



Education & Skills
Funding Agency

Funding Information System (FIS) User Guide

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Introduction

What does the Funding Information System (FIS) do?

The Funding Information System (FIS) is the Desktop Service application element of the Education and Skills Funding Agency's (ESFA) DCSS data collections system. It is not mandatory that FIS is used to prepare data files prior to submission to The Hub (Data Returns).

FIS can be used by data providers to do the following:

- validate Individualised Learner Record (ILR) data
- calculate funding and derived variables
- create a range of reports based on a set of ILR data.

How does FIS work?

FIS consists of a Framework application within which various component sets and resource data can be imported and then selected to give FIS its functionality for a specific funding year. The update process runs via an online update service and the selection of which Funding Year elements to use is driven by the user.

Data imported and validated through the Funding Information System is stored in the database on the user's machine. The user is responsible for the security of all data stored within their database.

The **component sets** contain application elements specific to a particular Funding Year such as procedures and reports. These appear under 'Procedures to Execute' in the FIS front-end screen.

The reference data **resource files** are lookup data sets for Learning Aims data, Provider data, postcode lookups and other data. These can be chosen through a dedicated selection screen - further details regarding this are available in the 'Selecting Collection year, Component Set and Reference Data' section of this document.

FIS also requires a SQL Express database to be installed, which it uses as a data store and transformation application. Note that this is installed as part of the FIS installation process.



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Functionality unique to FIS

Whilst the majority of the FIS functionality is available through The Hub (Data Returns), a small number of activities can only be carried out using FIS. These are:

- amalgamation of datasets
- export ILR data to Access database, Access database (flattened), or Comma Separated Value (CSV)

Accessing FIS

Please note that users do not need to install a new version of FIS for every academic year or re-register for FIS through the Hub. The existing installation will still work and present the user with available updates.

Users are required to accept a set of Terms and Conditions of use of the FIS, before navigating to the FIS download and installation link. This page appears on the Hub and then runs the installation via an internet connection. After installation, the management of FIS and its resource files is controlled by the user via the application's 'Check for Updates' functionality.

For full information on installing the FIS, please refer to the **FIS Installation Guide** which can be found on:

<https://www.gov.uk/government/publications/individualised-learner-record-ilr-check-that-data-is-accurate>

FIS Operating System compatibility

FIS is only intended to be installed on the following operating system environments:

- Microsoft Vista
- Microsoft Windows 7
- Microsoft Windows 8
- Microsoft Windows 10

FIS is a 32 bit application but it will operate in either a 32 bit or 64 bit environment.



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Prerequisite software

If not installed already, the following software is automatically invoked by the standard FIS installation process:

- SQL Express version2008r2,
- SQL Express version2012
FIS will work with either 32 bit or 64 bit versions
- .NET Framework 4.5

This software is mandatory in order for FIS to work correctly.



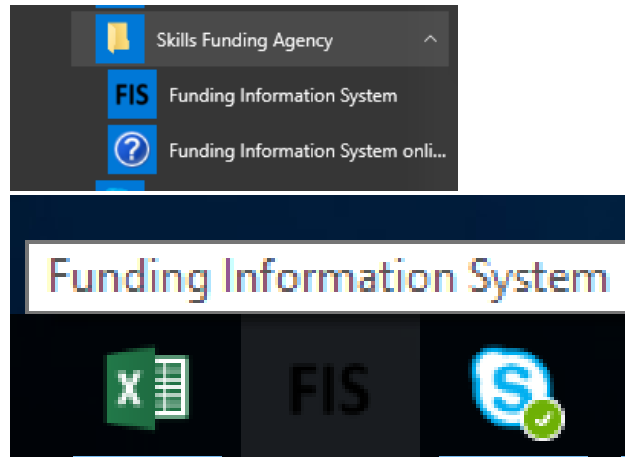
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How to use FIS

To operate FIS, follow the steps below –

1. Open FIS –

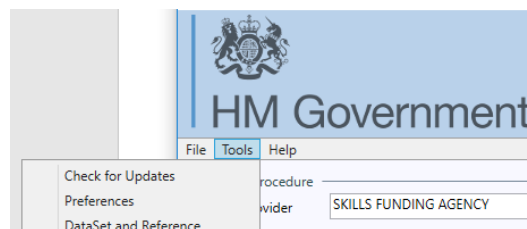
Once installed it will be available on your Start menu, users can manually add a shortcut link or pin to their taskbar.



