



CARS Application Programming Interface (API)
Following are the draft requirements for the CARS API.

SECTION A – SYSTEM CHANGE REQUEST INFORMATION
SECTION A.3 – Change Request Description



CARS API Requirements

Following are the draft requirements for the software vendor API.

CR-06 – Application Programming Interface (API)		
SECTION A – SYSTEM CHANGE REQUEST INFORMATION		
SECTION A.3 – Change Request Description		
Related Project Requirements?		
The following baseline requirements are related to this Change Request.		
REQ ID	Category	Requirement Text
CARS-NF-1.1	Security	The solution must comply with SAM 5300 Information Security. See http://sam.dgs.ca.gov/default.htm
CARS-NF-1.2	Security	The solution must enforce security of all data in accordance with the SOS Information Security Office Data Security Categorization Standards (see SIMM 5305-A).
CARS-NF-1.3	Security	The solution must utilize role-based access authorization based on least privileged principle.
CARS-NF-1.4	Security	The solution must allow authorized SOS administrators to define the specific functions that can be performed by each role.
CARS-NF-1.5	Security	The solution must allow authorized SOS administrators to create new roles.
CARS-NF-1.6	Security	The solution must allow authorized SOS administrators to assign users to roles.
CARS-NF-1.7	Security	The solution must only display functions which the user is authorized to perform according to the assigned role.
CARS-NF-1.8	Security	The solution must allow SOS administrators to assign users only to roles for which they are authorized to administer.
CARS-NF-1.9	Security	The solution must log all creations of and updates to the data. The following information must be logged for each such change to the data: Data that was changed; Prior value of the data before the change (if applicable); Date and time of the change; and Source of the change (e.g. source IP address, automated process identifier, SOS user name, web user).
CARS-NF-1.1	Security	The public website must reside under the sos.ca.gov domain, except where the Secretary of State's office (SOS) authorizes a deviation.
CARS-NF-1.11	Security	The solution must receive and transmit data only using connections encrypted by Transport Layer Security (TLS) v1.2 or higher using authoritatively signed certificates.



CARS CR-API

CARS-NF-1.12	Security	The solution must store password information only as salted hashes using SHA-2 or greater.
CARS-NF-1.13	Security	The solution must produce all PDF documents in PDF/A format in accordance with standard: ANSI/AIIM/CGATS/ISO 19005-3:2012, Document Management – Electronic Document File Format for Long-Term Preservation – Part 3: Use of ISO 32000-1 with support for embedded files (PDF/A-3) based on PDF 1.7 (ISO 32000-1:2008).
CARS-NF-2.1	Interoperability	All solution interfaces with external systems must be implemented as RESTful web services except where the Secretary of State's office (SOS) authorizes a deviation.
CARS-NF-2.2	Interoperability	The solution must contain RESTful web services that support data exchange format e.g., XML, JSON for communication with other applications.
CARS-NF-2.3	Interoperability	All RESTful web services must be secured using a combination of OAuth2 and JSON web tokens except where the Secretary of State's office (SOS) authorizes a deviation. (See bidder's library for specific details).
CARS-NF-3.1	Maintainability	The system must handle all exceptions.
CARS-NF-3.2	Maintainability	The solution must provide dashboard(s) to authorized SOS staff to display system and application events.
CARS-NF-3.3	Maintainability	The solution must provide a real-time alert (e.g., email, Phone, SMS, etc.) to authorized SOS staff for system or application events.
CARS-NF-3.4	Maintainability	The solution must provide authorized SOS administrators the ability to configure the specific events for which alerts will be provided; for each event, the administrator(s) and/or staff who will receive an alert; and for each combination of event and administrator(s) or staff, the method of transmittal of the alert (e.g., email, phone, SMS, etc.).
CARS-NF-3.8	Maintainability	The solution components hosted in the SOS Data Center must utilize existing LAN/WAN capabilities of the agency.
CARS-NF-4.1	Availability	The solution must be capable of operating in more than a single cloud region.
CARS-NF-4.2	Availability	In the event of a failure of up to a complete region, the system must be 100 percent functional within five minutes.
CARS-NF-4.3	Availability	The solution must allow administrators to manually migrate system components or the entire system to a specified previously-configured region.



