



# Combining ArcGIS for Server & ArcGIS Online

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# Overview

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

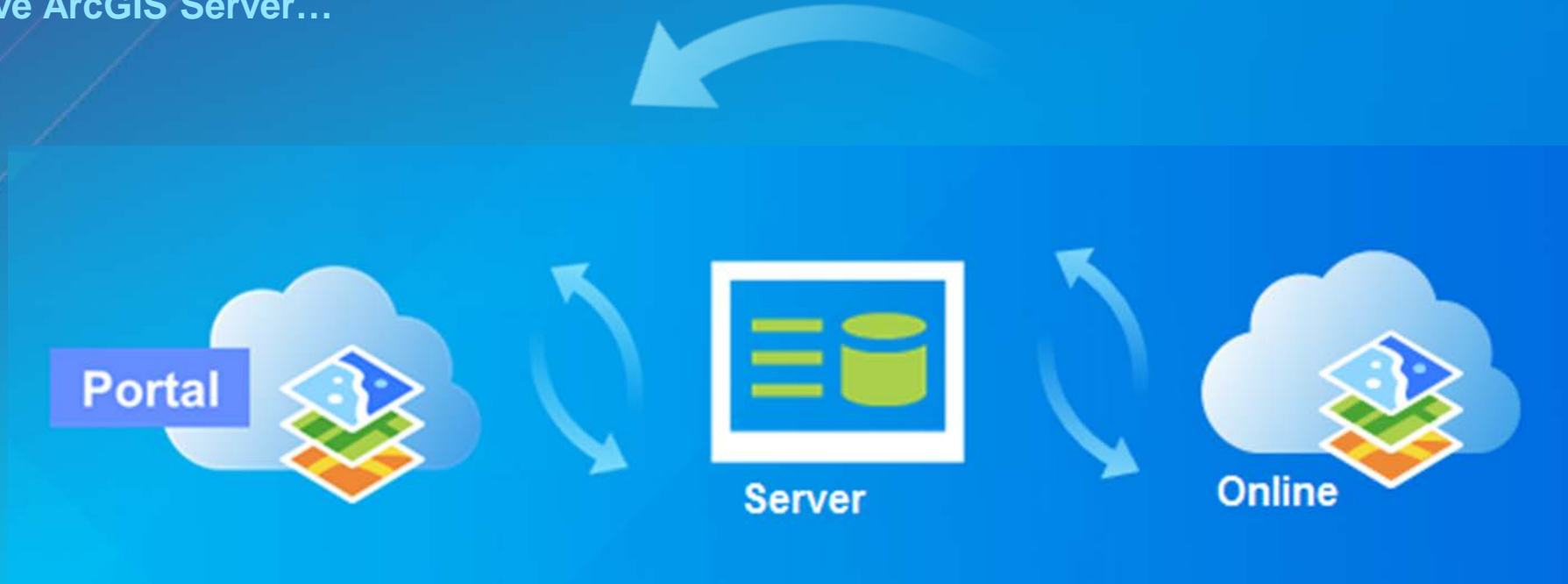
## Common Question:

- Q. What about Portal for ArcGIS?



# Combining ArcGIS for Server with a portal

So you have ArcGIS Server...



## Common Question:

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

- **A.**

- **Feature services**
- **Geocoding services**
- **Geometry services (Portal)**
- **Geoprocessing services (WAB)**
- **Image services**
- **Map services**
- **OGC services**
- **Routing services**
- **Printing services**



# Adding services to ArcGIS Online

## ArcGIS Server Web Services

- Add directly into a web map
- Add as an item to ArcGIS Online
- Share during publishing from ArcMap
- Share from Server Manager
- Configured as a Utility Service

### Add Layer from Web

What type of data are you referencing?

An ArcGIS Server Web Service ▾

URL:

Use as Basemap

The screenshot shows the ArcGIS Server Manager interface. At the top, there is a navigation bar with the ArcGIS logo and the text "ArcGIS Server Manager". To the right of the navigation bar is a "Services" button. Below the navigation bar, there are several tabs: "Manage Services", "OGC Services", "KML Network Links", and "Sharing". The "Sharing" tab is highlighted with a red box. The main content area is titled "Sharing Configuration Settings". Below this title, there is a paragraph of text: "Provide connection information for ArcGIS Online or your own portal. This connection enables you to share your services. Edit pencil to change the connection settings. Then use Sign In to connect." Below this text, there is a section titled "Portal Settings" with a pencil icon to its right. Under "Portal Settings", there are two rows: "Portal URL:" with the value "https://www.arcgis.com/home" and "Service URL:" with the value "https://julia.esri.com/arcgis/". Below these rows, there is a status indicator: a green checkmark followed by the text "Signed In". At the bottom of this section, there is a "Sign Out" button.

