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
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
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

- **ArcGIS Server:**
  - HTTP or HTTPS
  - Domain Name
  - Ports, Web Adaptor or Instance Name

### Examples

- **Hive and Organization ID**
  - HTTP://services6.arcgis.com/uvippzu5FgsRo42g/arcgis/rest/services

- **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.
Web Tier Authentication

Configuration Settings
- User Store: Windows Domain
- Role Store: Windows Domain
- Authentication Tier: Web
- Authentication Mode: Web

Windows Security
- Connecting to sup005467.esri.com.
- User name: [input]
- Password: [input]
- Domain: [input]
- Remember my credentials: [checkbox]

[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

Update Security Configuration

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

Update
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- Supporting Text
Enabling Security in ArcGIS Online

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.
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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
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

Reference an item on the Web.

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

URL:  
http://sampleserver6.arcgisonline.com/arcgis/rest/services/

A secure service was detected.

Username:  
user1

Password:  
*****

- Do not store credentials with service item. Prompt for authentication everytime.
- Store credentials with service item. Do not prompt for authentication.

Title:  
SaveTheBay

Tags:  
SaveTheBay

ADD ITEM  CANCEL
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- Supporting Text
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
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
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”**
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.