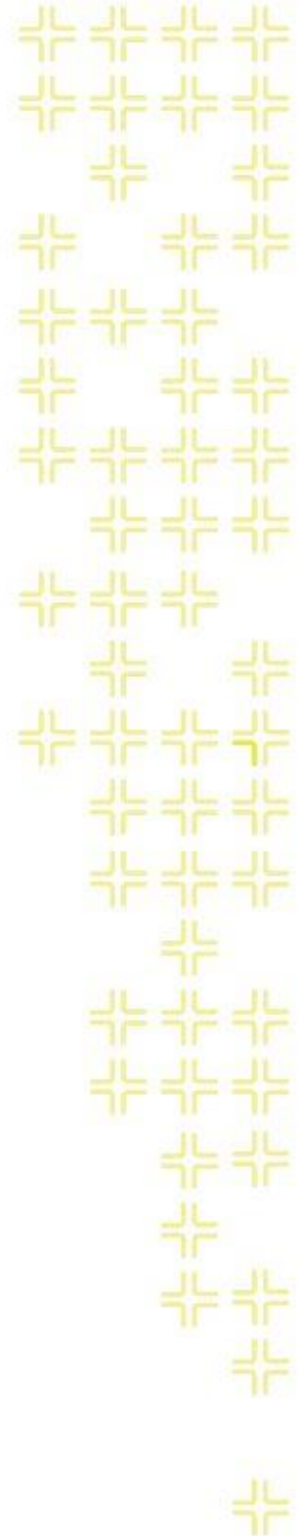




TRAINING GUIDE

ArcGIS Online with Lucity



ArcGIS Online with Lucity

In this session, we'll review the capabilities ArcGIS Online with Lucity.

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General Capabilities

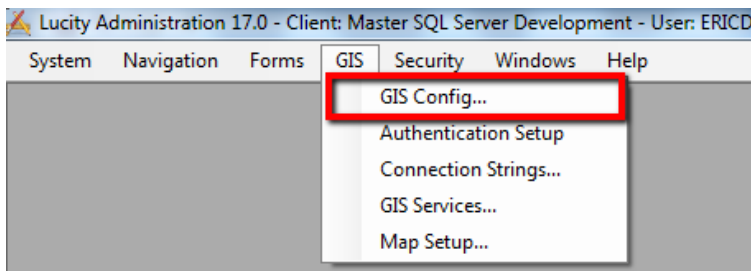
Certain ArcGIS Online (AGOL) content can be configured with Lucy. Currently, you can configure hosted feature and tiled layers on ArcGIS Online with Lucy. These layers may or may not also contain Lucy linked operational data. In a future release you will also be able to configure ArcGIS Online web maps to be used with Lucy.

Note: If you have an ArcGIS Online feature or tile layer that does not contain Lucy operational data (i.e. the layer is more for reference and doesn't need to be linked directly to a Lucy module) then you simply can configure that service with Lucy via the GIS Services form in the Lucy Administration tool. The purpose of this document is to review the steps necessary to configure an ArcGIS Online feature layer that has Lucy operational data and to link that data to a Lucy asset inventory module.

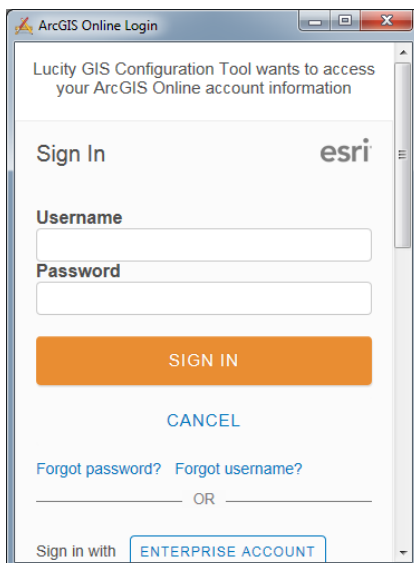
GIS Configuration tool

The GIS Configuration tool in Lucy Administration is used to configure ArcGIS Online services with Lucy modules.

