

Disconnected Replication

For organizations not on the State network to be able to replicate their data to the State's enterprise GIS system, the data needs to be exported from the source (parent) database and imported into the State's eGIS (child) database. This document covers the instructions for exporting the file that the State needs to load into the eGIS system, how to send it, and how to synchronize.

NOTE: More detail on disconnected replication is available in esri help:

- [Preparing data for replication](#)
- [Replicas in a disconnected environment](#)
- [Creating a one-way or two-way replica](#)

Overview of steps:

1. Prepare the data for replication
2. Create the disconnected replica to create an XML workspace document.
3. Send the XML workspace document to DTI via sFTP site.
4. DTI will import the XML workspace with replica configuration into eGIS and return an acknowledgement file to your organization.
5. Import the acknowledgement file back into the parent database.
6. After changes have been made perform a synchronization.

Preparing Data for Replication:

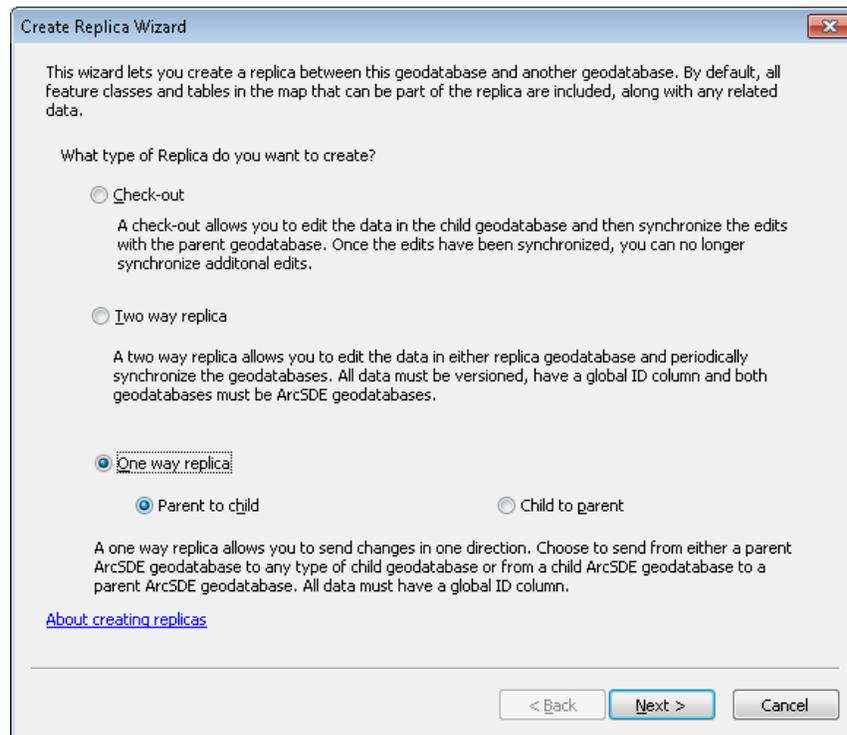
1. Source data must be registered as versioned, in an enterprise geodatabase. It cannot be versioned with the option to move edits to base.
2. Each dataset must have a [GlobalID Column](#).
3. All data must be stored in a [high-precision](#) spatial reference.

Creating Disconnected Replica:

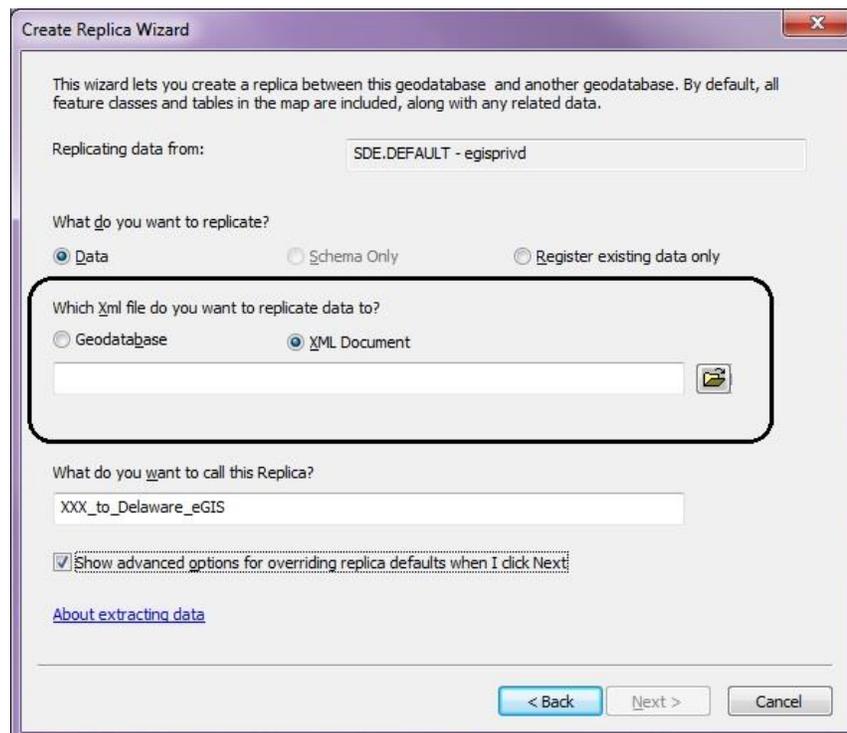
1. Within ArcMap, add all of the data that will be included in the replica, and configure any queries, if necessary.
2. Turn on the '**Distributed Geodatabase**' toolbar
(Go to Customize Menu and navigate to Toolbars and then to **Distributed Geodatabase**).
3. Click on the first icon to open the '**Create Replica Wizard**'.



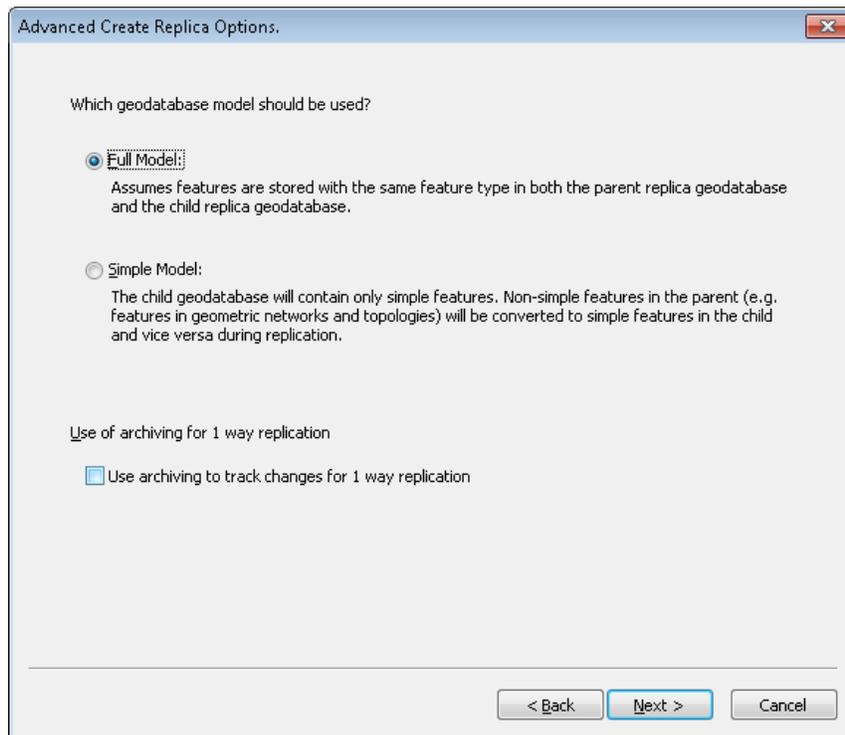
4. Select 'One way replica', 'Parent to Child'.



5. Select 'XML Document' for which XML file you want to replicate data to. Name the Replica 'XXX_to_Delaware_eGIS', where 'XXX' represents the name of the organization. Select the 'Show advanced option for overriding replica defaults when I click Next'



6. Select 'Full Model'.



Advanced Create Replica Options.

Which geodatabase model should be used?

Full Model:
Assumes features are stored with the same feature type in both the parent replica geodatabase and the child replica geodatabase.