## Common Question:

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

# Differences based on how services are added to ArcGIS Online.

## ArcGIS Server Web Services

- **A web map**
  - Referenced by the REST URL
  - Stores settings as web map JSON

The screenshot shows the 'Add Layer from Web' dialog box. It has a title bar with a close button (X). The main text asks 'What type of data are you referencing?'. Below this is a dropdown menu with 'An ArcGIS Server Web Service' selected. A text input field contains the URL 'http://<MyServerName>/ArcGIS/rest/services/<MyServiceName>'. There is a checkbox labeled 'Use as Basemap' which is currently unchecked. At the bottom right, there are two buttons: 'ADD LAYER' and 'CANCEL'.

- **'My Content'**
  - Assigns an item ID
  - Stores settings to the item ID

The screenshot shows the 'Item from the web' dialog box. It has a title bar with a close button (X) and a help icon (?). The main text asks 'Reference an item on the Web.'. Below this is a 'Type:' section with four radio button options: 'ArcGIS Server web service' (selected), 'KML', 'OGC (WMS)', and 'Document'. A text input field for 'URL:' contains 'http://<myServerName>/arcgis/rest/services/<myServiceName>'. There is a text input field for 'Title:' with the placeholder text 'Enter a title for this item'. There is also a text input field for 'Tags:' with the placeholder text 'Add tag(s)'. At the bottom right, there are two buttons: 'ADD ITEM' and 'CANCEL'.



# URL configurations:

Understand services by the URL



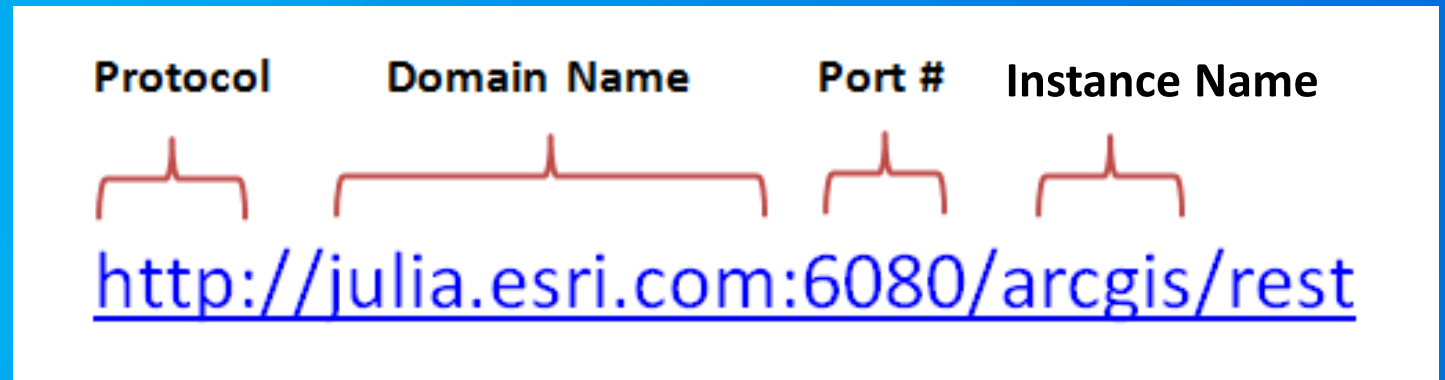
- **ArcGIS Online:**

- HTTP or HTTPS
- Hive number
- Organization ID



- **ArcGIS Server:**

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



# Common Questions:

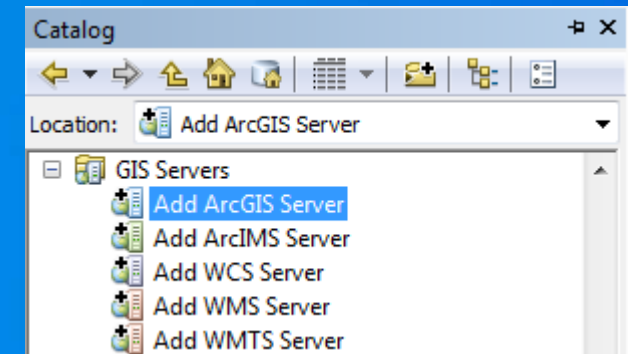
## ArcGIS Server Web Services

- **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

## ArcGIS Server Web Services

- 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?
  - Check your GIS Server connections in ArcMap