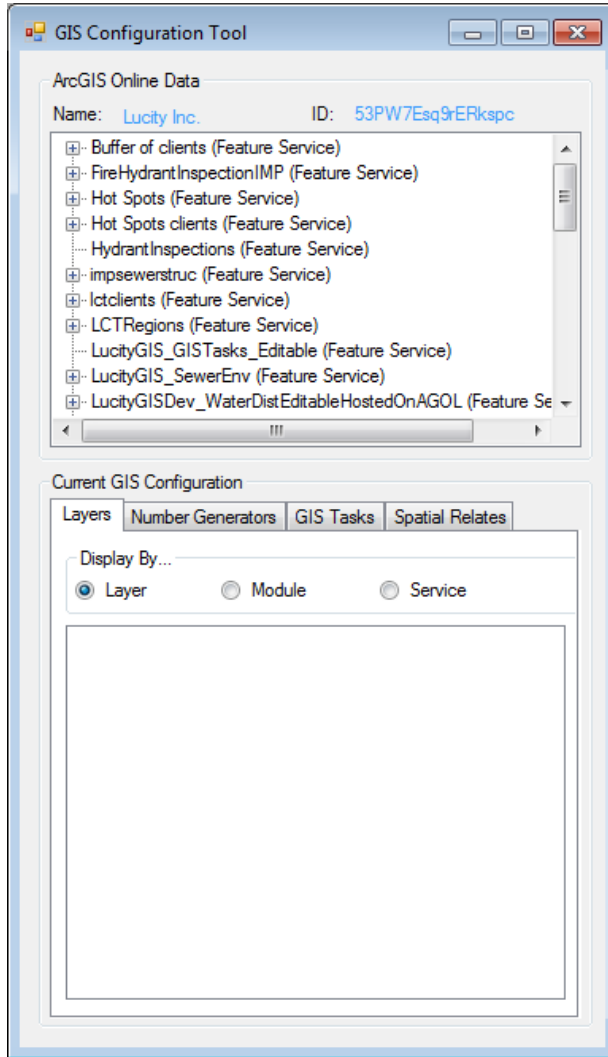
1. In the Lucy Administration tool, go to GIS>>GISConfig



2. The Lucy GIS Configuration tool requires access to your ArcGIS Online account; therefore, you will receive the following prompt asking you to login. Enter your ArcGIS Online credentials and click Sign In.



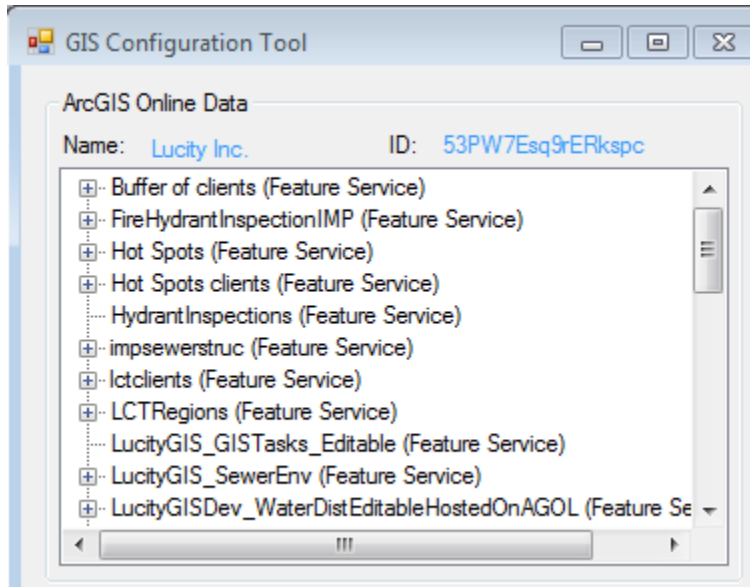
3. Depending on the amount of services in your ArcGIS Online organization it may take a few moments before the GIS Configuration Tool will load. The tool is obtaining a list of all services in your AGOL organization that are accessible to you.
 - o Note: Services not available to your AGOL user account will not be displayed. A user with access to those services must login to the Lucy GIS Config tool to configure those services.



Notes: _____

ArcGIS Online Data

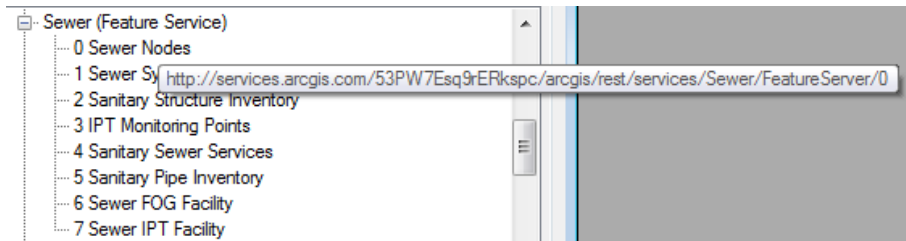
The ArcGIS Online Data section of the GIS Configuration Tool displays information about an agency's ArcGIS Online account.