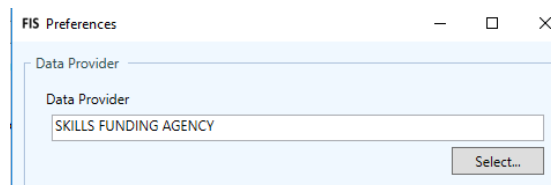
2. Select Data Provider (the user's organisation) –

This may have been selected during installation of FIS but if the Data Provider needs to be changed, select the required Data Provider by opening:

- Tools & then Preferences



- Under Data Provider – Select





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- If the Provider is listed here then select, else press Search to select a new Provider

The screenshot shows a dialog box titled "FIS Select Data Provider". It contains a list box with the text "Select a Data Provider from the list" and a single entry "SKILLS FUNDING AGENCY". Below the list box, there is a message: "If your desired Data Provider is not listed, click 'Search...'", followed by a "Search..." button. At the bottom of the dialog, there are "Save" and "Cancel" buttons.

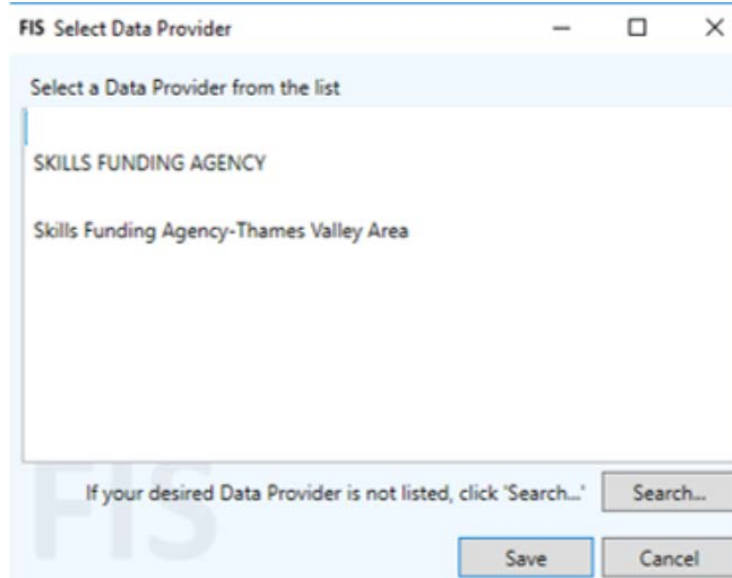
- Enter all or part of the Provider details press Search – a list of search results will be displayed, select the appropriate Provider

The screenshot shows a dialog box titled "FIS Data Provider Search". It has a "Search Criteria" section with two input fields: "Name" (containing "Skills Funding") and "Id" (empty). A "Search" button is located to the right of these fields. Below is a "Search Results" section with a list box containing several entries, including "Skills Funding Agency-Manchester Cheshire/Warrington and", "Skills Funding Agency-Thames Valley Area", "Skills Funding Agency-NATIONAL OFFICE(Direct Allocations)", "Skills Funding Agency-EAST MIDLANDS REGIONAL OFFICE", "Skills Funding Agency-South Central Area", "Skills Funding Agency-YORKSHIRE & HUMBER REGIONAL OF", "Skills Funding Agency-EAST MIDLANDS REGION", and "Skills Funding Agency-Yorkshire and the Humber Area". A message at the bottom of the list box states: "Your search returned 68 matches." At the bottom of the dialog, there are "Select" and "Cancel" buttons.

