Upgrading to ArcGIS 10.0 Geodatabases

Eugene Yang
Workshop outline

• Enterprise Geodatabase Configuration
  - Geodatabase Components
  - Connection Type
  - Client Server Compatibility

• Upgrade to Geodatabase 10.0
  - When do I need to upgrade
  - How to upgrade
  - Tips and good practices

• What’s new at 10.1
Components of Enterprise Geodatabase

- **ArcGIS Client**
  - Access spatial data

- **Geodatabase Software**
  - Enable Esri Spatial data Storage
  - Application Server

- **Enterprise DBMS**
  - Oracle, SQL Server, DB2 ....
Geodatabase: Application Server Connection

- ArcGIS Client
- ApplicationServer
- Enterprise DBMS
Geodatabase: Direct Connect

- ArcGIS Client
  - Direct Connect Drivers

- Enterprise DBMS
Components to Be Upgraded

• ArcGIS Client
  - Geodatabase Direct Connect Driver

• Geodatabase Software
  - Application Server (ArcSDE)

• Geodatabase Schema
  - Tables, Stored Procedures, ST_Geometry Type ....
Types of Upgrade

• Major Release Upgrade
  - 9.3.1 to 10
  - 9.3  to 10

• Service Pack, Patch, Hotfix
  - 10 SP1, 10 SP2, Replication Upgrade Patch, etc.
### Types of Upgrade: Steps

<table>
<thead>
<tr>
<th></th>
<th>Major Release Upgrade</th>
<th>Service Pack /Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS Client</td>
<td>Uninstall &amp; Re-install</td>
<td>Apply fix to existing install</td>
</tr>
<tr>
<td>Geodatabase Software (App. Server)</td>
<td>Uninstall &amp; Re-install</td>
<td>Apply fix to existing install</td>
</tr>
<tr>
<td>Geodatabase Schema</td>
<td>Schema upgrade</td>
<td>Schema upgrade if necessary</td>
</tr>
</tbody>
</table>
Client Server Compatibility

- Backward/Forward Compatibility

- Upgrade Strategy
  - Always Upgrade ArcGIS clients first
Prepare for Upgrade

• Make a Full Backup of Your Database

• Check New System Requirements
  http://resources.arcgis.com/content/arcgis-server-system-requirements

• Read ArcGIS Server 10 online help
  Topic: Enterprise geodatabase upgrade
Create Upgrade Test Environment

• Duplicate of Production System as Test Environment
  – Matching platform, operating system, and DBMS
  – Geodatabase restored from production system backup

• Benefits
  – Identify potential upgrade problems
  – Smooth product system upgrade process
  – Identify potential client / server compatibility issues
  – Estimate upgrade performance and reduce production impact
Getting Ready to Schema Upgrade

- Install ArcGIS 10.0 client
- Disconnect All Active Connections
- Connect From 10.0 Client
  - Direct connect
  - Connect as a required user
Geodatabase Schema Upgrade

• Two options
  - Upgrade button in ArcCatalog
  
  ![Upgrade Status](image)

  This 9.2 database can be upgraded to the ArcGIS release you are currently using to support additional capabilities.

  ![Upgrade Geodatabase](image)

- Python Script with Geoprocessing API

  UpgradeGDB_management(…)

Geodatabase Upgrade: ArcCatalog
Geodatabase Upgrade: ArcCatalog
Prerequisite Checks

• No active user connections
• Correct user to perform upgrade
• Required privileges for upgrade
• DBMS XML Support
• Geodatabase schema integrity
• Geodatabase configuration check
  - ST shape library
  - Multiple user schema geodatabases
Upgrade Geodatabase: GP Command

$$UpgradeGDB\_management\ (input\_workspace, \ input\_prerequisite\_check, \ input\_upgrade\_check)$$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$input_workspace$</td>
<td>Connection file of the geodatabase to be upgraded.</td>
</tr>
<tr>
<td>$input_prerequisite_check$</td>
<td>- NO_ PREREQUISITE_CHECK —Prerequisite check is not run.</td>
</tr>
<tr>
<td></td>
<td>- PREREQUISITE_CHECK (default)—Prerequisite check is run.</td>
</tr>
<tr>
<td>$input_upgrade_check$</td>
<td>- NO_UPGRADE —The Upgrade is not run.</td>
</tr>
<tr>
<td></td>
<td>- UPGRADE (default)—The Upgrade is run.</td>
</tr>
</tbody>
</table>
Upgrade Geodatabase: GP Script

- Example script in ArcGIS 10 online help under subjects

**Scripting an ArcSDE Geodatabase Upgrade**

```python
# Import arcpy module
import arcpy

# Local variables:
GDB_to_upgrade = "<file_path>\<Connection file>"

# Process: Upgrade Geodatabase
arcpy.UpgradeGDB_management(GDB_to_upgrade,
"PREREQUISITE_CHECK",
"UPGRADE")
```
Diagnostic files

• Log files under system TEMP directory
  - sde_setup.log – Detailed schema upgrade output and error message log
  - GDBUpgradeN.log – Overall GP tool output log with details on geodatabase schema migration
  - sdedc_<dbms>.log direct connect log

• DBMS and Operating system
  - DBMS specific log for DBMS errors
  - Windows: Event log
DEMO: Geodatabase Upgrade
New Features in ArcGIS 10.1

• Create Enterprise Geodatabase from ArcCatalog

• Create Geodatabase User

• Install Standalone ST_Geometry Type

• Simplified Direct Connect to Database
Additional Resources

• ArcSDE Install Guides
  
  http://resources.arcgis.com/content/kbase

• KB articles

  http://resources.arcgis.com/content/kbase

• Online help


• ArcSDE geodatabase user forum

Thank you!

Please fill out the survey form