Managing your Distributed Data

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Overview

- Why Distribute Data
- Geodatabase Replication
- Schema Changes
Why Distribute Data

Production GDB

Central hub
- Contractor
- Field work
- Publish to web

Replica tree

National
State
County
Geodatabase Replication Overview

- Distribute data across 2 or more geodatabases
- Replica Pair
- Geodatabases are edited independently
- Synchronize edits
Three types of replication

- **Two-way**
  - Sync both directions

- **One-way**
  - Sync one direction

- **Checkout/check-in**
  - Checkout once
  - Check-in once
Replication Demo
Schema Changes

1. Compare schemas
2. Export changes
3. Import changes
Add a Field Replication Demo

Tools are provided for this purpose:

• Compare Replica Schema
• Import Replica Schema
Disconnected replication

1. Edit made to sender
2. Data change message exported and sent to receiver
3. Data change message imported to receiver
4. Export acknowledgment message and send to sender
5. Import acknowledgment message
How does a geodata service work?
Geodata Service Demo
One-Way Geodatabase Replication Using a Geodata Service Demo

<table>
<thead>
<tr>
<th>Data requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Stored in high-precision spatial format</td>
</tr>
<tr>
<td>✓ Non-versioned or fully versioned (no move to base option)</td>
</tr>
<tr>
<td>✓ Must have GlobalIDs</td>
</tr>
<tr>
<td>✓ The database user must have write permission to the data</td>
</tr>
</tbody>
</table>
Choose a connection:

arcgis on jamest_6000 (admin)

Server type: ArcGIS Server

Service name: County_Information
Service Name: County_Information
Connection: http://jamesg:6080/arcgis/admin
Type of Server: ArcGIS Server
Type of Service: Geodata Service
Start service immediately: checked
Successfully published service.
Service

Publish this map as a service on the web using either ArcGIS Server or ArcGIS Online. This command is disabled if you are currently in Layout view.
Choose a connection

arcgis on jamesg_6080 (admin)

Server type: ArcGIS Server

Service name:

County_Information
General

Service Name: County_Information
Connection: http://jamesg:6080/arcgis/admin
Type of Server: ArcGIS Server
Type of Service: Map Service

Start service immediately

Service Publishing Result
The service has been published successfully.

OK
Create Replica Wizard

This wizard lets you create a replica between this geodatabase and another geodatabase. By default, all feature classes and tables in the map that can be part of the replica are included, along with any related data.

What type of Replica do you want to create?

- **Check-out**
  A check-out allows you to edit the data in the child geodatabase and then synchronize the edits with the parent geodatabase. Once the edits have been synchronized, you can no longer synchronize additional edits.

- **Two way replica**
  A two way replica allows you to edit the data in either replica geodatabase and periodically synchronize the geodatabases. All data must be versioned, have a global ID column and both geodatabases must be ArcSDE geodatabases.

- **One way replica**
  - **Parent to child**
  - **Child to parent**

A one way replica allows you to send changes in one direction. Choose to send from either a parent ArcSDE geodatabase to any type of child geodatabase or from a child ArcSDE geodatabase to a parent ArcSDE geodatabase. All data must have a global ID column.
Create Replica Wizard

This wizard lets you create a replica between this geodatabase and another geodatabase. By default, all feature classes and tables in the map are included, along with any related data.

Replicating data from: County_Information

What do you want to replicate?
- Data
- Schema Only
- Register existing data only

Which geodatabase do you want to replicate data to?
- Geodatabase
- XML Document

| sde.DEFAULT | C:\UC_Connections\SQL_Child_GIS.sde |

What do you want to call this Replica?
From_County_Geodata_Service

Show advanced options for overriding replica defaults when I click Next

About extracting data

< Back  Next >  Cancel
What do you want to do once the check out has been completed?

- No further action
- Change the layers and tables to point to the checked out data
- Save a copy of this map document with the layers and tables pointing at the check-out data:

Summary...
The wizard allows you to synchronize changes between replicas

Geodatabase 1 - The geodatabase that you have chosen to synchronize
JAMESG-sde:sqlserver:JAMESG-Child

Replica To Synchronize: GIS.From_County_Geodata_Service

Geodatabase 2 - The geodatabase containing the relative replica
County_Information

Replica Type: One way parent to child

The Synchronize Direction: From Geodatabase 2 to Geodatabase 1

About synchronizing changes
Please Take Our Survey on the App

1. Download the Esri Events app and find your event.
2. Select the session you attended.
3. Scroll down to find the feedback section.
4. Complete answers and select “Submit.”