



# Sharing Web Layers and Services in the ArcGIS Platform

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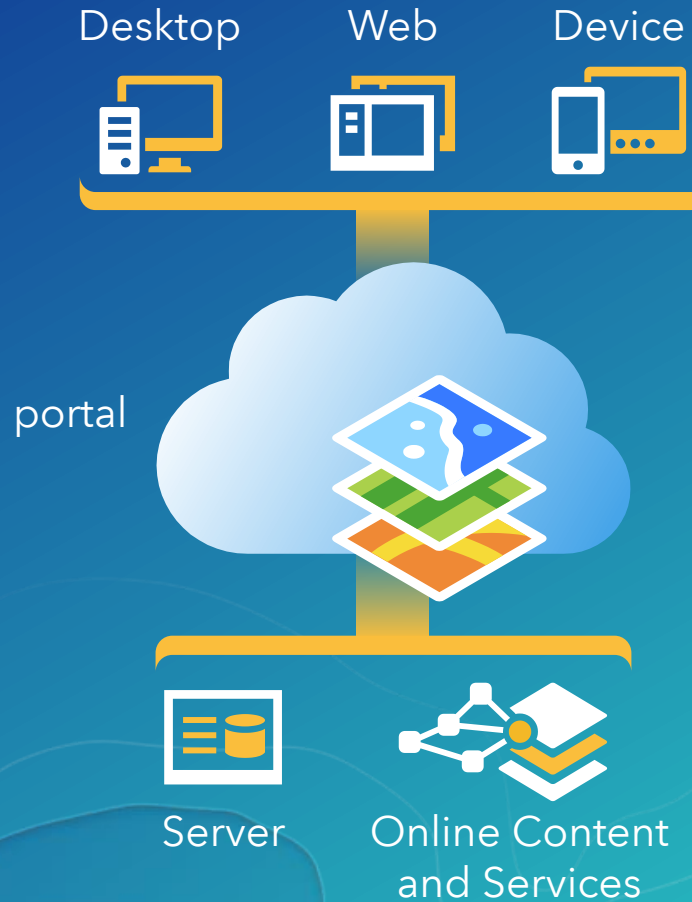
# Agenda

- ArcGIS Platform overview
  - Web GIS information model
  - Two deployment options
- ArcGIS Pro Sharing
  - User experience and workflows
  - Web layers
  - Web maps
  - 3D content and web tools
- Summary

# The ArcGIS Platform enables Web GIS

Enabling GIS Everywhere

Simple  
Integrated  
Open



Available in the Cloud ...  
... and In Your Own Infrastructure

# Sharing to a portal

- **portal**
  - Central destination for all the content in your Web GIS
  - ArcGIS Online organization and/or ArcGIS Enterprise
- **Within your portal, you can own content:**
  - Web maps (2D data)
  - Web scenes (3D data)
  - Web layers
    - Many different types