- **Name:** This is the name associated with the ArcGIS Online organization
- **ID:** This is the ArcGIS Online ID associated with the account.
 - This ID is typically what it displayed in the URL of all hosted content for that ArcGIS Online organization. For example:

http://services.arcgis.com/53PW7Esq9rERkspc/arcgis/rest/services/LucityGIS_SewerEnv/FeatureServer/0

- **Grid:** The grid displays a list of services that are part of the ArcGIS Online organization.
 - Only services accessible to the currently logged in user are displayed
 - A tooltip displaying the service url is displayed when the mouse is hovered over an item



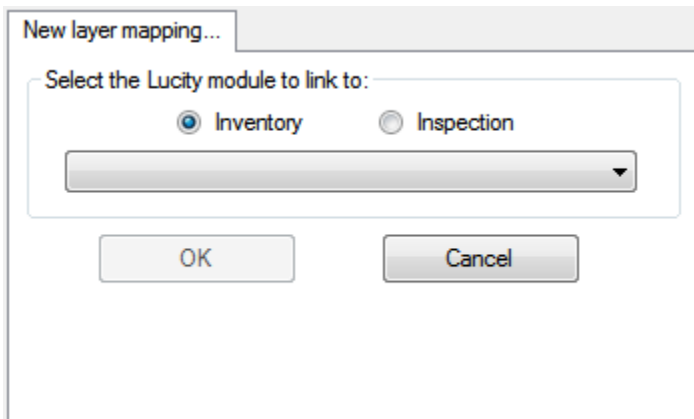
- Services listed in **black** do not have any layers linked to Lucity.
- Services listed in **green** contain at least one layer that has been linked to Lucity.
- Expand a service to view its layers
 - Additional Lucity tools are available when you right-click on a layer. The tools available depend if the layer is already linked to Lucity.



Link Layer to Lucity

This tool is available on the right-click menu for layers that are not currently inked to Lucity. This tool associates the layer to a module in Lucity and allows for further configuration.

1. Select a feature class layer listed in **black**.
2. Right-click on the layer and select **Link Layer to Lucity**. The following fields are displayed on the right side of the tool:



3. Select whether the feature class layer should link to an **Inventory** or **Inspection** module.
 4. In the drop-down box, select the **Lucity** module to which the layer should link.
 5. Click **OK**.
 6. Select the layer in the [ArcGIS Online Data](#) section or the [Current GIS Configuration](#) section to display the [Feature Class Configuration](#) section.
- The ArcGIS Online Services folder is added as a new GIS Connection String ([GIS Connection Strings, http://help.lucity.com/webhelp/v165/admin/index.htm#26705.htm](http://help.lucity.com/webhelp/v165/admin/index.htm#26705.htm)) if it hadn't been added previously.
 - The ArcGIS Online feature service that contains the layer is added to the [GIS Map Services](#) list if it hadn't been added previously.
 - The configuration is created for the layer and feature class.

Remove Link to Lucity

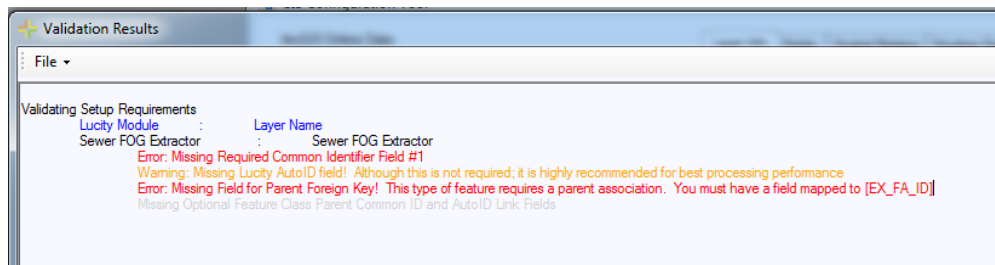
This tool is available on the right-click menu for layers that are currently inked to Lucity. This tool unlinks the layer to a module in Lucity and allows for further configuration.

1. Select a feature class layer listed in **green** in the **ArcGIS Online Data** section of the tool.
2. Right-click on the layer and select **Remove Link to Lucity**. The association no longer exists.

Validate

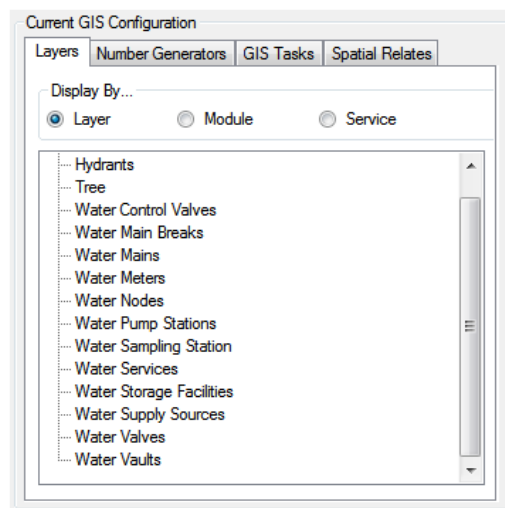
This tool is available on the right-click menu for layers that are currently inked to Lucity. This tool validates the configuration to confirm that there are no errors in the link between the layer and the Lucity module.

1. Select a feature class layer listed in **green** in the **ArcGIS Online Data** section of the tool.
2. Right-click on the layer and select **Validate**. The tool begins its three-part validation process, displaying results as it runs:



Current GIS Configuration

The bottom section of the GIS Configuration tool shows a list of currently configured layers.



