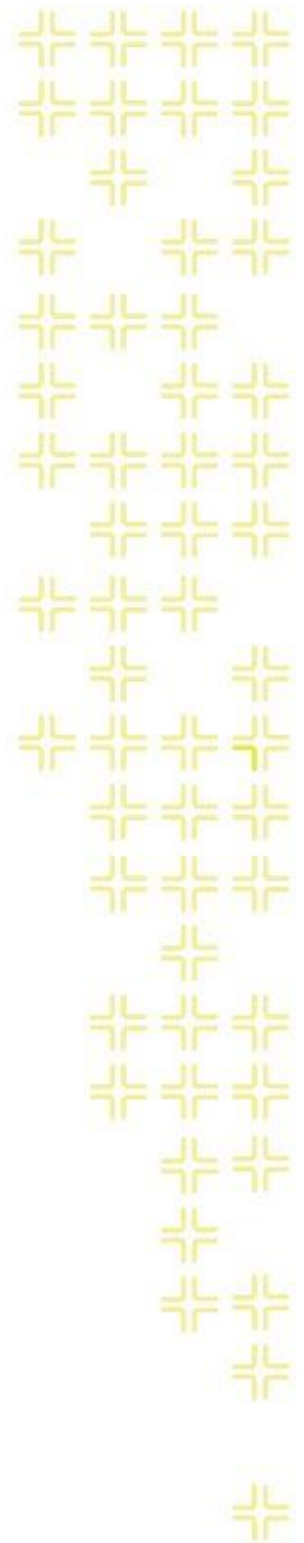




TRAINING GUIDE

# GIS Admin for Web and Mobile Maps



# GIS Admin for Web and Mobile Maps

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In this session, we'll cover the tools necessary to properly configure Lucy to work with your GIS environment. We'll give you information about the configuration and settings necessary to run the Lucy web and mobile maps.

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## Introduction

Some system configuration and setup is required prior to using the web maps available with Lucy Web, Mobile and Tablet. This configuration occurs in the Lucy Administration tool, ArcCatalog, ArcMap, and ArcGIS Server.

### Lucy Administration

- Set up user authentication if map and/or feature services are secured.
- Set up GIS service connection info
- Create map templates
- Configure system settings

### Lucy Security

- Assign users to default groups
- Verify user/group permissions grant access to GIS Web Map

### ArcCatalog

- Associate map/feature services for feature classes
- Feature class alias associations

### ArcMap

- Alias Name import

Before you can configure web maps to use in the various Lucy environments, you must first have the basic Lucy GIS configuration complete. Information on setting up the initial Lucy configuration is provided in the Lucy GIS Admin Tools documentation.

The following pages describe the above steps in further detail.

# Lucy Administration Tool

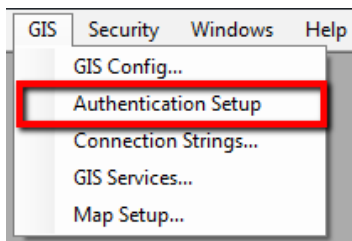
The Lucy Administration tool (Lucy.Admin.exe) is used to configure various GIS settings used with the Lucy web maps. This .exe can be found in your local workstation \bin directory or can be accessed by the Start>>All Programs>>Lucy>>Lucy Administration Tools

## Authentication Setup

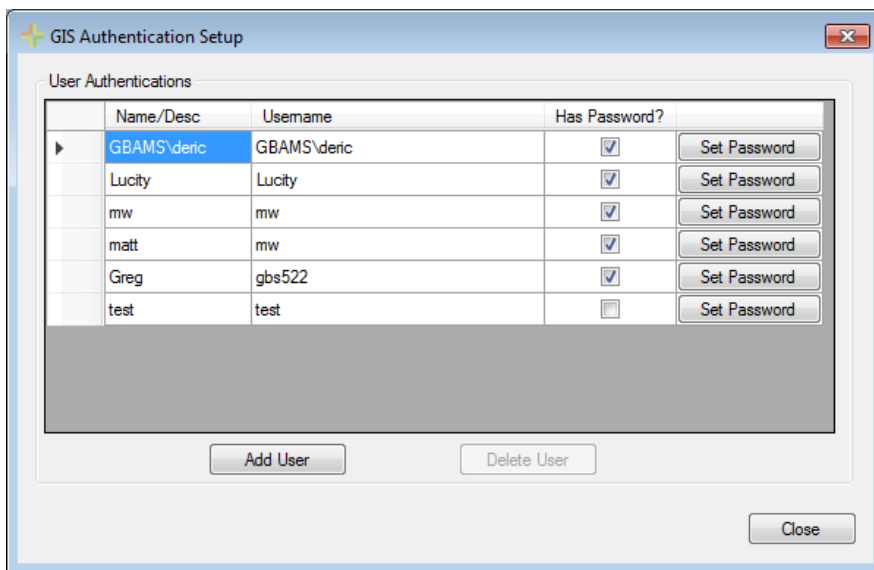
Before configuring GIS Services (covered in the next section), if your map and/or feature services are secured, you will need to configure a user authentication for each secured service. In version 2016r2+, this is handled inside Authentication Setup.

To configure user authentication:

1. In the Lucy Administration tool click on GIS>>Authentication Setup



2. The following dialog will appear, allowing you to add or delete user authentications.



### Grid Properties:

- **Name/Desc:** A unique/easily remembered name for whose credentials are on which row.
- **Username:** The actual username that has been configured for a given user on a given service.
- **Has Password?** Determines if the username has a password associated to it. If this is checked, then a password must be provided.
- **Set Password:** Click this button to populate the password associated to the username for the service, if there is one.

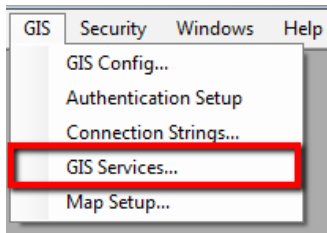
## GIS Services

The GIS Services module is used to store the services information used with the web maps. This includes three types: map services (services that have your operational data, redlining feature services, base map services, and any other map/feature services), utility services (geocoding services, geometry service, and routing service), and work zone services (services that hold information for work maintenance and alternate zones).

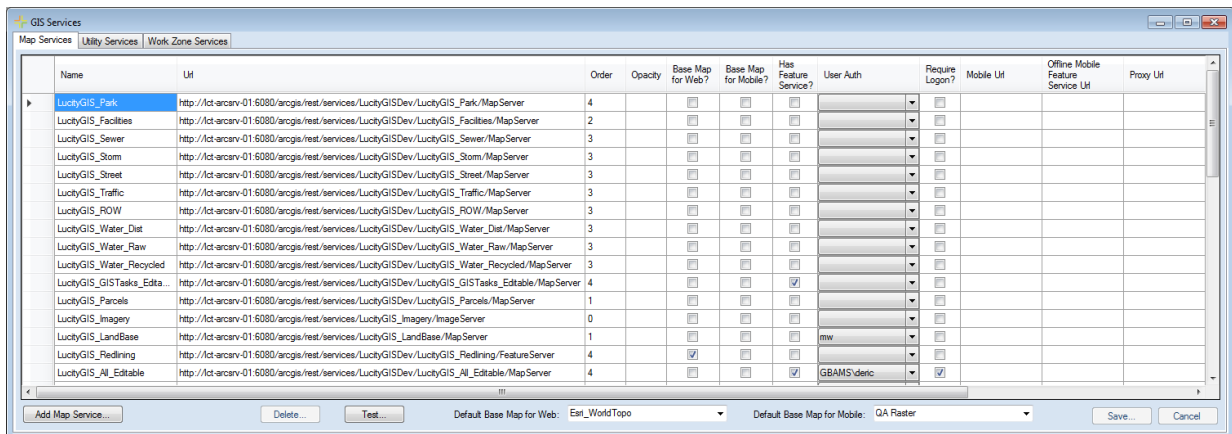
### Map Services

To add/edit/delete map services:

1. In the Lucy Administration tool click on GIS>>GIS Services



2. The following dialog will appear allowing you to edit existing services, add new services or delete services.



### Grid Properties:

- **Name:** A unique name for the service. This is used to identify the service during setup.
- **URL:** The URL of the service, or path to a local map package. This must include /rest after ArcGIS.
  - In ArcGIS 10.x the service name is case sensitive
- **Order:** The order in which map services will appear when used together. Lower numbers will appear underneath higher numbers. Base map services will always be on the bottom.
  - The Order can be overwritten for individual maps in Map Setup
- **Opacity:** Controls the opacity of this service
- **Base Map for Web?:** Marks whether a layer should be used as a base map for web. All layers marked as a Base map will be available to all users in the base map selection tool in the web map.
  - Base maps must be either a Tiled, Image, or Bing Map service

- **Base Map for Mobile?:** Marks whether a layer should be used as a base map for mobile. All layers marked as a Base map will be available to all users in the base map selection tool in the mobile map.
  - Base maps must be either a Tiled, Image, or Bing Map service
- **Has Feature Service?:** This setting indicates if the map service has a corresponding feature service. This would be the case if the map service had the Feature Access capability enabled on it.
- **User Auth:** If the map service is secure, select a user authentication that has permission to access it (configured in Authentication Setup). This is required for secure services that contain Lucity Operational Data.
- **Require Logon?:** If the service is a secured service it should have a username and password assigned. Mark this field to force users to enter their own login credentials as an added layer of security.
  - In version 2016r2+, this is automatically set to true for ArcGIS Online services.
- **Mobile URL:** If this service will be used by Lucity Mobile use this field to enter an alternative URL for the service that is available externally.
  - This functionality only applies to Lucity mobile applications.
  - This map service should still contain the same data as the service listed in the URL field. It is not intended to deploy different map services for the same item.
- **Offline Mobile Feature Service URL:** If this service is part of a map that users might pull down to the Lucity Mobile app in Offline mode this field allows you to enter a URL for an alternative map service. Map services that are taken offline have several Esri imposed restrictions. This setting allows you to use an unrestricted map service in your webmap/mobile map but then when users take the map offline it would automatically switch to the alternative service that you designed in-line with Esri's offline restrictions.
  - This functionality only applies to the Lucity mobile Android application
- **Proxy URL:** Clients using a proxy can provide the proxy URL here.