Web map



Web scene



Feature



Tile



Scene



Elevation



Map  
Image



Image



portal



# ArcGIS Platform Deployment Options

## In the cloud



**ArcGIS Online**

\* Services and data managed by Esri

## In your own infrastructure



**ArcGIS Enterprise**

Portal for  
ArcGIS



ArcGIS  
Server



ArcGIS  
Data Store

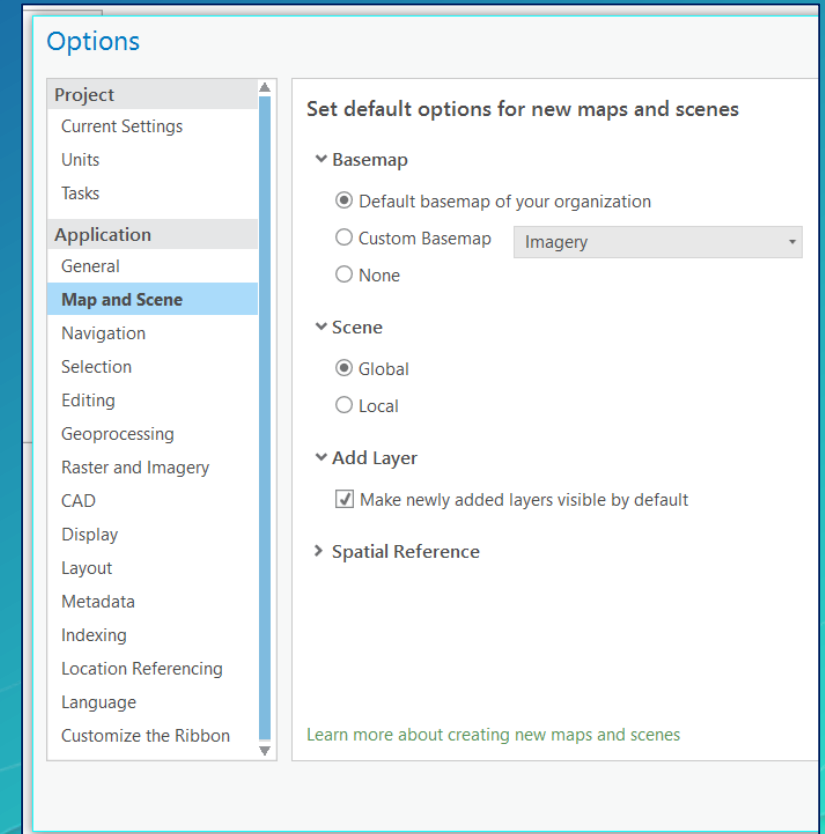


# ArcGIS Pro



ArcGIS Pro

- **ArcGIS Pro as a Web GIS client**
  - Sophisticated desktop functionality
  - Share and access maps, layers, and more
- **ArcGIS Pro uses the settings of your portal when possible**
  - Basemap gallery
  - Default elevation service
  - Default geocoding service
  - Utility services

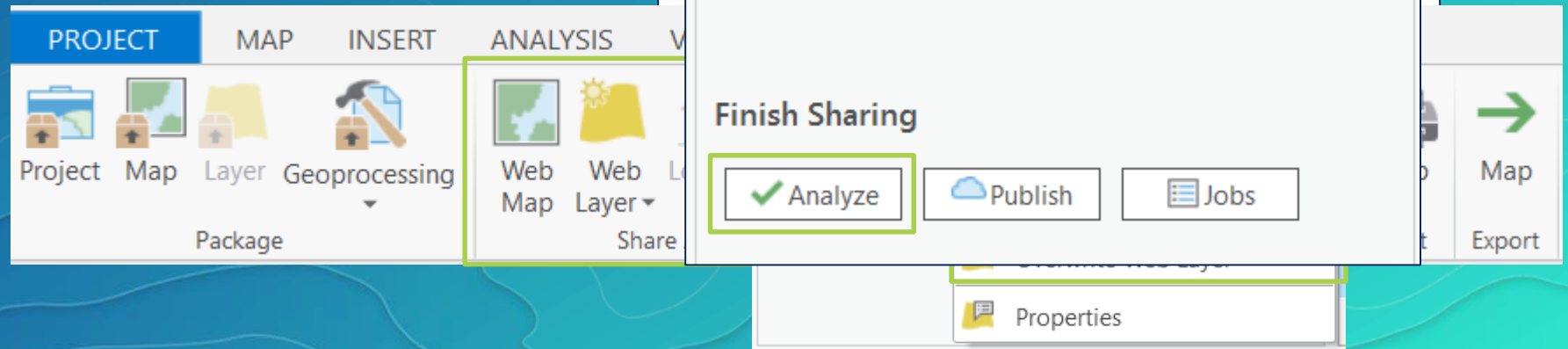




# Demo Sharing from ArcGIS Pro

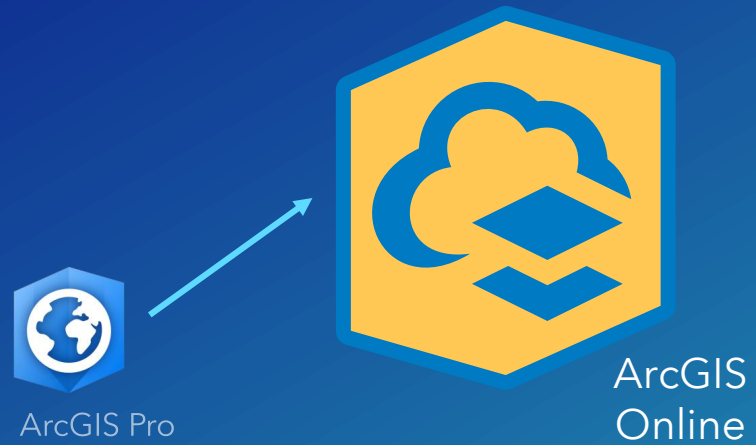
# ArcGIS Pro – Sharing User Experience

1. Sign into a portal
2. Share from:
  - i. The ribbon to share your entire map
  - ii. The context menu to share a selection of layers
3. Analyze your data for potential issues
4. Click Share/Publish