CARS CR-API

CARS-NF-4.4	Availability	The solution must remain on-line even if any single component is unavailable in a single region due to routine maintenance or failure.
CARS-NF-4.5	Availability	The solution must meet all performance requirements even if any single component is unavailable in a single region due to routine maintenance or failure.
CARS-NF-4.6	Availability	The solution architecture must be designed and configured in a fashion that allows the solution to be scalable in the Azure environment.
CARS-RQ-SR-0724	System Reports	The System shall allow PRD Staff the ability to generate and print a "certified" activity report.
CARS-RQ-FR-0128	Filer Registration	The System shall include an environment for and method for SOS testing of 3rd party system output to ensure compatibility with the standard data format.
CARS-RQ-FR-0130	Filer Registration	The System shall allow a Vendor/Service Provider to select the Filing Entity types for which it wishes to be certified.

The following baseline requirements are related to this Change Request and require modification.

REQ ID	Category	Requirement Text	Modified Requirement Text
CARS-RQ-FR-0129	Filer Registration	The System shall accept electronic submission of data from a certified Vendor/Service Provider on behalf of a filing entity.	The System shall accept electronic submission of data from a Vendor/Service Provider on behalf of a filing entity.
CARS-RQ-FD-0813	Filer Disclosures	The System shall accept a 3rd party file representing a registration or Activity Report only from a certified Vendor/Service Provider.	The System shall accept a 3rd party file representing a registration or Activity Report from a Vendor/Service Provider.

Description of Requested Change

The following requirements will be added to the RTM. The design, development and testing of the Application Programming Interface (API) will be incorporated in the current development schedule and the system will go live in December 2019 with an API. Team Perspecta will design, develop and test the API to meet the requirements below and will plan, support, coordinate and execute testing with the software vendors. This will include CAL-ACCESS environment readiness, creating test data for the vendors testing, initial data setup, system configuration, ongoing data setup, data refresh, testing, troubleshooting with the vendors and overall coordination support to the SOS Strike Team.

Requirement ID	Business Category	Requirement Description
CARS-RQ-AP-0821	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the following FPPC forms through a RESTFUL Application



CARS CR-API

		programming Interface (API): 470Short, 470Supplement, 615, 640, 690, 401, 635C, 425, 402, 461, 496, 460, 498, 645, 625, 630, 635, 497, 450, 511, 605, 606, and 607, as defined in the published CAL-ACCESS Vendor File Extensible Markup Language (XML) Schema Definition (XSD) specifications.
CARS-RQ-AP-0821-A	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 470Short through the API.
CARS-RQ-AP-0821-B	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 470Supplement through the API.
CARS-RQ-AP-0821-C	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 615 through the API.
CARS-RQ-AP-0821-D	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 640 through the API.
CARS-RQ-AP-0821-E	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 690 through the API.
CARS-RQ-AP-0821-F	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 401 through the API.
CARS-RQ-AP-0821-G	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 635C through the API.
CARS-RQ-AP-0821-H	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 425 through the API.
CARS-RQ-AP-0821-I	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 402 through the API.
CARS-RQ-AP-0821-J	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 461 through the API.



CARS CR-API

CARS-RQ-AP-0821-K	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 496 through the API.
CARS-RQ-AP-0821-L	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 460 through the API.
CARS-RQ-AP-0821-M	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 498 through the API.
CARS-RQ-AP-0821-N	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 645 through the API.
CARS-RQ-AP-0821-O	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 625 through the API.
CARS-RQ-AP-0821-P	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 630 through the API.
CARS-RQ-AP-0821-Q	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 635 through the API.
CARS-RQ-AP-0821-R	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 497 through the API.
CARS-RQ-AP-0821-S	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 450 through the API.
CARS-RQ-AP-0821-T	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 511 through the API.
CARS-RQ-AP-0821-U	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 605 through the API.
CARS-RQ-	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC



