Using SuperDAX MD

AtScale supports connections to Power BI using the SuperDAX MD (Multi-Dimensional) dialect. SuperDAX MD provides increased query efficiency and greater maximum concurrent throughput. Greatest benefit can be observed when running Power BI Service workbooks with many visualizations and many concurrent users. Also, SuperDAX MD makes it possible to use Power BI's Hierarchical Slicer control.

AtScale offers several ways to enable the SuperDAX MD dialect support: engine level (for all connections), connection level, and cube level.

Engine-Level Configuration

AtScale's query engine can be configured to treat all incoming DAX requests as SuperDAXMD requests. To enable this functionality for all DAX queries:

1. In the Design Center, go to Settings > Engine.
2. Locate the `xmla.discover.properties.daxdialect` engine setting, and set its value to `superdaxmd`.

   It can also have the following values:

   - legacy: causes the system to support the SSAS 2012 dialect
   - tabular: causes the system to support the DAX Tabular dialect; for details, see Using DAX Tabular

3. Restart the engine as described in Changing Engine Settings.

Connection-Level Configuration

When connecting to AtScale with Power BI Desktop, you can set a specific connection string parameter to enable workbook-specific SuperDAXMD support. This will allow the AtScale engine to continue to service the legacy workbooks with the same installation:

- The connection string parameter is `daxdialect=superdaxmd`.
- For example, you can set it like this: `http://atscale.mycompany.com:10502/xmla/default?daxdialect=superdaxmd`

Make sure to set the connection parameter in the following places:

- Each Power BI workbook that will use the SuperDAX MD dialect.
- Each Power BI Service Datasource configuration that will use the SuperDAX MD dialect.

When connecting to AtScale with PowerBI Service, you must set the same query string parameter to the "Server" field of all desired Datasource configurations.

Cube-Level Configuration

The dialect to be used for DAX queries can now also be configured on cube level, using the the `xmla.discover.properties.daxdialect` setting. Its value are the same as those for the engine level (described above). For details, see Cube Level Configuration Settings.

Consider that the cube-level setting is ignored when the connection-level configuration is applied.

Limitations

The following Power BI Features do not apply to multi-dimensional data sources:

- ▲ Actions
- ▲ Named Sets
- ▲ Report-scoped calculations
- ▲ Combining Data from Multiple Sources with Live Connect
- ▲ Scatter chart; see Known Issues.