

# 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
- Demo



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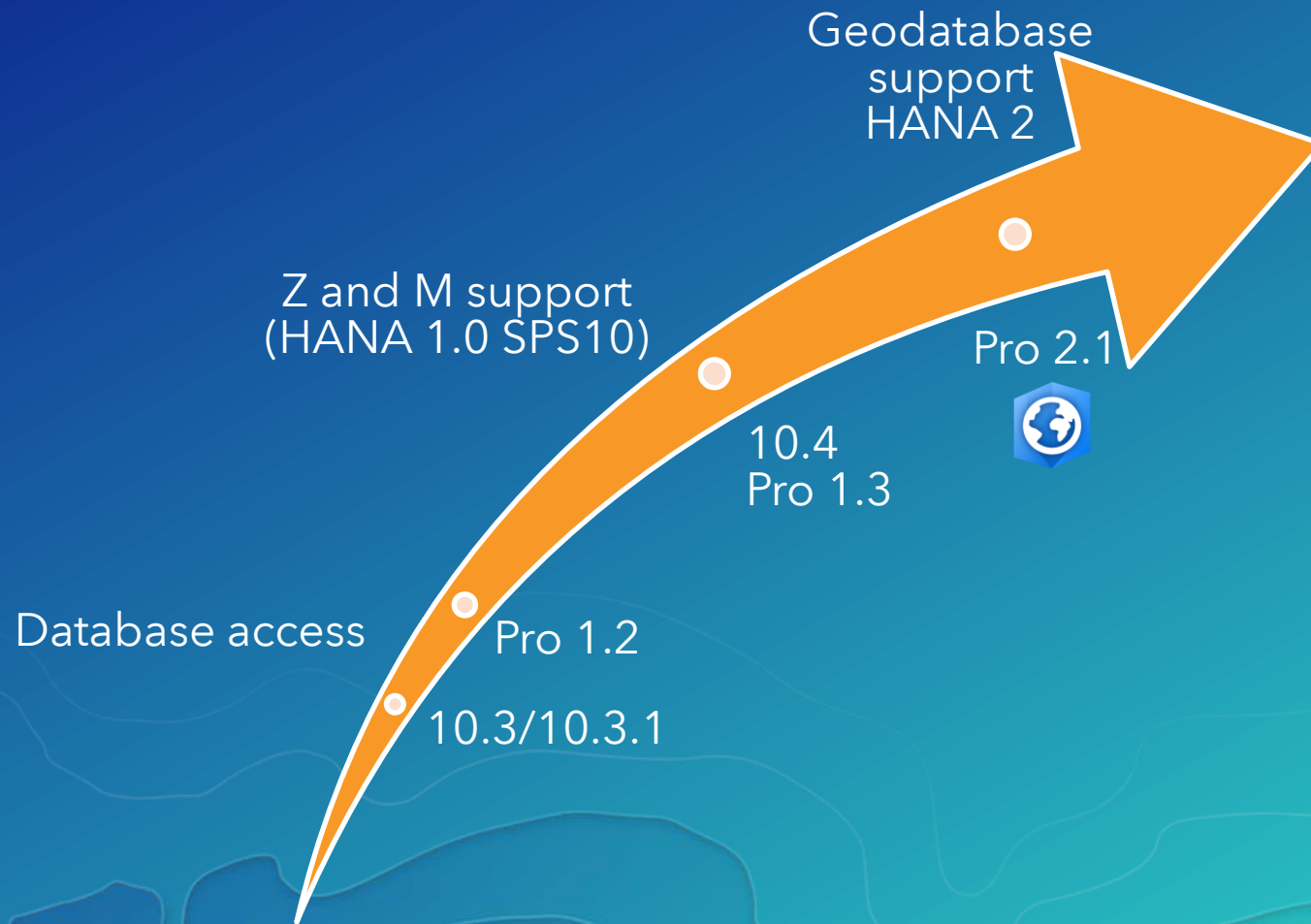
# SAP HANA

Leveraging SAP HANA and ArcGIS



- 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 (ST\_GEOMETRY)
- Provided on premise and via the Cloud (SaaS/PaaS)
  - HANA Express edition

