



WIDS Application Programming Interfaces (API)

Introduction

WIDS will offer and support Application Programming Interfaces which will allow clients to retrieve data directly from the WIDS database as well as perform a few very basic WIDS update functions.

APIs will typically be used by WIDS clients in one of two scenarios. In the first scenario data is pulled from WIDS and displayed on a client website or used to populate other data systems. In the second scenario WIDS data is updated from other data systems such as PeopleSoft. To support these scenarios, web-based services will be published that will allow WIDS clients to programmatically interact with the WIDS database. These services will be secured and will only be accessible using a private key that will be issued to WIDS clients.

While all services will be available over the web, the services that retrieve data will use a different approach than those that update information in the WIDS database. Retrieving data from WIDS will be supported via a Representational state transfer or REST data service

(http://en.wikipedia.org/wiki/Representational_state_transfer). REST services are very powerful in that they give the end client a lot of flexibility in the technologies they use and flexibility on how to present the data. REST services can be consumed by most all modern development languages and from web pages using JavaScript. While REST services can also be utilized to update the database that they pull data from, depending on implementation, there can be some issues with cross site scripting that can cause problems. Due to these concerns, actions that result in the WIDS database being updated are implemented using a more traditional XML Web Service (http://en.wikipedia.org/wiki/Web_service).

SOAP – Data Upload

This document details the API's available for SOAP data creation and/or updates. To get access to the service definition and proxy objects you will need to add a service reference to your application. The service can be found at <http://api.wids.org/WidsService/SOAP> and should be used for creating this reference.

Intended Audience

This document is intended for the IT professional(s) that will implement the APIs. It is expected that the reader is familiar with writing scripts or programs to consume web services.

Table of Contents

WIDS Application Programming Interfaces (API)	1
Introduction	1
SOAP – Data Upload	1
Intended Audience	1
Summary of WIDS APIs and Data Transaction Objects (DTOs).....	3
API Calls	3
API DTOs and Messages.....	5

Summary of WIDS APIs and Data Transaction Objects (DTOs)

Course DTOs

- Course
- Textbook

Project DTO

- Project

Program DTOs

- Program
- Job Title
- Program Course

Site DTOs

- Subunit
- Unit
- User

APIs

- SaveCourse
- SaveProgram
- SaveUnit
- SaveUser

API Calls

SaveUnit	
Interface:	
Description:	Create and/or update a unit and/or subunit(s)
Inputs:	SaveUnitRequest
Outputs:	SaveUnitResponse

SaveUser	
Interface:	
Description:	Create and/or update a user.
Inputs:	SaveUserRequest
Outputs:	SaveUserReponse

SaveCourse	
Interface:	

Description:	Create and/or update a course and/or textbooks
Inputs:	SaveCourseRequest
Outputs:	SaveCourseResponse

SaveProgram	
Interface:	
Description:	Create and/or update a program and/or child course
Inputs:	Username, School ID, Org Subunit ID, Program Number, Program Title, Instructional Areal, Description, Career Cluster, Instructional Level, Entry Requirements, Target Population, CIP Code, Mission Statement, Accreditation Statement, Program Director
Inputs for Course:	See Save Course Request API for details
Outputs:	SaveProgramResponse
Example:	

API DTOs and Messages

Object Name:	SaveUnitRequest	
Fields:	DTO UnitDTO	See UnitDTO for details
	List <DTO> SubunitDTO	See SubunitDTO for details

Object Name:	SaveUnitResponse	
Fields:	Integer Code	Internal error code
	String ErrorMessage	Textual description for the error

Object Name:	UnitDTO	
Fields:	String Name	Name of the unit
	String Description	Description of the unit
	String MissionStatement	Mission Statement of the unit
	String SchoolSystemID	School system unique id for the unit
	List <DTO> SubUnitDTO	See SubUnitDTO for details

Object Name:	SubUnitDTO	
Fields:	String UnitID	WIDS unique id for the unit
	String Name	Name of the subunit
	String Description	Description of the subunit
	String MissionStatement	Mission Statement of the subunit
	String SchoolSystemID	School system unique id for the unit

Object Name:	SaveUserRequest	
Fields:	DTO UserDTO	See UserDTO for details

Object Name:	SaveUserResponse	
Fields:	Integer Code	Internal error code
	String ErrorMessage	Textual description for the error

Object Name:	UserDTO	
Fields:	String LastName	Last name of the user
	String FirstName	First name of the user
	String Title	Title of the user
	String Department	Department to which the user belongs

	String UserName	
	String EmailAddress	Email address of the user
	Boolean Disabled	Indicates if the user is active or disabled
	Boolean UseActiveDirectory	Indicates if the school uses AD
	Guid ObjectGuidAD	School active directory unique ID
	String SchoolSystemId	School system unique id for the unit

Object Name:	SaveCourseRequest	
Fields:	DTO CourseDTO	See CourseDTO for details
	List <DTO> TextbookDTO	See TextbookDTO for details

Object Name:	SaveCourseResponse	
Fields:	Integer Code	Internal error code
	String ErrorMessage	Textual description for the error

Object Name:	CourseDTO	
Fields:	String AlternativeTitle	COS/Course Information
	String SchoolSystemID	School system unique id for the unit
	Decimal TotalCredits	COS/Course Information
	Decimal TotalHours	COS/Course Information
	String TargetPopulation	COS/Target Population
	List <DTO> CourseTextbookDTO	See Course Textbook DTO for details
	String GradingRationale	COS/Grading Information
	String OrgSubUnitID	Unique id for the subunit
	String UnitID	Unique id for the unit
	String Title	Course title
	String Number	Course Number
	String Description	Course Description
	String InstructionalArea	
	String InstructionalLevel	
	String CareerCluster	

Object Name:	TextbookDTO	
Fields:	String SchoolSystemID	School system unique id for the textbook
	String TextbookDetail	
	String TextbookCitation	
	Integer SortOrder	Sort order for the textbook display

Object Name:	SaveProgramRequest	
Fields:	DTO ProgramDTO	See ProgramDTO for details
	List <DTO> JobTitleDTO	See JobTitleDTO for details
	DTO ProgramCourseDTO	See ProgramCourseDTO for details

Object Name:	SaveCourseResponse	
Fields:	Integer Code	Internal error code
	String ErrorMessage	Textual description for the error

Object Name:	ProgramDTO	
Fields:	String SchoolSystemId	Unique school system id for this program
	String CIPCode	
	String MissionStatement	
	String TargetPopulation	
	String AccreditationInfo	
	String ExternalRequirements	
	String EntryRequirements	
	List <DTO> JobTitles	List of associated job titles
	List <DTO> ProgramCourses	List of associated courses
	String OrgSubUnitID	Unique id for the subunit
	String UnitID	Unique id for the unit
	String Title	Program Title
	String Number	Program Number
	String Description	Program Description
	String InstructionalArea	
	String InstructionalLevel	
	String CareerCluster	

Object Name:	ProgramCourseDTO	
Fields:	Boolean IsChildCourse	Indicates if the course is a child course

Object Name:	JobTitle	
Fields:	String SchoolSystemId	Unique school system id for this program
	String JobTitleDescription	
	String JobTitleCode	