# Sharing from ArcGIS Pro



# Concept Review: Base Deployment and Federated Servers

- **ArcGIS Enterprise Base Deployment**

- Consists of a federated Server site
- Configured to be a hosting server with the ArcGIS Data Store

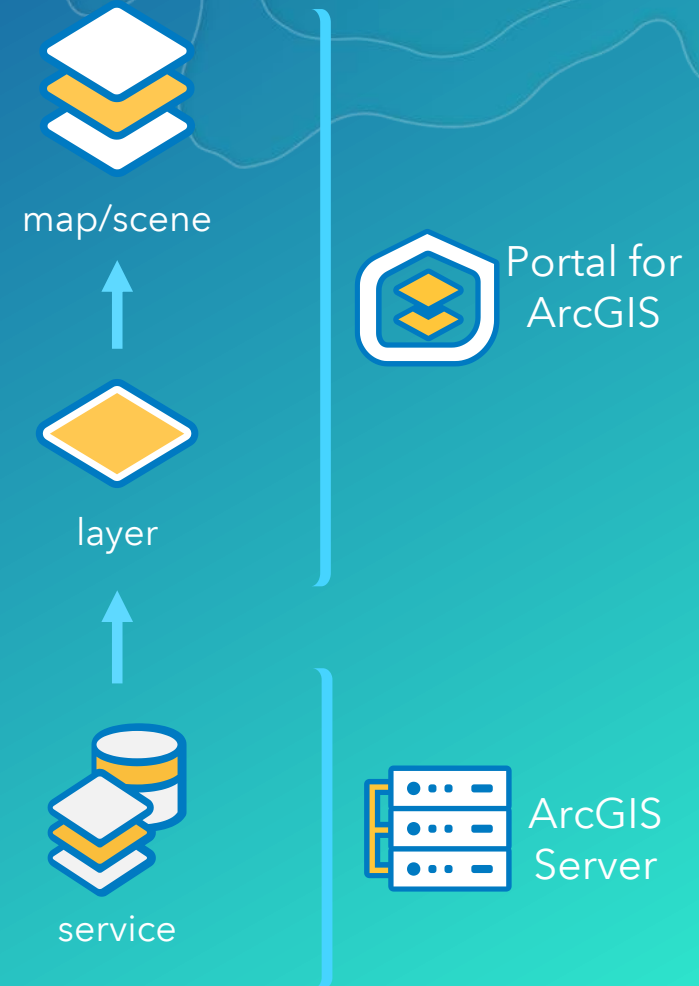
- Some organizations may also have additional Server sites that are federated with Portal

- When sharing from ArcGIS Pro, you decide which federated Server you want to publish services to



# How Web maps, Layers, and Services Work Together

- **Web map (2D) or Web scene (3D)**
  - Collection of web layers and mapping functionality
- **Web Layer**
  - Portal content that references a service
  - Stores configurations - attribute pop-ups, symbology, etc.
- **Web Service**
  - Exposes a URL for web clients to access data
  - Data can be copied to the server or referenced from a shared location or enterprise geodatabase



# Web Layers and Web Services



Web Layer	Web Service
Map Image Layer	Dynamic/Cached map service
Feature Layer	Feature service
Tile Layer	Cached map service (hosted)
Vector Tile Layer	Vector tile service
Scene Layer	Cached scene service





