Leveraging Native Spatial Data Types in ArcGIS using Query Layers

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Road Map

- Motivation
- Supported Databases
- Database connection
- Database Access UX
- Analysis
- Sharing

Leveraging native spatial data types in ArcGIS using query layers
Motivation for Database Access / Query Layers

Leveraging native spatial data types in ArcGIS using query layers
How does the database connection work?

ArcGIS

DBMS Client

Database

ArcMap/Catalog - 32 bit client
ArcGIS Pro & ArcGIS server - 64bit client

Leveraging native spatial data types in ArcGIS using query layers
Database Access

Query layers
1 - Accessed via database connection
   - drag/drop onto map
2 - Create New Query Layer
   - build your own SQL
Database Access

Query layers

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User Experience

**ArcGIS discovers**
- Unique identifier
- Geometry type of spatial field
- Spatial reference and extent

**Rules for validation**
- Unique Identifier field - not null, contain unique values
  - Datatype: integer, string, GUID, or date
- Single spatial column and single entity type

**Feature layer** - not a database object
- Stored within .mxd / .aprx
Using query layers

**Viewing**
- Dynamic information
- Non-spatial / Spatial (native types only)
  - Database tables
  - Unregistered tables within a GDB
- Read only via database connection

**Using ArcGIS tools**
- Tools that perform selections or create outputs
  - Eg: Analysis tools - Buffer

**Editing**
- Share via feature service
Query layers
Custom SQL & Sharing
Said Parirokh
New features

• 10.2 - Feature service support

• 10.3.1 -
  - Map service startup time
  - Added Feature services support for ALTIBSE, SAP HANA, & Teradata

• 10.4 -
  - Feature service publishing of unregistered data from a geodatabase
  - Updated ‘New Query Layer’ UI to allow for user to define spatial properties
    - Improves performance as only SQL validation is performed

• 10.5/Pro 1.4 - Registering database views with the geodatabase

• Pro 1.4 - Parameterized queries
Resources & Survey

**Related Sessions**

Visualize Dynamically Aggregated Results from Time Series Data Using ArcGIS Pro and Map Services

Thurs - Drawing Millions of Features in ArcGIS: Advanced Topics

**Resources from this session - Geonet**

[https://geonet.esri.com/docs/DOC-10253](https://geonet.esri.com/docs/DOC-10253)

- slides
- scripts from demo
- helpful links

Thank you!

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