There are three ways to display the current configuration:

- **Layer:** Lists all ArcGIS Online layers that have been linked to a Lucity module.
- **Module:** Lists all ArcGIS Online layers that are linked to a Lucity module, arranging them by Lucity program and module.
- **Service:** Lists all ArcGIS Online layers that are linked to a Lucity module according to which ArcGIS Online service the layer is part of.

Selecting a layer will expand the GIS Configuration form to show specific details on the layer configuration

Layer Configuration

When a Lucity-linked layer is selected, the GIS Configuration form expands showing detailed configuration options for the layer.

The screenshot shows the 'Layer Info' tab of the GIS Configuration form. It contains the following sections:

- General Info:** Layer Name: Water Control Valves; Lucity Module: Water Control Valves; Lucity Table: WTVALVEC; checkboxes for 'Disable Feature Class' (unchecked) and 'Always Update Length/Area Field' (checked).
- Feature Class Linking Fields:** Common ID (VC_NUMBER): FACILITYID; Lucity Auto ID (VC_ID): LUCITYID.
- Layer Fields (not linked to Lucity):** In Lucity Flag: INLUCITY; Last Synchronized Date: LastSynDate; Last Modified By: LastModBy; Last Modified Date: LastModDate; Field For Display: FACILITYID.
- Service Info:** A dropdown menu and a text box containing the URL: http://services.arcgis.com/53PEexamplepc/ArcGIS/rest/services/LucityGIS_WaterDistReadOnlyHostedOnAGOL/FeatureServer.

There are multiple tabs allowing you to define further customizations:

- **Layer Info:** Used to define some basic information about the layer, its linking fields, and some diagnostic fields.
- **Fields:** Contains the layer fields grid which is designed to link the layer fields to Lucity module fields.
- **Spatial Relationships:** Displays all the currently configured spatial relationships and ability to modify existing and create new relationships.
- **Number Generators:** Displays all currently configured number generators and ability to modify existing and create new number generators.
- **GIS Tasks:** Displays all GIS scheduled tasks currently configured and ability to modify existing and create new scheduled tasks.

Layer Info

This tab displays some basic information about the feature class, its linking fields, and some diagnostic fields.

General Information

General Info

Layer Name:
Water Control Valves

Lucity Module: Water Control Valves

Lucity Table: WTVALVEC

Disable Feature Class

Always Update Length/Area Field

- **Layer Name:** The name of the layer in the service. This would be the alias name of the actual underlying feature class.
- **Lucity Module:** Read-Only field displaying the name of the Lucity module the layer is linked to.
- **Lucity Table:** Read-Only field displaying the Lucity database table that stores information for the module.
- **Disable Feature Class:** This flag can be used to exclude the layer from the Lucity GIS integration. It can be used while initially configuring a layer and preparing for future use.
- **Always Update Length/Area:** This flag indicates whether or not the Lucity GIS Extension should always update a user-defined length or area field when the shape of a feature has changed. If checked, the program will update the field in the feature class mapped to the Lucity length/area field. If this option is left unchecked, the Length/Area fields will only be populated when the feature is first created.

Layer Fields (Not linked to Lucity)

This section contains optional fields used to keep track of changes in Lucity. The only exception is the Field for Display.

Layer Fields (not linked to Lucity)

In Lucity Flag: INLUCITY	Last Synchronized Date: LastSynDate
Last Modified By: LastModBy	Last Modified Date: LastModDate
	Field For Display: FACILITYID

- **In Lucity Flag Field:** This field is updated by Lucity to indicate whether or not the feature exists in Lucity.

- **Last Modified By:** This field is controlled by Lucy to indicate the last user to modify the record in the map.
- **Last Modified Date:** This field is controlled by Lucy to indicate the last date the record was modified in the map.
- **Last Synchronized Date:** This field is controlled by Lucy to indicate the last date the record was synchronized with Lucy.
- **Field for Display:** This is the field that is displayed by various Lucy GIS tools. By default this is set to the FacilityID/CommonID field.

Feature Class Linking Fields

This section is a quick reference to show which fields in the feature class layer form the basis of the link between the layer and the Lucy module.

Feature Class Linking Fields	
<i>These values can be modified under the Fields tab</i>	
Common ID (VC_NUMBER) :	FACILITYID
Lucy Auto ID (VC_ID) :	LUCITYID

- **CommonID Field: (Required)** The unique identifier assigned by the user for this asset.
 - The value for this field cannot be directly modified; it is automatically populated based on the field mappings on the **Fields** tab. Every module has at least one field that defines the asset as unique. These fields are highlighted in red on the **Fields** tab. To enter a value in this field go to the **Fields** tab, find the corresponding red highlighted field, and type the field name into the **Feature Class Field Name** column.
- **Lucy AutoID Link:** This field is used by Lucy to store an indexed long integer link between the records in the feature class and the records in the Lucy inventory table.
 - This field must be long integer. The value for this field name is not editable; to update this value, use the grid on the **Fields** tab.