Demo

# Sharing web layers

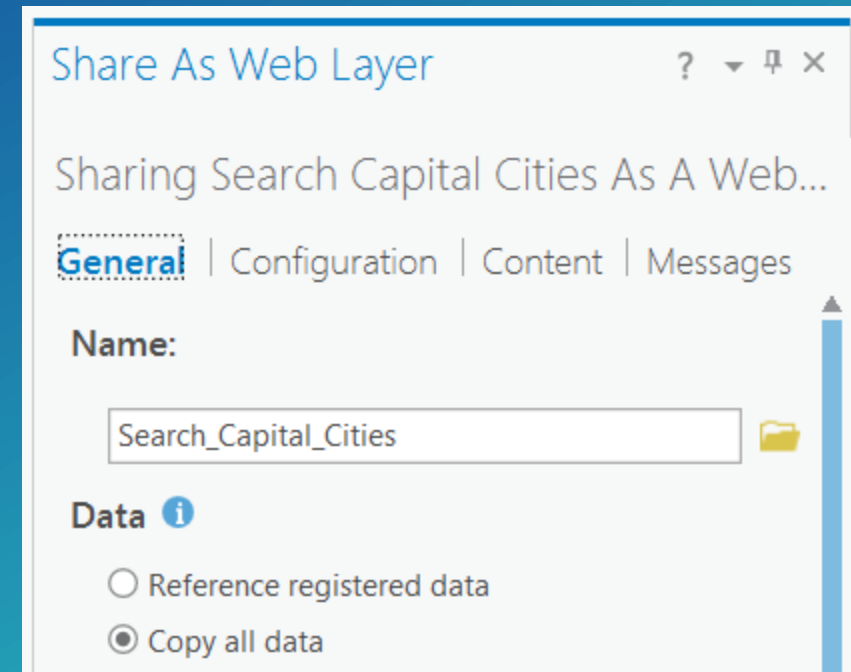
# Sharing Data Options

## 1. Reference registered data

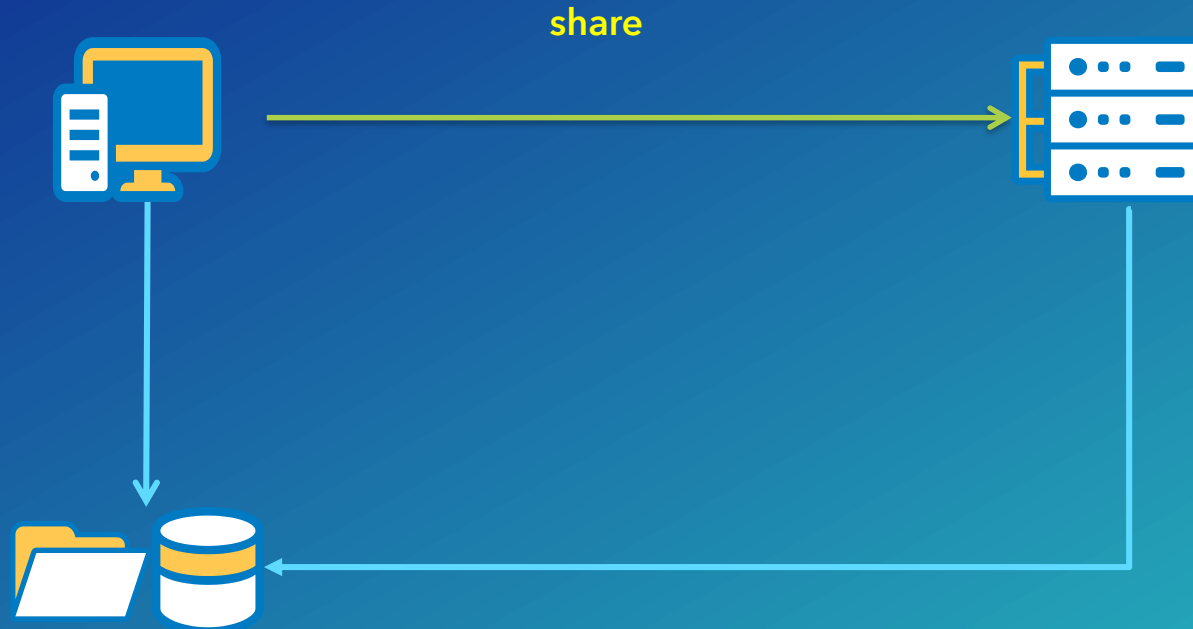
- Registered data will be referenced, unregistered data will be copied