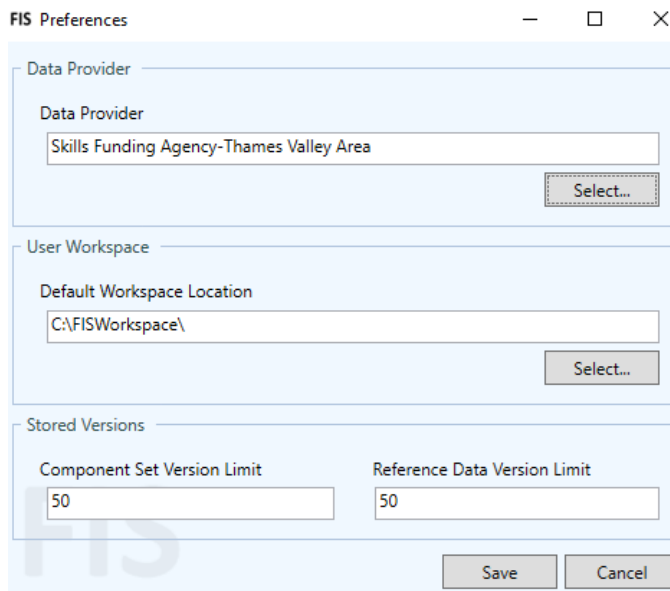


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- Save selection



- Save Preferences and Workplace Location



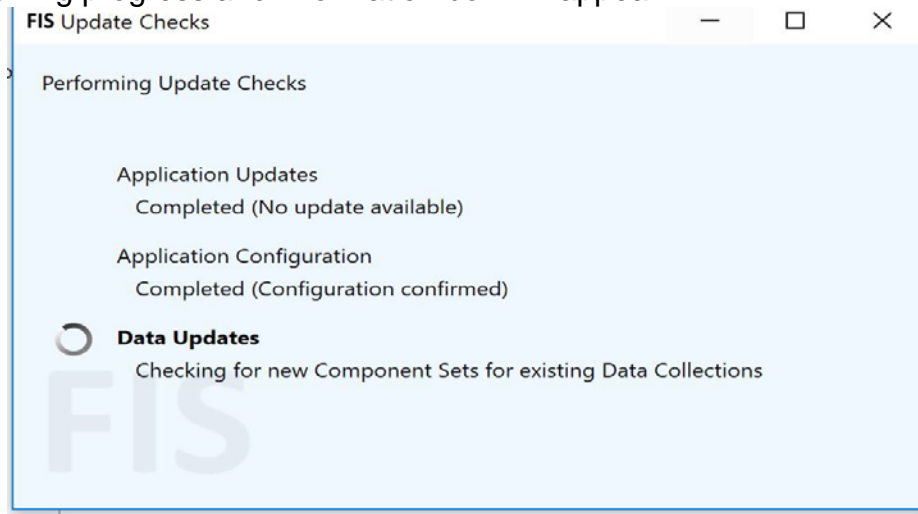


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3. Run Check for Updates

'Check for Updates' will run automatically when FIS is opened and it can be invoked by the user at any time to ensure that the correct Component Sets and Data Sets are downloaded. To invoke this, select 'Check for Updates' from the Tools menu.

The following progress and information box will appear:



The update checks look for changes to the application (framework), component sets and reference data sets. If updates are available, the user will be notified. As a general rule the latest versions should be used.

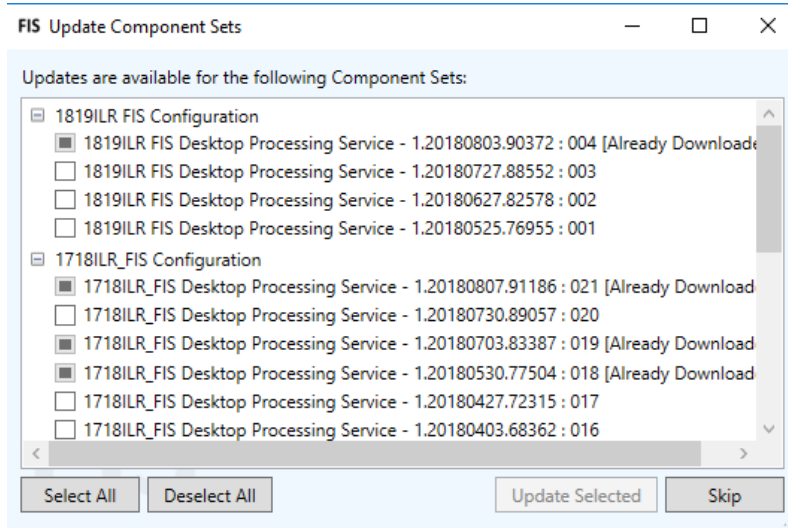
4. Update Component Sets

During 'Check for Updates' a range of available component sets will be displayed. Component Sets are normally updated on a monthly basis.

These will be split by Funding Year. To update at this stage, tick one or more of the relevant selection boxes and click 'Update Selected', otherwise click 'Skip'.



