Leveraging SAP HANA and ArcGIS

Melissa Jarman and Eugene Yang
SAP HANA

- 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 (DaaS/SaaS/PaaS)
ArcGIS support for SAP HANA

- Database access
- Geodatabase support
- HANA 2
- Z and M support (HANA 1.0 SPS10)
- 10.4 / 1.3
- Pro 2.1 +
- ArcMap 10.3
- Pro 1.2
SAP HANA Database Access

Database connection prerequisites:

- Install HANA ODBC client driver
- Configure ODBC DSN
  - 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:

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

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SAP HANA Database Access

• Query layers
  - View and query data via database connection
    - Spatial column – single column / one geometry type
  - Load datasets into HANA database
  - Editable via feature service

Leveraging SAP HANA and ArcGIS
Enable as Enterprise Geodatabase

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
- Future support for Create Ent GDB tool

HANA geodatabases
- consumed via ArcGIS Pro or services

Geodatabase support
ArcGIS Pro
- SQL Server
- Oracle
- DB2
- PostgreSQL
- SAP HANA
Accessing HANA geodatabases

ArcGIS Pro is required

Client/server connection to geodatabases in HANA are blocked via ArcMap / ArcCatalog
Connect to HANA
Editing query layers
Enable as GDB

Eugene Yang
Geodatabase Support for HANA

- Subtypes
- Domains
- Relationship classes
- Attachments
- Editor tracking
- Branch versioning
- Offline editing with sync
- Utility network
- Raster data support (ArcGIS Pro 2.2)

Upcoming
- Parcel fabric
- Topology
- Network dataset
- True curve / multi-patch support
SAP HANA geodatabases - Editing

- Nonversioned
- Nonversioned archive enabled
- Branch versioned
Editor tracking

- Optional for dataset that are nonversioned/archive enabled
- Required for branch versioning

- Fields - user defined or default field names
  - CREATED_USER
  - CREATED_DATE
  - LAST_EDITED_USER
  - LAST_EDITED_DATE
Branch versioning

• Web GIS - session based multi-user editing
• Read only via database connection

• Register as versioned
  - Prerequisites:
    - GlobalIDS
    - Editor tracking (UTC)
    - No unique indexes

• 2 new editor tracking attributes for deletes:
  - GDB_DELETED_AT
  - GDB_DELETED_BY

Leveraging SAP HANA and ArcGIS
Publishing – sharing branch versioned datasets

- Publish directly from DEFAULT version
- Reference registered data
- Version management capability
Services - Working with branch versioned datasets

- Version management capability
- Access to contextual Versioning tab
- Version manager
  - Versions listed based on:
    - Service
    - Portal account
    - Access permission on version
Geodatabase versioned editing
Eugene Yang
Thank you
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Download the Esri Events app and find your event

Select the session you attended

Select the Feedback tab

Complete answers and select “Submit”