**Default Base Map for Web:** Previously handled in System Settings>>GIS Web, unless otherwise specified, this is the basemap that will appear when any user opens the web map.

**Default Base Map for Mobile:** Previously handled in System Settings>>GIS Web, unless otherwise specified, this is the basemap that will appear when any user opens the mobile map.

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## Redlining Services

All the Lucity web map applications support basic redlining functionality. To enable redlining, the service that contains your redlining layers must be added to the GIS Map Services module.

1. When adding redlining services, be sure to provide the URL to the Feature Server in the URL field not the Map Server.
2. Do not mark the Has Feature Service option. The fact that you are specifying the URL to a Feature Server indicates that this is a Feature Service.

Example:

Name	Order	Opacity	Base Map for Web?	Base Map for Mobile?	Has Feature Service?	User Auth	Require Logon?
LucityGIS_Parcels	080/arcgis/rest/services/LucityGISDev/LucityGIS_Parcels/MapServer	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
LucityGIS_Imagery	080/arcgis/rest/services/LucityGIS_Imagery/ImageServer	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
LucityGIS_LandBase	080/arcgis/rest/services/LucityGIS_LandBase/MapServer	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mw	<input type="checkbox"/>
▶ LucityGIS_Redlining	080/arcgis/rest/services/LucityGISDev/LucityGIS_Redlining/FeatureServer	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
LucityGIS_All_Editable	080/arcgis/rest/services/LucityGISDev/LucityGIS_All_Editable/MapServer	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GBAMS\idetic	<input checked="" type="checkbox"/>
Esri_WorldStreet	online.com/arcgis/rest/services/World_Street_Map/MapServer	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Esri_WorldTopo	online.com/arcgis/rest/services/World_Topo_Map/MapServer	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

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## Editable Services

Version 2014r2+ allows you to configure services that can be used for editing in the Lucity web map. These services don't need to contain Lucity linked data, but if they do, special consideration needs to be given to the restrictions of editing Lucity linked data outside of the Lucity ArcMap editing environment.

1. When adding services that can be edited, be sure to provide the URL to the **Map Server** NOT the Feature Server in the URL field.
2. Check the Has Feature Service option. This indicates that the map service specified in the URL field has a corresponding feature service.

Example:

Name	Order	Opacity	Base Map for Web?	Base Map for Mobile?	Has Feature Service?	User Auth	Require Login?	Mobile Uti	Offline Mobile Feature Service Uti	Proxy Uti
LucityGIS_Storm	080/arcgis/rest/services/LucityGISDev/LucityGIS_Storm/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Street	080/arcgis/rest/services/LucityGISDev/LucityGIS_Street/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Traffic	080/arcgis/rest/services/LucityGISDev/LucityGIS_Traffic/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_ROW	080/arcgis/rest/services/LucityGISDev/LucityGIS_ROW/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Water_Dist	080/arcgis/rest/services/LucityGISDev/LucityGIS_Water_Dist/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Water_Raw	080/arcgis/rest/services/LucityGISDev/LucityGIS_Water_Raw/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Water_Recycled	080/arcgis/rest/services/LucityGISDev/LucityGIS_Water_Recycled/MapServer	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_GISTasks_Edit	080/arcgis/rest/services/LucityGISDev/LucityGIS_GISTasks_Edit/MapServer	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
LucityGIS_Parcels	080/arcgis/rest/services/LucityGISDev/LucityGIS_Parcels/MapServer	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_Imagery	080/arcgis/rest/services/LucityGIS_Imagery/ImageServer	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_LandBase	080/arcgis/rest/services/LucityGIS_LandBase/MapServer	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mw	<input type="checkbox"/>			
LucityGIS_Redlining	080/arcgis/rest/services/LucityGISDev/LucityGIS_Redlining/FeatureServer	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
LucityGIS_All_Editable	080/arcgis/rest/services/LucityGISDev/LucityGIS_All_Editable/MapServer	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	GBAMS\deric	<input checked="" type="checkbox"/>			
East_WorldStreet	online.com/arcgis/rest/services/World_Street_Map/MapServer	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
East_WorldTopo	online.com/arcgis/rest/services/World_Topo_Map/MapServer	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
Sewer_Test10.3	t/arcgis/rest/services/Sewer/MapServer	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			

## Special Considerations

- If editing Lucity linked data:
  - Lucity is not directly aware of the edits being made in the web map. **The Lucity database is not updated when you save your edits.** In order for Lucity to be updated with the edits made in the web map you **must do one of the following**:
    - Setup a GIS Scheduled Task against the underlying feature classes.

Or

    - In ArcMap, using the Lucity Editor Extension run the Force Sync tool on the features that have been edited.
  - Only basic editing tasks supported. Due to the nature of maintaining inspection and work history along with feature relationships the following edits are not supported and should be avoided in the web map:
    - Renumber (changing the FacilityID/CommonID value for an existing feature)
    - Delete (deleting an existing feature)
    - Split (splitting a sewer pipe, storm conduit, water pipe, or a street segment/subsegment/supersegment)
    - Merge (merging sewer pipes, storm conduits, water pipes, or street segments/subsegments/supersegments)



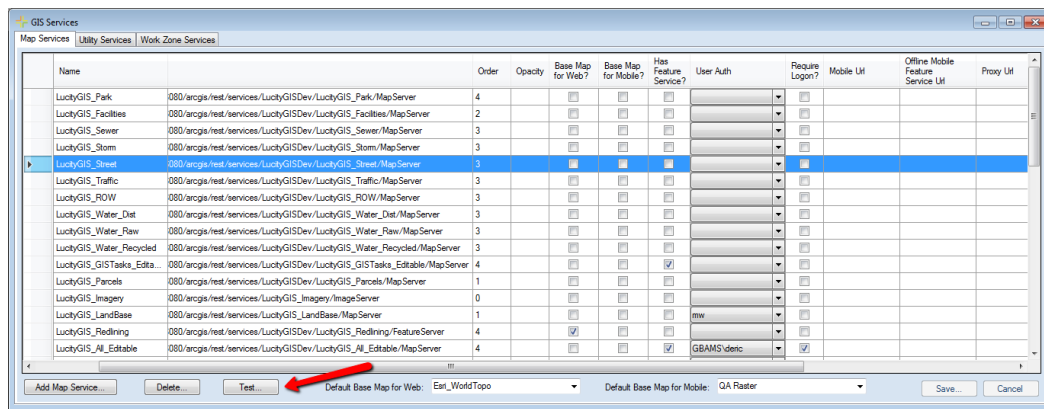
## Testing Service Connection

The GIS Services module provides the ability to test the service connection. This tool is helpful in validating which layers in the service are recognized as being linked to Lucity. There are two connection tests that are performed:

1. Tests the connection method used by the Lucity Webmap and SOE
2. Tests the connection method used by the Lucity Spatial Updater, Lucity GIS Tasks, and Lucity to GIS updates via a Feature Service.

To test a service connection:

1. Select the row(s) you wish to test, or if no rows are selected then a test will be performed against all services.
2. Click the Test button.



3. Once the service tests have been completed, a separate dialog will appear showing the results. If a connection to a service was successful, the results will list only the layers in that service that have been recognized as being linked to Lucity.

Example result:



## Utility Services

Previously handled in System Settings>>GIS Web; geocoding, geometry, and routing services are now defined inside GIS Services>>Utility Services.

