DATA INTEGRATION

Integration Methods

Smart Assessor has 4 methods allowing integration into Smart Assessor, each of these methods have both benefit and drawbacks. This document aims to look at each of these and provide a framework on deciding which solution best fits your organisation.

FTP - File Transfer Protocol

PICs API - Direct Interface from the PICs environment

API - Application program interface

Bridge Tool - Common Interface Technology

Only FTP & Bridge Tool are one way integration option, API and the PICs API are capable of inserting specific data back to MIS system from Smart Assessor.

Each of the tools can support a variety of datasets to provide input into Smart Assessor. The most common of these data sets are CSV (Comma Separated Values), XML (eXtensible Markup Language), Excel.

Applications such as the Bridge tool and the API functionality also can provide access to direct data through SQL views and JSON.

Two-way connection is often specific to individual client's system designs and configurations.

DATA INTEGRATION

File Transfer Protocol

Overview

Simple to setup and use, supports a variety of data types, CSV, Excel, XML. Any Qualifications not currently in the site that are referenced in the learner data are also automatically downloaded to the client site provided it exists in our current master qualifications. Any non-existing qualification must be requested through support.

Smart Apprentices Responsibilities

Smart Apprentices provides an environment and all documentation required to enable the import of 3 areas of data into the Smart Assessor Platform.

Employers - A record of the company itself. This holds key information on the Employer, however does not create an account for them.

Assessors - A record of the account for the Assessor to use.

Learners - A record of the account for the learner to access. This also contains qualification data (Course, Start/End dates and Status) for the learners.

Smart Apprentices will complete the following tasks as part of any implementation process:

- The option to set up secure FTP environment for automatic data transfer.

- Issue username and passwords required for access.

- Provide detailed documentation of the data requirements which shows mandatory and optional fields.

- Provide Example data templates to aid clients in creating correct data structure and format that the Data Importer allows.

- Provide technical help with validating the correct structure of all import types

DATA INTEGRATION

File Transfer Protocol

Client Responsibilities

As part of the implementation, the client is expected to provide an accurate data set of the following types: Employers, Assessors & Learners.

As data owners, the method for creating these data sets is solely the responsibility of the client.

- The frequency and method for data to be uploaded to the Import area is also solely the responsibility of the client (Smart Apprentices will assist in any technical or operational issues with using the Secure FTP area).

- Clients are all expected to arrange for any client site configurations for firewalls etc required to enable the use of Secure FTP file transfers to be changed.

- The client data must match the specification issued as part of the detailed documentation provided by Smart Apprentices.

- Smart Assessor provides detailed logs of successful and unsuccessful imports, providing detailed error reports to highlight anomalies in the data. It is the responsibility of the client to correct any data before the next upload. Smart Assessor provide assistance on how to correct the errors in the documentation.

DATA INTEGRATION

Smart Assessor Bridge Tool

Overview

A sophisticated intermediary tool to allow the translation of 'flat' data sets as well as direct access database tools to import into the Smart Assessor Platform.

Smart Apprentices Responsibilities

Smart Apprentices provides an environment and all documentation required to enable the import of 4 areas of data into the Smart Assessor Platform.

Employers | Assessors | Learners | Learner Enrolment Data (Qualification Data)

The Bridge Tool splits data for Learners and their qualification data.
Smart Apprentices will complete the following tasks as part of any implementation process.

- Provide a copy of the latest Bridge Tool Software application.
- Issue latest version of application software including all installation instructions
- Issue username and passwords required for access.
- Provide detailed documentation of the data requirements
- Smart Assessor to provide, where possible, data structures to assist clients in building data sets (this is dependent on the MIS system used).
- Provide technical assistance with validating the correct structure of all import types.

Client Responsibilities

As part of the implementation, the client is expected to provide an accurate data set of the following types: 1) Employers 2) Assessors 3) Learners 4) Learner Course Information (Enrolment)

As data owners, the method for creating these data sets is solely the responsibility of the client.

Stage 1: Installing the Application

- NOTE: Administrator access will be required for full set up of the Bridge Tool.
- Install the bridge tool on the same location as the MIS database (which holds your student assessor records). Remote Desktop connection to the server might be necessary.

Stage 2: Setup and Configuration

- The Configuration file will need to be set up so the Bridge Tool can be linked to your Database.
- There are numerous sections within the CONFIG file that need to be set up.

Smart Assessor Bridge Tool

Stage 3: Creating the correct mapping between systems

Four mapping files are needed to map your specifically written database views into the Bridge tool. These mapping files link the fields in your views to the fields within Smart Assessor. Each file contains the data you can map in, to send over to Smart Assessor from your MIS system.

