

Web Services with access to databases

OData Support in GeneXus

*GeneXus* 16

Next, we will see some GeneXus objects that are useful when encapsulating functionality and organizing the objects of our knowledge base.

What is OData?

 **OData**  
Open Data Protocol



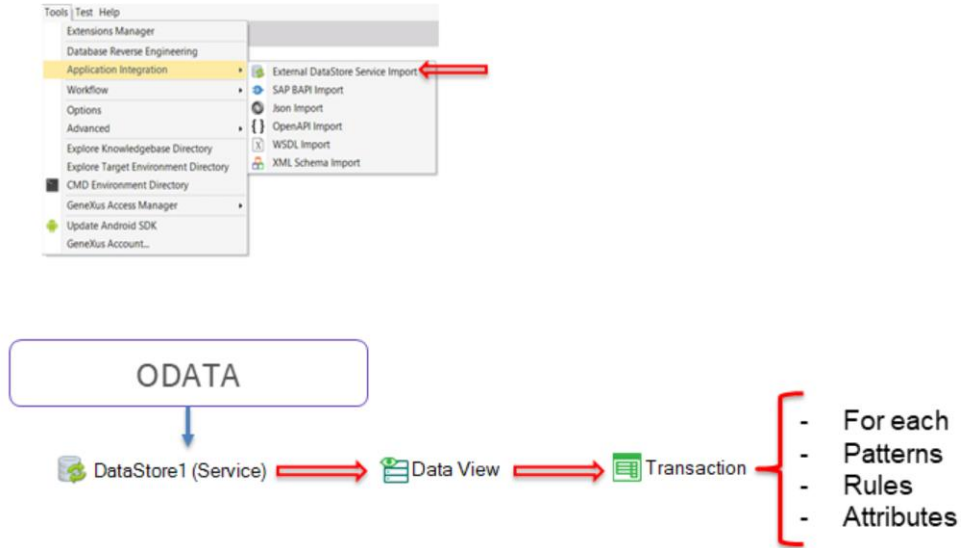
- Uniform representation of structured data with XML and JSON
- Standard URLs for data access (browsing, filtering, etc.)
- DB operations through actions: GET, POST, PUT and DELETE.

Open Data Protocol (OData), is a Microsoft-driven initiative for data exposure as a REST Service based on Internet standards such as HTTP, Atom/XML and JSON. It is the evolution of what was formerly known as ADO.NET.

It differs from other REST services in that it provides uniformity in describing data and data models. It is a flexible technology that allows for interoperability between data sources, applications, services and customers.

OData tries to implement the exposure of data, relational or not, through a Web Service running operations with a "standard" language based on the uniform representation of structured data through XML or JSON, the use of uniform URL conventions for data browsing, filtering, ordering and paging (among others), and the creation of uniform operations to the database, through the actions GET, POST, PUT and DELETE.

