



Fusion Registry® 9 Enterprise Edition

Release 9.4 New Features



Fusion Registry 9 Enterprise Edition is an integrated statistical data and metadata management solution for **official statistics** organisations needing to report, collect, integrate, exchange and disseminate using the SDMX standard.

For data scientists involved in **business analytics** and **econometrics**, Fusion Registry 9 can also be used to transparently integrate statistical data from any number of data stores, departments and operating units into a single virtual statistical data repository.

Fusion Registry 9.4 Enterprise Edition was released in January 2019 and includes a range of new features for creating and sharing data visualisations, converting data into different structures, synchronising structural metadata between environments and defining rules which describe between what observation dates items like codes are valid for.

Data Browsing and Visualisations

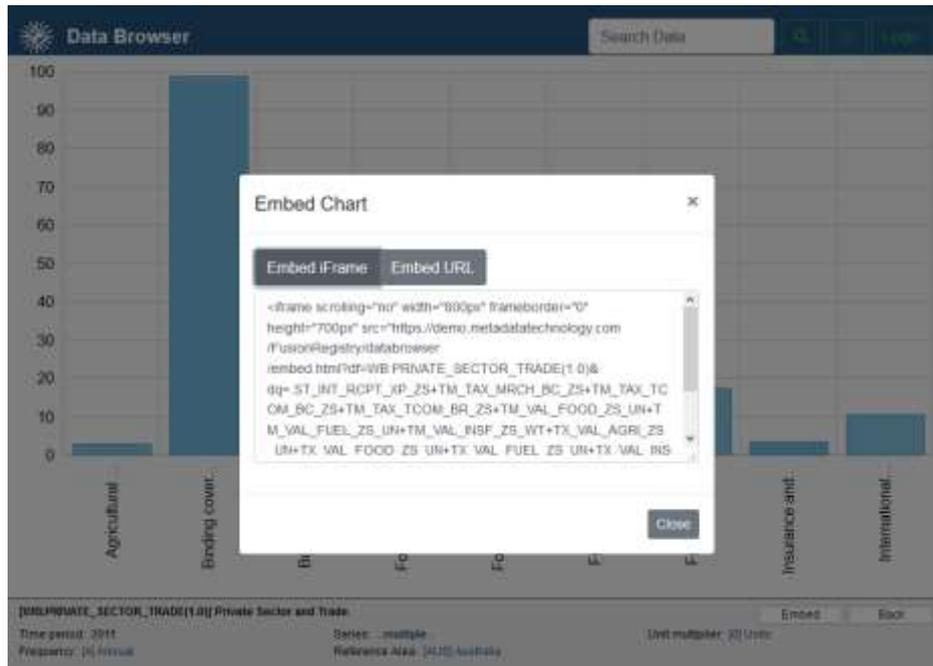
The built-in Fusion Data Browser now allows data consumers and analysts to visualise data using a range of charts and tables including:

- Interactive pivot table
- Time series line charts
- Bar charts
- Pie charts
- Pyramid charts
- Tree maps
- Radar charts
- Heat maps



Sharing Charts and Tables

Charts and tables created using the Fusion Data Browser can now be shared as URLs or embedded into websites and blog posts



The visualisations are live: users clicking on a link or viewing a web page with an embedded chart will always see the latest data.

Converting Data into Different Structures

Fusion Registry's 'Structure Mapping' function allows data sets to be converted from one structure to another either when the observation data is loaded, or dynamically when executing queries. Use cases include converting a data set into an alternative structure more suitable for public dissemination, and converting series with a single series code dimension into full multi-dimensional.

Fusion Registry 9.4 add some new ways to define these mapping rules:

Series Mapping

Series Mapping allows administrators to define rules which explicitly map one 'series key' to another. For instance, rules converting a simple two dimensional data set consisting of a series code and country into a multi dimensional structure may look like this:

Source Key	Target Key
BOP_LOC_AX1:DE	BOP:DE:PPM:_T:LOCAL:EUR:AX1
BOP_LOC_DF9:FR	BOP:FR:PPM:_T:LOCAL:EUR:DF9

Partial Code Mapping

Partial code mapping allows a dimension in the source data set to be mapped based on just part of the code. The main use case is where codes in source datasets carry multiple pieces of information – for instance: a code 'FR_EUR' may mean France and Euro currency.

In Fusion Registry 9.4, Substring and Regex expressions can be used to identify just part of the source code value.

