InterSystems IRIS Adaptive Analytics

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InterSystems IRIS Adaptive Analytics
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InterSystems IRIS Adaptive Analytics

1 Overview of InterSystems IRIS Adaptive Analytics

InterSystems IRIS® Adaptive Analytics is an optional extension that provides a business-oriented, virtual data model layer between InterSystems IRIS and popular Business Intelligence (BI) and Artificial Intelligence (AI) client tools. It includes an intuitive user interface for developing a data model in the form of *virtual cubes* where data can be organized, calculated measures consistently defined, and data fields clearly named. By having a centralized common data model, enterprises solve the problem of differing definitions and calculations to provide their end users with one consistent view of business metrics and data characterization.

Adaptive Analytics provides the following key features:

- The Adaptive Analytics modeler, which makes data accessible for business users without exposing complex data structures, tables, or relationships.
- Publication of data model changes as virtual cubes, preventing disruption caused by lengthy rebuilds.
- Unified access to an online analytical processing (OLAP) model via the BI tool of your choice.
- Live connectivity to all data stored within InterSystems IRIS.
- Automated data structure aggregation for frequently-used queries.

Adaptive Analytics is powered by AtScale®, a product of AtScale, Inc. For documentation of AtScale functionality, consult their official documentation. Note that only users licensed for InterSystems IRIS Adaptive Analytics can view this documentation.

2 Configuring InterSystems IRIS for Adaptive Analytics

The configuration instructions provided here will assume that you have already successfully installed InterSystems IRIS and configured your primary namespace and databases. If you have not done so, consult the instructions in the *InterSystems IRIS Installation Guide* and the Create/Modify a Namespace section of the *System Administration Guide*.

In order to leverage Adaptive Analytics *User-Defined Aggregate Functions* (UDAF), you must first import and register the UDAF class file available from the WRC with the following procedure:

1. Download the `AdaptiveUDAF.xml` file from the **Components** area of WRC Software Distribution.
2. On your Adaptive Analytics instance, log in to the Management Portal as a user with administrative privileges and ensure you are in your Adaptive Analytics namespace.
3. Navigate to **System Explorer** > **Classes** and click **Go**.
4. Click **Import**. In the modal window, select the **My Local Machine** option for the **The import file resides on** field and select the `AdaptiveUDAF.xml` file.
5. Check the **Compile imported items** box and set the **Compile flags** to `cuk`. Click **Import**.
6. Navigate to **System Explorer** > **SQL**. Execute the following command:

```
CALL AtScaleUDAF.Register()
```

7. To verify your configuration, navigate to **System Explorer** > **SQL** and execute the following query:

   ```
   SELECT ATSCALE_HONEYBEE_VERSION()
   ```

The configuration thus far will result in a system where aggregates are stored in the same database as source data. InterSystems strongly recommends separating aggregates so that they can be managed and assessed without needing to manually filter them from a more general data set. To separate aggregates from source data, perform the following steps:

1. Log into a Terminal session as a user with administrative privileges. Ensure you are in your Adaptive Analytics namespace.
2. Call the following command to configure your aggregate database and global mappings:

   ```
   write ##class(AtScaleUDAF.Utils).CreateDatabase("/<instancePath>/mgr/AtScale/")
   ```

   Where `<instancePath>` is the full path to your Adaptive Analytics instance.

3 Configuring AtScale for Adaptive Analytics

After configuring InterSystems IRIS, additional configuration is required for AtScale itself. This procedure must come after the configuration of InterSystems IRIS, and assumes that AtScale has already been installed. If you have not configured InterSystems IRIS, refer to the previous section for instructions. If you have not installed AtScale, refer to Installing Stand-Alone AtScale in the AtScale Documentation.

After you have configured InterSystems IRIS and installed AtScale, configure AtScale according to the procedure described in Adding InterSystems IRIS Data Warehouses.