GIS Services

Map Service | **Utility Services** | Work Zone Services

Geocoding Services

Name	Url	Service is secure?	Proxy Url	Last Modified By	Last Modified Date	Last Modified Time
DefaultGeocodingService	http://geocode.arcgis.com/arcgis/rest/services/World/GeocodeServer	<input type="checkbox"/>		CONVERSION	6/1/2016	2:16 PM
LucyConvMap_2	http://demo.lucity.net/arcgis/rest/services/GeoLocate/GeocodeServer	<input type="checkbox"/>		EricD	6/3/2016	3:24 PM
LucyConvMap_1	http://tarcv-016080/arcgis/rest/services/DBO_atSegment_AddressLocator/GeocodeServer	<input type="checkbox"/>		CONVERSION	6/1/2016	2:46 PM
testGeocode2	http://demo.lucity.net/arcgis/rest/services/Lucity2016/AddressDualRange/GeocodeServer	<input type="checkbox"/>		EricD	6/3/2016	10:02 AM

Add Geocoding Service... Delete... Default Geocoding Service: DefaultGeocodingService Save... Cancel

Geometry Service

Url	Service is secure?	Proxy Url	Last Modified By	Last Modified Date	Last Modified Time
http://tarcv-016080/arcgis/rest/services/Utilities/Geometry/GeometryServer	<input type="checkbox"/>		EricD	6/3/2016	3:24 PM

Save... Cancel

Routing Service

Url	Service is secure?	Proxy Url	Last Modified By	Last Modified Date	Last Modified Time
http://tasks.arcgisonline.com/ArcGIS/rest/services/Network/Analysis/ESRI_Route_NA/NAService/Url...	<input type="checkbox"/>		EricD	6/3/2016	3:24 PM

Default Vehicle Start Address for Work Routing: Save... Cancel

### Grid Properties:

- **Name:** A unique name for the service. This is used to identify the service during setup (this is not provided for geometry or routing services, since only one may be defined at a time).
- **URL:** The URL of the geocoding/geometry/routing service, or path to a local map package. This must include /rest after ArcGIS.
- **Service is Secure?:** Indicates whether a secured service is being used (which is supported for utility services in version 2016r2+).
- **Proxy URL:** Clients using a proxy can provide the proxy URL here.

**Default Geocoding Service:** This is the geocoding service that will be used by the web map for all geocoding operations, unless otherwise specified.

**Default Vehicle Start Address for Work Routing:** This is the address that will be considered the starting point for all vehicle routing operations (i.e. the facility where the fleet is located), unless otherwise specified.

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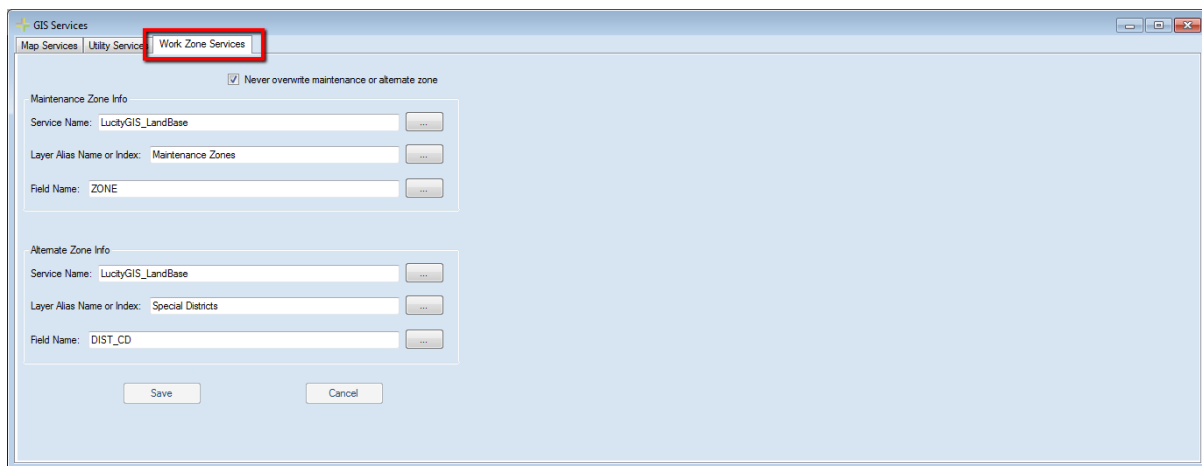
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## Work Zone Services

Previously handled in System Settings>>Work Zones, service information for work maintenance zones and work alternate zones is now defined inside GIS Services>>Work Zone Services.

The screenshot shows a window titled "GIS Services" with three tabs: "Map Services", "Utility Services", and "Work Zone Services". The "Work Zone Services" tab is selected and highlighted with a red rectangle. Inside the tab, there is a checkbox labeled "Never overwrite maintenance or alternate zone" which is checked. Below this, there are two sections: "Maintenance Zone Info" and "Alternate Zone Info". Each section contains three text input fields with "..." buttons to the right: "Service Name" (containing "LucyGIS\_LandBase"), "Layer Alias Name or Index" (containing "Maintenance Zones"), and "Field Name" (containing "ZONE" for maintenance and "DIST\_CD" for alternate). At the bottom of the dialog are "Save" and "Cancel" buttons.

### Properties:

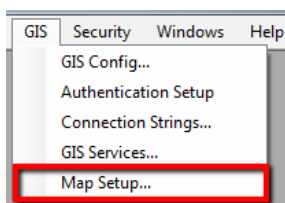
- **Never overwrite maintenance or alternate zone:** When checked, this ensures that the maintenance/alternate zone code for a record is not overwritten when these fields are entered on a request or work order
- **Service Name:** The name of the service that contains the maintenance/alternate zone layer
- **Layer Alias Name or Index:** The name of the maintenance/alternate zone layer in the map service.
- **Field Name:** The name of the field that contains the maintenance/alternate zone ID in the maintenance/alternate zone layer.

## GIS Map Setup

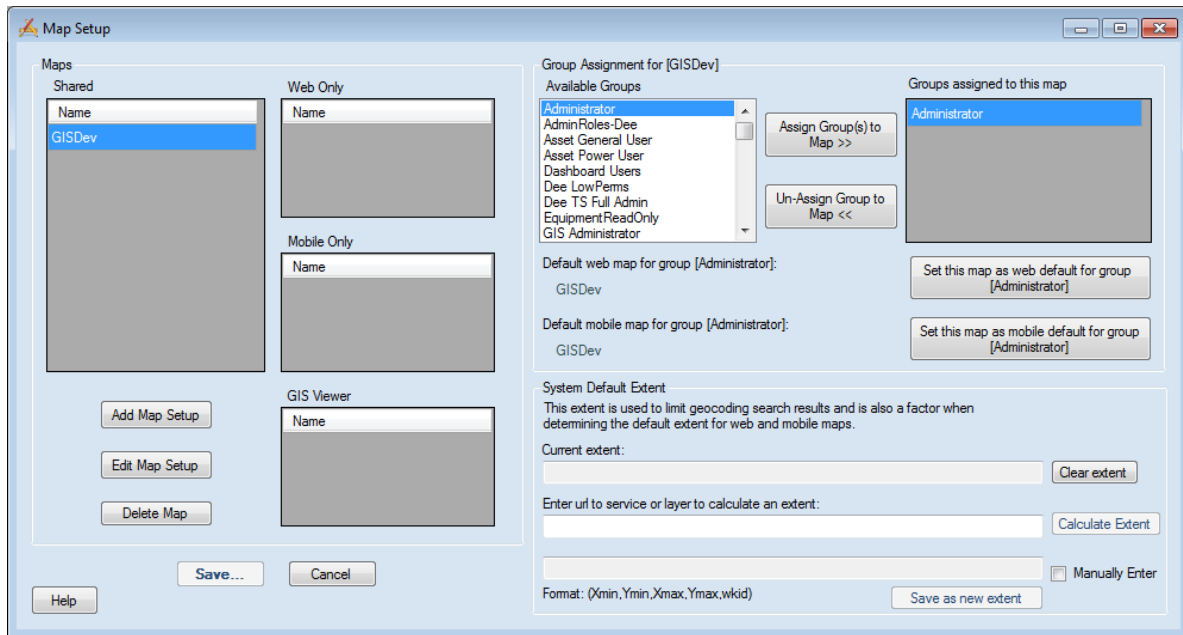
The GIS Map Setup module is used to create the templates used with the various Lucity web map applications. The GIS Map Setup provides the ability to specify template permissions, which services should be used and the order in which they should be displayed, disable any editing services, which redlining service should be used, an override to the default locator service, among other settings.

To add/edit/delete Map Setup templates:

1. In the Lucity Administration tool click on GIS>>Map Setup...



- The following dialog will appear allowing you to add, edit or delete templates, along with assigning user groups to existing map templates and setting a system default extent.

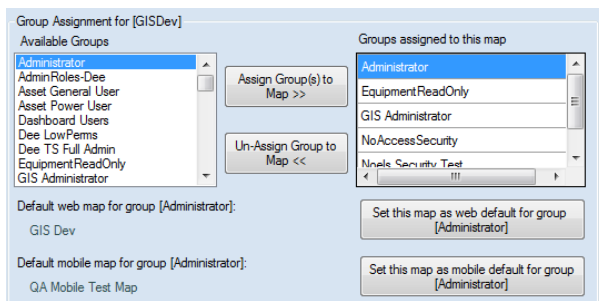


## Assign Groups to Maps

To assign user groups to maps:

- Select a map in the **Maps** section on the left-hand side of the dialog. You will notice that after a map is selected the **Group Assignment for []** is updated to reflect the selected map
- In the **Group Assignment for []** section, highlight one or more groups in the **Available Groups** list.
- Click the **Assign Group(s) to Map >>** button in the center of the dialog.