CARS CR-API

AP-0821-V		form 606 through the API.
CARS-RQ- AP-0821-X	API	The system shall allow authorized and authenticated users to electronically submit original and amended versions of the FPPC form 607 through the API.
CARS-RQ- AP-0822	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of the following FPPC forms through a RESTFUL Application programming Interface (API): 400, 410, 602, 603, 601, and 604, as defined in the published CAL-ACCESS Vendor File Extensible Markup Language (XML) Schema Definition (XSD) specifications.
CARS-RQ- AP-0822-A	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 400 through the API.
CARS-RQ- AP-0822-B	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 410 through the API.
CARS-RQ- AP-0822-C	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 602 through the API.
CARS-RQ- AP-0822-D	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 603 through the API.
CARS-RQ- AP-0822-E	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 601 through the API.
CARS-RQ- AP-0822-F	API	The system shall allow authorized and authenticated users to electronically submit only the amended versions of FPPC form 604 through the API.
CARS-RQ- AP-0823	API	The system shall allow an authorized and authenticated PRD administrator to add or remove the forms that the certified user is certified to file.
CARS-RQ- AP-0824	API	The system shall allow an authorized and authenticated user to electronically submit filing data through the API using only the form specifications that the user is certified to file.
CARS-RQ-	API	The system shall synchronously return success or failure error



CARS CR-API

AP-0825		code through the API.
CARS-RQ- AP-0826	API	Along with a success indicator, the system shall synchronously return a unique submission id, through the API.
CARS-RQ- AP-0827	API	The system shall asynchronously process filings received electronically and email success or error to the filer's registered primary and secondary email ids.
CARS-RQ- AP-0828	API	The system shall allow authorized and authenticated users to request the status message of an electronic submission by submission ID number through the API.
CARS-RQ- AP-0829	API	The system shall allow the authorized and authenticated users to request Portable Document File (PDF) forms for submitted filings through the API.
CARS-RQ- AP-0830	API	The system shall allow authorized and authenticated users to retrieve the current name, address and contact information for a filer based on the filer ID Number through the API.
CARS-RQ- AP-0831	API	The system shall allow authorized and authenticated users to submit forms through the API in a test mode which will process as other filings, but without committing data to the CAL-Access database.
CARS-RQ- AP-0832	API	The system shall allow authorized and authenticated users to amend forms through the API in a test mode which will process as other filings, but without committing data to the CAL-Access database.
CARS-RQ- AP-0833	API	The system shall asynchronously process test filings received electronically through the API and email success or error to the filer's registered primary and secondary email id.
CARS-RQ- AP-0834	API2	The system shall allow authorized and authenticated users to retrieve the full list of Candidates, along with the candidate IDs, and date registered for registrations in the last two (2) years, through the API.
CARS-RQ- AP-0835	API2	The system shall allow authorized and authenticated users to retrieve the full list of Measures, along with the measure IDs, and date registered for registrations in the last two (2) years, through the API.



CARS CR-API

CARS-RQ-AP-0836	API2	The system shall allow authorized and authenticated users to retrieve the full list of Committees, along with the committee IDs, and date registered for registrations in the last two (2) years, through the API.
CARS-RQ-AP-0837	API2	The system shall allow authorized and authenticated users to retrieve the full list of Lobbyists, along with the lobbyist IDs, and date registered for registrations in the last two (2) years, through the API.
CARS-RQ-AP-0838	API2	Using the Candidate ID, the system shall allow authorized and authenticated users to retrieve the full list of Contributors/Payees, Contributions and Expenditures and Lobbying topic through the API.
CARS-RQ-AP-0839	API2	Using the Committee ID, the system shall allow authorized and authenticated users to retrieve the full list of Contributors/Payees, Contributions and Expenditures and Lobbying topic through the API.
CARS-RQ-AP-0840	API2	Using the Lobbyist ID, the system shall allow authorized and authenticated users to retrieve the full list of Contributors/Payees, Contributions and Expenditures and Lobbying topic through the API.
CARS-RQ-AP-0841	API2	The system shall allow authorized and authenticated users to retrieve the full list of independent expenditure-only committees, along with the Committee IDs, and date registered for registrations in the last two (2) years, through the API.
CARS-RQ-AP-0842	API2	Using the Lobbyist IDs, the system shall allow authorized and authenticated users to retrieve lobbying firm and employer for a lobbyist, through the API.
CARS-RQ-AP-0843	API2	Using the Committee IDs, the system shall allow authorized and authenticated users to retrieve candidates and the candidate's committee information, through the API.
CARS-RQ-AP-0844	API2	Using the ID of the candidates, the system shall allow authorized and authenticated users to download the Top 10 contributor list, through the API.
CARS-RQ-AP-0845	API2	Using the ID of the committees, the system shall allow authorized and authenticated users to download the Top 10