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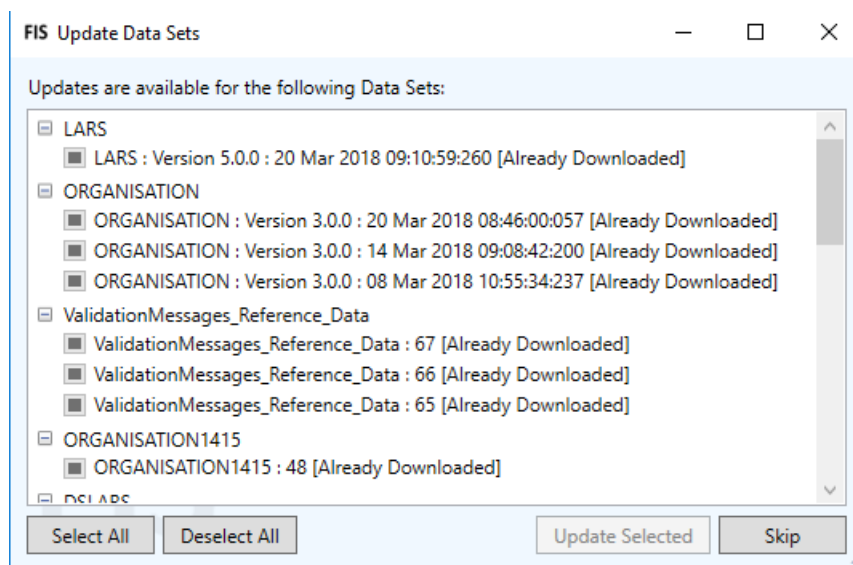


5. Update Data Sets

Next, new Data Set updates are checked for. These will be grouped by Data Set Type.

If the latest version of each Data Set is **not** already downloaded, select the latest versions and click 'Update Selected'.

If the latest versions are already downloaded, click 'Skip'. Unless there is a known issue with the latest data set, there is no need to download previous versions).





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Select Collection year, Component Set and Reference Data required

Under Tools there is a drop down menu called 'Data Set and Reference'.

When this is selected, the following box will appear. Selecting the collection year under 'Data Collection' will present Component Sets and Reference Data for that funding year.

When these have been selected, the versions will be displayed on the front screen of FIS.

The screenshot shows a window titled "FIS Data Set And Reference". It contains several dropdown menus for selecting data options. The "Data Collection" dropdown is highlighted with a red box and shows "1819_ILR FIS Configuration". Below it are other dropdowns for "Component Set", "Select Reference Data" (with sub-sections for CampusIdentifier_Reference_Data, CoFRemoval_Reference_Data, CollectionsCalendar, and LargeEmployers_Reference_Data), "LARS", "ORGANISATION", "PostcodeFactorsReferenceData", and "ValidationMessages_Reference_Data". At the bottom of the window are "Save" and "Cancel" buttons.