# ArcGIS Support for SAP HANA

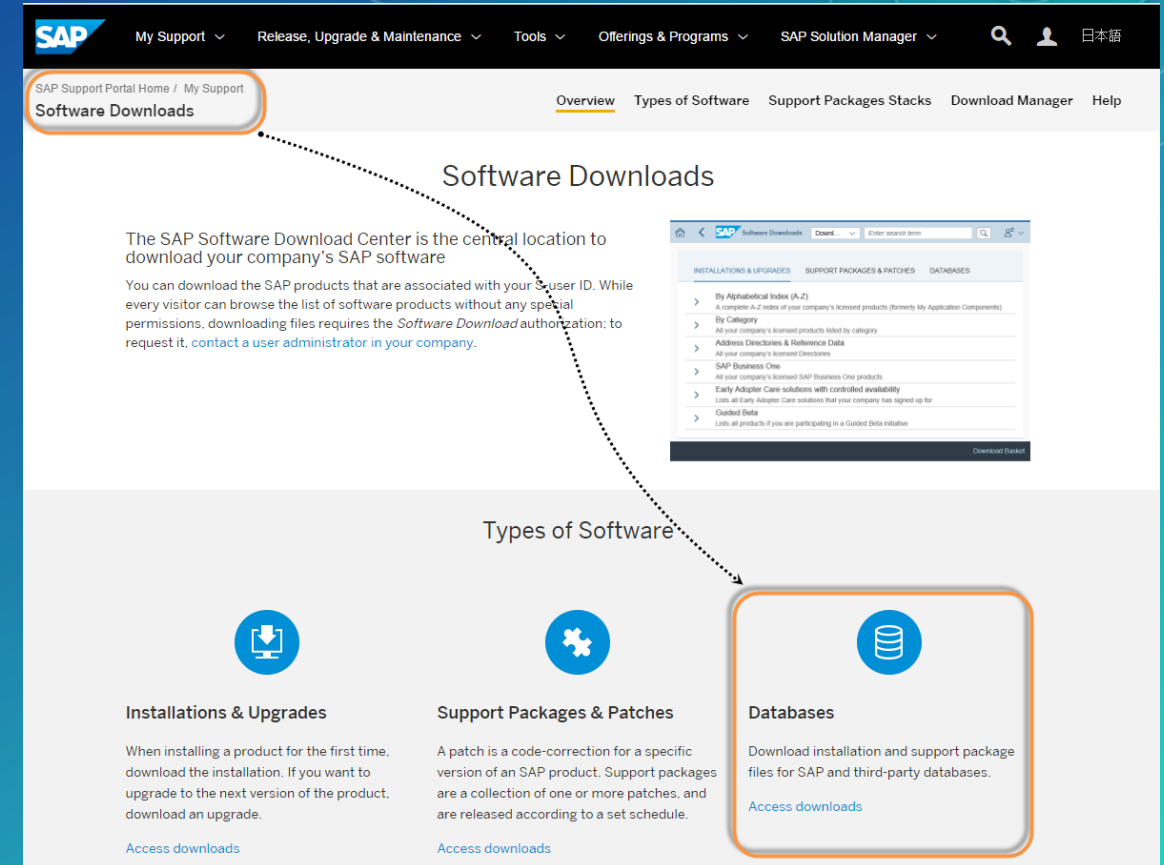




# SAP HANA Database Access

## 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



## Client install path:

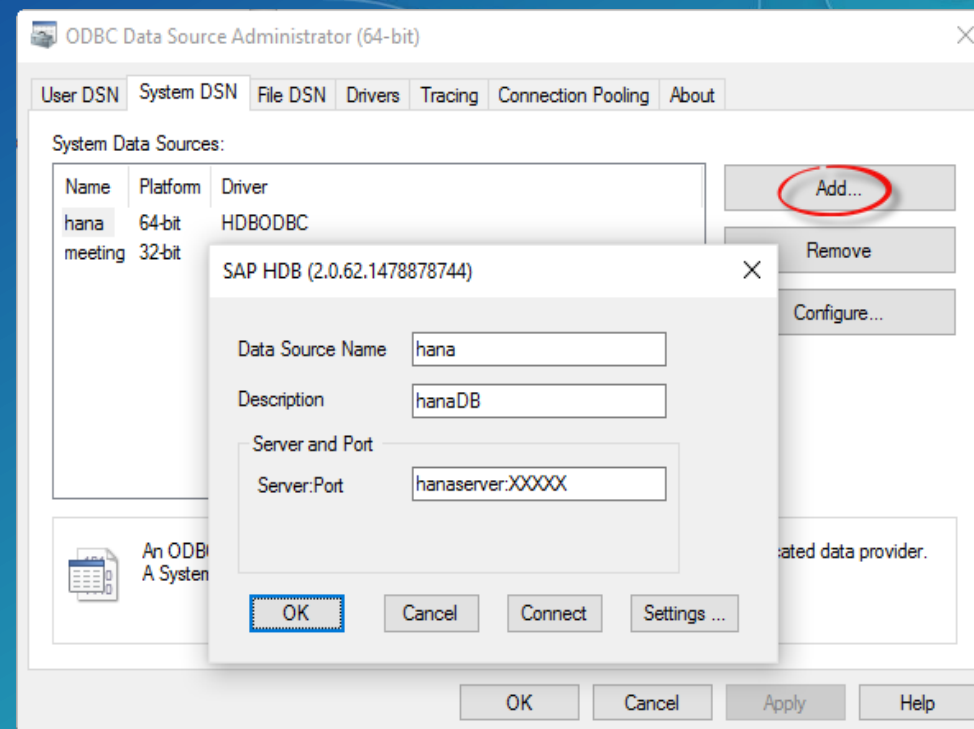
64 bit - C:\Program Files\sap\hdbclient