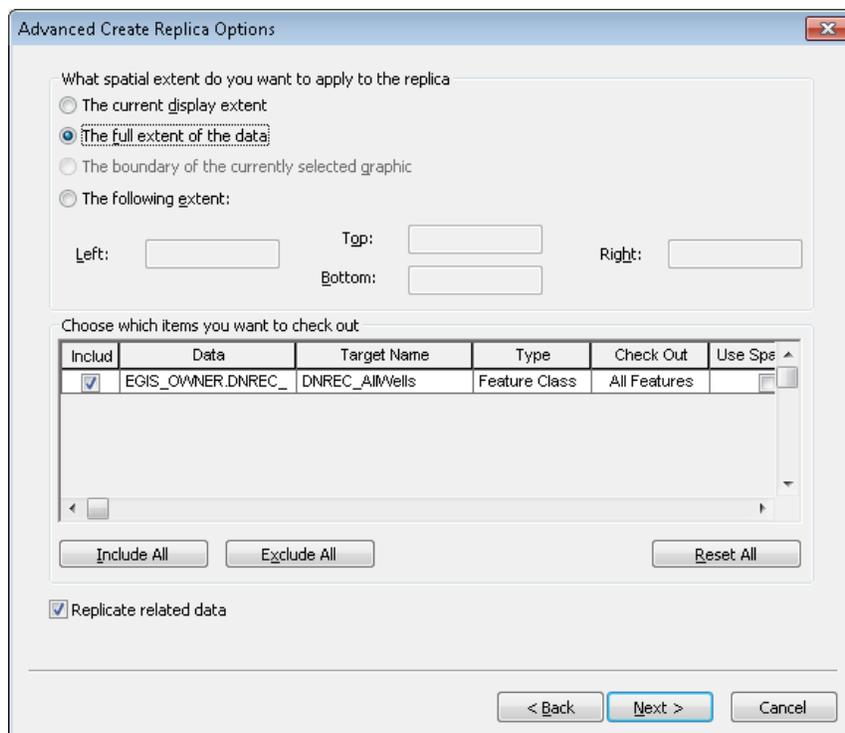
Simple Model:
The child geodatabase will contain only simple features. Non-simple features in the parent (e.g. features in geometric networks and topologies) will be converted to simple features in the child and vice versa during replication.

Use of archiving for 1 way replication

Use archiving to track changes for 1 way replication

< Back Next > Cancel

7. Select the 'The full extent of the data', leave the option to Replicate related data checked.



Advanced Create Replica Options

What spatial extent do you want to apply to the replica

The current display extent

The full extent of the data

The boundary of the currently selected graphic

The following extent:

Left: Top: Right:
Bottom:

Choose which items you want to check out

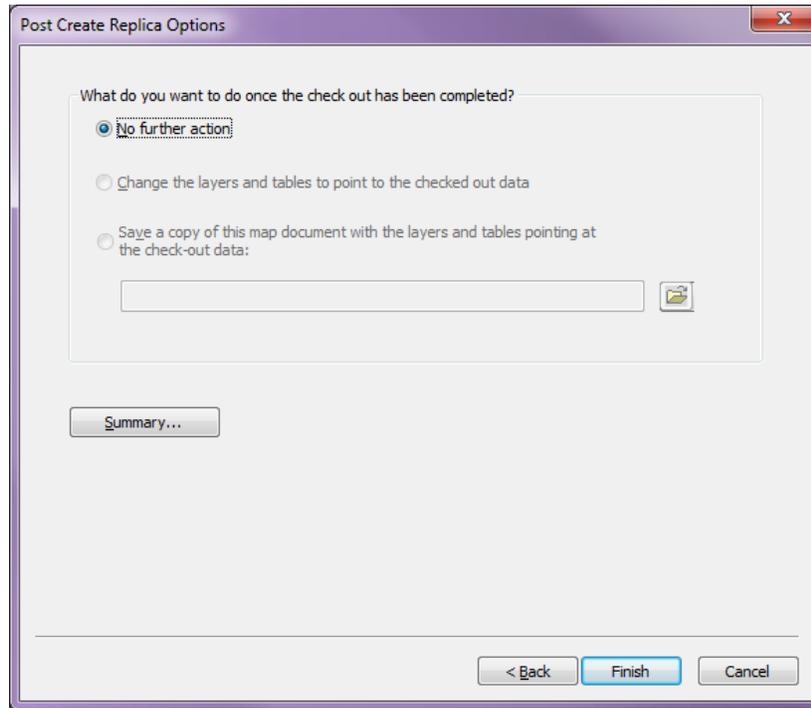
Includ	Data	Target Name	Type	Check Out	Use Spa
<input checked="" type="checkbox"/>	EGIS_OWNER.DNREC_	DNREC_All/Vells	Feature Class	All Features	<input type="checkbox"/>