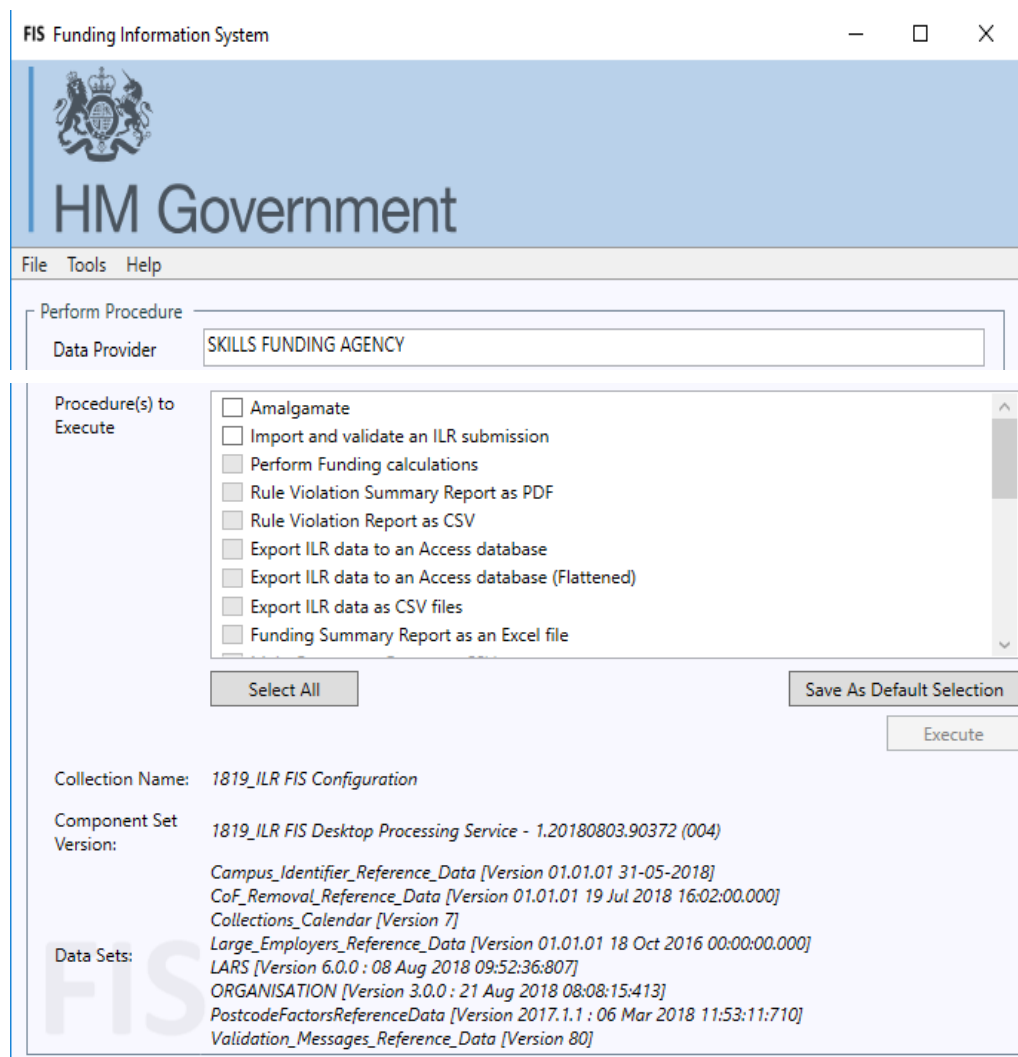


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Functionality

Running Procedures

Once FIS has been installed and the Data Provider, Data Collection, Component Set and Reference Data are selected, the next step is to choose from 'Procedure(s) to Execute', procedure(s) to run.



Selected procedures will run in sequence as shown from the top down. There are restrictions over which procedures can be run depending on their antecedent procedures.



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The procedures currently available in FIS for 2018 to 2019 are as follows:

Name	Description
Amalgamate	Function to convert multiple data files into one. This phase precedes Import and Validate because the later phases operate as if one data set has been imported.
Import and validate an ILR submission	Import single or multiple ILR data file(s).
Perform Funding calculations	Funding Calculations are invoked, applicable calculations are invoked automatically.
Rule Violation Summary Report as PDF	Report shows a summary of errors, the number of occurrences of each error and warnings for data which has conflicted with ILR validation rules. This will request filter criteria
Rule Violations Report as CSV	Report shows each error at learner level.
Export ILR data to an Access database	Exports imported ILR data and calculation results to an Access database MDB file. These are not an exact replica of the FIS SQL Express data tables
Export ILR data to an Access database (Flattened)	Exports imported ILR data and calculation results to a flattened Access database MDB file. These are not an exact replica of the FIS SQL Express data tables
Export ILR data to CSV	Exports ILR data tables which appear in the Access MDB file as individual CSV files to the 'Workspace' folder.



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Funding and Monitoring Reports currently available in 2018 to 2019

The formats of these reports are specified in the table for selection. Options vary between reports but may be:

CSV: exports an CSV format report to the user assigned 'Workplace' folder location

Excel: exports an Excel format report to the user assigned 'Workplace' folder location

PDF: exports a PDF file which can be viewed on screen or saved to the users assigned 'Workplace' folder location.

The following reports show the funding and monitoring results of the ILR file:

Name	Format(s)
Funding Summary Report	Excel
Main Occupancy Report	CSV
ALLB Occupancy Report	CSV
Career Learning Pilot Occupancy Report	CSV
Trailblazer Apprenticeships Occupancy Report	CSV
Trailblazer Apprenticeships Employer Incentives Report	CSV
Adult Funding Claim Report	Excel
Summary of Funding Model 35 Funding Report	PDF or CSV
Maths and English Report	CSV
High Needs Students Summary Report	PDF
High Needs Students Detail Report	CSV
16-19 Funding Claim Report	PDF
16-19 Summary of Funding by Student Report	CSV
CL Summary of Learners by Non-Single Budget Category Report	PDF
Apprenticeship Indicative Earnings Report	CSV



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How to run import and export procedures

Importing and validating an ILR submission

Click the following procedures on the home screen – ‘Import and validate an ILR submission’ and ‘Perform Funding Calculations’ – in this example, ‘Rule Violation Report as CSV’ has also been selected for reporting.