Service Info

This section displays the URL for the Feature Service that contains the Layer.

Service Info

LucyGIS_SewerEnv

http://services.arcgis.com/53PW7Esq9rERkspc/arcgis/rest/services/LucyGIS_SewerEnv/FeatureServer

This path is just for information. It is read-only.

Fields

The Fields tab contains a grid that allows you to link the layer fields to fields in the Lucity module.

Note: GIS Fields that link to a Lucity Picklist field can only link to the Code portion of the Lucity Picklist field.

Note: Never link Esri's Shape.Length field to the Lucity length field.

Fields

FieldName	DisplayName	Field Type	MaxMask	Feature Class Field Name	Field Lookup	Lookup Lucity ID
BK_ADR_STR	Street Name	String			<input type="text"/>	
BK_ADR_TY	Street Type	String	5x		<input type="text"/>	
BK_AZONE_...	Alternate Zone	String	10x		<input type="text"/>	
BK_BR_CD	Default WO Cat	String	10x		<input type="text"/>	
BK_CITY_CD	Facility	Short	nnnn		<input type="text"/>	
BK_COVR_CD	Surface Type	Short	nnnn		<input type="text"/>	
BK_CRW_CD	Repair Crew	Short	nnnn		<input type="text"/>	
BK_DESC_CD	Break Type	Short	nnnn	BREAKTYPE	<input type="text"/>	
BK_ID	Mainbreak Rec #	Long	nnnnnnnn	LUCITYID	<input type="text"/>	
BK_INCN_CD	Interior Condition	Short	nnnn		<input type="text"/>	
BK_LOC	General Location	String	100x		<input type="text"/>	
BK_MAP_NO	Map Number	String	15x		<input type="text"/>	
BK_MAP1_NO	Alt Map Number	String	15x		<input type="text"/>	
BK_MZONE_...	Maintenance Zone	String	10x		<input type="text"/>	
BK_NOWORK	No WO/PM/Req	Boolean			<input type="text"/>	
BK_NUMBER	Break Number	String	20x	FACILITYID	<input type="text"/>	
BK_OTCN_CD	Exterior Condition	Short	nnnn		<input type="text"/>	
BK_PIP_DPT	Pipe Depth (ft)	Double	-nnnnnnnn...		<input type="text"/>	
BK_PIPE_DI	Diameter (in)	Double	-nnnnnnnn...		<input type="text"/>	
BK_PMAT_CD	Material	Short	nnnn		<input type="text"/>	
BK_PP_ID	Pipe Rec #	Long	nnnnnnnn		<input type="text"/>	

FieldName	DisplayName	Field Type	MaxMask	Feature Class Field Name	Field Lookup	Lookup Lucity ID
HI_HY_ID	Hydrant Rec #	Long	nnnnnnnn	FACILITYKEY	<input type="text"/>	<input checked="" type="checkbox"/>
HI_ID	Auto Number	Long	nnnnnnnn		<input type="text"/>	
HI_INBY_CD	Inspection By	String	5x		<input type="text"/>	
HI_INSP_BY	Inspected By	String	25x	INSPECTOR	<input type="text"/>	
HI_INSP_DT	Inspection Date	Date	mm/dd/yyyy	INSSTART	<input type="text"/>	
HI_INSP_TM	Inspection Time	Time	hh.mm am		<input type="text"/>	
HI_NEEDREP	Needs Repair	Boolean		MTCERQRD	<input type="text"/>	
HI_NMNT_DT	Next Insp Date	Date	mm/dd/yyyy		<input type="text"/>	
HI_NOZL_CD	Nozzle Condition	Short	nnnn		<input type="text"/>	
HI_NOZLGRD	Grade to Nozzle	Double	-nnnnnnnn...		<input type="text"/>	

- **Field Name:** The field name in the Lucity table
- **Display Name:** the field caption in Lucity
- **Field Type:** The type of data stored in the Lucity field
- **MaxMask:** The data format
 - A numeric value followed by an “x” indicates the number of characters allowed.
 - “n” indicates a numeric value

- **Feature Class Field Name:** This is the name of the field in the layer.
- **Field Lookup:** This button column displays a list of the feature class fields.
 - **Note:** If a connection to the service was unsuccessful then no fields will be listed.
- **Lookup Lucity ID:** This looks up the record number based on the common id.
 - This column only works for feature class layers linked to Lucity Inspection modules and only appears next to the field that links to a **Record #**. The feature class must have contain an ID for the Lucity Asset the inspection is for. If the ID stored in the feature class is the asset's **Rec #** link that field to the **Rec #** field and leave this box unchecked. If the ID stored in the feature class is the the asset's common ID then link the field to the common ID and check the **Lookup Lucity ID** field next to the Rec #. This is done because in this case Lucity needs to know the record number.
- **Color Coding:**
 - **Red:** Required field.
 - **Orange:** Stores the required ID numbers of related features.
 - **Yellow:** Stores the optional ID numbers of related features.
 - **Green:** Composite address field.
 - **Pink:** Strongly recommended field.
 - This is typically the Lucity AutoID field. Although, technically not required it is recommended to improve performance with various Lucity GIS tools because without this field additional resources will be used to determine the AutoID value based upon the CommonID.

