

Implementing a Hybrid Approach to ArcGIS

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Overview

- **Difficulty Level: Intermediate**
- **What you will learn:**
 - **How to successfully integrate and work with services from ArcGIS Server in ArcGIS Online.**
 - **Security considerations with ArcGIS Server, ArcGIS Online and Portal for ArcGIS.**
 - **Utilizing the Perform Analysis functionality with ArcGIS Server web services in ArcGIS Online.**

Common Question:

- Q. What about Portal for ArcGIS?
- A. Great question!



Combining ArcGIS for Server with a portal



Common Question:

- **Q. What types of ArcGIS Server services can I use with ArcGIS Online?**

- **A.**

- **Feature**
- **Map**
- **Image**
- **Geocode**
- **OGC**
- **Routing**
- **Print**
- **Geoprocessing**
(*Web AppBuilder for ArcGIS)



Adding services to ArcGIS Online

The screenshot displays the ArcGIS Online Service Editor interface. The main window is titled "Service Editor" and shows the "Sharing" tab selected in the left-hand navigation pane. The "Sharing" tab is divided into two sections: "Share your service with:" and "Members of these groups:". The "Share your service with:" section has three checkboxes: "My Content" (checked), "Esri Support Services" (checked), and "Everyone (public)" (unchecked). The "Members of these groups:" section lists several groups: "GPS Test", "Marg_OD", "Marine Mammal Map", "Open Data Collabor", "Public Maps and Ap", "Testing", and "Trees". A "Choose" dialog box is open, showing a list of groups with "Esri Support Services" selected. The "Utility Services" tab is also visible, showing the "Printing" and "Geocoding" sections. The "Printing" section has a text input field for the print service URL, with the "Esri Default" service selected. The "Geocoding" section has a text input field for the geocoding service URL, with the "Esri Default" service selected. The "Directions and Routing" section is also visible, showing the "Route Service" section with a text input field for the route service URL, with the "Esri Default" service selected.

Service Editor

Connection: arcgis on supt004261.esri.com (publisher) Service Name: MyService

Sharing

Share your service with:

- ☒ My Content
- ☒ Esri Support Services
- ☐ Everyone (public)

Members of these groups:

- ☐ GPS Test
- ☐ Marg_OD
- ☐ Marine Mammal Map
- ☐ Open Data Collabor
- ☐ Public Maps and Ap
- ☐ Testing
- ☐ Trees

Choose

- ☒ Esri Support Services
- ☒ Required

Member

- ☐ BAO
- ☐ Basic
- ☐ Crov
- ☐ Crov

Utility Services

Configure the utility services for your organization.

Printing

Configure your print service. Enter the URL of your print service, or leave blank to use the default printing service.

Esri Default

Example: <https://webadaptor.domain.com/arcgis/rest/services/Utilities/PrintingTools/GPServer/Export%20Web%20Map%20Task>

Geocoding

Establish the geocoders that members of your organization will have access to. Click Add Geocoder to reference a URL, specify a user friendly name, and set other properties. You can also reorder, configure, or delete your geocoders below.

ADD GEOCODER

Name		
Esri World Geocoder	↓	×
San Diego	↑	✎ ×

1 - 2 of 2 results

Directions and Routing

Route Service

Configure your route service. Enter the URL of your route service, or leave blank to use the default route service.

Esri Default

Example: <https://webadaptor.domain.com/arcgis/rest/services/folder/serviceName/NAserver/layerName>