## Set a default map for a Group



To assign the user group's default web and mobile map:

- Select a map in the **Maps** section on the left-hand side of the dialog. You will notice that after a map is selected the **Group Assignment for []** is updated to reflect the selected map

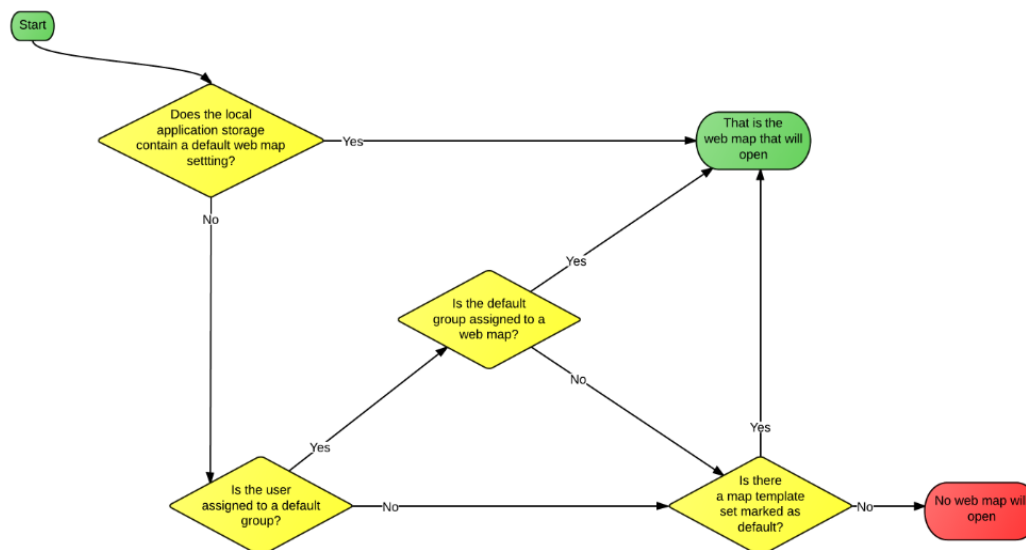
2. In the **Group Assignment for []** section, highlight one or more groups in the **Groups assigned to this maps** list.
  - Note: If no groups are assigned to this map, you will first need to assign a group to the map. See the Assign Groups to Maps in this document for instructions.
3. Click the **Set this map as web default for group []** and/or the **Set this map as mobile default for group []** button to set the current map as the default.

Note:

- While each map can be assigned to multiple user groups, each group can only be assigned one default web map and one default mobile map.

## Logic for determining which web map will open for a user

### Lucy Web Map- Which map will open for a user?



## System Default Extent

System Default Extent  
This extent is used to limit geocoding search results and is also a factor when determining the default extent for web and mobile maps.

Current extent:  
751569.683727033,844310.149606302,759904.697834644,850006.465879261,2868

Enter url to service or layer to calculate an extent:

☐ Manually Enter

Format: (Xmin,Ymin,Xmax,Ymax,wkid)

The system default extent is used in the following scenarios:

1. It is used with the new geocoding method to help limit the results. This is especially useful if using a broad locator service such as the Esri's World Geocoding Service.
2. It is also used in the logic to determine the default extent of the web and mobile maps.

To set a default extent:

1. Enter the URL to the service or to an individual layer within the service that contains the extent you wish to use. For example:
  - [http://lct-arcsrv-01:6080/arcgis/rest/services/LucityGISDev\\_SewerWaterStorm/MapServer](http://lct-arcsrv-01:6080/arcgis/rest/services/LucityGISDev_SewerWaterStorm/MapServer)
  - [http://lct-arcsrv-01:6080/arcgis/rest/services/LucityGISDev\\_SewerWaterStorm/MapServer/4](http://lct-arcsrv-01:6080/arcgis/rest/services/LucityGISDev_SewerWaterStorm/MapServer/4)
  - Note: These can't be secured services. If using secured services, you will have to manually enter the extent information by checking the **Manually Enter** checkbox.
2. After entering the URL, click the **Calculate Extent** button. This will retrieve the extent information from the service and enter this into the next text box.
3. Click the **Save As new Extent** button to update the system setting with the calculated extent.

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## Create/Edit Map Templates

To edit an existing map or create a new one:

1. Click the **Add Map Setup** or **Edit Map Setup** buttons to open the GIS Map Edit screen. The following dialog will appear:

2. Edit the properties on the GIS Map Edit form as described below.
3. Once done click the Close button. This will take you back to the Map Setup dialog.
4. **To save your changes you must click Save on the Map Setup dialog!**

## GIS Map Edit Properties

- **Name:** A unique name for the map template.
- **Lucity application(s) that can use this map:** Mark which Lucity mapping program this map is designed for. This interface is used for creating maps for Web, Mobile, and the GIS Viewer.

- **Default Geocoding URL:** This is **read-only** and is used to show the URL of the default geocoding service that is set in System Settings on the GIS Web tab.
- **Geocoding URL (if different than default):** Select from a list of configured geocoding URLs here if the geocoding service used for this map will should be different than the default.
- **Redlining:** To enable redlining capabilities, select the feature service from the drop down that contains the point, line, and/or polygon redlining layers. Once the redlining feature service has

been configured, enter the index of the point, line, and/or polygon redlining layer as it is listed in the service.

- This list only displays the feature services configured in the Map Services module. You first must provide the redlining feature service connection info Map Services.
- **Available Web Services:** Select all the services that need to be added to the map and click **Add**. Records will appear under the **Services to Display in Map**.
  - Do not add any map services that will be used as a base map.
- **Available Editable Services:** Select the web services that your users should be able to edit and click **Add**. Records will appear under the **Services to Display in Map**.
  - This list only displays map services that have been marked as editable via the Has Feature Service property in the Map Services module.
- **Available Local Services:** Select the map and/or tile packages that need to be added to the map and click **Add**. Records will appear under the **Services to Display in Map**.
  - This list only displays map services that have a URL to a map (.mpk) or tile package (.tpk).
- **Services to Display in Map:** This grid shows all the services that will be loaded into the map. Additional properties can be assigned to each of the services:
  - **Name:** This column is read-only. It is used as a reference to show the name of the service as it is listed in the Map Services module.
  - **URL:** This column is read-only. It is used as a reference to show the URL of the service as it is listed in the Map Services module.
  - **Order:** This column is read-only. It is used as a reference to show the default order in which the services will be loaded into the map. These values are defined in the Map Services module.
  - **Order Override:** To adjust the sequence of the layers for this map enter a new order using this column. 0 is the lowest layer in the map.
  - **Disable Identify:** Check this box to stop the identify tool from querying that service. Disabling Identify also disables the ability to select features in that service.
  - **Disable Edits:** If you included an editable service in the map, but you don't want users to edit these features in this particular map- check the Disable Edits box to disable editing for the service in this map.
  - **Disable Visibility:** Check this box to default the map service to being turned off in the map. These services will be turned off when the map is accessed but can be turned back on by users. Having layers turned off by default makes the map load faster.
  - **Default Extent:** Mark a service as the default extent. This makes the services extent the default extent for the entire map. When the map is loaded it will display this service's extent. This requires the **Force the GIS Web Map to always open to the default extent** setting to be enabled in system settings.

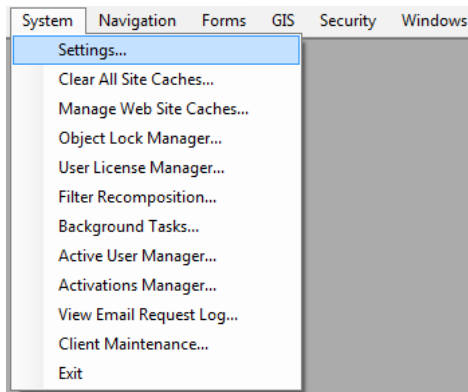


## System Settings

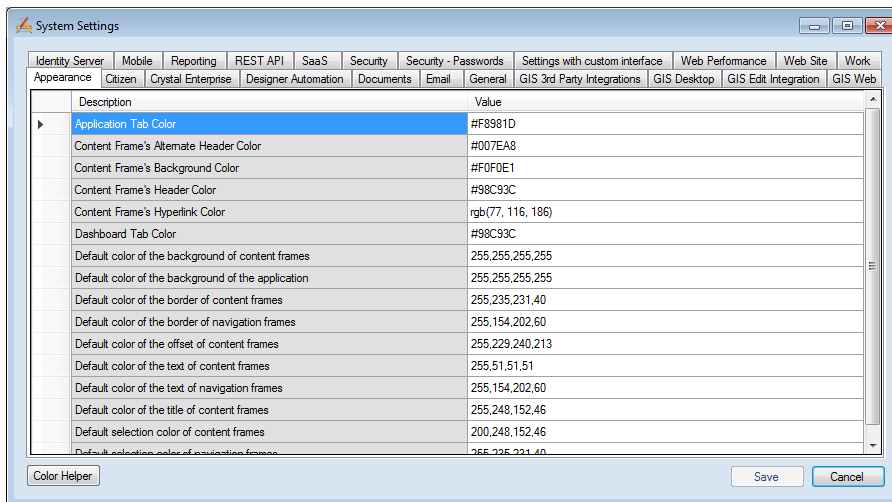
There are various settings that are needed for web maps used in the Lucy Web and Mobile applications.