Click ‘Execute’ – please bear in mind that selecting all options on the list of procedures will significantly slow the process.

The screenshot shows the 'Perform Procedure' dialog box in the FIS Funding Information System. The window title is 'FIS Funding Information System'. The dialog has a menu bar with 'File', 'Tools', and 'Help'. The main content area is titled 'Perform Procedure' and contains the following elements:

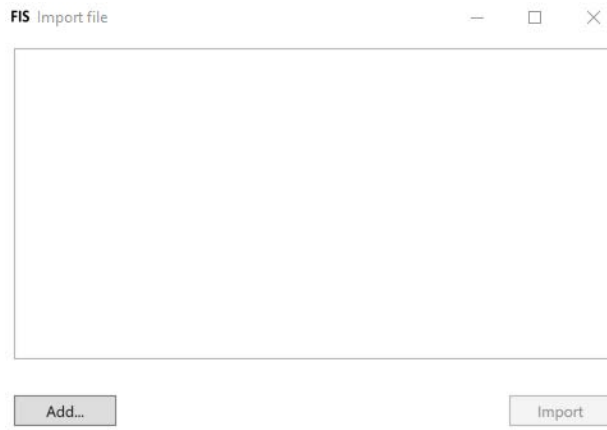
- Data Provider:** SKILLS FUNDING AGENCY
- Procedure(s) to Execute:** A list of procedures with checkboxes:
 - Amalgamate
 - Import and validate an ILR submission
 - Perform Funding calculations
 - Rule Violation Summary Report as PDF
 - Rule Violation Report as CSV
 - Export ILR data to an Access database
 - Export ILR data to an Access database (Flattened)
 - Export ILR data as CSV files
 - Funding Summary Report as an Excel file
 - Main Occupancy Report as CSV
- Buttons:** 'Select All', 'Save As Default Selection', and 'Execute'.
- Collection Name:** 1718_ILR_FIS Configuration
- Component Set Version:** 1718_ILR_FIS Desktop Processing Service - 1.20180403.68362 (016)
- Data Sets:** A list of data sets with their versions and timestamps:
 - Collections_Calendar [Version 6]
 - EFA_CoF_Removal_Reference_Data [Version 01.01.01 26 Mar 2018 14:24:00.000]
 - Large_Employers_Reference_Data [Version 01.01.01 18 Oct 2016 00:00:00.000]
 - LARS [Version 5.0.0 : 10 Apr 2018 08:43:15:333]
 - ORGANISATION [Version 3.0.0 : 11 Apr 2018 12:01:15:223]
 - PostcodeFactorsReferenceData [Version 2017.1.1 : 06 Mar 2018 11:53:11:710]
 - Validation_Messages_Reference_Data [Version 70]



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You will then be required to add the file – click on Add and browse for the ILR file.



Once the file has been added and 'Import' is selected, the validation will run. The 'Perform Funding Calculations' procedure applies Funding Calculation rules and Derived Variable Calculation rules to the imported data. The results generated by this procedure will be stored within FIS.

In the example a rule violation report in **CSV format** will also be processed.

Amalgamation of ILR files

Amalgamation allows users to combine valid data from two or more imported ILR data files in to one ILR data file. This allows users to combine data from different MIS systems.

Click Amalgamate on the main Home screen

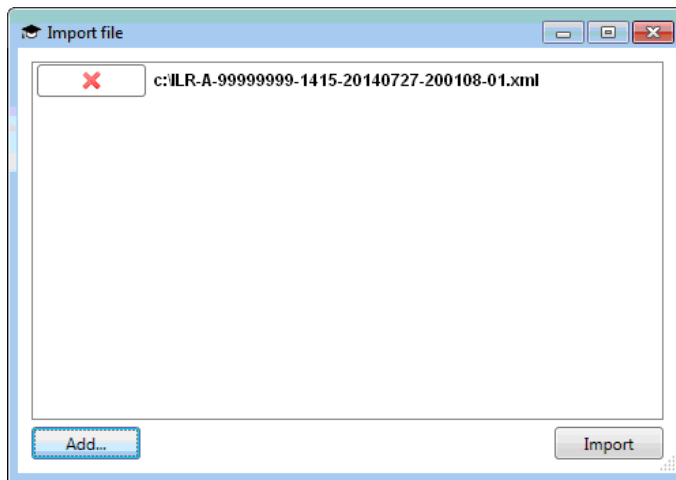
Click 'Add' to select a file to import. If an ILR file from the previous Funding Year is selected, the Funding Information System will perform a conversion process to update it to the current year. If you wish to amalgamate several files, click 'Add' again and select the next file (repeat for all files to be amalgamated).

