XMLA Data Source

Yellowfin OLAP Cube Connectivity

Yellowfin can connect and report from pre-built cubes exposed via an XMLA connection. Yellowfin views can be based on a cube, enabling reports to be written using a similar process to Yellowfin reports based on a standard RDBMS. Yellowfin does not have the capability to generate cubes, however.

XML for Analysis (XMLA) is a standard protocol for accessing data from OLAP data sources. It is built on existing standards including XML, SOAP and HTTP.

This guide will briefly cover the connection process for XMLA data sources. The connection method is largely independent of the data source you are connecting to, but examples are provided for connecting to Microsoft Analysis Services, Mondrian and PALO sources.

Recommendations

OLAP connectivity is provided to give access to existing cube infrastructure that may exist at an organization. When starting a new BI project with Yellowfin, it is recommended to use a RDBMS with a data warehouse, as this has several advantages over using a cube, with similar drill-down capabilities.

Restrictions

Using OLAP cubes has several restrictions compared to the functionality provided by Yellowfin for relational data sources.

- Yellowfin inherits the hierarchies and data-types from the cube, and these cannot be changed in Yellowfin.
- Grouped Columns is not supported on Cubes.
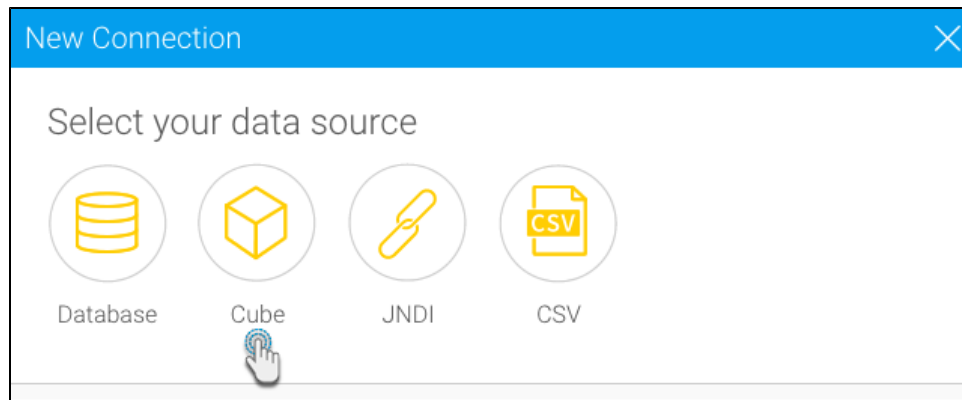
XMLA Data Source

Interface to an XMLA data source is via a HTTP URL. All data access is performed via HTTP requests to the data source. As such, the only connection parameters required are the XMLA URL, and an optional username and password if the data source requires them.

> ⚠ The method for enabling the XMLA interface depends on the data source you are connecting to, and therefore is not covered by this guide.

Depending on the data source, the XMLA interface may be a built-in feature or require external software and configuration – for example, Microsoft Analysis Services requires IIS to be installed and a virtual directory configured to handle XMLA requests.

1. Create a new connection from the Data Sources section of the Administration page.
2. Select Cube as the data source type

3. Enter the connection URL
4. You can also provide a username and password, if necessary

5. Click on the Test Connection button to attempt to connect to the data source. Once a connection is made, Yellowfin retrieves the list of Data Sources and Catalogs.
6. You can then select the default Data Source and Catalog for the connection

7. Continue creating views for this cube connection

Examples of Connections

Microsoft Analysis Services

Microsoft Analysis Services requires an initial step of mounting the cube as an XMLA service. This requires configuring a redirection filter on an IIS server. This process differs depending on the version of Microsoft Analysis Services and the version of IIS installed. This process is not covered in this guide. The following links may assist in this process:

Configure HTTP Access to Analysis Services on Internet Information Services (IIS) 8.0:

https://msdn.microsoft.com/en-us/library/gg492140.aspx

The XMLA URL will depend on how IIS is configured. A common configuration is to have a virtual directory called "olap" which contains the connection pump dll file. In this case the URL would look like:

http://<server>:<port>/olap/msmdpump.dll

NB. *Microsoft Analysis Services 2000 is not supported.*

Mondrian

Mondrian is an open-source XMLA interface to an underlying RDBMS. We recommend the use of Mondrian only if existing Mondrian infrastructure is available, as Yellowfin can replicate the functionality of Mondrian directly from a relational database itself.

It is assumed that Mondrian has been configured to interface with the database where report data is to be sourced.

Mondrian runs as a web application on Tomcat (by default) and must be configured to enable XMLA. This process is outlined in the Mondrian documentation but basically requires the addition of the MondrianXmlaServlet to the web.xml file for the Mondrian web application:

```
<servlet-mapping>
<servlet-name>MondrianXmlaServlet</servlet-name>
<url-pattern>/xmla</url-pattern>
</servlet-mapping>
```

The XMLA URL is the address to the MondrianXmlaServlet, for example:

http://<host>:<port>/mondrian/xmla

PALO

The Premium Edition of PALO OLAP server supports XMLA connections by installing the optional XMLA provider.

The default connection URL for the PALO XMLA provider is:

XMLA URL: http://localhost:4242/xmla

Username: admin

Password: admin