To edit the system settings:

1. In the Lucy Administrator tool click System>>Settings.



2. The following dialog will appear:



3. The following pages go over the various settings found in System Settings dialog that impact the web maps used with Lucy Web and Mobile.

## GIS Web Tab

The GIS Web tab of system settings contains the options used for web maps in both the Lucity web and mobile applications.

Identity Server	Mobile	Reporting	REST API	SaaS	Security	Security - Passwords	Settings with custom interface	Web Performance	Web Site	Work
Appearance	Citizen	Crystal Enterprise	Designer Automation	Documents	Email	General	GIS 3rd Party Integrations	GIS Desktop	GIS Edit Integration	GIS Web
Description							Value			
▶ Automatically save redlining edits							TRUE			
Comma separated criteria to use for a where clause if parcel layer is to be queried. ...							ADG_ADR_BDG={BUILDING},ADDRESS=%{STREETNAME}%'			
Force the GIS Web Map to always open to the default extent							TRUE			
Operational Data Spatial Reference WKID							3419			
Preload GIS caches to speed initial map load							TRUE			
Separator to use for Geocoding Intersections										
Street Address Geocoding Field							Address			
URL to address layer in map service										
Use an address layer for address queries instead of a geocoding service							FALSE			
Use GIS Viewer instead of GIS Web for Show in Map							FALSE			

- **Automatically save redlining edits:** (Only applies to Lucity web map) Indicates if you want the redlining and editing tools to automatically save edits as they are being made. If set to FALSE, then the user is responsible for clicking the save button on the edit toolbar to commit the changes.
  - Due to the editing environment Lucity recommends that this be set to **FALSE**
- **Comma separated criteria to use for a where clause if parcel layer is to be queried. Keywords are {BUILDING},{STREETNAME},{STREETNAME2},{ZIP}:** (Only applies to Lucity web map) This is a template that the app can use when querying a parcel layer for information. This template should specify actual field names.
  - **Example:** This says the Building number is stored in the feature class in a field called ADDRESS and the Street name is stored in a field called STRNAME.
    - **ADDRESS={BUILDING} AND STRNAME='{STREETNAME}'**
  - There are four available Keywords
    - **{BUILDING}**
    - **{STREETNAME}**
    - **{STREETNAME2}**
    - **{ZIP}**
- **Force the GIS Web Map to always open to the default extent:** (Only applies to Lucity web map) The Webmap will not save the extent when it closes. Instead it will automatically open to the default every time it is opened.
- **Operational Data Spatial Reference WKID:** The WKID is the "Well Known Spatial ID" for the operational data layer. This spatial reference will be used by Lucity to record xy coordinates and any other spatial data.
- **Preload GIS caches to speed initial map load:** This causes the maps and map services to load when the web app first starts. It is recommended that this be set to TRUE, as it will improve performance.

- **Separator to use for Geocoding Intersections:** This setting allows agencies to specify which character their geocoding service uses as a separator character. By default this field is set to the | character.
- **Street Address Geocoding Field:** Which field name the geocoder is based on.
- **URL to address layer in map service:** When populated, this indicates that an address layer should be used instead of a geocoding service to locate addresses in the map.
- **Use an address layer for address queries instead of geocoding service:** (Only applies to *Lucity web map*) Allows users to use a parcel layer instead of a geocoding layer.
- **Use GIS Viewer instead of GIS Web for Show in Map:** (Only applies to *Lucity web map*) Forces the Web show in map to launch the Lucity GIS Viewer, instead of the Lucity Web Map.

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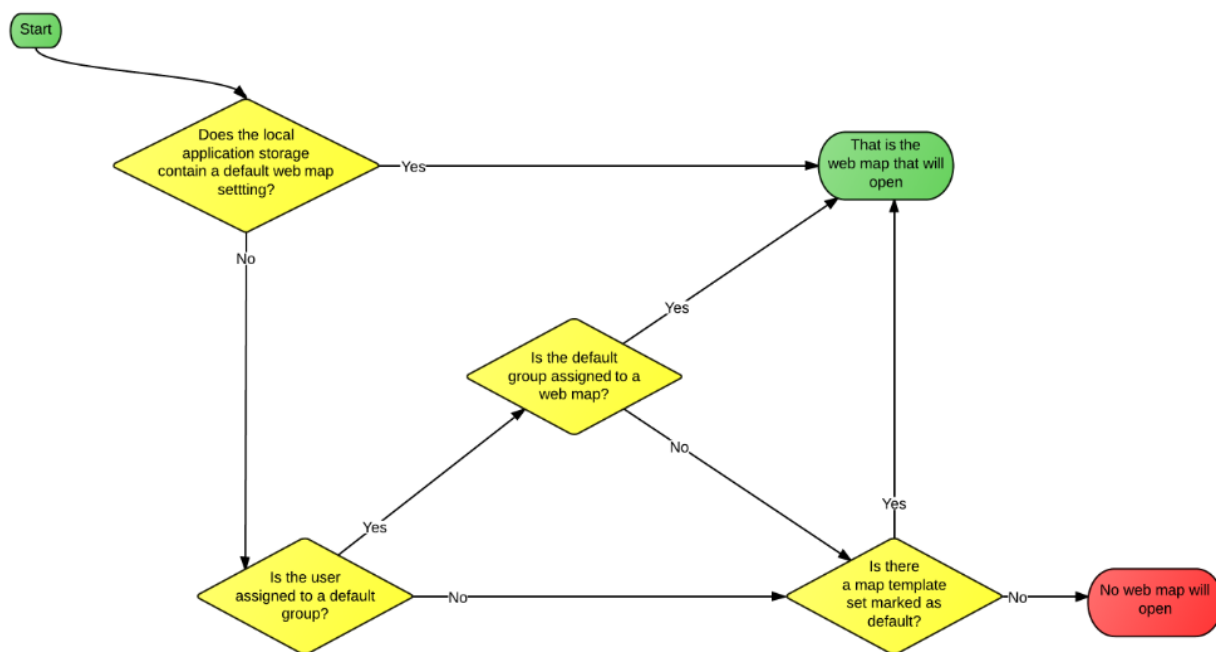
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## Lucy Security Program

The Lucy Security program (Lucy.Security.exe) can be used to assign default groups to users. Default groups are necessary to assigning user access to the various map templates. This .exe can be found in your local workstation \bin directory or can be accessed by the Start>>All Programs>>Lucy>>Lucy Security

*Logic for determining which web map will open for a user*

### Lucy Web Map- Which map will open for a user?

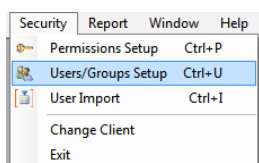


## Assign a user to a default group

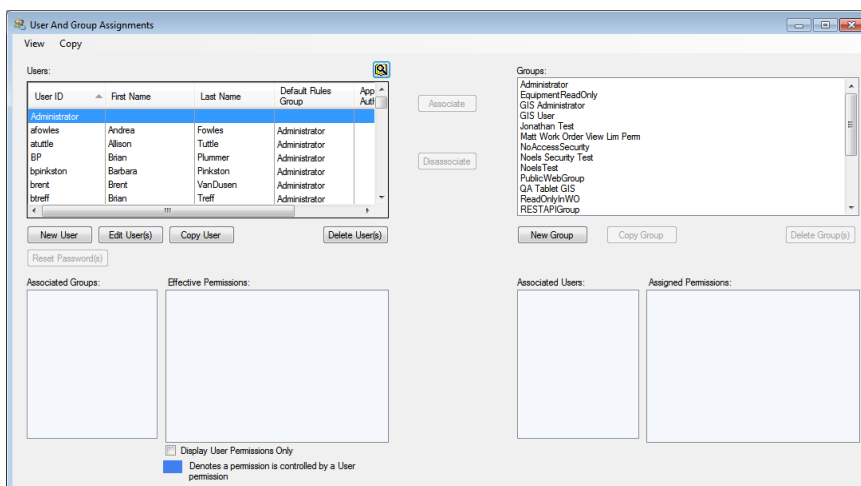
Since users are not directly assigned to map templates, but rather it is their default user group that determines which map template will be used it is important to make sure that a user has been assigned to the appropriate default user group.

To modify a default group for a user:

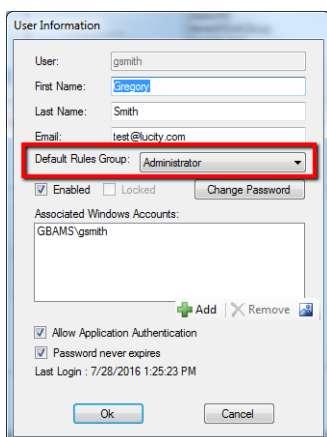
1. In the Lucity Security program click on Security>>Users/Groups Setup



2. The following dialog will appear allowing you to edit existing users and groups.



3. Click on the user and select Edit User(s), or double-click on the user. The following dialog will open:



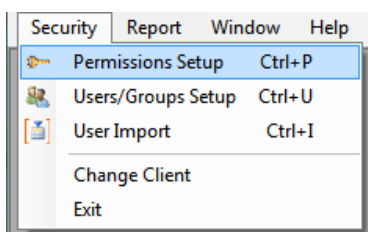
4. To assign the user to a default group, select a group from the Default Rules Group dropdown.
5. Click Ok to save changes.