32 bit - C:\Program Files (x86)\sap\hdbclient

# SAP HANA Database Access

## Database connection prerequisites:

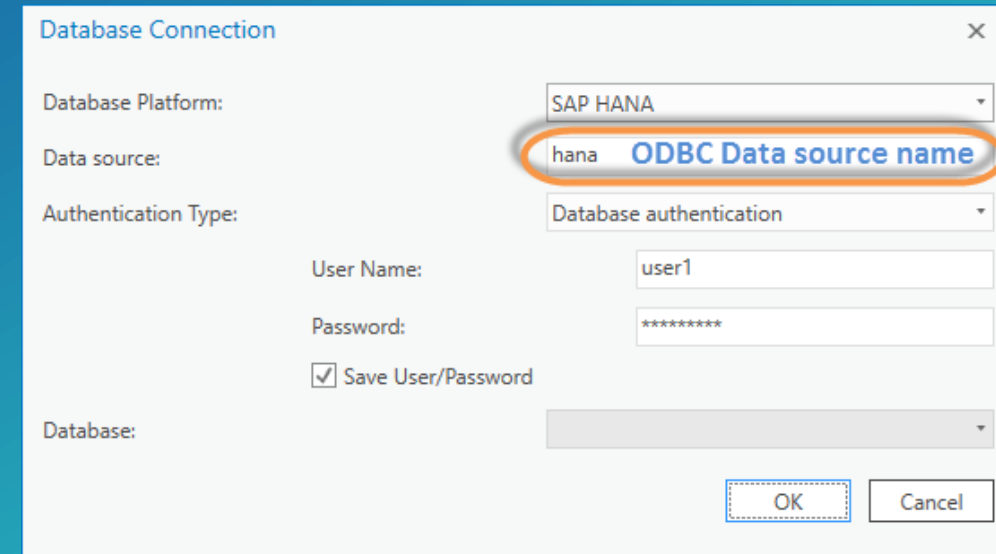
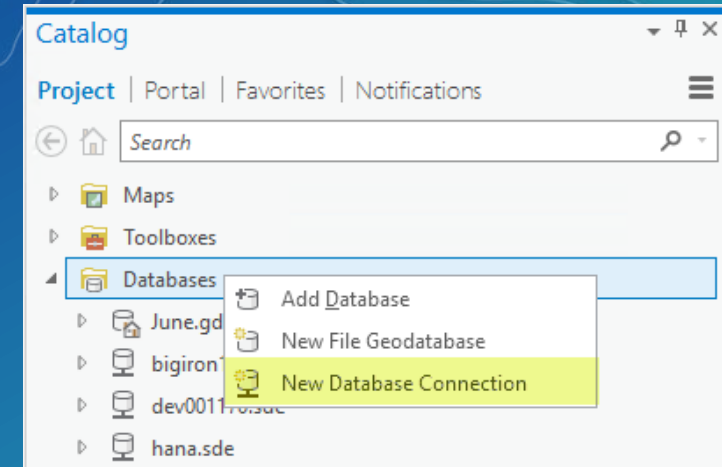
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# SAP HANA Database Access