Four views will need to be created by your MIS team, the views that are needed surround information about the following:

Assessors | Employers | Learners | Qualifications attached to Learners (Enrolment)

Alternatively, CSV files can be created instead of the database views that sit in a location to be picked up by the Bridge Tool. Four CSV Files will be needed:

Assessors | Employers | Learners | Qualifications attached to Learners (Enrolment)

Stage 4: Use the Bridge Tool

Once all the mapping files have been correctly mapped to your data sets, the client is required to test the files 1-by-1 to make sure each file is working correctly in the following order:

Employers | Assessors | Learners | Qualifications attached to Learners (Enrolment)

- The frequency and method for data to be uploaded is also solely the responsibility of the client, which is set within the configuration file (Smart Apprentices will assist in any technical or operational issues with scheduling this).

- Clients are all expected to arrange for any client site configurations for firewalls etc required to enable the use of Bridge Tool to be changed.

- The client data must match the specification issued as part of the detailed documentation provided by Smart Apprentices.

- Smart Assessor provides detailed logs of successful and unsuccessful imports, providing detailed error reports to highlight anomalies in the data, it is the responsibility of the client to correct any data before the next upload.

DATA INTEGRATION

Application Program Interface API

Overview

The Smart Assessor API specifies how software components should interact between Smart Assessor and any External application. This is a more technical solution for users who have the capability to utilise this level of functionality in the form of using applications or building their own.

Datasets Available

Activity Assessment	Analytics
Assessor	Course CoreTypes
CourseType	Employer
Enrolment Forms	Evidence
EvidenceModule	Management Reports
LearningDifficulty	Master Quals - Requirement
Master Quals - Module	MasterQualsUnit
Master Quals - Unit	Task Evidence
TaskList	Task Module
TaskRequirement	Unit
Unit Core Types	

Smart Apprentices Responsibilities

Smart Apprentices provides an environment and all documentation required to enable the exposure of all available API end points.

Smart Apprentices will complete the following tasks as part of any implementation process:

- Provide a copy of the API capabilities through a swagger page.

- Provide a client unique API key for client development teams to use in the development of integration tools

- Provide technical help with validating the correct use of the APIs and the models of data that need to be passed

Client Responsibilities

- All client side development for use of the APIs is the responsibility of the client.

- All testing and deployment of client applications that use the API.

- Support for all aspects of the client development.

PICs Integration

Overview

In partnership with Pellcomp, Smart Apprentices has developed an integrated set of technologies which when enabled in both Smart Assessor and PICs allows for the seemless transfer of key data between the systems.

Enrolment Data

When enrolling or updating a single learner with Smart Assessor PICS will send the following details:

Learner Details | Surname | First name | Email Address | Date of Birth | Address | Telephone Number Mobile Number | ULN | Sex | Employer PICS ID | Employer Smart Assessor ID | Employer Name Employer Address | Employer Telephone.

Course Details

After enrolling or updating the learner in Smart Assessor, PICS sends the following course/ qualification details:

Qualification ID | Trainee identifier | Start Date | Expected end date | Status (CM if ended and achieved; EL if just ended; IT if not ended). | Assessor. Either the qualification assessor, if set, or the learner main adviser (from ILR-Additional).

Other Details

Employer and Assessors are automatically created as a result of transfer of Learner and Qualification Data. This creates accounts for Assessors to access and stores a record of Employer records. This does not create an account for the Employer.

Progression

Tracking of progression is also available from SA into PICs although this is a limited functionality providing only an overall progress position.

Reviews/Sessions

The PICS systems can create PICS 'Normal' reviews based on session data sent from SA. This is configurable to allow or prevent the import of sessions from Smart Assessor into PICS as Reviews Smart Assessor has multiple types of Session and we convert these to PICS 'Normal Reviews' when the session type are:

Formal Review | General Session | Induction Session | Telephone Session | Exam.

Matched reviews from Smart Assessor then create reviews in PICS with the following information only:

Review proposed date and time | Review Attended status (derived from Status of the session) | Review Actual date. | Review officer.

DATA INTEGRATION

PICs Integration

Client Responsibilities

Initial Setup

- Purchase of PICs Integration Module

- Contact Smart Assessor to arrange access between the systems.

- Purchase and enter new PICS licence, then enter Smart Assessor access and other configuration details to PICS.

- Synchronise your current qualifications and update employer and officer records in PICS.

- If Existing Smart Assessor Customer: Complete spreadsheet(s) to help match existing learner, employer and staff data as required.

- Give access permissions to the relevant staff.

Data Transfers

- Enter employer and staff records and ensure SA matches them.

- Enter all learners & qualifications initially to PICS, rather than direct to SA.

- Enrol/upload each learner separately from PICS to Smart Assessor, then maintain details in SA

- Use batch exchange process to transfer data subsequently between the two systems

- If qualifications are added after enrolment with SA they must be added to the learner in PICS first (so they can be uploaded in the next data exchange) rather than entered directly to SA.

- The data exchange does not download any qualifications added in SA to PICS. It will only update information for those items that it finds in PICS.

- Base Qualification Data must be re-synced prior to transfer of qualification data.

- No data is transferred for units.

All PICs support must be directed to PICs technical support mechanisms (support@pellcomp.co.uk)