**SMARTERAPP SPECIFICATION**

**for**

**ART STUDENT API**

Authored by

Fairway Technologies, Inc.

Updated

20 July 2016

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Revision Description | Author/Modifier | Date |
| 1.0 | Initial Release | Jeff Treuting (Fairway) | July 18, 2016 |

Table of Contents

Purpose 4

Student Data Dictionary 5

Data Model and Serialization 9

Data Exchange Protocol 10

# Purpose

The purpose of this document is to provide details on the ART Student API that allows student records to be created, updated, and deleted. This API is externally available and requires authentication via OAuth 2.0. Student data can be submitted individually or via job batches that are processed asynchronously.

This document describes the student data model, transport protocols and API endpoints available for managing students via this API hosted by the ART application.

# Student Data Dictionary

The following fields represent a student entity within the Administration and Registration Tools (ART) application. The Student API expects a student object to be represented as follows:

| **Field Name** | **Description** | **Accepable Values** | **Reference** |
| --- | --- | --- | --- |
| ssid | State-assigned student identifier (SSID) | MaxLength: 30 characters  REQUIRED |  |
| externalSsid | Alternative state-assigned student identifier. If a state chooses not to share its students’ SSIDs with consortium members, ART provides this number instead. | MaxLength: 50 characters  REQUIRED |  |
| stateAbbreviation | State in which the student attends school | Any two-letter state abbreviation plus the following: AA (Armed Forces Americas), AE (Armed Forces Africa, Canada, Europe and Mideast), AP (Armed Forces Pacific), TS (Test State), OT (Other)  MaxLength: 2 characters  REQUIRED |  |
| districtIdentifier | Identifier for the district related to the student | Alphanumeric characters of an existing district ID  MaxLength: 30 characters |  |
| institutionIdentifier | Identifier for the institution related to the student | Alphanumeric characters of an existing institution ID  MaxLength: 30 characters  REQUIRED |  |
| firstName | Student’s first name | MaxLength: 35 characters |  |
| lastName | Student’s last name | MaxLength: 35 characters |  |
| middleName | Student’s middle name | MaxLength: 35 characters |  |
| birthDate | Student’s birth date | Valid date formatted as YYYY-MM-DD  Must be earlier than the firstEntryDateIntoUsSchool field if it is provided |  |
| gradeLevelWhenAssessed | Student’s enrolled grade | IT, PR, PK, TK, KG, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, PS, UG  REQUIRED |  |
| sex | Student’s gender | Male, Female  REQUIRED |  |
| hispanicOrLatino | Hispanic ethnic flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| americanIndianOrAlaskaNative | American Indian/Alaskan Native race flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| asian | Asian race flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| blackOrAfricanAmerican | African American race flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| white | White race flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| nativeHawaiianOrPacificIsland | Native Hawaiian/Other Pacific Islander race flag | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| twoOrMoreRaces | A person having origins in any of more than one of the racial groups | Boolean: true, false (defaults to false if not provided)  At least one of the seven ethnicity flags is required to be set to true. |  |
| ideaIndicator | Student enrolled in IEP | Boolean: true, false  REQUIRED |  |
| lepStatus | Student identified as LEP | Boolean: true, false  REQUIRED |  |
| section504Status | Student with 504 plan | Boolean: true, false, null (represents Unknown) |  |
| disadvantageStatus | An indication that the student met the state’s criteria for classification as having an economic disadvantage | Boolean: true, false  REQUIRED |  |
| languageCode | Three-character code for the specific language or dialect that a person uses to communicate. | See CEDS Language Codes reference | <https://ceds.ed.gov/iso639-2LanguageCode.aspx> |
| migrantStatus | Persons who are, or whose parents or spouses are, migratory agricultural workers, including migratory dairy workers or migratory fishers, and who, in the preceding 36 months, in order to obtain, or accompany such parents or spouses, in order to obtain, temporary or seasonal employment in agricultural or fishing work (A) have moved from one LEA to another; (B) in a state that comprises a single LEA, have moved from one administrative area to another within such LEA; or (C) reside in an LEA of more than 15,000 square miles, and migrate a distance of 20 miles or more to a temporary residence to engage in a fishing activity. | Boolean: true, false (defaults to false if not provided) |  |
| firstEntryDateIntoUsSchool | The date of a student’s initial enrollment into a United States school | Valid date formatted as YYYY-MM-DD  Must be later than the birthDate field if it is provided |  |
| lepEntryDate | The date a student classified as limited English proficient entered the LEP program | Valid date formatted as YYYY-MM-DD |  |
| lepExitDate | The date a student classified as limited English proficient exited the LEP program |  |  |
| title3ProgramType | Title III Language Instruction Program Type | “DualLanguage” - Dual Language  “TwoWayImmersion” - Two-way immersion  “TransitionalBilingual” – Transitional bilingual  “DevelopmentalBilingual” – Developmental bilingual  “ShelteredEnglishInstruction” – Sheltered English instruction  “StructuredEnglishImmersion” – Structured English immersion  “SDAIE” – Specially designed academic instruction delivered in English  “ContentBasedESL” – Content-based ESL  “PullOutESL” – Pull-out ESL  “Other” - Other |  |
| primaryDisabilityType | The major or overriding disability condition hat best describes a student’s impairment | “AUT” – Autism  “DB” – Deaf-blindness  “DD” – Developmental delay  “EMN” – Emotional disturbance  “HI” – Hearing impairment  “ID” – Intellectual disability  “MD” – Multiple disabilities  “OI” – Orthopedic impairment  “OHI” – Other health impairment  “SLD” – Specific learning disability  “SLI” – Speech or language impairment  “TBI” – Traumatic brain injury  “VI” – Visual impairment |  |
| elpLevel | An indication of progress made by a student toward English proficiency | MaxLength: 20 characters |  |