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# Database access

Configure ODBC client

Establish database connection



# Database Access

## Query layers

### 1 - Accessed via database connection

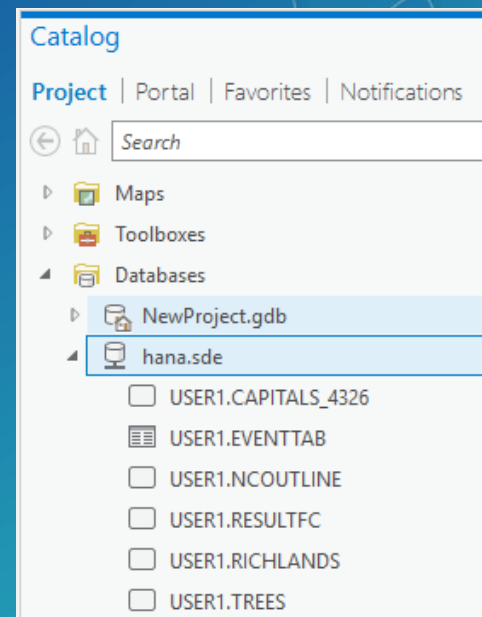
- drag/drop onto map

### 2 - Create New Query Layer

- build your own SQL

- ArcGIS discovers

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



# Database Access

## Query layers

### 1 - Accessed via database connection

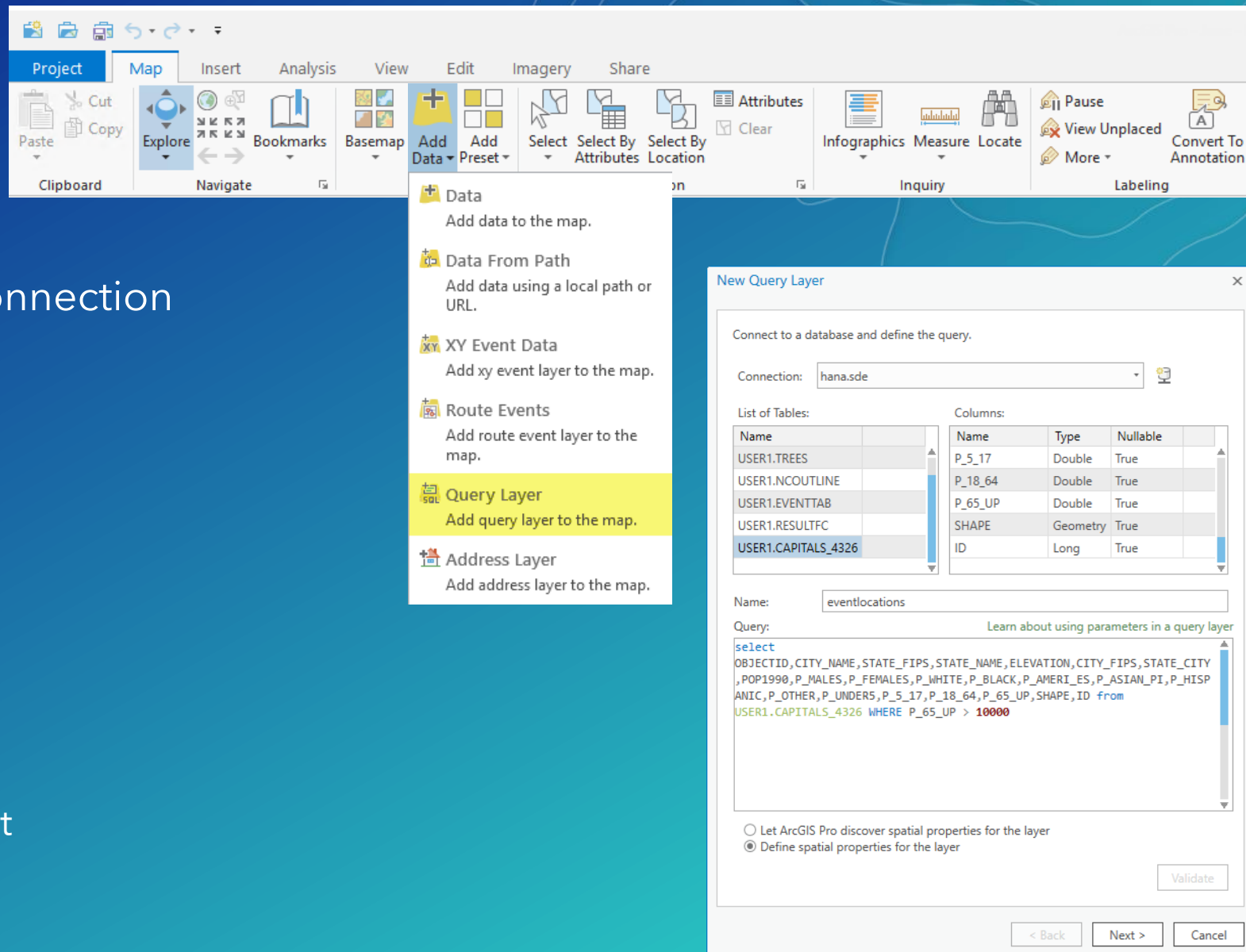