How to Link a feature class field to a Lucity field.

1. Decide which field should be linked.
2. Look at the field in Lucity. Either get the field display name or CTRL + Right -click and look at field properties for the field name.
3. In the GIS Config select the feature class linked to the correct module
4. Search through the grid on the right for the Lucity field using the field name or display name.
5. Enter the name of the feature class layer in the **Feature Class Field Name** field OR push the **Field Lookup** button for a list of fields from the associated feature class.

Spatial Relates

Spatial relationships automatically update features based on their location relative to other features to help aid general editing and maintaining these relationships. These are used to speed up filling out information when adding new features. It is most often used to update a child record with a parent records ID number. For example it can update play ground equipment with the park id. The spatial relate can update any fields, whether or not they are linked to lucity and it can use non-Lucity feature classes to update Lucity feature classes.

Triggering a Spatial Relationship update

The GIS Task that syncs your GIS data in your Feature Service into Lucity has an option to Update Spatial relationship.

Considerations

Which features require data from other features?

Which features would benefit from having data pulled over from other features?

What is the relationship between these features?

How to Add a New Spatial Relate

1. Click the **Add New Spatial Relate** button.
2. A new record will be added to the grid.
3. Select the record in the grid and fill out the **Spatial Relationship Info** section at the bottom.

The screenshot shows the 'Spatial Relationship Info' form with the following fields and options:

- Field to Update:** A dropdown menu.
- Service that contains related layer (Only necessary if related layer is not in the same service):** A dropdown menu with a greyed-out text input field to its right.
- Related Layer Name:** A dropdown menu.
- Related Layer Field:** A dropdown menu.
- Relationship Type:** A dropdown menu.
- Distance Value:** A text input field containing the number '0'.
- Never overwrite a non-null value
- Update value to null if no relationship is found

4. **(Required)** Populate the **Field to Update** with the Field name of the field in the selected feature class layer that will be automatically updated.
5. **(Required)** Populate the **Service that contains related layer** with the name of the feature service that contains the layer the current feature class layer should be related to. (Only necessary if the related layer is not in the same service)

6. **(Required)** Populate the **Related Layer Name** with the name of the feature class layer that the current feature class layer should be related to.
7. **(Required)** Populate the **Related Layer Field** with the field name of the field in the **Related Layer Name** that contains the value that will update the **Field to Update** field.
8. **(Required)** Populate the **Relationship Type** using the drop down list of predefined relationships.
 - **From Intersect:** Finds any features in the **Related Layer** that intersect the from point of the feature in the selected feature class layer. This relationship only works for polyline, edge, or complex edge features.
 - **To Intersect:** Finds any features in the **Related Layer** that intersect the To Point of the feature in the selected feature class layer. This relationship only works for polyline, edge, or complex edge features.
 - **Is Contained by:** Finds any features in the selected feature class layer that are contained by features in the **Related Layer**. The **Related Layer** must be a polygon feature class layer.
 - **Intersects:** Finds the first feature in the **Related Layer** that intersects the feature in the selected feature class.
 - **To Intersect Distance:** Finds the first feature in the related feature class layer that intersects the feature in the currently selected feature class layer. It then calculates the distance along the related feature between the intersection location and to point. If the selected feature class layer is of a polyline geometry type then it requires the 'to point' of the selected feature to intersect the related feature. This relationship type requires the related feature class layer to be a polyline geometry type.
 - **From Intersect Distance:** Finds the first feature in the related feature class layer that intersects the feature in the currently selected feature class layer. It then calculates the distance along the related feature between the intersection location and the from point. If the selected feature class layer is of a polyline geometry type then it requires the 'to point' of the selected feature to intersect the related feature. This relationship type requires the related feature class layer to be a polyline geometry type.
 - **Midpoint Intersect:** Finds any feature in the related feature class layer that intersects the midpoint of the feature in the selected feature class layer. This relationship is designed for polyline, edge, or complex edge features as the selected feature class layer, and a polygon feature for the related feature class layer.
 - **Force Feature to Self-Update:** This relationship finds any features that intersect the feature in the selected feature class layer and adds them to the edit cache so that they are synced to Lucity even if the records have not changed. This is used primarily for the street segment feature class with the street intersection feature class (as **Related Layer**). This forces the intersections to automatically recalculate the intersection configurations for the diagram in the desktop Intersection module when street segments are changed.
 - **Is Within Distance of:** Finds all features in the **Related Layer** that are with a specified distance of the feature in the selected feature class.
9. Populate the **Distance Value**.