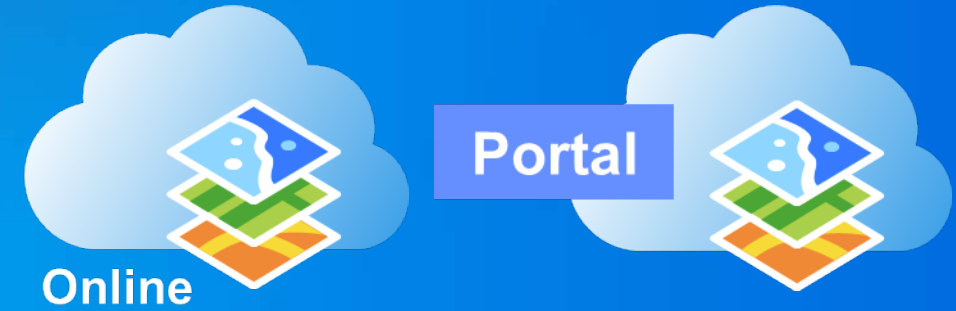
## Common Question:

### ArcGIS Server Web Services


- **Q. How does ArcGIS Server security mix with ArcGIS Online? And, what options do I have in terms of security configuration?**

# GIS Tier (ArcGIS Server) Authentication

## ArcGIS Server Security



- 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          |



### Sign In

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

Username:

Password:

## Common Question:


### ArcGIS Server Web Services

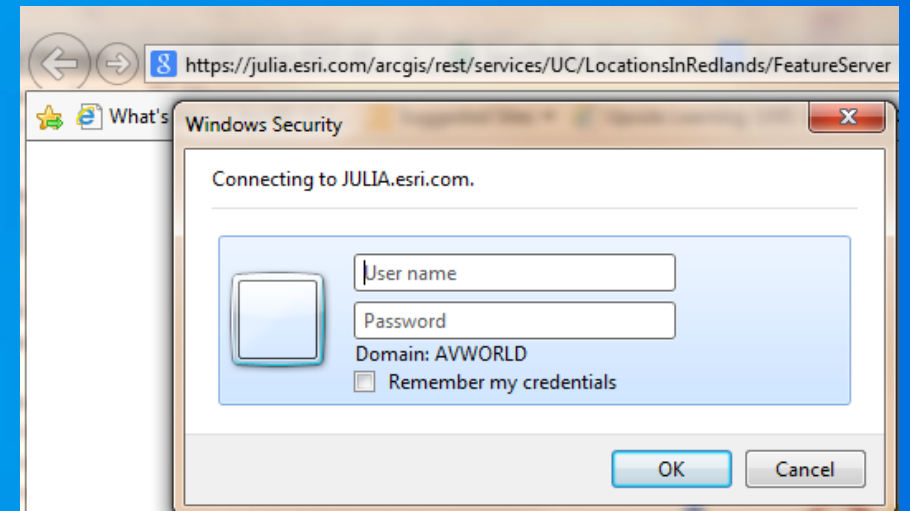
- **Q. Does ArcGIS Online support Web Tier authentication?**
- **A. No.**

# Web Tier Authentication

## ArcGIS Server Security



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



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## **Common Question:**

### ArcGIS Server Web Services

- **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 Organization settings**



# Demo: Enabling Security in ArcGIS Server

## ArcGIS Server Security

**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





• [DEMO](#)

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# Demo: Enabling Security in ArcGIS Online

## ArcGIS Online Security

 User Conference 2015

**General**

Home Page

Gallery

Map

Item Details

Groups

Utility Services


Roles

**Security**

### Security


Configure the security settings for your organization.

#### Policies



- Allow access to the organization through SSL only.
- Allow anonymous access to your organization's website. (UC-2015.maps.arcgis.com)  
[What does this mean?](#)
- Allow only standard SQL queries.

#### Sharing and Searching



- Members can share content outside the organization.
- Members can search for content outside the organization.

# Secure Services in ArcGIS Online

## Secure Services

- ArcGIS Online supports ArcGIS Server authentication (not Web Tier) when adding and accessing secure services.
- Web Tier authentication (Windows Active Directory, LDAP, etc.) is supported for use with Portal for ArcGIS.