Once the file list is complete, click on 'Import' to continue processing.

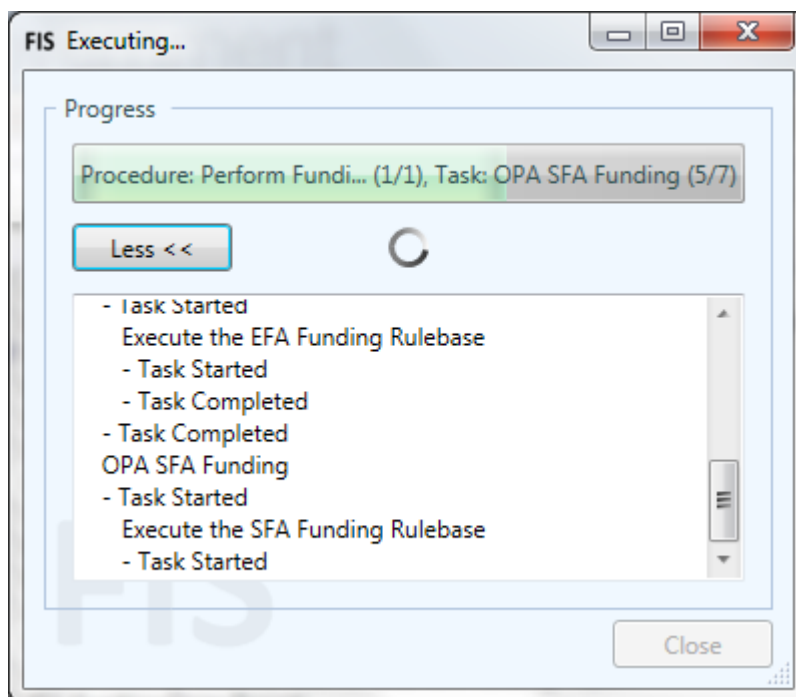
Please note: If the 'amalgamation' function is selected but only one file has been imported, you will not be able to proceed as the 'Import' button will be disabled.



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The Funding Information System displays a progress window with a progress bar that provides information on what tasks are completed. To see the task currently being executed click the 'More' button.



Further information regarding amalgamation is available in the **Funding Information System Amalgamation Guidance** document which can be found under:

<https://www.gov.uk/government/publications/individualised-learner-record-ilr-check-that-data-is-accurate>



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Using the procedures 'Export ILR Data to an Access Database'

This procedure will export tables and fields from the FIS internal database to an MS Access .mdb format file. This file can be created to support the use of third party software such as PDSAT. It will not be in a read only or access protected state. The data tables that it will be populated with will also enable the recreation of any validation, calculation and reporting process; this includes invalid data. The resulting file will be delivered to the folder selected under 'Workspace' on the FIS main screen.

Housekeeping

To ensure efficient operation of FIS there are some actions users may take. Below are some suggestions.

Managing the FIS data footprint size

Users are advised that over an extended period, FIS can accrue large amounts of reference and component set data. Some users may find this amount of data to be inconvenient and wish to remove it, at least partially.

There are three types of data file used within FIS that can be removed, these are:

- component sets
- component set databases which hold the calculation results and other data generated by the 'Rulebases' when ILR data files are processed
- Reference data databases which are the lookup data sets consumed by FIS such as Postcode data and Learning Aims data.

To reduce the amount of data stored by FIS the following activities can be performed:

1. Set the number of component sets and component and reference data databases that are retained by FIS.

The fields into which the number of component and reference data sets can be entered are in the FIS application framework under 'Tools\Preferences\Stored Versions'. FIS will retain only as many Component Sets, Component Reference Databases and Reference Data Databases as set under 'Component Set Version Limit' and/or 'Reference Data Version Limit' fields. The most recent are kept according to the version number in their file names. The default amount kept in both categories is 50 but can be set by the user to any number from 1 to 100. It will not remove ILR data files or any other data stored in the host environment. Please note that:



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- this will just clear all data to the limit;
- the number will need to be changed to accommodate further component sets and reference data sets;
- if certain historic component and reference data sets and results are still required then users can download those component and reference data sets and re-run their ILR data through FIS.