## 2. Copy all data

- Both registered and unregistered data will be copied

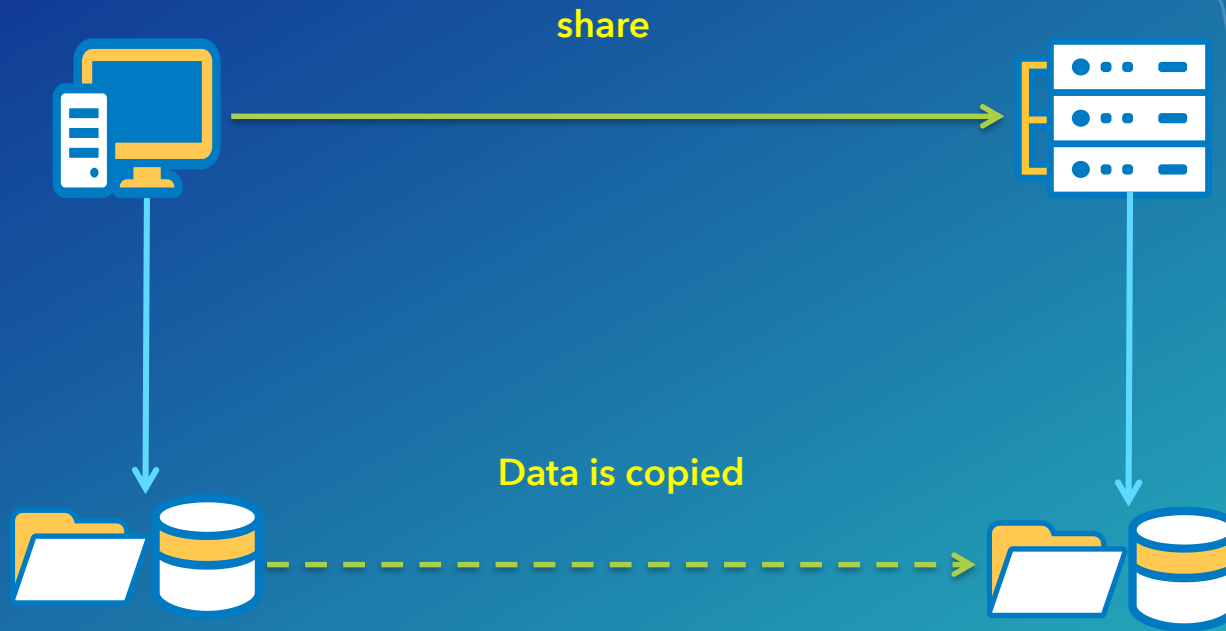


# Working with Registered Data



- Designed to support enterprise editing workflows
- Data sources are registered with the federated server
- Source data is referenced, not copied

# Working with Unregistered Data



- Source data is copied to the server machine
- Does not support enterprise data updates
- Maintains a static copy of your data

*Copy all data* option in ArcGIS Pro  
All source data is treated as unregistered data



# Understanding Data Stores

- **Data store items**

- Locations registered with the server that contains data used by services
- OS account that ArcGIS Server is running as has read/write access

- **ArcGIS Data Store**

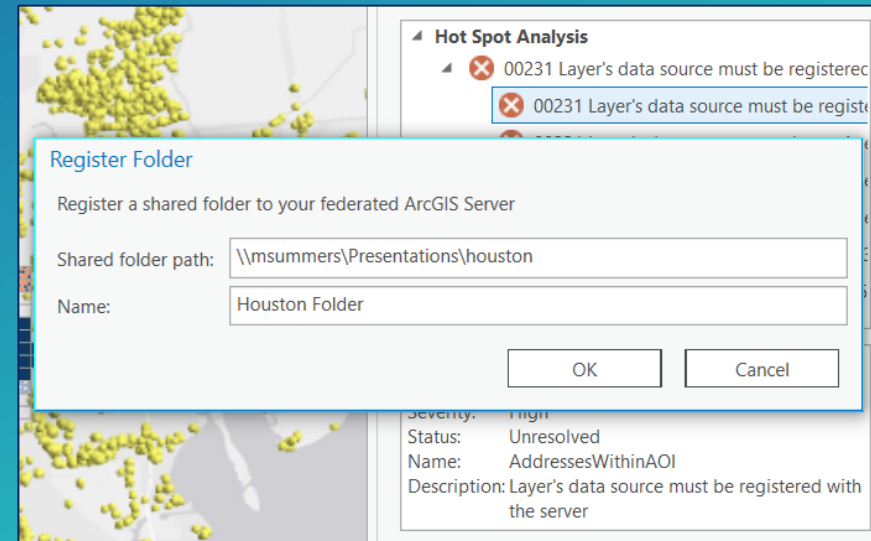
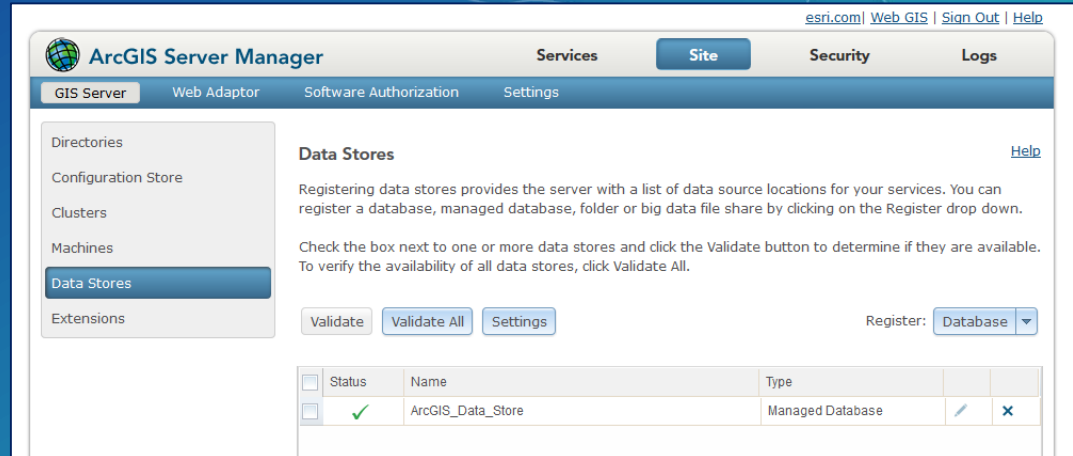
- Part of the base deployment
- Database is managed by the server
- Used to store data copied to the server for hosted services