## **Common Question:**

Secure services

**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

## Secure Services

### 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](#)

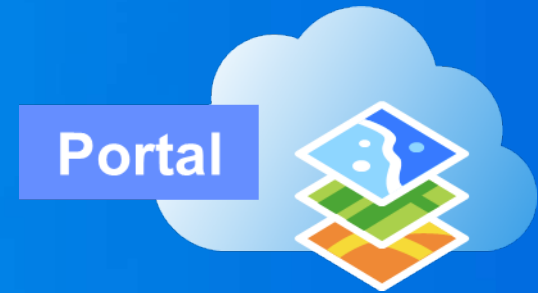
Title:

Tags:   
*Add tag(s)*

• DEMO

# Limit Usage for Secured Services

## Secure 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

## Secure 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

**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

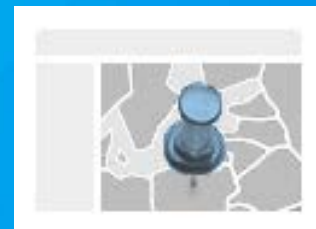
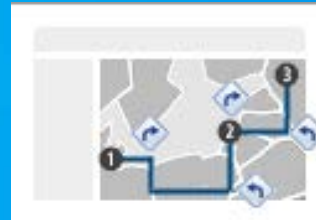
http://uc-2015.maps.arcgis.com  
https://uc-2015.maps.arcgis.com

OK CANCEL

# Configuration options

Administrative tasks for customization

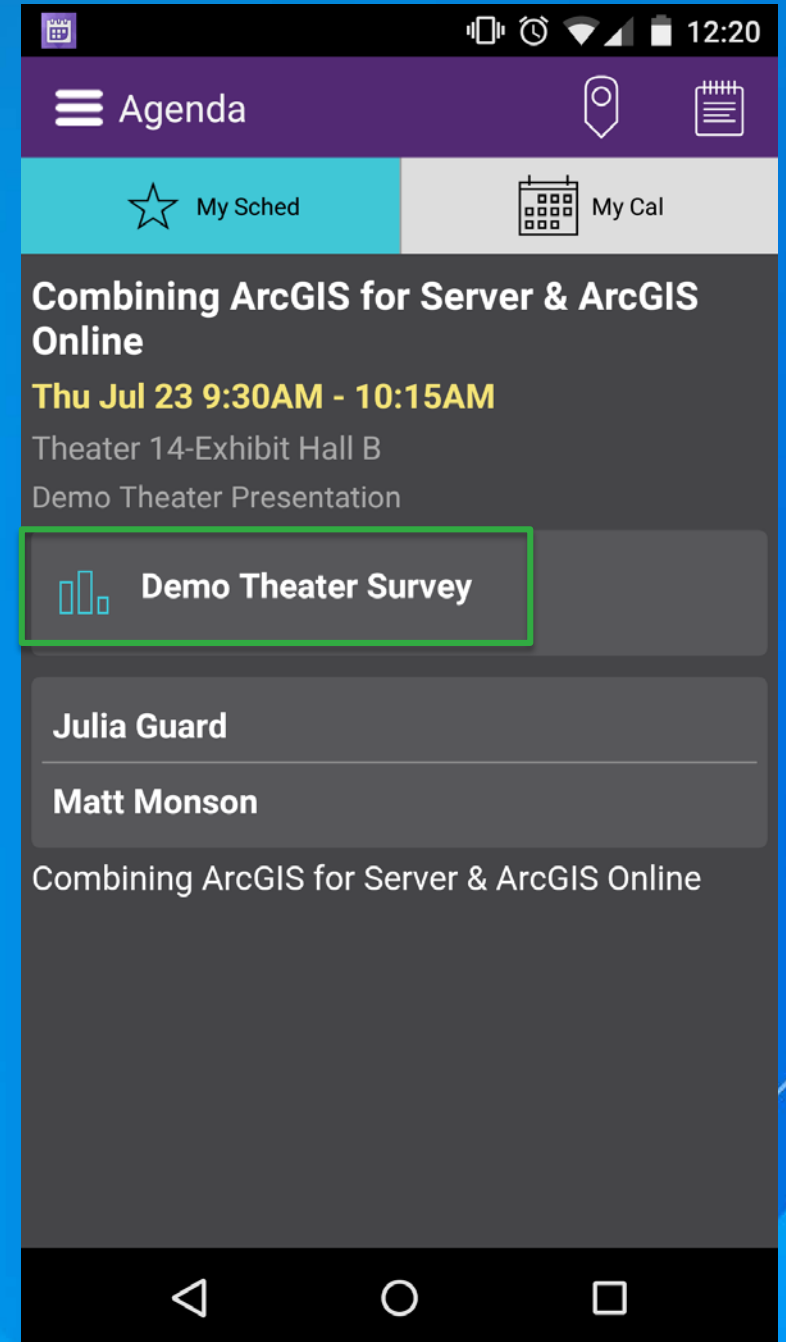
- **Printing Service**
- **Routing Service**
- **Geocoding Service**
- DEMO
- PRINT OUT





# Thank you...

- **Select Combining ArcGIS Server with ArcGIS Online in the Mobile App**
  - Use the Search Feature to quickly find this title
- **Click “Demo Theater Survey”**
- **Answer a few short questions and enter any comments**





Understanding our world.