- drag/drop onto map

### 2 - Create New Query Layer

- build your own SQL

- ArcGIS discovers

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



# Working with SAP HANA data



## Create new data:

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

## Existing data:

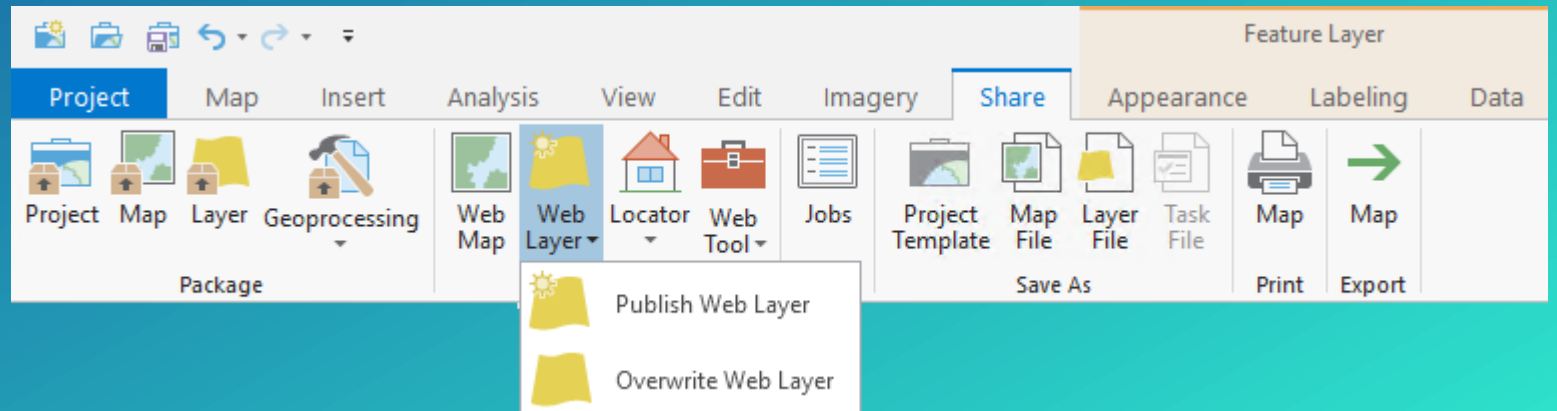
- View & query - spatial & non-spatial data
  - Database connection - read only
- Append new data
- Perform analysis using ArcGIS tools
  - Creating output of analysis
- Edit via feature service
- Consume via Insights