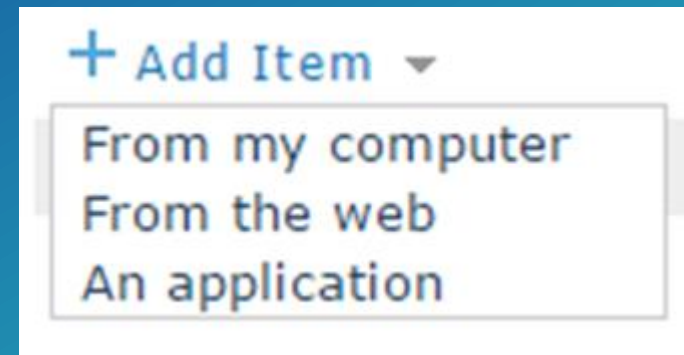
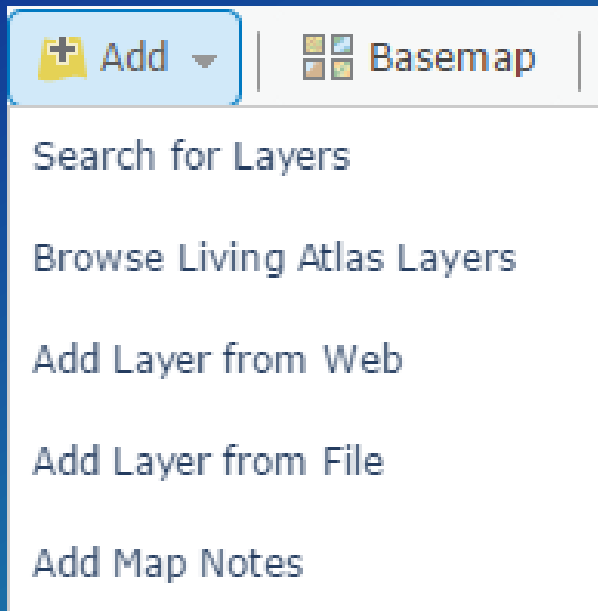
CONFIGURE TRAVEL MODES

Common Question:

- Q. Does it matter how I add my ArcGIS Server services to ArcGIS Online?
- A. Yes!



Add Layers vs. Add Items




Understanding URL configurations

- **ArcGIS Online:**

- HTTP or HTTPS
- Hive number
- Organization ID

Hive **Organization ID**




<http://services6.arcgis.com/uvippzu5FgsRo42g/arcgis/rest/services>

- **ArcGIS Server:**

- HTTP or HTTPS
- Domain Name
- Ports, Web Adaptor or Instance Name

Machine Name **Domain Name** **Web Adaptor Name**



<http://sampleserver6.arcgisonline.com/arcgis/rest/services>

Common Questions:

- **Q. Which URL should I use when adding services to ArcGIS Online?**
- **A. The one that is most appropriate for your audience.**

Web Service URL's

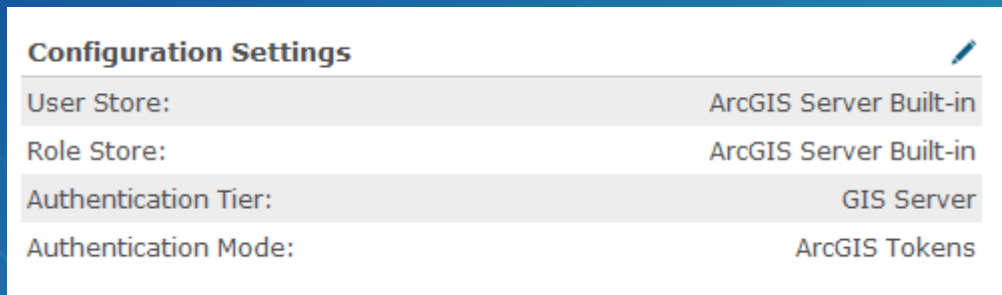
- Depending upon who will be accessing the web service, the URL format will need to be changed
- Considerations:
 - Are you encrypting requests (HTTPS) from ArcGIS Server?
 - ArcGIS Online/Portal for ArcGIS security settings
 - Will your services be consumed outside of your internal network?

Common Question:

- **Q. How does ArcGIS Server security interact with ArcGIS Online and what options do I have in terms of security configuration?**
- **A. Many!**

GIS Tier (ArcGIS Server) Authentication

- Uses ArcGIS Server tokens to pass credentials. Also known as ArcGIS Server Built-in security.