Include All Exclude All Reset All

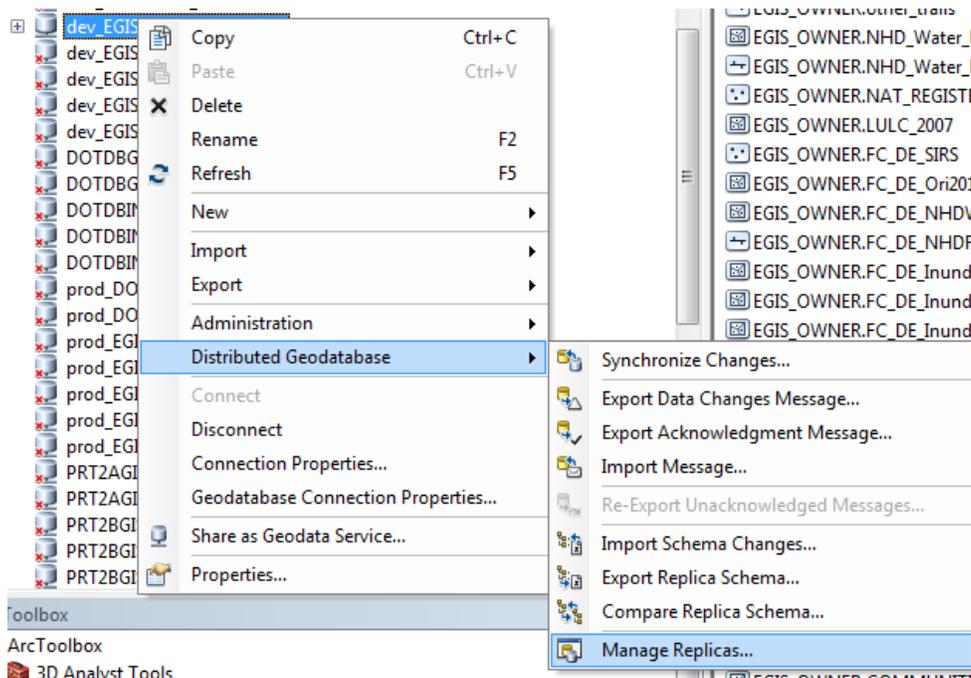
Replicate related data

< Back Next > Cancel

8. Select 'No Further Action' then finish.



9. To confirm that the replica created successfully, refresh the database connection in ArcCatalog, then right-click on the name of the parent geodatabase and select 'Distributed Geodatabase' ->'Manage Replicas'. You should see the replica listed in the 'Replica Manager'.

