



Opening up data for discoverability and re-use

Information Sheet

Linked Data Solutions

Why Linked Data?

More and more organisations are choosing to 'open up' all or part of their data, making it available as Linked Data for others to use in 'mash-ups' or in applications. Organisations have varying motivations for making their content available as Linked Data. These range from

- Transparency – the government publish information in an open format
- Commercial motives such as offering free 'tasters' to increase usage of paid-for content
- Boosting visibility and ranking in search engines
- Open Access – promotes open and free access of published data to benefit research

How do you get Linked Data?

Whatever an organisation's motives for publishing Linked Data, there are processes to follow to transform content into RDF format and hold it in an RDF Store. Creating access points (APIs) helps content to be easily accessed by both computers and users. So, certain steps need to be taken and the technical infrastructure needs to exist for content to be transformed into Linked Data.

TSO is at the forefront of opening up data for organisations and has a wealth of expertise and technology solutions in this field. We are able to assist by providing a number of semantic services and a cost-effective platform for the storing and making Linked Data available. Our services include:

- Data modelling
- URI schemes
- RDF conversion
- API creation
- SPARQL endpoint set-up
- RDF data hosting
- Semantic enrichment

TSO's RDF Store

Part of our OpenUp® service, TSO's RDF Store is offered as a hosted solution and supports data publishers and developers in building the next generation of Semantic Web applications. It is built on 5Store, a highly scalable, clustered, commercial database storage and query engine. 5Store is designed and developed by our partner Garlik, leaders in semantic technology.

TSO's RDF Store provides

- A highly scalable and secure environment for hosting RDF data for re-use
- A number of standards-based data access and query options including SPARQL for easy integration with new and existing applications
- A software-as-a-service (SaaS) pricing model allowing fast deployment at a reasonable cost
- Scalability to more than 1,000 servers and storage of well over a trillion triples

Querying the TSO RDF Store

The data can be accessed either by sending a query to a SPARQL endpoint or using a Linked Data API. TSO can set-up the SPARQL endpoints and create the required APIs.

Performance

TSO's RDF Store is incredibly fast even on a single machine and with small clusters, it can handle over 200 million triples with import speeds of over 150 thousand triples per second on a single machine. The store can efficiently utilise large clusters, enabling it to maintain import and query speeds on enormous databases, given enough hardware.

5Store allows for thousands of simultaneous connections. It has very efficient storage, operating as low as 100 bytes per triple (depending on the type of data) and it supports dynamic configurable segmentation which is one of the design features that lets 5Store scale to such a large size.

Find out more

To find out more about TSO's Linked Data solutions, visit <http://openup.tso.co.uk>

To discuss your requirements with one of our experts please email opendata@tso.co.uk

TSO is an approved supplier on the Government Procurement Services Framework for Data Conversion and Migration Services and eDiscovery Solutions.

TSO has also been awarded a place on the Environmental Agency Framework for Building Capacity in the provision of Linked Data - this Framework will become available for other public sector bodies.

 Government Procurement Service

 Environment Agency