- Required only if the relationship type **Is Within Distance Of** has been selected. The field is used to specify a distance for this relationship type.

10. **Never Overwrite a Non-Null Value.**

- Optional. Check this box to ensure that data populated in the **Field to Update** field of the selected feature class is never overwritten if a value already exists.

11. **Update Value to Null if No Relationship is Found.**

- Optional. Check this box to allow the **Field to Update** field to be set to null if no relationship is found.

12. This information will be saved when another node is selected of the form is closed.

Notes: _____

Number Generators

Number Generators are designed to assist users in populating a feature class field with a unique value.

Triggering a Number Generator

The GIS Task that syncs your GIS data in your Feature Service into Lucity will automatically trigger any number generators when it runs.

Considerations

Do I want this number to have a prefix?

If so is the prefix set, or does it change depending on location?

What would the next number in the feature class be?

How to Add a Number Generator

1. Click the **Add New Number Generator** button.
2. A new record will be added to the grid.
3. Select the record in the grid and fill out the **Number Generator Info** section at the bottom.

Number Generator Info

Field to AutoNumber: Buffered Number Length:

Prefix Settings (Optional)

None

Use Set Prefix

Use a polygon layer to create a prefix

Separator Character:

Service that contains related layer (Only necessary if related layer is not in the same service):

Polygon layer

Field that contains prefix value

ID	NumberGeneratorID
*	

4. **(Required)** Populate the **Field to AutoNumber**- This is the field that will be auto-numbered.
 - o This should be a text field, large enough to support the numbers that will be generated based on the settings on this form.
5. Populate the **Buffered Number Length**. This causes the number to contain buffered zeros. Enter the number of characters desired.
 - o Optional. Example, if a buffered length of 5 is entered, and if the auto-number generated is 985, the resulting auto number that will be populated is 00985. This may allow for easier number sorting.

6. Include **Prefix Settings**.

- **None**: This will be marked by default. If this button remains marked, there will be no Prefix for this AutoNumber field.
- **Use Set Prefix**: This will allow specifying a prefix in the next number grid and a separator character.
- **Use a polygon feature class to create a prefix**: Uses a Polygon Feature class field to generate a prefix based on a features spatial relation to the polygon feature class.
 - **Service that contains related layer**: Populate with the name of the feature service that contains the polygon layer the number generator will use. (Only necessary if the related layer is not in the same service)
 - **Polygon Layer**: The polygon feature class layer that the prefix is based on.
 - **Field that Contains prefix value**: The field in the polygon feature class that contains the value that will be used as a prefix.

7. **Separator Character**: Optional. Characters entered into this field will be between the Prefix and Autonumber. This is available only if using a prefix.

8. Click the **Generate Next Number** button to set the correct start number.

- If the prefix setting option is set to **None** or **Use Set Prefix** then only one next number record is allowed in the grid.
- If the prefix setting option is set to **Use a Polygon Feature Class** then an unlimited number of next numbers can be set. One for each polygon in the feature class.

9. This information will be saved when you click on a different feature class.

Notes: _____

GIS Tasks

Scheduled Tasks are designed to push data back and forth between the feature service layer and the Lucity database. It can push inventory data from the GIS layer to Lucity or push inspection data from Lucity to the GIS layer.

- **Lucity to GIS**- Currently this is only available for inspection feature classes
- **GIS to Lucity**- This is supported for all GIS enabled modules (inventory and inspection).

Scheduled Tasks can be configured to run automatically. The GIS Task Runner will process any Scheduled Task that is due based upon the user defined frequency and other criteria. This functionality greatly expands the Lucity and GIS integration capabilities with use of feature services. Edits to the feature service, regardless of who did it and what environment they did it in, can be picked up by Lucity. Some potential examples:

- Collector for ArcGIS (iOS & Android)- including disconnected editing
- Lucity Web Map
- Lucity Mobile
- ArcGIS.com map viewer
- [Any other 3rd party apps that support feature service editing](#)

Notes:

- Merges, Splits, Renumbers, and Deletes must still be done in an ArcMap editing environment with the Lucity extension enabled in order for the related Lucity inspection, construction, and work history to be properly updated.
- Features must meet the Lucity module requirements in order for them to be synchronized. For example, required fields such as the Lucity common ID must be populated with a unique value.
- Scheduled Tasks interact with the feature class via the feature services. Before setting up a Scheduled Task you should make sure there is a feature service defined at either the feature class or geodatabase level.

Primary Uses

- Import Inspection records into Lucity that were created in an inspection feature class layer.
- Update Lucity with edits made to feature classes layers in the Lucity web map.
- Update Lucity with edits made to Lucity linked feature class layers using editing environments that aren't integrated with Lucity.

Prerequisites

- Your feature service must have all the fields that you want linked to Lucity.

