

Data Loading Instructions

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1. Data Loading

1.1. Basics

The data model is provided as a blank file geodatabase. This document provides tool recommendations, instructions and workflows which you can use to import data into this model. Most of the information in this document refers to standard tools and procedures from the ESRI software.

The easiest tools for loading data into the model are Object Loader and Simple Data Loader. The simplest and fastest way to do this is working with the file geodatabase on a desktop computer. Some users may find it useful to load the model onto their servers to get the advantages (e.g. versioning, multi user editing and/or speed) that their enterprise system will offer.

You can load data into existing feature classes and tables using either of the following methods: the Object Loader in ArcMap or the Simple Data Loader in ArcCatalog. A third way to load data is using the Append geoprocessing tool. The Append geoprocessing tool is useful if loading data is going to be used as part of a batch

process, but generally the above methods are better for all other occasions. To learn more about the Append tool please follow the link in the Helpful Links Section Below.

Both Object Loader and Simple Data Loader allow you to load data into empty feature classes and tables, or add to feature classes and tables that already contain data. Providing it falls within the spatial reference of the feature class in which you are loading, you can load coverage, shapefile, CAD, or geodatabase feature class data into an existing feature class. You can load INFO, dBASE, or geodatabase table data into an existing table.

1.2. Object Loader vs. Simple Data Loader

While Object Loader and Simple Data Loader are similar loading wizards, the Object Loader provides the following functionality that the Simple Data Loader does not:

- Because Object Loader loads data during an edit session in ArcMap, once you have finished loading, you can undo the changes if needed.
- If the feature coordinates you are loading are not precisely located, you can choose to honor the current snapping environment, snapping coordinates as they load.
- If you are loading into a feature class that has validation rules, such as attribute domain or geometric network connectivity rules, you can validate the features added and create a selection of the loaded features that are in violation of these rules.
- With Object Loader, you can load into feature classes in a geometric network, feature classes in a relationship with messaging, or feature classes that have feature-linked annotation.

If you do not require any of the above capabilities, you can load with the Simple Data Loader. The Simple Data Loader is faster because it does not validate or process data as it loads. Please use the link below to find out more about loading using the Simple Data Loader

1.3. Simple Data Loader Process

1. Click View, point to Toolbars, and click Customize.
2. Click the Commands tab.
3. In the Categories list, click Data Converters.
4. Drag and drop the Load Objects command from the Commands list onto the Editor toolbar. The command appears on the toolbar.
5. Click Close.

1.4. Object Loader Process

1. Add your data to ArcMap, click Editor, then click Start Editing.

2. Click the Target layer drop-down arrow and click the feature class or subtype into which you want to load data.
3. Click Load Objects.
4. Browse to the source feature class.
5. Click Add to add it to the list of source data.
6. Repeat steps 4 and 5 until you have specified all the source data.
7. Click Next.
8. Click the drop-down arrow in the Matching Source Field list and click the field from the source data you want to match to the target field. Leave the Matching Source Field as <None> if you do not want data from a field in the source data to be loaded into the target data.
9. Repeat step 8 until you have matched the fields you want loaded from your source data.
10. Click Next.
11. Click the first option and skip to step 16 if you want to load all the source data.
12. Click the second option if you want to limit the features from the source data to load into the target using an attribute query.
13. Click Query Builder to open the Query Data dialog box.
14. Create a query to limit the features or rows from the source data to be loaded into the target.
15. Click OK.
16. Click Next.
17. Click No if you do not want your features to be snapped to existing features in your edit session. Click Yes if you want to use the current Editor snapping environment to snap the new features as they are loaded.
18. Click No if you do not want your new features to be validated after they are loaded. Click Yes if the feature class or subtype into which you are loading data has rules associated with it and you want any new invalid features to be selected after the loading process.
19. Click Next.
20. Review the options you have specified for loading your data. If you want to change something, go back through the wizard by clicking Back.
21. Click Finish to load your data when satisfied with your options.

1.5. Tips

- If you're loading into a versioned ArcSDE feature class or table with ArcMap, the data loads into the delta tables, not the base tables. After you have finished loading into any feature, class, or table that is registered as versioned without the option to move edits to the base table, run compress. Compress is found on your database and will push all the records from the delta tables to the base tables. Having your data in the base tables will result in better query speed as opposed to having large amounts of data in your delta tables.

- The option to validate the new features applies only to the geodatabase validation rules and does not validate the topology. You have to perform this operation separately.

2. Validating Topology & Fixing Errors

After loading the data, the Topology should be validated and any errors fixed, as necessary. Some features may be flagged as errors, but may be in fact correct; for example, Middle Mile points can be out of a state boundary, so if the Middle Mile point is actually out of the state boundary it is correct to keep it. The intent of the rule is to find points with incorrect or invalid coordinates.

Data can be validated by running the tools available in ArcGIS. It is recommended that you look into using the Validate Topology command. Validate Topology is available in the topology Toolbar in ArcMap and in ArcCatalog. The Validate Topology tool will not alter the data, it will simply flag the errors. For more information on Validating Topology, please visit the link found in the Helpful Links section below.

3. Look for Inconsistencies

Use the Validate Features command to find any inconsistencies with the business rules (coded domains, range domains, etc.) Data can be validated by running the tools available in ArcGIS. It is recommended that you look into using the Validate Features command. Validate Features is available from the Editor Dropdown in ArcMap. The Validate Features tool will not alter the data, it will simply flag the errors. For more information on Validating Features, please visit the link found in the Helpful Links section below.

4. Troubleshooting

4.1. Known Issues

Below you will find a chart of known issues when loading your data into the file geodatabase.

Problem	Solution
The Simple Data Loader or Object Loader fails with “Features from <i>your source file</i> name cannot be loaded” error.	The tools provide a list of the offending features. Copy the objectids and look the records in your source data. Look for inconsistencies in the field types or widths that are affecting the tool.
Error Message “Invalid Spatial reference”	The spatial reference in your source data is different from output geodatabase.

	Reproject your data.
Error message “All data must have the same schema”	You are trying to load from more than one feature class at the same time and the structures of the layers are not the same. Load one feature class at a time.
You reach the section in the Object Loader or Simple Data Loader where you match fields and you don’t see one of the fields in your source data listed.	This may happen when a field is a different type in your source data base and in your output. For example: in database A Date is Date type and Database B has Date as text. The loader will not match the fields automatically and will not let the user match them manually. Solution is to convert your data to the same type.
After loading data, fields for some records do not show coded value domain descriptions only the codes are displayed. For example: “1” instead of “School - K through 12”. Other records show the description correctly.	The subtype field for the problem records has not been populated. Populate the subtype column with valid data if possible.

5. Helpful Links

5.1. About Loading data

[http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=2541&pid=2539&topicname=Work flow strategies for loading data](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=2541&pid=2539&topicname=Work%20flow%20strategies%20for%20loading%20data)

5.2. About Validate Topology

[http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=718&pid=710&topicname=Topology validation](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=718&pid=710&topicname=Topology%20validation)

5.3. About Validate Features

[http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=683&pid=679&topicname=Editing with default values and attribute domains](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?id=683&pid=679&topicname=Editing%20with%20default%20values%20and%20attribute%20domains)

5.4. Append Tool

[http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Append \(Data Management\)](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Append%20(Data%20Management))

5.5. About the Simple Data loader

[http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?id=2080&pid=2077&topicname>Loading data in ArcCatalog](http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?id=2080&pid=2077&topicname>Loading%20data%20in%20ArcCatalog)