2. Delete Component Sets from FIS resource folders.

This is a manual deletion process performed using Windows Explorer. The Component Set files are found in "C:\Sandbox". For each component set, there is a database which contains calculation results for data run using each one. Deleting them will not automatically remove their accompanying Component Set databases from SQL Express resource folders; these will have to be removed separately and users are advised to follow the guidance covered below in point 3.

3. Remove Component Set databases and Reference data databases using SQL Server Management Studio (SSMS).

Guidance on how to do this can be found in the FIS Uninstallation Guidance document available from the following link: _

<https://www.gov.uk/government/publications/individualised-learner-record-ilr-check-that-data-is-accurate>

Reference data database naming convention begins "FIS_DATA..." and contains the version number and the date when it was downloaded. The resource files will also need to be removed from the SQL Express storage folders. Please make sure the right resource files are removed at this point.

4. Please note that just uninstalling FIS will not remove its resources; it will only remove the Framework application.

- **Option 1** will block delete all data to a chosen level
- **Options 2 and 3** enable users to remove selected component sets and reference data.

(If it is preferable that only certain component and reference data sets are removed then the methods in options 2 and 3 should be followed).



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Glossary

Term	Description
Component Set	A set of resource modules that contain data validation, funding calculation and derived variable calculation business rules. Used by FIS to generate enriched data based on the imported ILR data.
Reference Data Sets	<p>Tables of referential factors used by the component set business rule modules when generating values. In FIS these are:</p> <p>Campus Identifier Reference Data - Reference table that identifies at campus level data being delivered.</p> <p>CoF Removal Reference Data – Reference table that contains the funding that will be removed from providers in relation to their students who have not met the condition of funding.</p> <p>EFA CoF Removal Reference Data – Reference table that contains the funding that will be removed from providers in relation to their students who have not met the EFA condition of funding.</p> <p>Collection Calendar – Reference table that identifies the collection months</p> <p>Large Employers_ Reference Data – Reference table that identifies the ‘large employer’ status of organisations used in the ‘Employer_ID’ field of the imported ILR data.</p> <p>LARS – Learning Aims Reference (LARS) data</p> <p>Organisation – Factors assigned to each organisation for the purpose of funding calculation, used by the funding calculation business rules.</p> <p>PostcodeFactors ReferenceData – Area-cost and Disadvantage Uplift factors based upon Widening Participation indexes and Disadvantage uplift factors based upon Multiple Deprivation indexes UK geographical wards assigned to relative Post-codes.</p> <p>Validation Message Reference Data – Reference table listing the ILR validation rules.</p>



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Database Instance	A database entity, not the database application itself but a database file which holds all relevant data and structures for a particular model, in this case the FIS and it's Component Sets.
Default Selection	This functionality records which procedures are selected at the time and recalls those settings when FIS is opened.
Procedure	A discrete area of functionality selected by the user and called by FIS during an execution cycle. For example "Import, amalgamate and validate an ILR Submission" or "Perform Funding calculations". These can be run individually or in series, the sequence of procedures shown in the FIS front screen cannot be altered.
SQL Express	A free to download and distribute Relational Database Management System produced by Microsoft. This provides the back-end database to FIS.
SQL Express Management Studio	A set of GUI tools that can be installed alongside or with SQL Express to allow management of an SQL instance via script and graphical editors. This allows users to configure, manage and administrate the database.
Template	A set of activities that FIS will undertake recorded as an XML file and called during the Command Line functionality.
Workspace	The folder directory to which FIS outputs are sent during execution.



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Changes to this Document

Version	Date	Changes made
V1.0	20/05/2014	Initial version to support FIS for Funding Year 2014 – 2015.
V1.1	14/08/2014	Procedures available for 2014/15 updated
V1.2	23/03/2015	Data housekeeping advice and Data Provider selection advice added.
V1.3	12/04/2018	Windows 10 update and updated screenshots
V1.4	30/07/2018	Updated to 2018/19 funding year
V1.5	21/08/2018	Updated the Report listing, screenshots for 2018/19 and Glossary Data Sets
V1.6	23/08/2018	Updated the procedure description for Rule Violations Report as CSV
V1.7	28/08/2018	Updated to the Glossary for CoF and EFA CoF Removal Reference Data