Considerations

- Which inspections should show up in the feature class?
- Should old records be updated with new changes?

How to Add a GIS Task

1. Click the **Add New GIS Task** button. A new record appears in the grid.
2. Select the record in the grid and complete the **GIS Task Info** section at the bottom.

The screenshot shows the 'GIS Task Info' configuration panel with the following sections:

- General Info:** Task Type: [dropdown], [Disabled] checkbox.
- Filter Options:** [None (process all source records)] radio button selected, [Filtered set] radio button, Where Clause: [Select Filter] button, [empty text area].
- Scheduling Info:** Units: 0, Frequency: [dropdown], Last run: [calendar icon], [Override] checkbox, Next run: [calendar icon], [Recalc] button.
- Options:** [Only process records modified since last run] checkbox, Last Edited DateTime Field: [dropdown], [Insert record if it doesn't already exist] checkbox, [Enable number generator for imports] checkbox, [Enable spatial relates for imports] checkbox, [Update existing record] checkbox, [Delete previous inspection(s) for asset. (Only keep most recent inspection)] checkbox.
- History:** Last Process DateTime: [text field], Last Sync Start: [text field], Last Sync End: [text field], [Last Sync contained errors] checkbox.

3. Under **General Info**, select the desired **Task Type**:
 - **Sync - Lucity to GIS** - Pushes Inspection data from **Lucity** to an **Inspection** feature class layer.
 - **Sync - GIS to Lucity** - Pushes any data from the feature class layer to **Lucity**.
4. Under **Filter Options**, select which records to task will process when it runs:
 - **None** - Directs the task to consider all records when syncing.
 - **Filter Set** - Directs the task to consider only records that meet the criteria of a particular filter.
 - i. **Select Filter** - Choose an existing **Lucity** filter from the related module.
5. Under **Scheduling Info**, indicate how often the task should run.
 - **Units** - Indicate the number of minutes, hours, days, or months that will pass between runs.
 - **Frequency** - Select whether the units represent minutes, hours, days, or months.

- **Last Run** - Displays the last date that the task was run. (The system automatically completes this field.)
 - **Override** - Allows the user to manually modify the **Last run** date.
 - **Next Run** - Displays the next date/time the task will run. (The system automatically calculates this field based on the **Last Run**, **Units**, and **Frequency**.)
6. Click the **Recalc** button to calculate the **Next Run** date using the **Units**, **Frequency** and today's date.
 7. Under **Options**, set how the scheduled task should behave when populating the feature class:
 - **Only process records modified since last run** - Directs the **Task** to check the records' **Last Modified** dates. Only records (in the filter set) that were modified since the **Last Run** date are synced.
 - **Last Edited DateTime Field** - Directs the **Task** to store the date/time that the record was last edited (typically the Esri Editor Tracking field). This is only enabled when the **Only Process records modified since last run** option is checked and the **Task Type** is **Sync- GIS to Lucity**.
 - **Insert record if it doesn't already exist** - Tells the **Task** to add any new records to the destination.
 - **Enable number generator for imports** - Directs the **Task** to assign numbers to assets using a **Lucity GIS Number Generator** related to the feature class.
 - **Enable spatial relates for imports** - Directs the **Task** to perform spatial relationships configured for the layer.
 - **Update existing record** - Tells the **Task** to update existing records with new attribute data.
 - **Delete previous inspection(s) for asset. (Only keep most recent inspections)** - Directs the **Task** to delete any **Inspection** in the feature class that is not the most recent **Inspection** for an asset. The option is helpful if an agency wants the feature class to contain only the most recent **Inspection** for each feature. (Enabled only when the **Task Type** is **Sync- Lucity to GIS**.)
 8. Click on a different part of the tool to save changes.

Service Configuration

When a Lucity-linked service is selected, the GIS Configuration form expands showing detailed configuration options for the layer.

Note: This information is also available and can be modified under GIS Services in the Lucity Administration Tool.

Service Info

Service Properties

Name:

Url:

Require Logon?

Authentication for Secured Service:

Offline Mobile Feature Service Url:

Proxy Url:

- **Name:** A unique name for the map service. For ArcGIS Online services, the system automatically uses the ArcGIS Online defined service name.
- **URL:** The URL of the service. This should NOT be modified.
- **Require Logon?:** Provides an added layer of security by forcing users to enter their own login credentials when accessing a secure service.
 - This is required for ArcGIS Online services
- **Authentication for Secured Service:** Enables you to select what authentication you would like to use for a secured service. The authentication selections in this list are configured in the Lucity Administration's GIS>>Authentication Setup tool.
 - This is required if using GIS Tasks
 - If the service is secured and no username/password is provided, users will be prompted to login.
- **Offline Mobile Feature Service Url:** Specifies the URL for an alternate map service in cases in which a map is likely to be used in Lucity Mobile's offline mode.
- **Proxy URL:** Identifies the proxy address for clients using one.