### Benefits of using OData in a GeneXus application

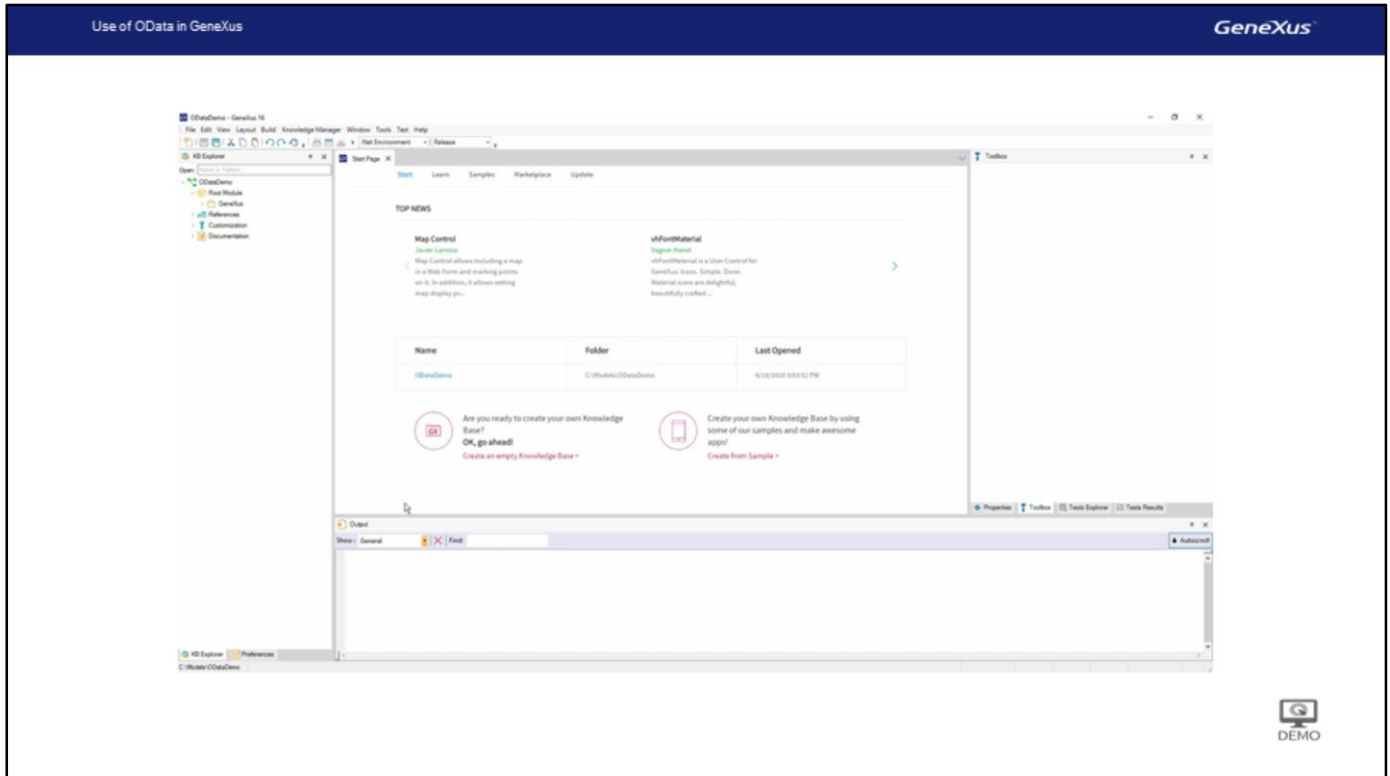


What are the benefits of incorporating OData into your GeneXus solutions?

When consuming a service that uses OData from a GeneXus solution, it is considered as another data store, and the entities exposed by the service are imported as transactions, which simplifies the way you work with the data, because it is possible to use For Each commands to run through the data, apply patterns to it or add business rules to transactions, drag attributes to a web panel, etc.

In this way, the consumed data can be used for any platform in which Web or SD development is being done, saving developers' time and effort, and increasing their productivity.

Next, we will see a small demo on how to consume Odata services and use them.



[ DEMO: <https://youtu.be/fzV9I6EKNWw> ]

And now I'm going to show you how to work with OData from GeneXus.

We have to go to Tools, Application Integration, External DataStore Service Import. Once you're here you open a window where you enter all the data necessary for the service. First you create a Data Store which we will call "ServiceTripPin".

This will be in charge of all the connections to the service. Then, we will add everything we want to consume, TripPin in this case. The passwords are used when the service requires authentication; it is not necessary here, and so we can add additional information and in this case we say it doesn't support string datatype comparators.

We click inspect once again. A window will be opened and we'll see what we have to export. By unchecking "Show only top level" there, we are shown all the activities of the service.

We're going to work with the main ones and GeneXus will be in charge of exporting the main at once to work with.

Once it's imported, the GeneXus entities are imported as transactions and data views, for instance, we go to the airline's transaction, we apply the pattern WorkWith and we save it.

Then we will create a procedure, "ChangeAirlinesName" which reads Airlines data and updates it. To that end, we'll use a "for each" and if the code starts with "A", it would add a prefix error.

We save it. Then we'll create a web panel called "AirlineChange" and from here we'll call the procedure.

In the web panel we have a button added to it, "Airline Change Name", then we go to the event linked to the button and we call "ChangeAirlinesName" and "WorkWithAirlines" (WWAirlines). We save and run.

Now we go here, Insert, we'll insert a new record "AU", "Airlines Uruguay" will be the name.

Then we go back to the developer menu, we go to the web panel we created and press the button for the procedure.

Once the procedure finishes, we are taken to "WorkWithAirlines" and there we'll see the airline name change.

More information about OData support in GeneXus:

<https://wiki.genexus.com/commwiki/servlet/wiki?40713>

To learn more about the use of OData services in GeneXus, click on the link displayed on the screen.

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