# Data Model and Serialization

Student information is represented as a concrete data model serialized as JSON (<http://www.json.org>).

Below is an example of a JSON student record:

{

ssid: "ssid4",

stateAbbreviation: "CA",

institutionIdentifier: "DS9001",

districtIdentifier: "DISTRICT9",

firstName: "test",

lastName: "student",

middleName: null,

birthDate: "1999-01-02",

externalSsid: "essid4",

gradeLevelWhenAssessed: "04",

sex: "Male",

hispanicOrLatino: false,

americanIndianOrAlaskaNative: false,

asian: false,

blackOrAfricanAmerican: false,

white: false,

nativeHawaiianOrPacificIsland: false,

twoOrMoreRaces: true,

iDEAIndicator: false,

lepStatus: false,

section504Status: false,

disadvantageStatus: false,

languageCode: "spa",

migrantStatus: false,

firstEntryDateIntoUsSchool: "2000-03-02",

lepEntryDate: null,

lepExitDate: null,

title3ProgramType: null,

primaryDisabilityType: null,

elpLevel: “0”

}

# Data Exchange Protocol

| **Name** | **Description** |
| --- | --- |
| Protocol | HTTPS RESTful API |
| Authentication and Authorization | OAuth 2.0 |
| Base URL | https://*[ART\_BASE\_URL]*/ |

| **API Endpoint** | **HTTP Verb** | **Description** | **Body Content** | **Required Permissions** | **Responses** |
| --- | --- | --- | --- | --- | --- |
| /rest/external/student | POST | Student upsert performed. If the student exists based on the SSID and State Abbreviation, that student is updated, otherwise they are created. | Single student JSON object | Student Modify | 201: Student created successfully  204: Student updated successfully  401: Not authorized  400: Bad Request / Validation error  Note: The Location header includes the URL for retrieving the student information. |
| /rest/external/student/{stateCode}/{ssid} | DELETE | Deletes the student represented by the State Abbreviation and SSID | n/a | Student Modify | 204: Student deleted successfully  401: Not authorized  404: Student not found |
| /rest/external/student/{stateCode}/{ssid} | GET | Retrieve the student information represented by the State Abbreviation and SSID | n/a | Student Read | 200: Success  401: Not authorized  404: Student not found  Note: Student JSON is returned as the content. |
| /rest/external/student/{stateCode}/batch | POST | Submit a batch job of students to be inserted or updated for this particular State. | Array of student JSON objects | Student Modify | 202: Batch job accepted  400: Bad request  401: Not authorized  Note: The Location header returns the URL used to retrieve the batch progress information. |
| /rest/external/student/{stateCode}/batch | DELETE | Submit a batch job of students to be deleted for his particular State. | Array of JSON objects with the “ssid” and “stateCode” properties only | Student Modify | 202: Batch job accepted  400: Bad request  401: Not authorized  Note: The Location header returns the URL used to retrieve the batch progress information. |
| /rest/external/student/batch/{batchId} | GET | Retrieve progress information on a previously submitted batch. The URL needed to access this endpoint is returned from the Batch POST and DELETE endpoints via the Location header.  The data returned includes the number of students submitted, the number processed and any exceptions or validation errors that occurred during processing. | n/a | Student Read | 200: Success  401: Not authorized  404: Not found  Example response:  {  id: "578e6c34e4b01a4741ab321d",  percentComplete: 1,  numProcessed: 3,  numSubmitted: 3,  numSuccess: 2,  exceptions: [  {  errorMessage: "Grade level when assessed should be in IT, PR, PK, TK, KG, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, PS, UG\n",  ssid: "ssid2"  }  ],  submittedBy: "user@example.com",  submittedDate: "2016-07-19T18:06:44.160+0000",  updatedDate: "2016-07-19T18:06:44.681+0000",  stateCode: "CA",  upsert: true,  numExceptions: 1  } |