## Assign permission to a default group

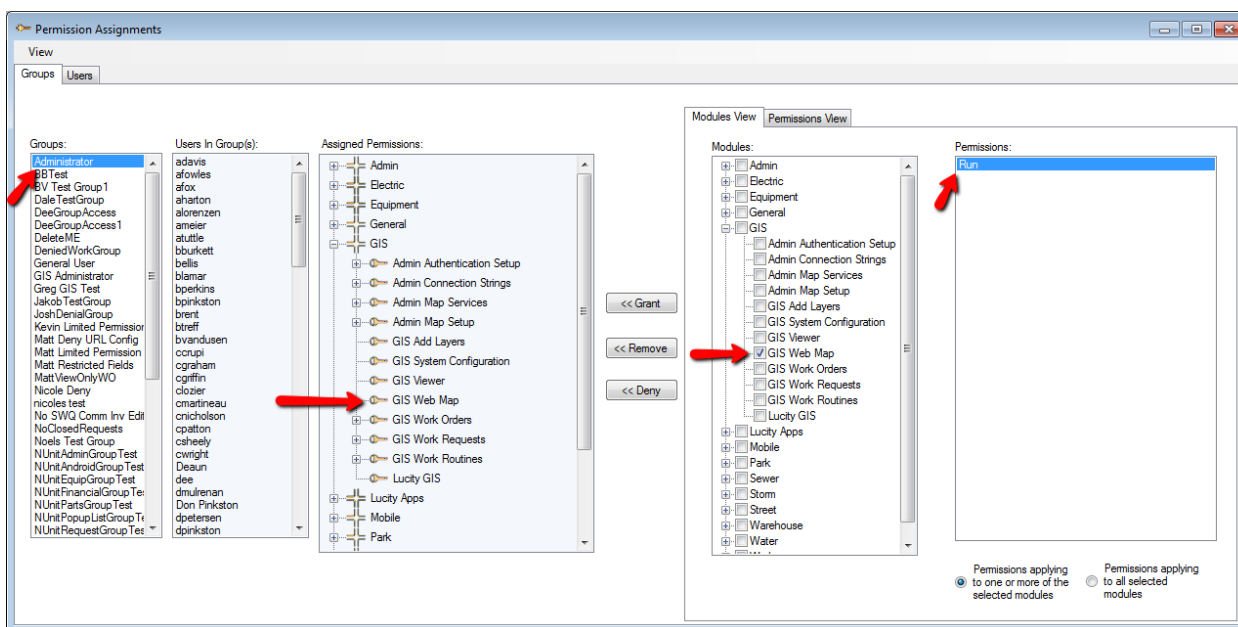
Since users are not directly assigned to map templates, but rather it is their default user group that determines which map template will be used it is important to make sure that default user groups have the permission to run the GIS Web Map.

To modify permissions for a group:

1. In the Lucity Security program click on Security>>Permission Setup



2. The following dialog will appear:



3. Select the default user group from the list.
4. Verify that under Assigned Permissions the group has the run permission for GIS Web Map. If not, select the Run permission and click Grant.
5. Repeat for all default user groups that have been assigned to a map template in UI Admin's Map Setup module.

## ArcMap

There are a few tools provided with the Lucy extension in ArcMap that facilitate the setup/configuration of Lucy to work with the feature/map services.

### Lucy Alias Import

In order for Lucy GIS to recognize a layer in a service as being linked to a Lucy module it must know the layer's alias as it is listed in the service. The Lucy Manager toolbar in ArcMap provides an Alias Import tool that facilitates the process of assigning alias names to Lucy linked feature classes. Along with associating alias names the tool also provides some basic validation that warns the user of issues that may cause the Lucy GIS tools to fail when interacting with the service.

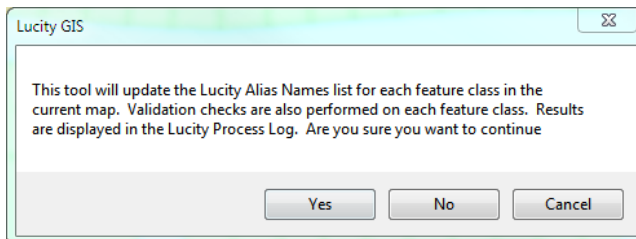
- It is strongly recommended that running the Lucy Alias Import tool be part of your routine when publishing services that will be consumed by any of the Lucy GIS tools and applications.
- Besides updating the alias configuration in Lucy, it also validates that each feature class linked to Lucy has the following fields:
  - OID, Shape, Lucy AutoID, FacilityID
- Each feature class can be assigned to multiple aliases, but each alias must be assigned to only one feature class.

To run the Lucy Alias Import:

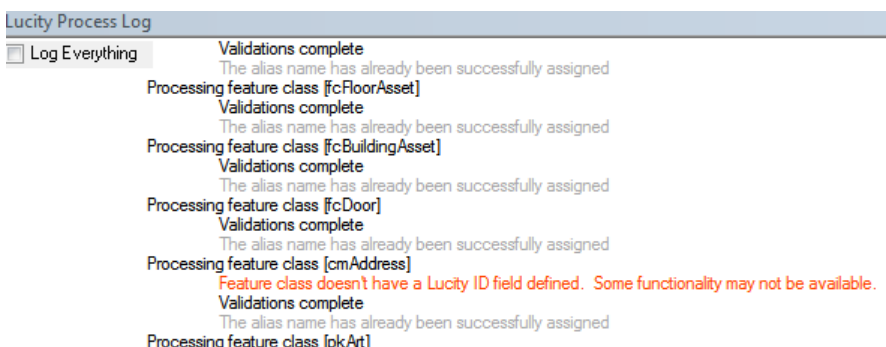
1. In ArcMap, prior to publishing a map/feature service from the .mxd you will want to run the Alias Import tool. On the Lucy Editor Toolbar click **Alias Import**.



2. You will receive the following prompt confirming that you are about to modify the alias names as they are defined in the Lucy GIS configuration.



3. The results are displayed in the Lucy process log.

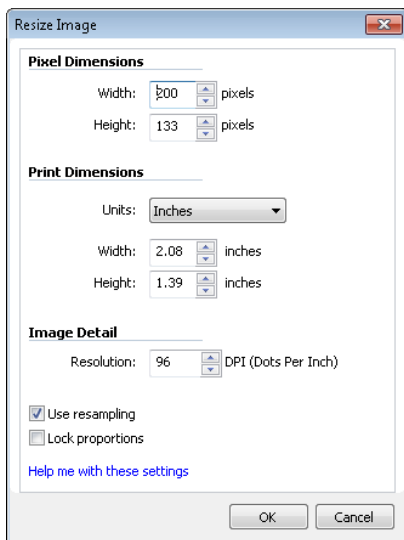


## Create Base Map Thumbnails

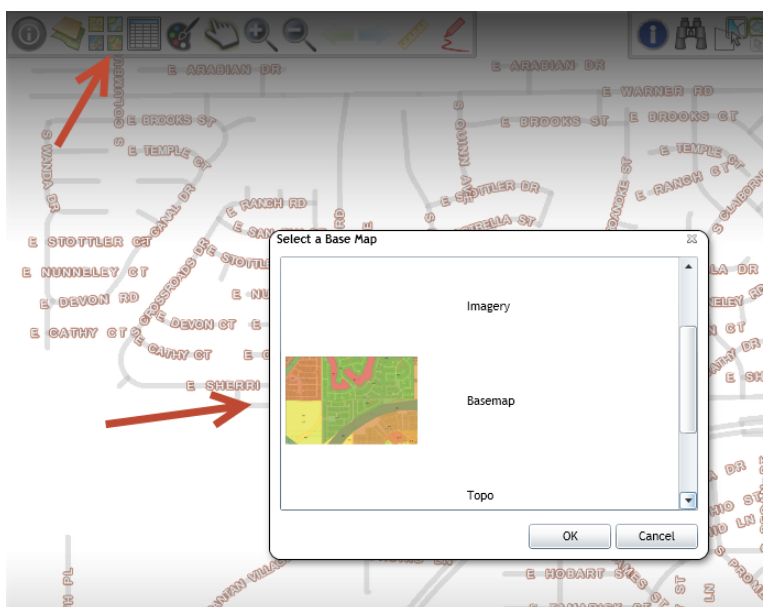
The Base Map tool in the Lucity web map allows users to switch what base map should be displayed in the map. This tool also provides the ability to display a small thumbnail image to help the user determine what data is represented in the base map. This is not required to use the Base Map tool, it is just adds that little bit of additional information in describing the base map.

To create a basemap thumbnail:

1. In ArcMap, open the .mxd that was used to publish the cached map service and capture screenshot within the Map Document window.
2. Resize the screen captured image to be 200 x 133 pixels. This is the recommended size.



3. Save the image as a PNG and name the image the same name as the map service into *inetpub\wwwroot\LucityWeb\ClientBin\GIS\BaseMapThumbnails*
4. Afterwards, you should see the new thumbnail when referencing the basemap.