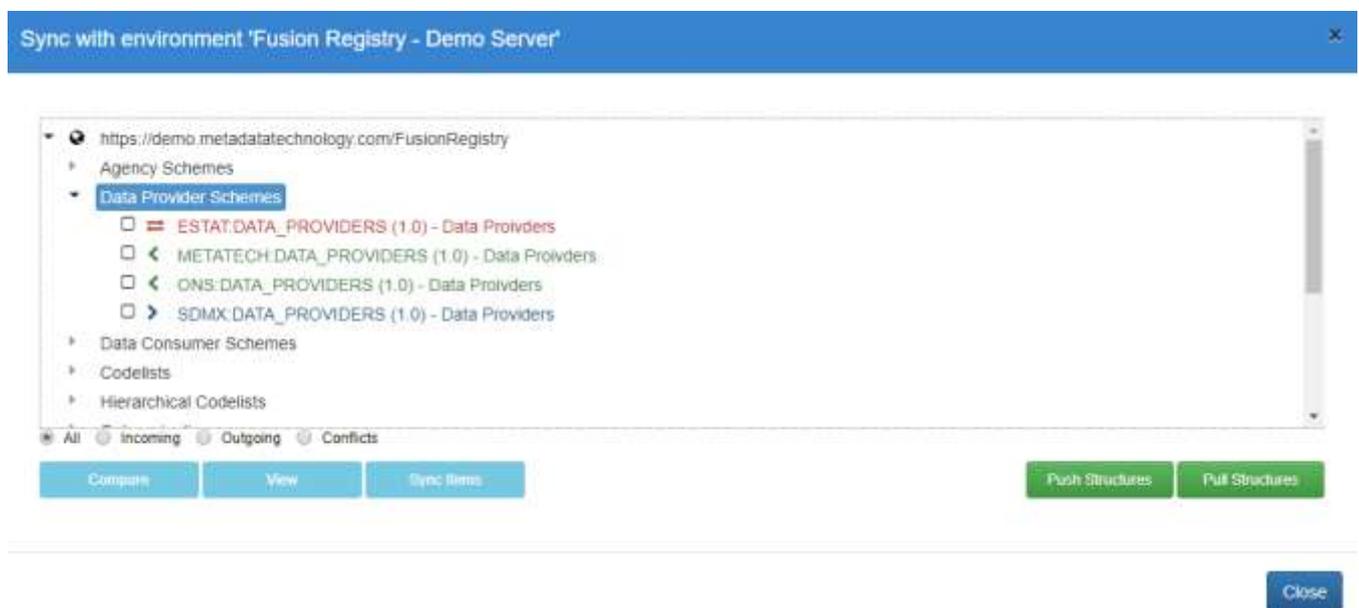
Here is a conceptual example using the FR_EUR code introduced above as the REGION dimension in the source data set mapped to the REF_AREA and CURRENCY dimensions in the target.

Source	Target
Left(REGION,2)=FR	REF_AREA=FR
Right(REGION,3)=EUR	CURRENCY=EURO

Synchronise Structural Metadata Between Environments

From release 9.4, the GUI includes a visual tool for synchronising structures between two Fusion Registry environments. This is particularly useful in installations where changes such as adding codes to a codelist tested in a non-production instance need to be pushed to 'live' in a controlled way.

While copying structures between environments has always been possible using the file export-import method, structure synchronisation simplifies and automates the process.



Key benefits:

- Examine all of the differences in the structural metadata content between the two Registries in a single view
- Easily identify content on the local environment that does not exist on the target (blue), content that exists on the target but not on the source (green) and collisions (red) where an artefact with the same ID exists on both source and target.
- Single button to push or pull structures from the target Registry.

Note that synchronisation of observation data is planned for a future release.

Item Validity

'Item Validity' allows structural metadata content managers to define a time period when an item such as a code is considered valid. A common use case involves country codes that are only valid between particular dates when the country was in 'existence'. The feature also supports the case where a code changes meaning over time.

Example:

The Gilbert and Ellice Islands had the ISO country code 'GE' until 1977 when they became the independent countries of Kiribati and Tuvalu. When Georgia gained independence from the former Soviet Union in 1991, the 'GE' code was reused. Item Validity now allows this logic to be described as part of the structural metadata.

In practical terms, Item Validity allows data with dimension codes that vary in meaning over time to be robustly validated and correctly disseminated.

Validation Observation data for country 'GE' and the time period '1970' must relate to the Gilbert and Ellice islands. Whereas observations for the same 'GE' code but for the period 2005 must relate to Georgia. Observations for country 'GE' during the period 1978 and 1990 will be rejected as invalid because the validity rule states that no country with that code existed between those dates.

Dissemination Visualisations showing observation data for country 'GE' and time period '1970' will use the code named 'Gilbert and Ellice'. When showing similar data for '2005', the Item Validity rules will mean that the code named 'Georgia' will be displayed.

In addition to codes, Item Validity can be applied to Concepts, Hierarchical Codes and code list maps which are used by the Fusion Registry Structure Mapping feature.