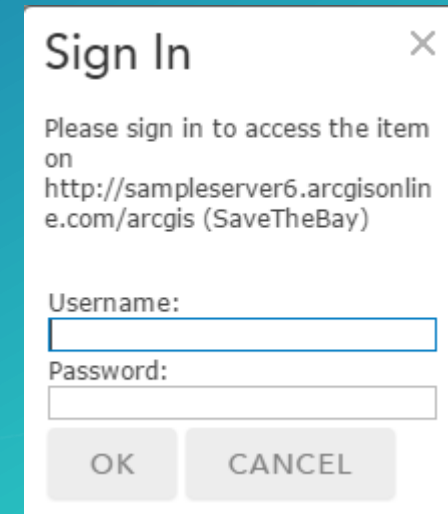


Configuration Settings

User Store:	ArcGIS Server Built-in
Role Store:	ArcGIS Server Built-in
Authentication Tier:	GIS Server
Authentication Mode:	ArcGIS Tokens

The Configuration Settings dialog box shows the authentication configuration. It has a title bar with a close button. The settings are as follows:

Setting	Value
User Store	ArcGIS Server Built-in
Role Store	ArcGIS Server Built-in
Authentication Tier	GIS Server
Authentication Mode	ArcGIS Tokens



Sign In

Please sign in to access the item on
<http://sampleserver6.arcgisonline.com/arcgis> (SaveTheBay)

Username:

Password:

OK CANCEL

The Sign In dialog box is used for authentication. It contains a title bar with a close button, a message about signing in, the URL of the item, and fields for Username and Password. There are OK and CANCEL buttons at the bottom.

Web Tier Authentication


Configuration Settings 

User Store:	Windows Domain
Role Store:	Windows Domain
Authentication Tier:	Web
Authentication Mode:	Web



Windows Security

Connecting to supt005467.esri.com.



Domain:
☐ Remember my credentials

OK Cancel

Common Question:

- **Q. How do you configure an ArcGIS Server using Web Tier authentication with ArcGIS Online?**
- **A. Add the ArcGIS Server as a trusted server in ArcGIS Online.**

Common Question:

- **Q. How can I check the security configuration settings of my ArcGIS Server and ArcGIS Online organization?**
- **A. Server Manager/ArcGIS Admin page (REST) and the Organization settings in ArcGIS Online.**

Enabling HTTPS Communication in ArcGIS for Server

ArcGIS Server Administrator Directory

[Home](#) > [security](#) > [config](#) > [update](#)

Update Security Configuration

Warning

Changing Protocol will cause the web server to be restarted.

Security Configuration

Protocol: HTTP and HTTPS

Virtual directories security enabled: ☐

Authentication tier: GIS_SERVER

Allow direct administrator access: ☒

Portal properties:

Allowed Admin Access IP's :

Format: HTML





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- Supporting Text

Enabling Security in ArcGIS Online

SAVE

CANCEL

General

Home Page

Gallery

Map

Item Details

Groups

Utility Services

Roles

Marketplace

Credits


Security

Open Data

Security


Configure the security settings for your organization.

Policies



- ☐ Allow access to the organization through HTTPS only.
- ☒ Allow anonymous access to your organization's website. (ess.maps.arcgis.com)
[What does this mean?](#)
- ☒ Allow only standard SQL queries.
- ☒ Allow members to edit biographical information and who can see their profile.

Sharing and Searching



- ☒ Members can share content publicly.
- ☒ Members can search for content outside the organization.
- ☒ Show social media links on item and group pages.

MAYBE DEMO


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- Supporting Text

Services secured with web-tier authentication

- Add to Trusted Servers
- This applies primarily to editing secure feature services from a stand-alone (unfederated) ArcGIS Server or viewing secure OGC services.
- Servers added to the trusted servers list must support CORS

Trusted Servers



Configure the list of trusted servers you wish your organization to send credentials to when working with services secured with web-tier authentication. Changes made to this list are only applied when Save is clicked.