## Troubleshooting Techniques

In many cases when dealing with multiple solutions, troubleshooting can be somewhat of an issue. If experiencing issues or problems with the Lucy software, you can always contact Lucy support. However, there are a few things to check if you would like to troubleshoot issues on your own.

### Clear Lucy caches

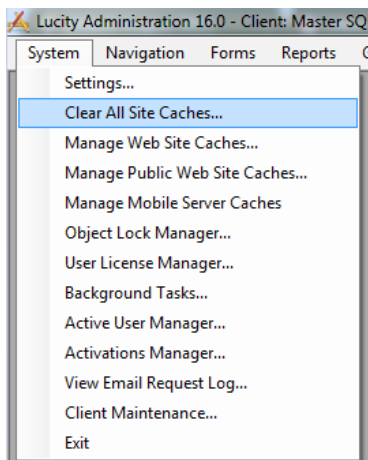
After changing GIS settings in Lucy that are used by the Lucy web maps, you should clear the Lucy caches. The following are some GIS changes that may require a clearing of the Lucy caches:

- Any change to feature class or field mappings made in the Lucy Geodatabase Configuration tool in ArcCatalog.
- Alias changes made by the Lucy Alias Import tool in ArcMap.
- System setting changes made in Lucy UI Admin tool.
- Changes to map/feature services and map setup templates made in Lucy UI Admin tool.

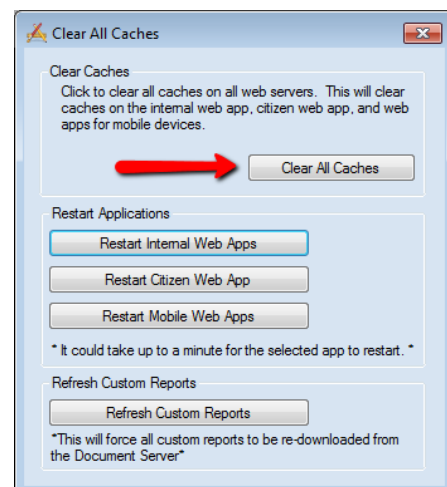
If you made a change to one of the above items, yet the change doesn't seem to have taken in the web map, then you should clear the Lucy cache to try and resolve the issue.

The following are the steps needed to clear the Lucy caches:

1. In the Lucy Administration tool click on System>>Clear All Site Caches...



2. The following dialog will appear. To ensure all the GIS caches are cleared, simply click **Clear all Caches**.



3. Close out of UI Admin and reopen the Lucy web map to confirm your changes have taken.

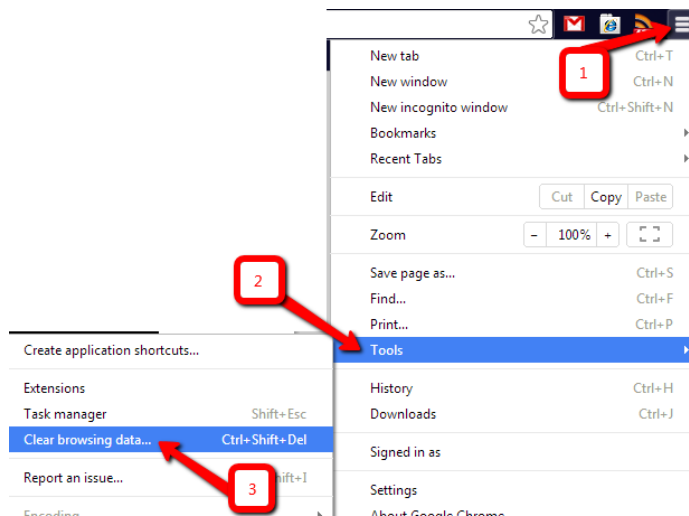
## Clear Browser cache

If you changed the GIS settings in Lucity that are used by the Lucity web maps and you cleared the Lucity cache, but the changes still haven't taken in the web map, you may need to try and clear your browser cache.

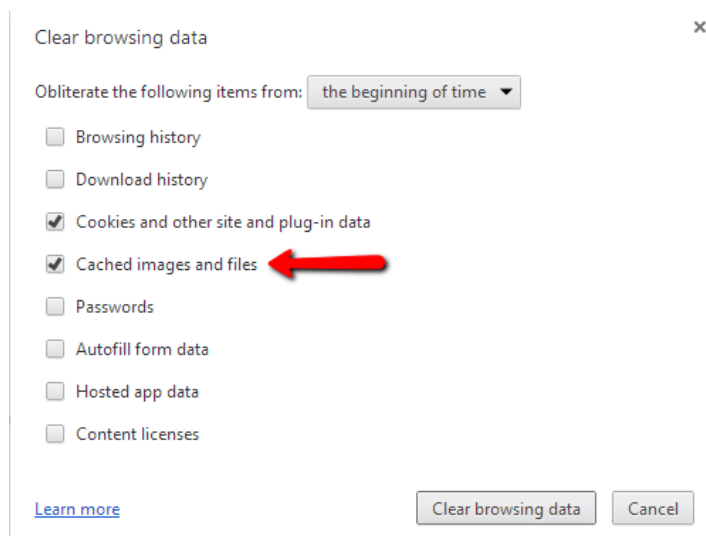
Obviously, how to clear your browser cache depends on which web browser you are using. Below are some examples for the common browsers:

For Chrome:

1. Close out of the Lucity web map, go to Settings>>Tools>>Clear browsing data...

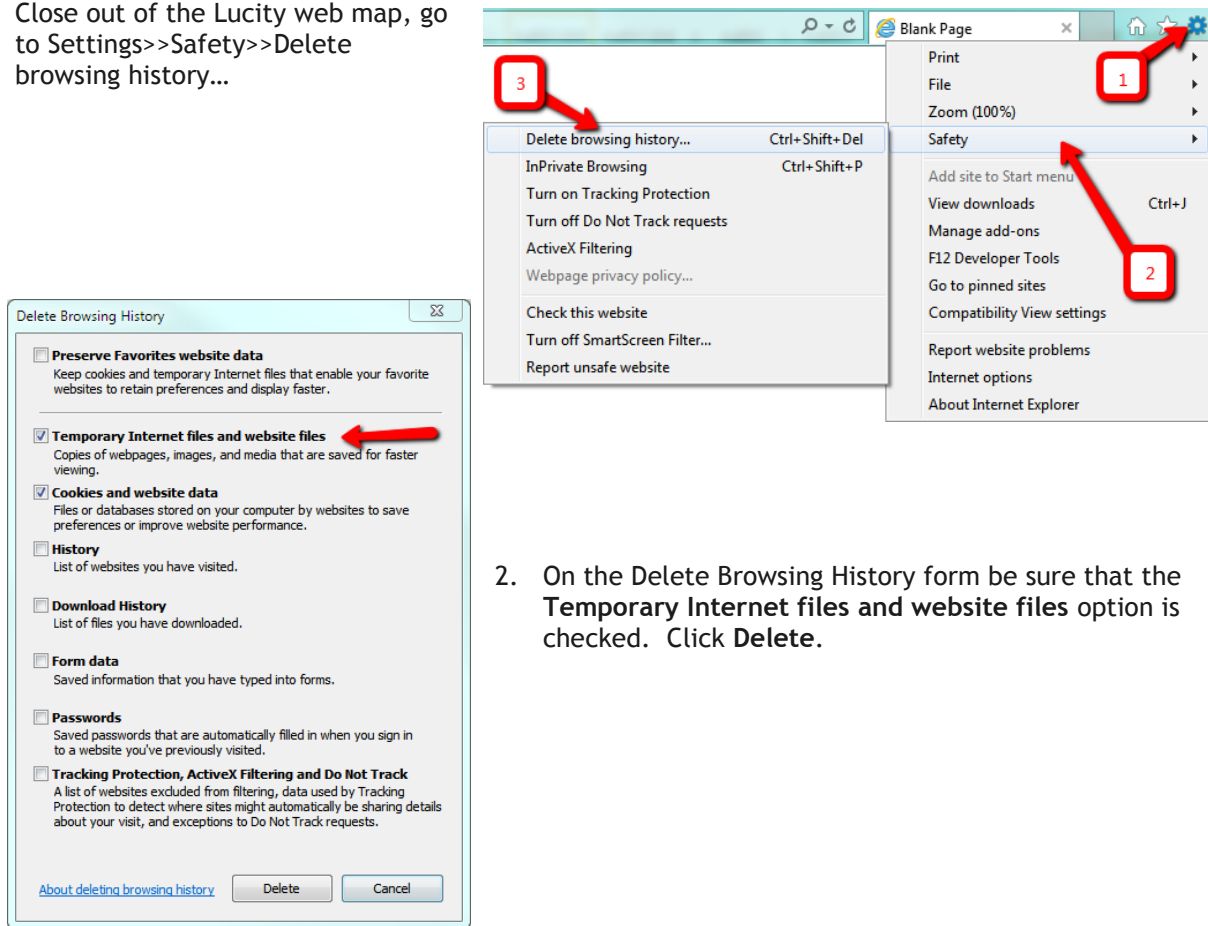


2. On the Clear browsing data form be sure that the **Cached images and files** option is checked. Click **Clear browsing data**.