# Registering Data stores

- 2 ways to define

1. Ahead of time: ArcGIS Server Manager
  - Site > Data Stores
2. While sharing: Resolve analyzers



# Sharing Web maps

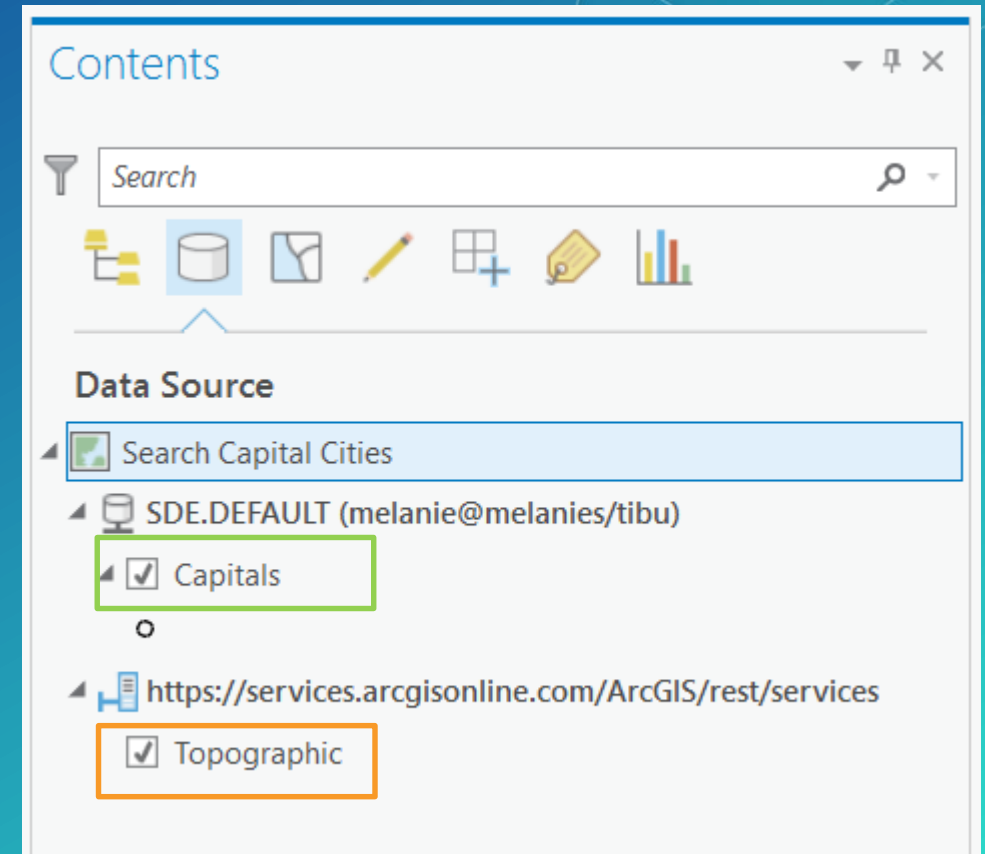
- Preset configurations make one click sharing of new web layers **easy** and **accessible**
- Map level settings, such as bookmarks, are automatically maintained
- For more control, new web layers can be split and configured individually or shared beforehand

