-on, identity provisioning, a user access request portal, a user request review portal, and identity reporting and analytics.

The CONTRACTOR will create design documentation to address how the ForgeRock IAM Enterprise Enablement Solution will be implemented in the LRS/CalSAWS System and

associated CONSORTIUM enterprise and external applications (“CONSORTIUM Application Landscape”). Designs will be attached to System Change Requests (“SCRs”) that will be implemented for the ForgeRock IAM Enterprise Enablement Project.

#### **2.1.1 Subtask: Delegated Administration**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement a Delegated Administration feature that would allow CONSORTIUM and County help desk administrators to manage enterprise users and authorizations. This enterprise feature would allow help desk administrators to manage enterprise identities in ForgeRock, assign authorizations to enterprise identities, remove authorizations to enterprise identities, and enable/disable enterprise identities in ForgeRock.

The CONTRACTOR will configure Delegated Administration across user lifecycle management processes, to be configurable down to the attribute level (e.g. County-based administrators).

#### **2.1.2 Subtask: Application Dashboard Service**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement a user interface that would allow users to access applications through a single enterprise application dashboard. This dashboard will include a single portal for access to authorized applications, a themed user interface, and a dynamic dashboard based on authorizations/assigned privileges.

#### **2.1.3 Subtask: Enterprise Application Onboarding**

The CONTRACTOR will work with the CONSORTIUM to identify up to a total of twenty (20) enterprise applications to onboard onto the ForgeRock platform. Three of the twenty applications to be onboarded will be the LRS/CalSAWS System’s ServiceNow tool, Apigee, and Qlik. The CONTRACTOR will work with the CONSORTIUM to identify the remaining seventeen (17) enterprise applications that will be onboarded onto the ForgeRock platform. The CONTRACTOR will perform the following activities for each of the twenty (20) onboarded applications:

- The CONTRACTOR will manage the application inventory that consists of application meta-data.
- The CONTRACTOR will work directly with application owners through the application onboarding process. Application owners will be responsible for participating in design and requirements gathering sessions with CONTRACTOR as part of the application onboarding process.

Each application onboarded will consist of the following ForgeRock enterprise features: authentication, role lifecycle management, user management, user migration, and user lifecycle management. CONTRACTOR will implement up to ten (10) monitoring dashboards to support the twenty (20) above mentioned applications.

#### **2.1.4 Subtask: API Security – Secure Data Access**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability for non-Consortium applications and clients (e.g. County-hosted applications) to securely access data through application programming interfaces (“APIs”).

This feature for secure data access will leverage the following existing solutions:

- OAuth authorization server;
- Partner application API onboarding process;

#### **2.1.5 Subtask: Session Management & Single Sign-on**

The CONTRACTOR will design, build, test, and implement an enterprise feature for Session Management and Single Sign-on. Session Management and Single Sign-on would provide a user with a single set of credentials for the LRS/CalSAWS System and the user would be able to sign into the LRS/ CalSAWS System and another onboarded application simultaneously using that single set of credentials.

This enterprise feature will include the following:

- This feature will be delivered through the enablement of applications (when applicable) to refer to ForgeRock for session information.

- A single set of credentials for access to applications already onboarded onto the ForgeRock IAM Enterprise Enablement Solution will also be enabled.
- This feature will enable onboarded applications to integrate with ForgeRock through Open Authorization (OAuth2), Open ID Connect (OIDC), and security assertion markup language (SAML).
- The CONTRACTOR will enable an enterprise service capable of passing system-to-system authorization information.
- The CONTRACTOR will enable an enterprise service capable of passing user-to-system authorization information.

#### **2.1.6 Subtask: Identity Provisioning**

The CONTRACTOR will design, build, test and implement the ability for the ForgeRock IAM Enterprise Enablement Solution to provision identities in backend applications through the enablement of the connector for the ForgeRock software's System for Cross-Domain Identity Management ("SCIM"). This feature will also enable the ForgeRock IAM Enterprise Enablement Solution to provision identities in downstream systems from ForgeRock, including Active Directory. The CONTRACTOR will perform the following tasks:

- Define a page within the ForgeRock application for authorized viewing and modification of user identities and IAM information such as attributes and roles
- Define a page within the ForgeRock application for new user onboarding with the ability to intake and process new CalSAWS users for "Day 1" (i.e. a user's specified start date) access across five (5) non-custom systems.)
- Define up to seven (7) user identity types, including but not limited to the following, which may be modified as the design is confirmed:
  - CalSAWS County User ("County")