For IE:

1. Close out of the Lucity web map, go to Settings>>Safety>>Delete browsing history...



2. On the Delete Browsing History form be sure that the **Temporary Internet files and website files** option is checked. Click Delete.

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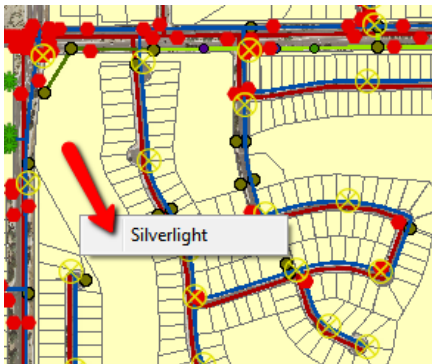
## Clear Local Application Storage

The Lucy web map saves some user settings locally in the Silverlight Application Storage. Although, these settings are saved automatically and are updated during normal Lucy web map usage, it is possible that a corrupt setting is causing abnormal behavior with the web map. The following are the current Lucy GIS settings stored in the Silverlight Application Storage:

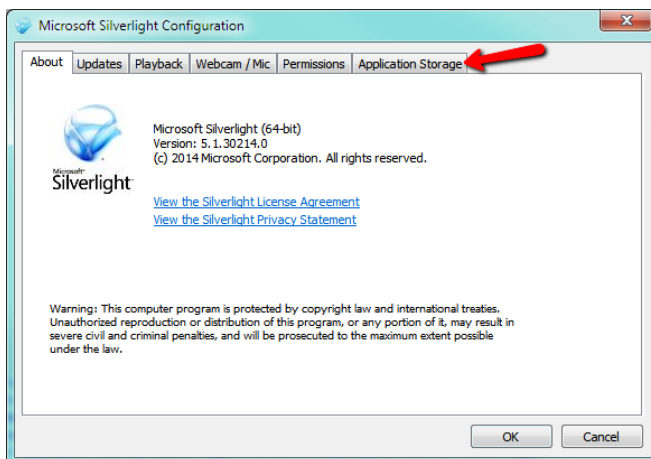
- Default web map
- Default map extent
- Default selection tool
- Work order view or edit prompt
- Visible layers
- Non-Selectable layers
- Display preferences (custom setting name, main selection color, secondary selection color, revert to pan option).
- Suppress print instructions

The following are the steps needed to delete the Lucy settings from the Silverlight Application Storage:

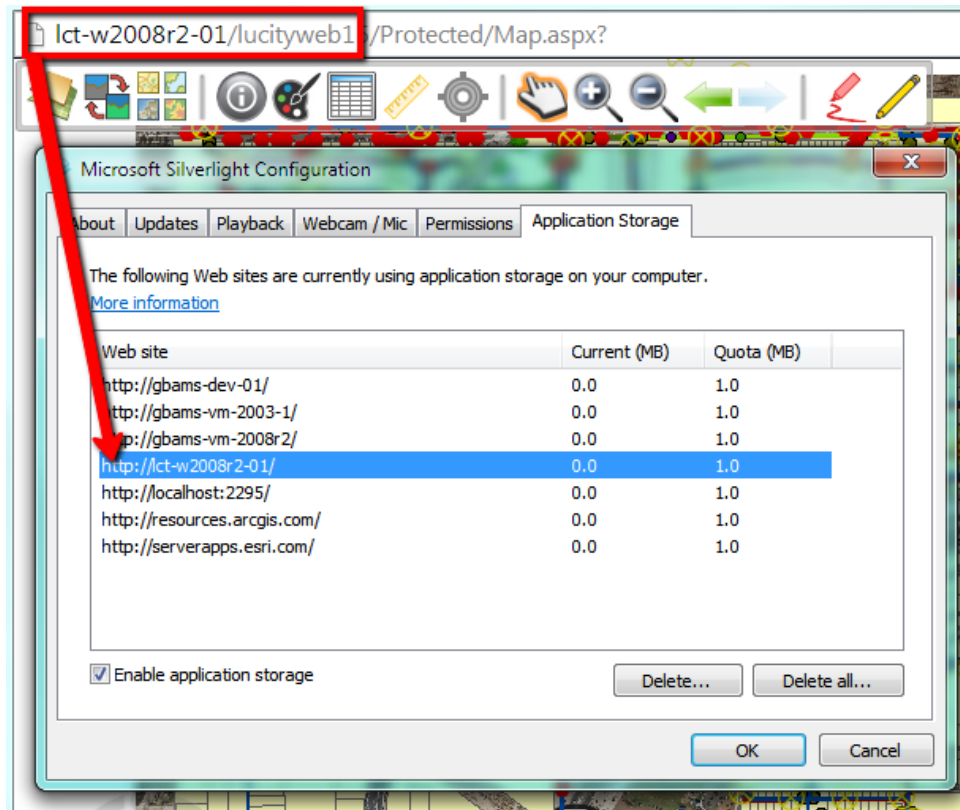
1. Browse to the Lucy web map, right-click in the map and select **Silverlight**.



2. The Microsoft Silverlight Configuration form will appear. Go to the **Application Storage** tab.



3. On the Application Storage tab, select the Lucy web map site. If you are unsure of the web site, check the URL to the Lucy web map. Click **Delete**.



4. Reopen the Lucy web map page for the page to be loaded with no user defaults.

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## Check Lucy Web Map Log

The majority of the Lucy web map tools if encountered an error will display a message to the user to check the Lucy log for further details. The log may contain additional details to help explain the issue and can be helpful to Lucy support if assisting with troubleshooting.

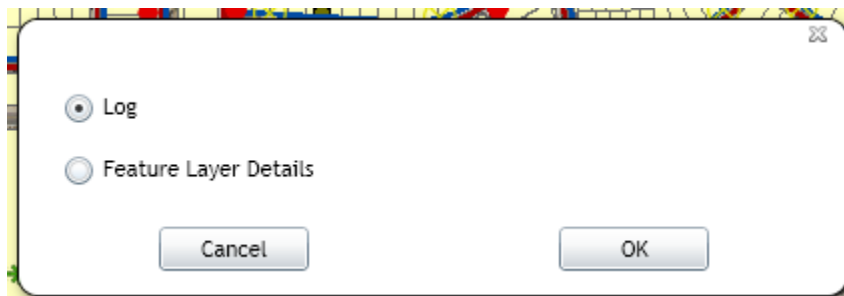
### Error log

The following are the steps needed to access the Lucy web map error log:

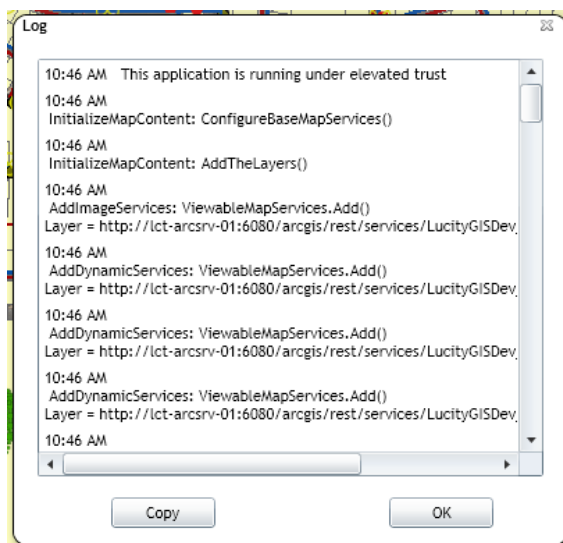
1. In the Lucy web map click the Lucy log button.



2. You will receive the following prompt in which you should check **Log** and click **OK**.



3. The log window will appear. You have the option to Copy the contents which is helpful when providing the information to Lucy support.



## Feature Layer Details

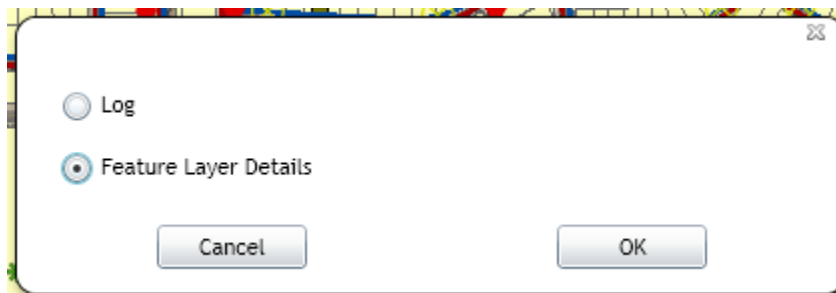
The Lucy web map log also provides a tool to verify which layers in the map are integrated with a Lucy module. This is helpful when troubleshooting issues involving layers in the map. Some web map tools only work on Lucy linked layers, so the Feature Layer Details log will help verify what those layers are.

The following are the steps needed to access the Lucy feature layer details log:

1. In the Lucy web map click the Lucy log button.



2. You will receive the following prompt in which you should check **Feature Layer Details** and click **OK**.



3. The log window will appear. You have the option to Copy the contents which is helpful when providing the information to Lucy support.
  - Note: Only layers that have been recognized as being linked to Lucy will be listed. It provides the layer index, the Lucy inventory type with description, and information regarding linking fields.
  - The most common reason why a layer isn't listed is because the layer's alias has not been properly defined in Lucy.