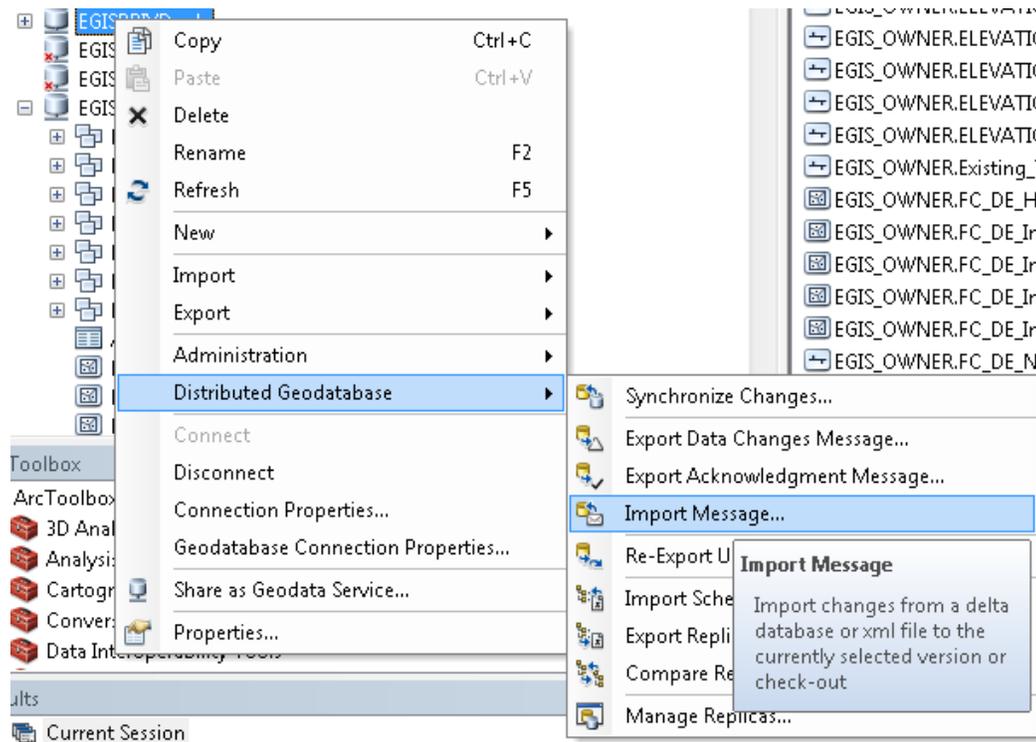


10. Once the export is complete send the XML file to DTI via the SFTP that has been set up for your organization with the provided credentials.

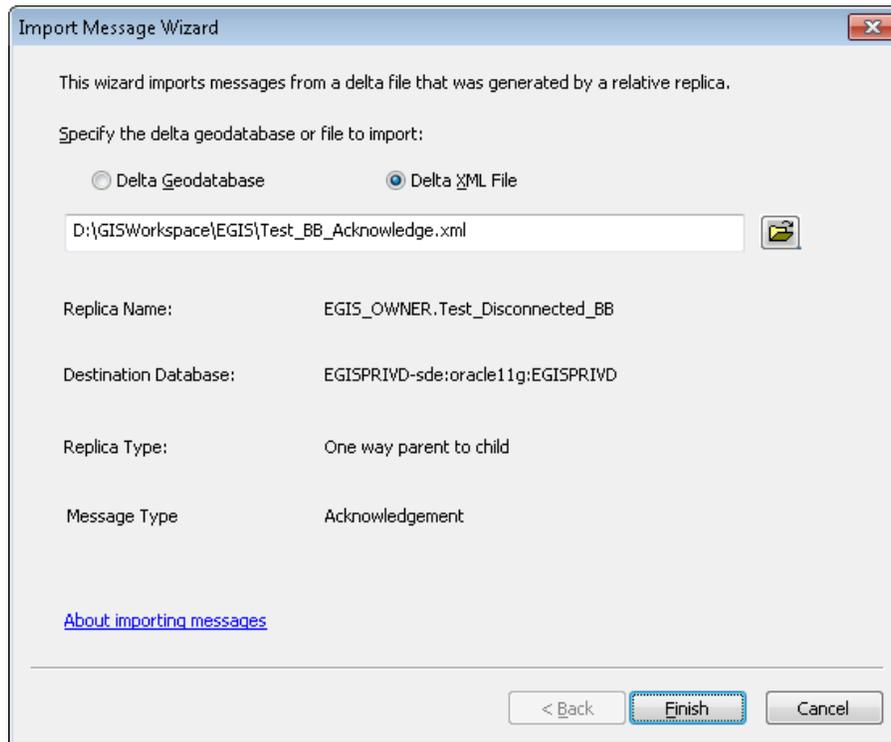
Import Acknowledgement Message

Once DTI has imported the XML workspace and configured the replica, we will return an acknowledgement message so that the parent (organization's) database is aware that the replicas are in synch.

1. From ArcCatalog, right-click on the name of the database and select '**Distributed Geodatabase**' -> '**Import Message**'.



2. Select '**Delta XML File**' and navigate to the file you received from DTI and click finish. You will receive a confirmation message that the changes have been acknowledged.



Synchronization

Geodatabase replication uses versioning during the synchronization process for replicas hosted in ArcSDE geodatabases. Versioning is used to determine the changes to send and also when receiving changes.

Synchronizing Disconnected Replicas

Once the replica has been configured within your organization and in the State’s eGIS database, changes will be synchronized by using ArcCatalog to send a change file. Once DTI imports the changes into the eGIS child database, we will return an acknowledgement file that must be imported into the parent database to confirm that the changes were accepted.