**CalSAWS**  
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- CalSAWS County Staff that are County personnel. To include personnel working in County offices, such as eligibility workers;
- CalSAWS Collaborator User (“CBO”)
  - CalSAWS non-Staff Collaborators that are aligned to the CalSAWS Counties or community-based organizations (“CBOs”);
- CalSAWS Consortium User (“Consortium”)
  - CalSAWS Consortium Staff that are assigned to one of the Consortium’s projects (e.g. C-IV, LRS, CalSAWS DD&I) and not assigned to a role within one of the CalSAWS Counties;
- CalSAWS Contractor or Vendor User (“Vendor”)
  - CalSAWS Consortium’s vendors that are contracted to perform work for one of the Consortium’s existing projects (e.g. C-IV, LRS, CalSAWS DD&I);
- CalSAWS External Customer Users (“Customers”)
  - CalSAWS External/Customer Users are beneficiaries or other persons whose relationship to CalSAWS is as a citizen/member of the public;
- CalSAWS Statewide Users (“Statewide”)
  - Enterprise users who are non-county/statewide, e.g. Statewide agency users;
- CalSAWS Special Accounts (“Special Accounts”)
  - Users who require special access to systems and do not fall under any of the other user types. These can be oversight or



audit agency users needing special and/or confidential access;

#### **2.1.7 Subtask: User Access Request Portal**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability for users to request access to ForgeRock-onboarded applications through a user interface for application access requests. This feature would also enable an approval process for access requests and provide the ability to track such requests.

The CONTRACTOR will configure access request approval workflows, enabling the routing of user-submitted access requests to the appropriate approvers.

#### **2.1.8 Subtask: User Access Review Portal**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability for managers and other administrator users to review existing user access via access review email campaigns. This feature would provide a user interface for reviewing and taking action on user access, and the ability to certify or revoke user access. The CONSORTIUM will be responsible for defining the frequency of the access review campaigns and the escalation process for incomplete access reviews by administrator users.

#### **2.1.9 Subtask: Identity Reporting & Analytics**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability to perform identity reporting and analytics through identity audit reporting and analytics, managed data reporting and analytics, and identity notifications, inclusive of the creation of five (5) identity reports. This feature for identity reporting and analytics would be used by administrators on the CalSAWS Project and would leverage existing reporting functionality within the ForgeRock software.

#### **2.1.10 Subtask: Change Management Support**

The CONTRACTOR will develop up to five (5) job aids on the ForgeRock IAM Enterprise Enablement Project across end user-facing functionalities (e.g. self-service, Delegated Administration, etc.). These five (5) job aids will be used by the CONSORTIUM to train the enterprise end user to use certain features of the ForgeRock application. The job aids to be created will include the following:

- One (1) job aid regarding the Delegated Administration feature
- One (1) job aid regarding the Application Dashboard feature
- One (1) job aid regarding Foundational User Self-service
- One (1) job aid regarding the User Access Request Portal
- One (1) job aid regarding the User Access Review Portal

The CONSORTIUM will be responsible for performing functional peer reviews for the job aids prior to their deployment into the CalSAWS System's online help application.

### **2.2 TASK 2: CALSAWS IAM PUBLIC PORTAL FEATURES**

The CONTRACTOR will design, build, test and implement certain features within the ForgeRock IAM Enterprise Enablement Solution to support the CONSORTIUM's Statewide self-service portal (BenefitsCal). The enterprise features that would support the Statewide self-service portal include external user access, user registration, enhanced user self-service, lifecycle management, relationship management, and enhanced authentication and authorization, which are further described below.

#### **2.2.1 Subtask: External User Access**

The CONTRACTOR will work with the CONSORTIUM to enable ForgeRock services for performing IAM functions for external/public user identities.

CONTRACTOR will leverage the ForgeRock software's existing Consumer Identity and Access Management ("CIAM") model to enable IAM functions for external/public user identities. This model will enable identities to be created via the Statewide self-service portal to be used across CONSORTIUM applications that use a unique identifier.

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the following components to allow the ForgeRock IAM Enterprise Enablement Solution to manage authentication and authorization for external users into the Statewide self-service portal application:

- External user data object classes
- External user data management Create-Read-Update-Disable ("CRUD") APIs
- Multi-factor authentication ("MFA")
- External user login experience

### **2.2.2 Subtask: User Registration**

The CONTRACTOR will work with the CONSORTIUM to design, build, test, and implement a self-service feature within the ForgeRock IAM Enterprise Enablement Solution that would allow users to self-register for access to the Statewide self-service portal. The User Registration feature will include self-service registration utilizing user information, the creation of identity objects in ForgeRock, enablement of registration to be available via ForgeRock's user interface, and enablement of registration to be available via the ForgeRock API.