# 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

## Data ⓘ

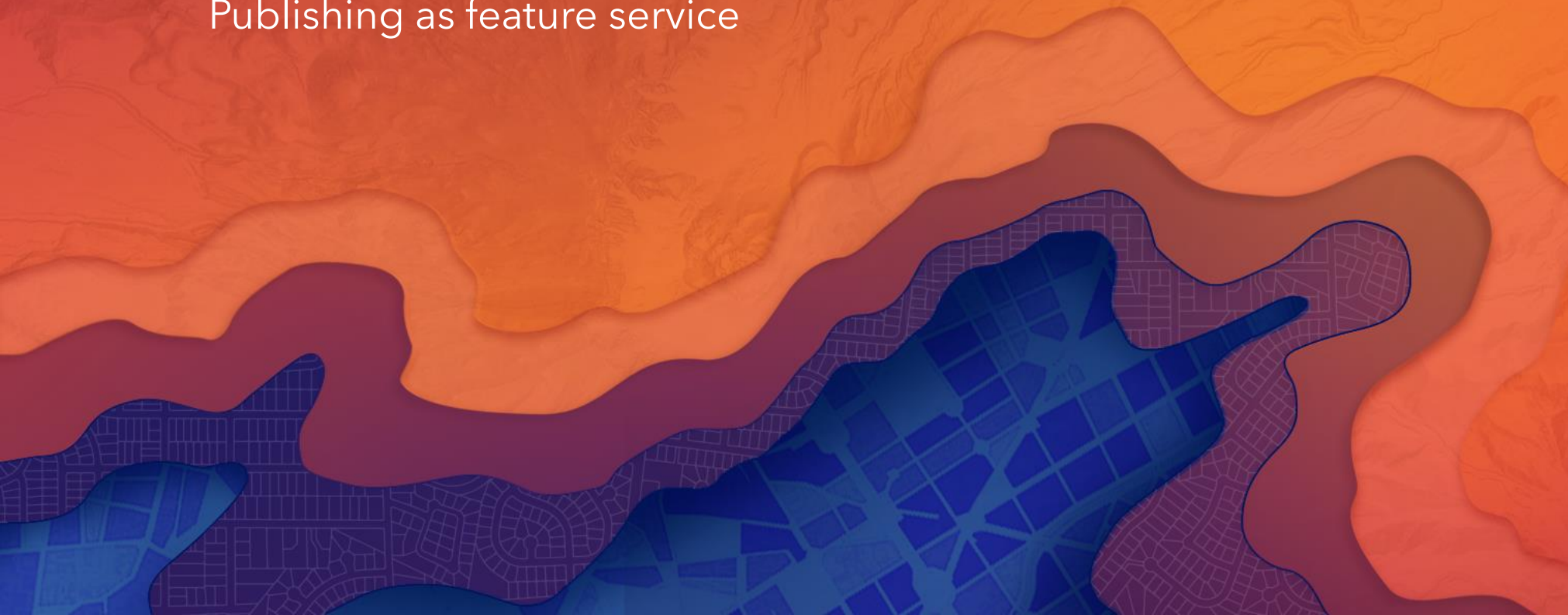
- ☒ Reference registered data
- ☐ Copy all data





# Working with SAP HANA data

Creating custom query layer  
Publishing as feature service



# 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
- Input parameters:
  - Database connection as SDE user
  - ArcGIS Server license file