The screenshot shows the 'Share As Web Map' dialog box with the following details:

- Title:** Search\_Capital\_Cities
- Tab:** Map | Configuration
- Name:** Search\_Capital\_Cities
- Item Description:**
  - Summary:** Dev Summit 2017 US Cities
  - Tags:** Dev Summit 2017
- Sharing Options:**
  - ☒ My Content
  - ☐ Dinoco
  - ☐ Everyone
  - Groups
- Select a Configuration:**
  - Copy all data: Exploratory
  - Copy all data:**
    - Exploratory**  
Interactive map supporting queries
    - Editable**  
An exploratory map with editing enabled
    - Visualization**  
Fast rendering map using pre-generated tiles

# Web maps and existing web layers

- **Existing web layers are referenced in the Web map**
  - Any modified settings are stored in the map; not at the web layer or service
  - Sharing settings will NOT be updated to match the web map
- If the map contains existing web layers, they will not be “published” again







# Demo

## Sharing a web map

# Sharing Web maps – One Click Configurations

Configuration	Description
Exploratory	Interactive map that supports querying <ul style="list-style-type: none"><li>• Reference - map image layers</li><li>• Copy - non-editable feature layers</li></ul>
Editing	Editable map <ul style="list-style-type: none"><li>• Reference - map image + feature layers</li><li>• Copy - editable feature layers</li></ul>
Visualization	Pre-generated tiles <ul style="list-style-type: none"><li>• Reference - cached map image layers</li><li>• Copy - tile layers</li></ul>

- Map layers unsupported by the primary web layer type will still be shared
  - EX: **Copy all data - editing** with raster data will share raster layers as web tile layers



# Sharing 3D Data

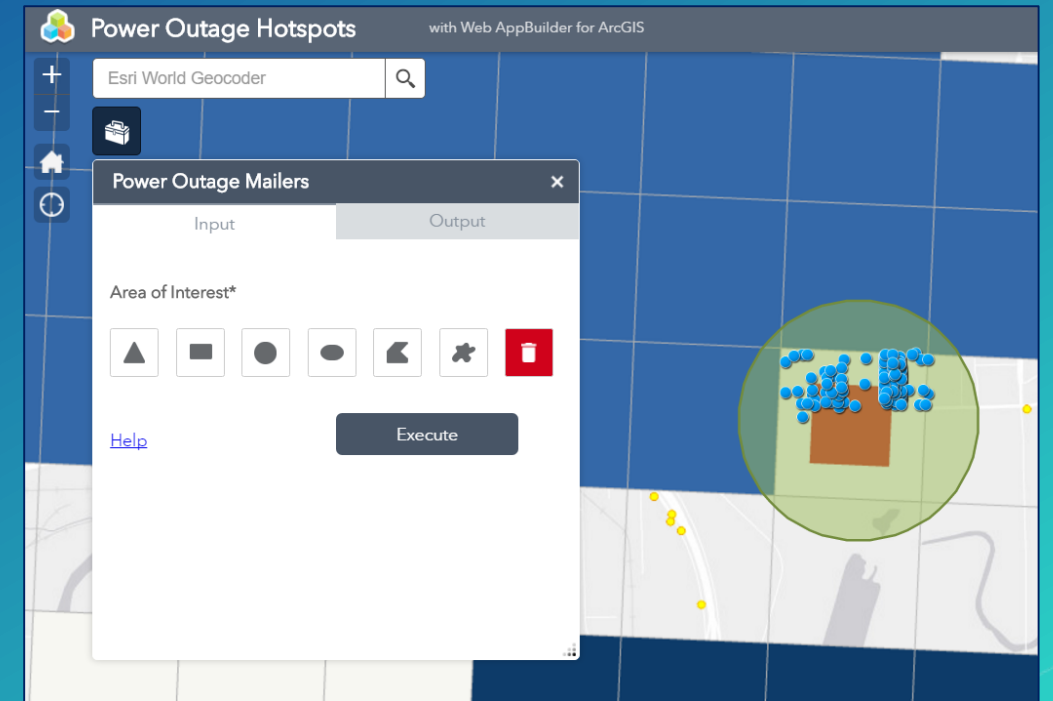
- GIS data is not siloed between 2D and 3D in ArcGIS Pro
- 3D layers and scenes are just as easy to share
- Supported 3D data types
  - Point layer
  - 3D object layer
  - Point cloud layer
  - Integrated mesh