CARS CR-API

		contributor list, through the API.
CARS-RQ-AP-0846	API2	Using the ID of the measures, the system shall allow authorized and authenticated users to download the Top 10 contributor list, through the API.
CARS-RQ-AP-0847	API2	Using the IDs of the candidates, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Spenders through the API.
CARS-RQ-AP-0848	API2	Using the IDs of the committees, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Spenders through the API.
CARS-RQ-AP-0849	API2	Using the IDs of the measures, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Spenders through the API.
CARS-RQ-AP-0850	API2	Using the IDs of the candidates, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Targets through the API.
CARS-RQ-AP-0851	API2	Using the IDs of the committees, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Targets through the API.
CARS-RQ-AP-0852	API2	Using the IDs of the measures, the system shall allow authorized and authenticated users to download the Top 10 Independent Expenditure Targets through the API.
CARS-RQ-AP-0853	API2	Using the IDs of the Lobbying employers, the system shall allow authorized and authenticated users to download the Top 10 Lobbying employers by spending through the API.
CARS-RQ-AP-0854	API2	Using a candidate's ID, the system shall allow authorized and authenticated users to download late contributions through the API.
CARS-RQ-AP-0855	API	The system shall be designed following Open Web Application Security Project (OWASP) best practices including but not limited to securing username, password, and user access authentication.
CARS-RQ-AP-0856	API	The Web API designed for the public and authorized and authenticated filings should follow the Representational State Transfer (REST) architecture.



CARS CR-API

CARS-RQ-AP-0857	API	The system shall allow an authorized and authenticated user to retrieve the reference data from the system for forms that can be submitted or amended through the API.
CARS-RQ-AP-0858	API	The system shall log and display all the filing API activities. (error, exception messages, stack, etc.)
CARS-RQ-AP-0859	API	The system shall utilize the Azure API Management (AAM) service hosted in the SOS Azure environment.
CARS-RQ-AP-0860	API	<p>The system shall provide a dashboard to allow SOS Admin to monitor the job log, filter the jobs by categories displaying the following minimal information:</p> <ul style="list-style-type: none">• Job ID,• File name,• Filer info (such like name, or id),• Unique submission id (or whatever is being used to identify a unique filing),• Job status (such like processing, successful, failed, terminated, email sent, etc.),• Time stamps (such like start time, end time, email time etc.)• Vendor name (ex. Netfile)• Vendor Software & Version
CARS-RQ-AP-0861	API	The system shall automatically terminate a job if the time has elapsed "5" minutes.
CARS-RQ-AP-0862	API	The system shall provide SOS Admin the ability to configure the number of minutes to elapse before automatically terminating the job.
CARS-RQ-AP-0863	API	The system shall roll back all transactions when a job is terminated.
CARS-RQ-AP-0864	API	The system shall provide SOS Admin the ability to manually terminate a job.
CARS-RQ-AP-0865	API	The system shall provide functionality to handle a "failed/terminated" job. The SOS Admin shall be able to see the root cause of failed/terminated jobs.
CARS-RQ-	API	The system shall provide SOS Admin the ability to restart a



CARS CR-API

AP-0866		failed/terminated job.
CARS-RQ- AP-0867	API	The system must allow concurrent filings using the API.
CARS-RQ- AP-0868	API	The system will apply the same validation rules applied to online file uploading(s) to API filing(s).
CARS-RQ- AP-0869	API	<p>The system response time upon completing the first level validation for file upload, either via API or online file uploading, shall be < 15 sec for file size <=40MB or <=150,000 records.</p> <p>Note: The first level validation rules are defined in the existing file uploading requirements. A “record” is one row in any tab in the Excel version of the form (for XML there’s a similar construct).</p>
CARS-RQ- AP-0870	API	The file (size >40MB or >150,000 records and <= 60MB or <=250,000 records) processing time (this time starts after the file is uploaded) shall be <= 90 seconds.
CARS-RQ- AP-0871	API	The system shall send an email to the filer once the file processing is done.
CARS-RQ- AP-0872	API	The system must accommodate three or more independent processing queues based upon the size of the file being uploaded (Small, Medium and Large).
CARS-RQ- AP-0873	API	The system shall allow authorized and authenticated users to retrieve a list of candidate(s), along with the candidate ID(s), and date registered for registration(s) in the last (2) years by a wildcard search on a candidate’s name, through the API.