Servers	
https://services2.geodataonline.no	×
https://supt005546.esri.com	×

Common Question:

Q. What are my options for accessing secured services in ArcGIS Online?

A. Store credentials or prompt each time for login

Storing Credentials in ArcGIS Online

Item from the web ?

Reference an item on the Web.

Type: ☒ ArcGIS Server web service ☐ KML
☐ OGC (WMS) ☐ Document

URL:

A secure service was detected.

Username:

Password:

☐ Do not store credentials with service item.
Prompt for authentication everytime.

☒ Store credentials with service item.
Do not prompt for authentication.

[Learn more](#)

Title:

Tags:
Add tag(s)

DEMO



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Limit Usage for Secured Services

- Controls how many time and/or by whom the service is accessed
- Determined by:
 - A rate limit
 - referrer URL/IP

Advanced Options

LIMIT USAGE

Limit Usage for Secured Services

- Enable rate limiting—a maximum number of requests allowed for a specific period of time
- Designate referrer URLs and IPs that can access your service, such as, the URL to your organization.

[DEMO](#) OR SCREENSHOTS

Limit Usage

Restrict traffic and/or enforce rate limiting policies to the domains or IP addresses below.

☒ Enable rate limiting

1 requests per 1 Second(s)

Referrer URL or IP: **ADD** **DELETE**

OK **CANCEL**



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- Supporting Text

Perform Analysis

- The majority of ArcGIS Online's analysis tools have been ported to Portal 10.5
- Must have the following privileges in the organization:
 - Create, update and delete content
 - Publish hosted features
 - Spatial analysis
- In Portal for ArcGIS, you must be federated and using ArcGIS Data Store.
- Certain tools need additional privileges such as Network Analysis and GeoEnrichment. See ArcGIS Online Perform Analysis documentation for specific tool requirements.

Common Question

- **Q. What type of layers and data can be analyzed?**
- **A.**
 - Publically accessible map services
 - Publically accessible feature services
 - Hosted tile layers (query enabled)
 - Hosted feature layers (query enabled)
 - Comma-separated values (CSV) files
 - KML layers
 - GPX exchange format files (.gpx)
 - Shapefiles (.zip)
 - GeoRSS web feeds
 - Map notes
 - Route layers

Using the Analysis tools

Analysis capabilities in ArcGIS Online and Portal for ArcGIS 10.4

- DEMO

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- Supporting Text

Please Take Our Survey on the Esri Events App!

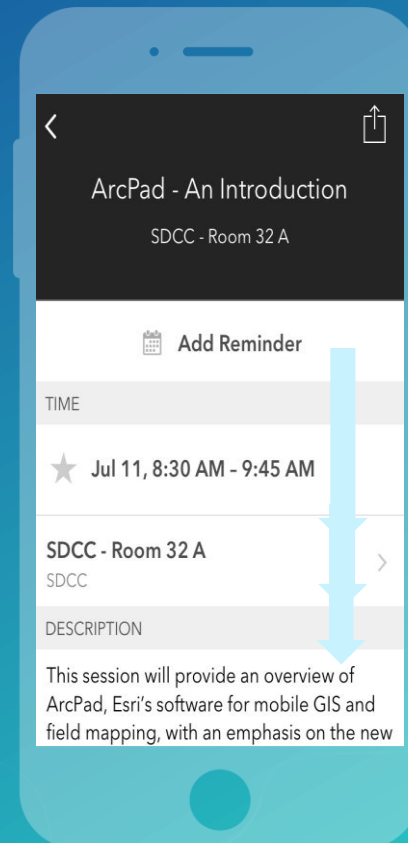
Download the Esri Events app and find your event



Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"






esri

THE
SCIENCE
OF
WHERE

Aspect Ratio Test



If this shape does not appear as
a perfect circle, adjust the aspect
ratio of your display until it does.

Try the resolution 1920x1080 for
16:9 displays.