### **2.2.3 Subtask: Enhanced User Self-Service**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement enhanced self-service features for public users of the Statewide self-service portal, including the following:

- Self-service password reset

- Self-service forgot username
- Self-service registration
- Self-service multi-factor validation
- Self-service knowledge-based article

#### **2.2.4 Subtask: Lifecycle Management**

The CONTRACTOR will work with the Consortium to design, build, test and implement a lifecycle management feature that would provide the public users of the Statewide self-service portal with self-service functions for managing a user identity from creation through deactivation. This includes the following functions for public portal identities:

- User creation
- User updates
- User lockout
- User deactivation

The above-mentioned functions for the Lifecycle Management feature will be based upon existing capabilities of the ForgeRock software. To enable the Lifecycle Management feature, CONTRACTOR will leverage existing APIs.

#### **2.2.5 Subtask: Relationship Management**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability to maintain object-to-object relationships relating to public portal identities.

This relationship management feature will cover the following use cases:

- Identity data modeling for public portal identities, roles, and organizations
- Ability to read identity data, including relationships, via APIs

### **2.2.6 Subtask: Enhanced Authentication and Authorization**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the following enhancements to the existing ForgeRock Authentication and Authorization functions:

- Multi-factor authentication
- Authentication via API
- Biometric authentication
- Step-up authentication
- Enhanced user journeys for authentication via API

## **2.3 TASK 3: CALSAWS IAM OCAT FEATURES**

CONTRACTOR will design, build, test, and implement certain features within the ForgeRock IAM Enterprise Enablement Solution to support the Consortium's Online CalWORKs Appraisal Tool ("OCAT") system. The enterprise features that would support the OCAT system include user self-service, API security, and lifecycle management, which are further described below.

### **2.3.1 Subtask: User Self-Service**

The CONTRACTOR will work with the CONSORTIUM to design, build, test, and implement a foundational self-service feature that would allow OCAT system users to reset their password via email validation.

### **2.3.2 Subtask: API Security**

The CONTRACTOR will work with the CONSORTIUM to design, build, test, and implement the ability to securely access data through APIs via the following means:

- OAuth authorization server
- Partner application API onboarding process

### **2.3.3 Subtask: Lifecycle Management**

The CONTRACTOR will work with the CONSORTIUM to design, build, test and implement the ability to manage a user identity from creation through deactivation. This feature will include the ability to perform the following functions for identities:

- User creation
- User updates
- User lockout
- User deactivation

The above-mentioned functions for the Lifecycle Management feature will be based upon existing capabilities of the ForgeRock software. To enable the Lifecycle Management feature, CONTRACTOR will leverage existing APIs.

### **2.3.4 Subtask: Environment Support**

The CONTRACTOR will support development and production environments for the ForgeRock IAM Enterprise Enablement Solution which are required for supporting the OCAT system. The scope of environment support will include the following:

- User issues
- Defects
- Environment availability
- Disaster recovery

## **2.4 TASK 4: CALSAWS IAM IDENTITY MIGRATION & RELEASE MANAGEMENT**

### **2.4.1 Subtask: IAM Agile Scrum Support**

The CONTRACTOR will utilize an agile and rapid software development lifecycle (“SDLC”) process for design, development, testing, and release cycles for features and fixes that will be implemented for the ForgeRock IAM Enterprise

Enablement Project. This agile SDLC process will follow scrum methodologies. CONTRACTOR will provide one part-time resource to support the agile SDLC process for the ForgeRock IAM Enterprise Enablement Project.

#### **2.4.2 Subtask: IAM Migration and Release Management**

The CONTRACTOR will create an IAM Migration Plan that will outline the process, approach, and timeline for completing the import of identity information such as users and roles into the ForgeRock platform. The CONTRACTOR will import identity data exported from the C-IV, LRS, and CalWIN systems' respective IAM systems into the ForgeRock IAM Enterprise Enablement Solution. The CONTRACTOR will perform the following tasks:

- Perform test imports to confirm methodology and finalize the IAM Migration Plan
- Build and test batch jobs for importing identities and their respective metadata

#### **2.4.3 Subtask: Post-implementation Production Support (Hypercare)**

The CONTRACTOR will provide two (2) weeks of post-implementation support following the production deployment of each release of enterprise features and each of the twenty (20) above-mentioned application onboardings. Post-implementation support will include defect triage, investigation, and remediation by the ForgeRock IAM Enterprise Enablement Project's development team.

