

# Leveraging SAP HANA and ArcGIS

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## Outline Leveraging SAP HANA and ArcGIS

- SAP HANA database
- ArcGIS Support for HANA
- Database access
- Sharing via Services
- Geodatabase support
- Demos







- In-memory database
- Support for both row and column store tables
- Designed for both transactional and analytical uses
  - OLTP and OLAP
- Real-time analytics on big data
- High performing native spatial type
- Provided On-premises and via the Cloud (SaaS/PaaS)

# ArcGIS Support for SAP HANA



# SAP HANA Database Access

Database connection prerequisites:

- Install HANA ODBC client driver
- Configure 32/64 bit ODBC data source name
  - 32 bit ArcMap/Catalog
  - 64 bit Pro and Server
- Connect in ArcMap or Pro



<u>Client install path:</u> 64 bit - C:\Program Files\sap\hdbclient 32 bit - C:\Program Files (x86)\sap\hdbclient

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  - 64 bit Pro and Server
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## Database Access

### Query layers

- 1 Accessed via database connection
  - drag/drop onto map
  - query can be edited
- 2 Create New Query Layer
  - build your own SQL

### ArcGIS discovers

- Unique identifier
- Geometry type spatial field
- Spatial reference and extent



General Metadata	✓ Data Source		÷
Source	Data Type	Query Feature Class	
Elevation	Server	hdevmj2	
Selection	Instance	hdevmj2	
Display	Client	hana	
Cache	User	melissa	
Definition Query	Query	select NAME, STATE_FIPS, CNTY_FIPS, FIF 📝	
Time	Alias	MELISSA.%NCCOUNTIESQL	Edit Query
Range	Feature Type	Simple	
oins	Geometry Type	Polygon	
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# Database Access

Query layers

1 - Accessed via database connection

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Project

Clipboard

- drag/drop onto map
- query can be edited
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  - build your own SQL

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# Working with SAP HANA data

### <u>Create new data:</u>

- Import datasets into database
- Create new table, feature class, or view

#### Existing data:

- View & query spatial & non-spatial data
  - Database connection read only
- Append new data
- Perform analysis using ArcGIS tools
  - Creating output of analysis
- Edit via feature service
- Consume via Insights



# Sharing via Services

- Share data within organization
  - Control access level via the service
- Publish by reference Data store registration
  - ODBC data source names must match on client/server machines



# Database Access as query layers

Configure ODBC client Establish database connection Creating custom query layer Access from feature service to edit

## Enable as Enterprise Geodatabase – Pro 2.1

- When you want to do more with your data
- ArcGIS Pro via Enable Enterprise Geodatabase tool
  - Existing HANA database
  - SDE database user with CATALOG READ permission

- Enable Enterprise Geodatabase tool
  - Database connection as SDE user
  - ArcGIS Server license file



Geoprocessing	+ □ ×
Enable Enterprise Geodatabase	≡
Parameters   Environments	?
Input Database Connection hdevmj.sde	<b>(†</b>
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# Geodatabase Support for HANA – Pro 2.1

- Subtypes
- Domains
- Relationship classes
- Attachments
- Editor tracking
- Non-versioned archiving
- Offline editing with sync
- New service based transaction model
  - long transactions
- Utility network

#### Upcoming

- Parcel fabric
- Topology Network dataset

# Geodatabase support

Enabling as geodatabase Geodatabase functionality Editing via feature service

## Resources & Survey

**Related sessions** 

July 12 @ 1:30 PM - Geodatabase: An Introduction July 12 @ 5 PM - Leveraging Native Spatial Data Types in ArcGI using Query Layers

Resources from this session

https://geonet.esri.com/docs/DOC-10254

- slides
- scripts from demo
- Helpful links



	<b>Thank you!</b> Fill out survey in Esri Events mobile app
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	FEEDBACK
	Title and Description Consistent with Content
	Low (1)-(2)-(3)-(4)-(5) High
	Well Organized/Clear Presentation
	Low 1 2 3 4 5 High
	Public Speaking Skills
	Low 1 2 3 4 5 High
	The content of the workshop was relevant to my work
	No Yes
	The workshop provided information or techniques I can apply to my work right away
	Low (1)-2-3-4-5 High
	I would recommend this workshop to a colleague
	No

