

Create a topology

- Open ArcGIS Project and in Catalog pane, navigate to Landbase feature dataset in Montgomery geodatabase.
This dataset contains several feature classes. You will create a topology using two feature classes – Parcels and Blocks.
- Right click the Landbase feature dataset, point to New, and click Topology.
Create Topology wizard starts and presents a default name and cluster tolerance for the topology.
- Accept the default name and ranks, and set the cluster tolerance to 0.01.
- For Feature Classes check Blocks and Parcels
These feature classes will participate in the Landbase topology.
One of the topology rules you will create is for the Parcels feature class, and the other will be between one subtype of Parcels and one subtype of Blocks; thus, both Blocks and Parcels feature classes must participate in the topology. If one of these feature classes already participated in another topology or a geometric network, or if they were registered as versioned, it would not appear in the list of available feature classes to add to this topology.
- Topology automatically assigns ranks for feature classes. If you would like assign separate ranks for feature classes adjust Number of XY Ranks box and manually edit the rank next to the feature class.
Ranks allow you to ensure that more accurately collected features are not snapped to the position of less accurately collected ones when the topology is validated. For example, if you were including a feature class that was collected using a survey-grade Global Positioning System (GPS) unit and a feature class digitized from a 1:1,000,000-scale source map in the same topology, you would likely assign the GPS feature class a rank of 1 and the 1:1,000,000-scale source feature class a rank of 5. If you were to validate the topology, parts of features that fell within the cluster tolerance would snap together, with the less accurate ones moving to the location of the more accurate ones. The GPS features would not be moved to the position of the 1:1,000,000-scale features.
- Click Next to Add Rules

Landownership parcels are usually not allowed to overlap each other. Add a rule to prevent your parcel features from overlapping each other.

- Click on Add button or Click here to add a new rule
For Feature Class 1, select Parcels from the dropdown menu.
For Rule, select Must Not Overlap (Area) from the dropdown menu.

Next, create a topology rule governing the topological relationship of features in particular subtypes of two different feature classes. Specifically, make sure that residential parcels are covered by or contained within blocks also designated as residential.

- Add another rule –
For Feature Class 1, select Parcels and for Subtype 1 select Residential.
For Rule, select Must Be Covered By (Area-Area)
For Feature Class 2, select Blocks and for Subtype 2 select Blocks.

Residential is a subtype of the Parcels feature class that the planning department uses to represent parcels where people live.

- Click Next
Review the summary information for the topology to be sure it is correct.
- Click Finish.
After the topology is created, you have the opportunity to validate it. You do not need to validate the topology immediately after creating it. Depending on your data and your workflow, it may make sense to assign different areas to data editors to validate and edit within ArcPro.