### **2.5 TASK 5: CALSAWS IAM MAINTENANCE & OPERATIONS**

CONTRACTOR will provide Technical Infrastructure services for technology support and administration required for maintaining and operating the ForgeRock IAM Enterprise Enablement Solution, pursuant to tab '3. Recurring R&A Services' of Attachment 2 (ForgeRock IAM Enterprise Enablement Pricing Schedule). Staffing levels, hours, and rates for Technical Infrastructure services are defined in Attachment 2 (ForgeRock IAM Enterprise Enablement Pricing Schedule).

The tasks that will be performed by CONTRACTOR for maintenance and operations of the ForgeRock IAM Enterprise Enablement Solution are further described below.

### **2.5.1 Subtask: Monitoring & Incident Resolution**

CONTRACTOR will provide Maintenance and Operations services to monitor and support production and non-production ForgeRock environments. Maintenance and Operations services will be provided in a hybrid model that will be performed by CONTRACTOR staff located within the 50 United States and CONTRACTOR's Global Delivery Network ("GDN") locations. The scope of work the GDN will perform will be limited to the following:

- Monitor ForgeRock platform uptime and responsiveness against contracted performance requirements for the ForgeRock IAM Enterprise Enablement Solution as documented in Attachment 1 (Contractor Assumptions) to this SOW;
- Triage and troubleshoot help desk tickets assigned to the ForgeRock queue;
- Identify and correct ForgeRock data inconsistencies;
- Assist the ForgeRock IAM Enterprise Enablement Project's development team with applying ForgeRock software updates;
- Assist the ForgeRock IAM Enterprise Enablement Project's development team with applying configuration updates;

The GDN will provide services in support of the ForgeRock application only and will not have access to the data housed in any application integrated with the ForgeRock IAM Enterprise Enablement Solution, including eligibility/beneficiary information in the core CalSAWS application.



### **2.5.2 Subtask: Data Load & Remediation**

The CONTRACTOR will provide bulk data load and export support for identity data requests. The CONTRACTOR will identify and correct identity data inconsistencies present in existing and newly loaded data to prevent end user impact.

### **2.5.3 Subtask: Enhancements & Defect Fixes**

The CONTRACTOR will perform the following activities to support CalSAWS application changes for the ForgeRock IAM Enterprise Enablement Solution:

- Provide Level 3 support for the CalSAWS Application change for the ForgeRock IAM Enterprise Enablement Solution:
  - Troubleshoot and resolve tickets
  - Work with Level 1 support staff to coordinate the resolution of tickets
- Plan, document, and report the status of requests for modifications to the ForgeRock IAM Enterprise Enablement Solution via SCRs
- Design, build, test and deploy SCRs for the ForgeRock IAM Enterprise Enablement Project using the standard release management process documented in the LRS (CalSAWS) M&E Services Plan Deliverable

### **2.5.4 Subtask: Upgrades & Patching**

The CONTRACTOR shall perform regular patching and upgrades of the ForgeRock IAM Platform, to include:

- Security patching
- Minor version upgrades to enable ForgeRock product fixes
- Major version upgrades to enable ForgeRock enhancements and new features

## **3. ATTACHMENT 1 CONTRACTOR ASSUMPTIONS**

Attachment 1 attached hereto includes CONTRACTOR assumptions associated with the delivery, maintenance, and operations of the ForgeRock IAM Enterprise

Enablement Solution. CONTRACTOR's performance of the ForgeRock IAM Enterprise Enablement Project, at the pricing included in Attachment 2 (ForgeRock IAM Enterprise Enablement Pricing Schedules), is dependent on the assumptions in Attachment 1, this SOW, and the Base Agreement. In the event the assumptions are incomplete or inaccurate, the Parties will enter into an appropriate Amendment to the Base Agreement for such Work to address any incremental prices or timeline changes incurred by CONTRACTOR or in connection with such Work.

**4. ATTACHMENT 2 FORGEROCK IAM ENTERPRISE ENABLEMENT PRICING SCHEDULES**

Attachment 2, ForgeRock IAM Enterprise Enablement Pricing Schedules, attached hereto includes the CONTRACTOR payments for the ForgeRock IAM Enterprise Enablement Project. CONTRACTOR will invoice Work for recurring R&A Change Budget Services for maintenance and operations of the ForgeRock IAM Enterprise Enablement Solution on a time and materials basis. Actual hours worked for such services will be invoiced at contracted rates up to the maximum for each State Fiscal Year, as calculated in the ForgeRock IAM Enterprise Enablement Pricing Schedules. The hourly rates for Maintenance and Operations services are included in the ForgeRock IAM Enterprise Enablement Pricing Schedules.