Point cloud layer shared to Portal for ArcGIS

# Sharing web tools

- Portal item that exposes a geoprocessing (GP) service
- Can be used across the platform including ArcGIS Pro and through web clients such as Web AppBuilder for ArcGIS
- Shared from the history item of a successfully ran GP tool



Web tool added to a web application





# Demo Sharing web tools

# Summary

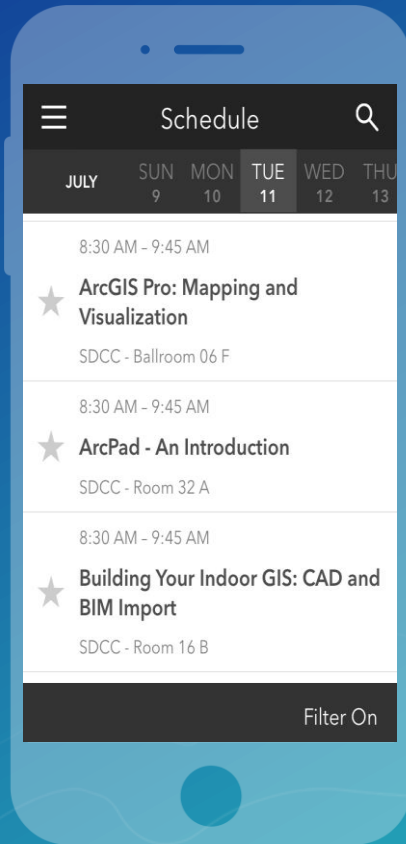
- ArcGIS Pro is deeply integrated with your portal
  - ArcGIS Online or ArcGIS Enterprise
- Sharing content is done in 4 simple steps
  - Web layers
  - Web maps
- Difference between services, web layers, and web maps
- Registered vs unregistered data
- Sharing web tools

# Please Take Our Survey on the Esri Events App!

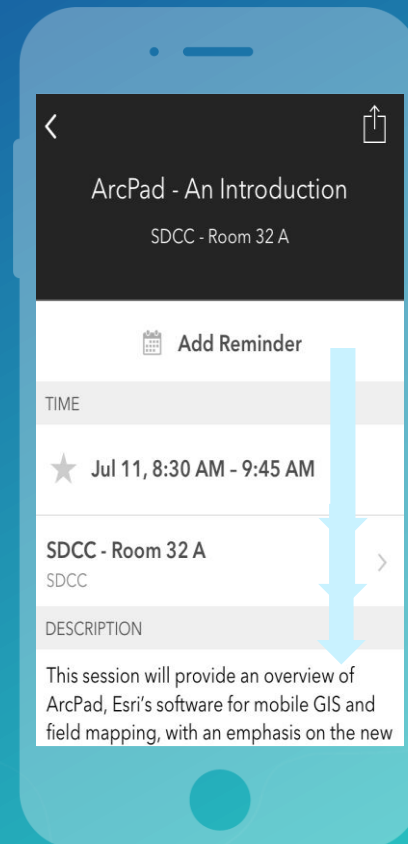
Download the Esri Events app and find your event



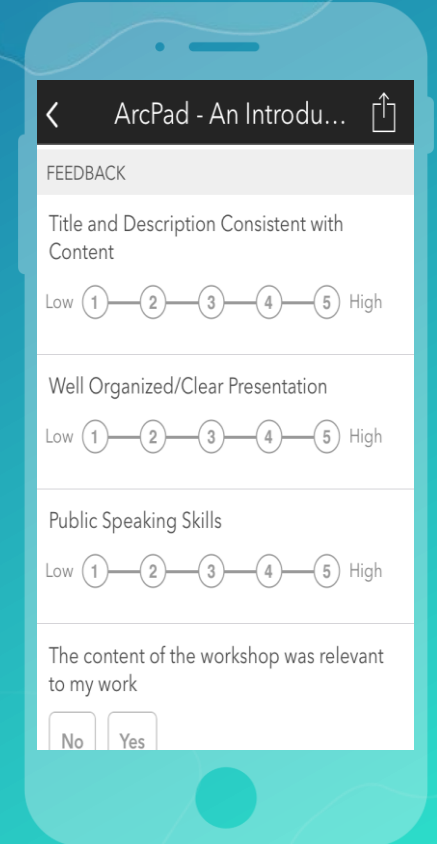
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"







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WHERE