Geodatabase support  
@ Pro 2.1

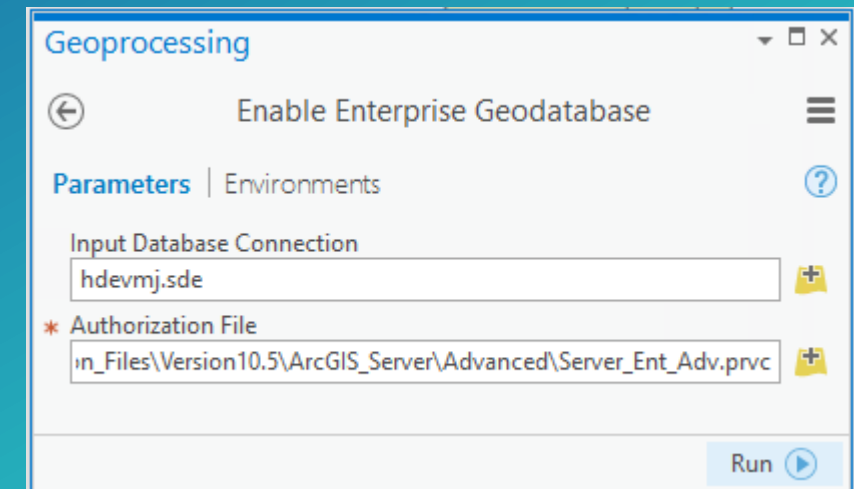
SQL Server

Oracle

DB2

PostgreSQL

SAP HANA



# Geodatabase Support for HANA – Pro 2.1



- Subtypes
- Domains
- Relationship classes
- Attachments
- Editor tracking
- Non-versioned archiving
- Offline editing with sync
- New service based editing model
  - long transactions (branch versioning)
  - Includes editor tracking
- Utility network

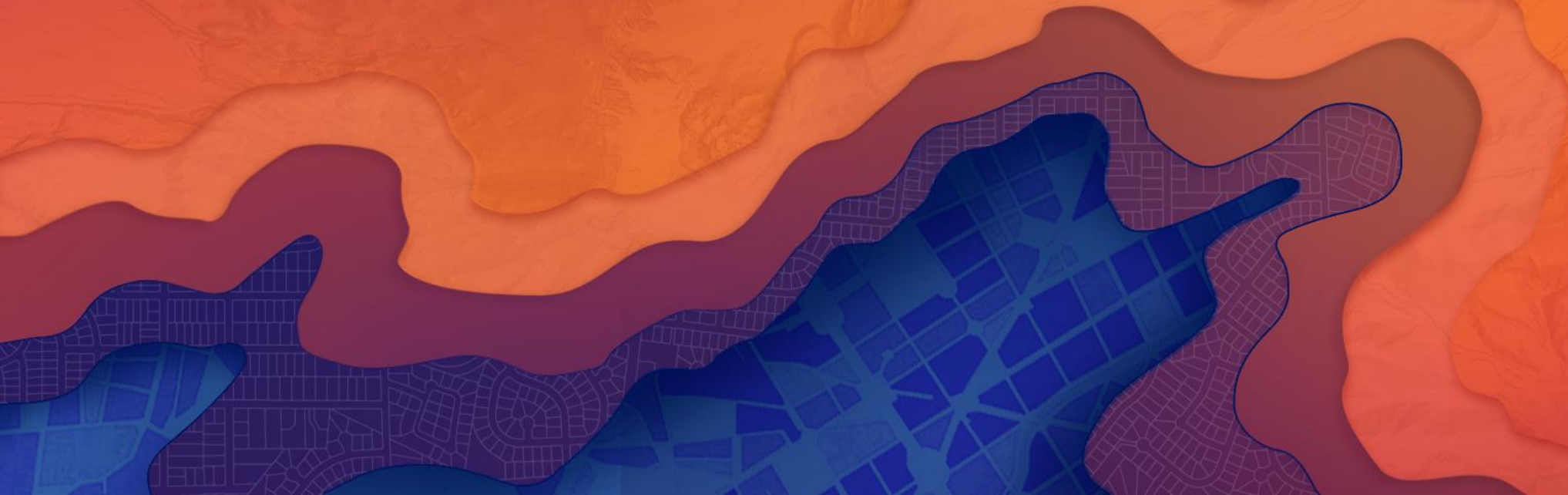
## Upcoming

- 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 @ 5:30 PM - SIG: ArcGIS and SAP: Federation of platforms with SAP Geographical Enablement Framework**

## Resources from this session

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

- slides
- scripts from demo
- Helpful links



**Thank you!**

Fill out survey in  
Esri Events mobile app

A screenshot of a feedback survey displayed on a mobile app. The survey is titled "Leveraging SAP HANA an..." and is labeled "FEEDBACK". It contains five questions, each with a 5-point rating scale from "Low" to "High". The questions are: "Title and Description Consistent with Content", "Well Organized/Clear Presentation", "Public Speaking Skills", "The content of the workshop was relevant to my work", and "The workshop provided information or techniques I can apply to my work right away". The final question, "I would recommend this workshop to a colleague", has "No" and "Yes" buttons instead of a rating scale. The survey is presented in a clean, white interface with blue accents.



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