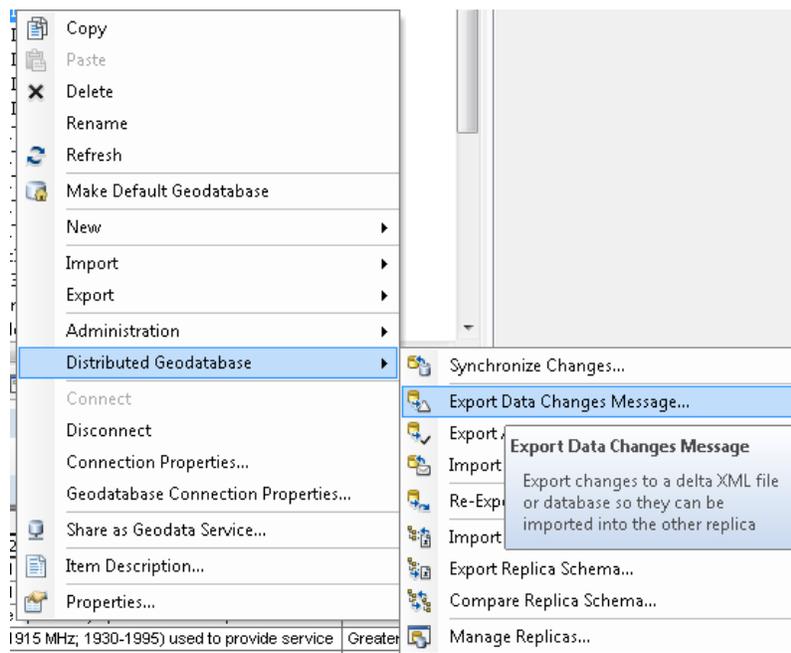
More information can be found in the esri help for [disconnected synchronization](#).

Export a data change message:

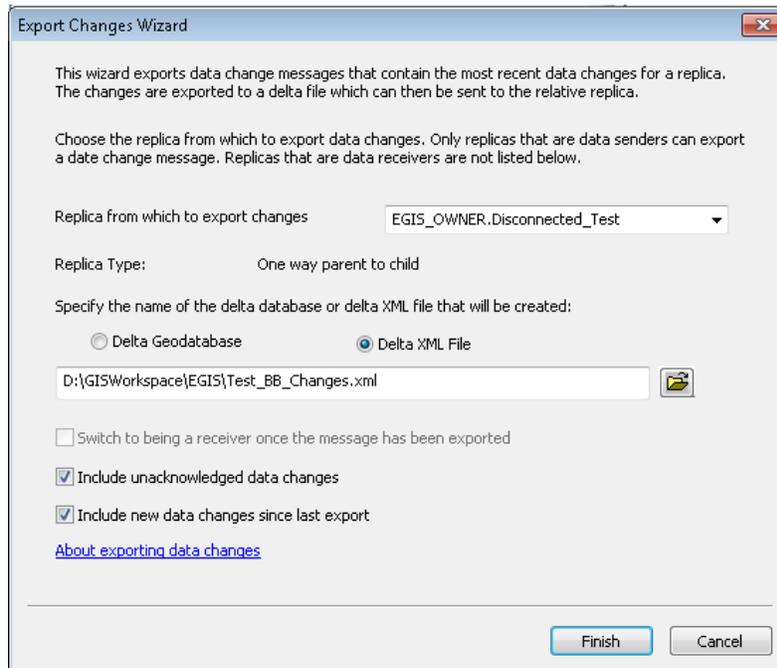
Data changes include new data changes and unacknowledged data changes. New changes are any inserts, updates, and deletes applied to the replica version since the last data change message was exported. Unacknowledged data changes include previously exported changes for which you have not received an acknowledgment.

When you are ready to send changes to be loaded into the eGIS system, export a change file and send it to DTI. After DTI imports the changes, we will return an acknowledgement file.

1. Right-click on the name of the parent database and select ‘**Distributed Geodatabase**’ -> ‘**Export Data Changes Message**’.



2. Select 'Delta XML File' and provide a file name.



3. Send the XML file to DTI for import into the eGIS system.
4. Import the Acknowledgement file from DTI. Right-click on the name of the database and select 'Distributed Geodatabase' -> 'Import Message' and select the path to the XML file you received from DTI.