

# ArcGIS Enterprise 10.7 und 10.7.1: Neue Funktionen

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## Things to consider - Updated product lifecycle

- **Starting with 10.7, ArcGIS Enterprise releases will be either:**
  - **Short term support: 3 years of support including 1.5 years of patches [10.7]**
  - **Long term support: 6 of support including 4 years of patches [10.7.1]**
- **All previous versions will remain long term support**
- **When planning your upgrades, take these into consideration**
  - Are you updating frequently (every year or two?)
  - Or do you need to choose a version and stay there for a longer time period?



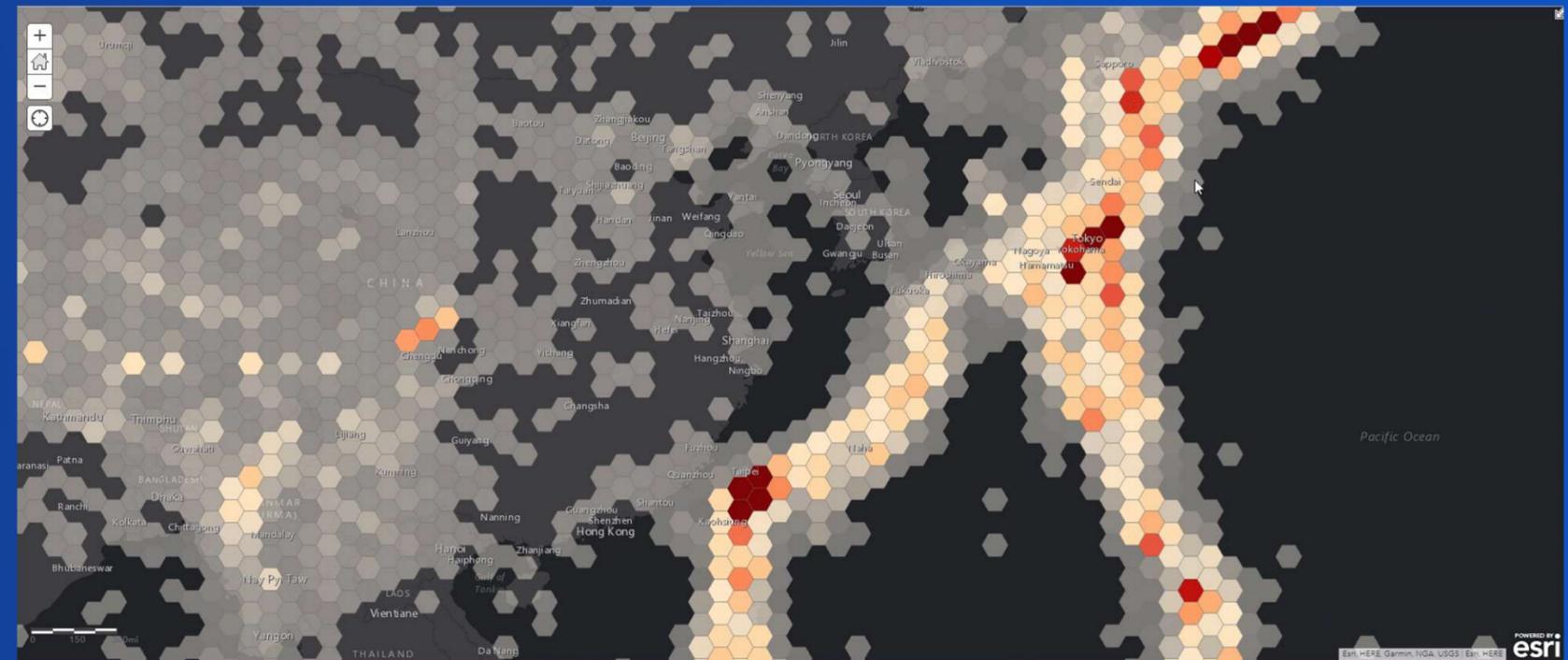
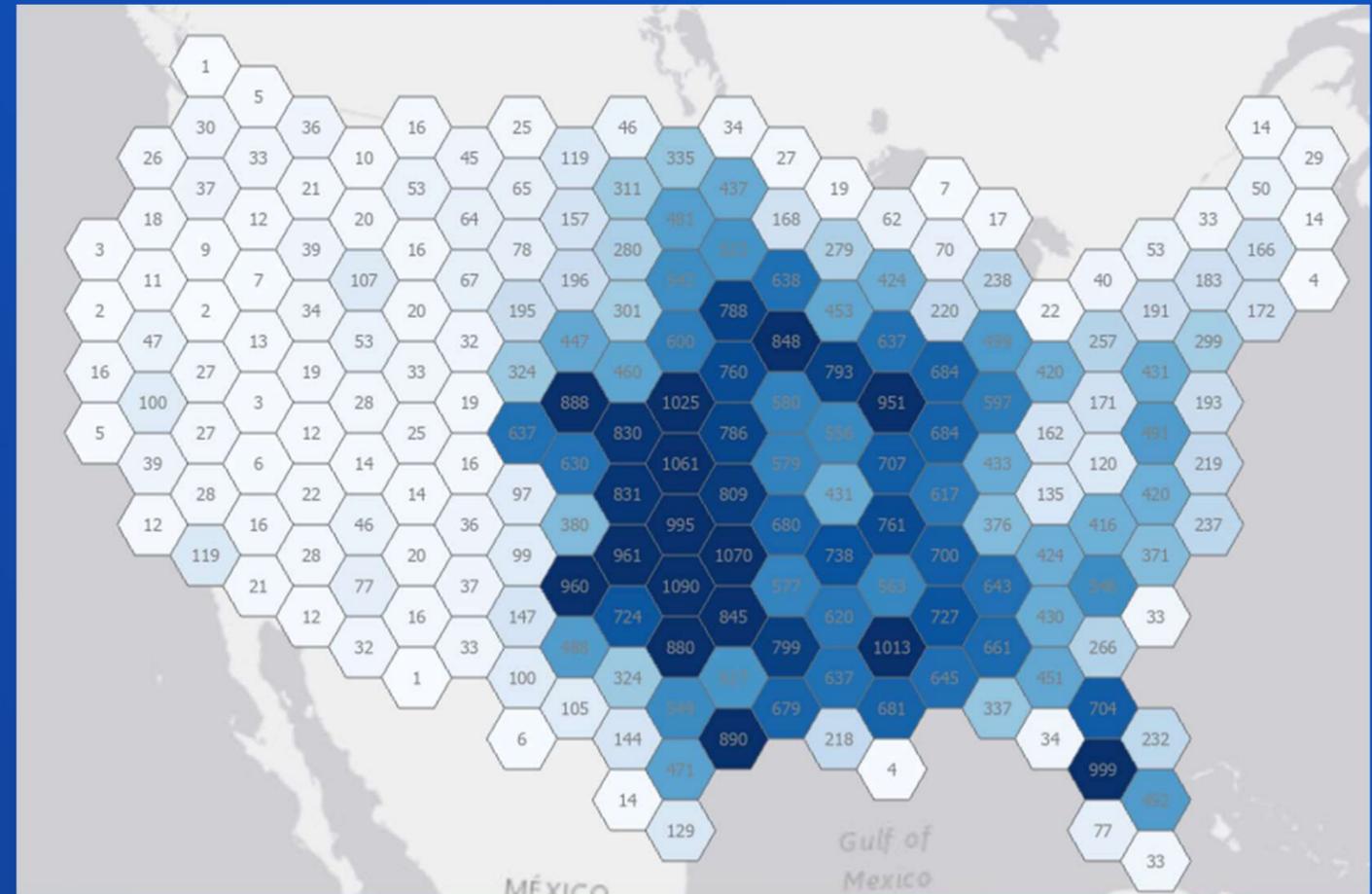
# Mapping

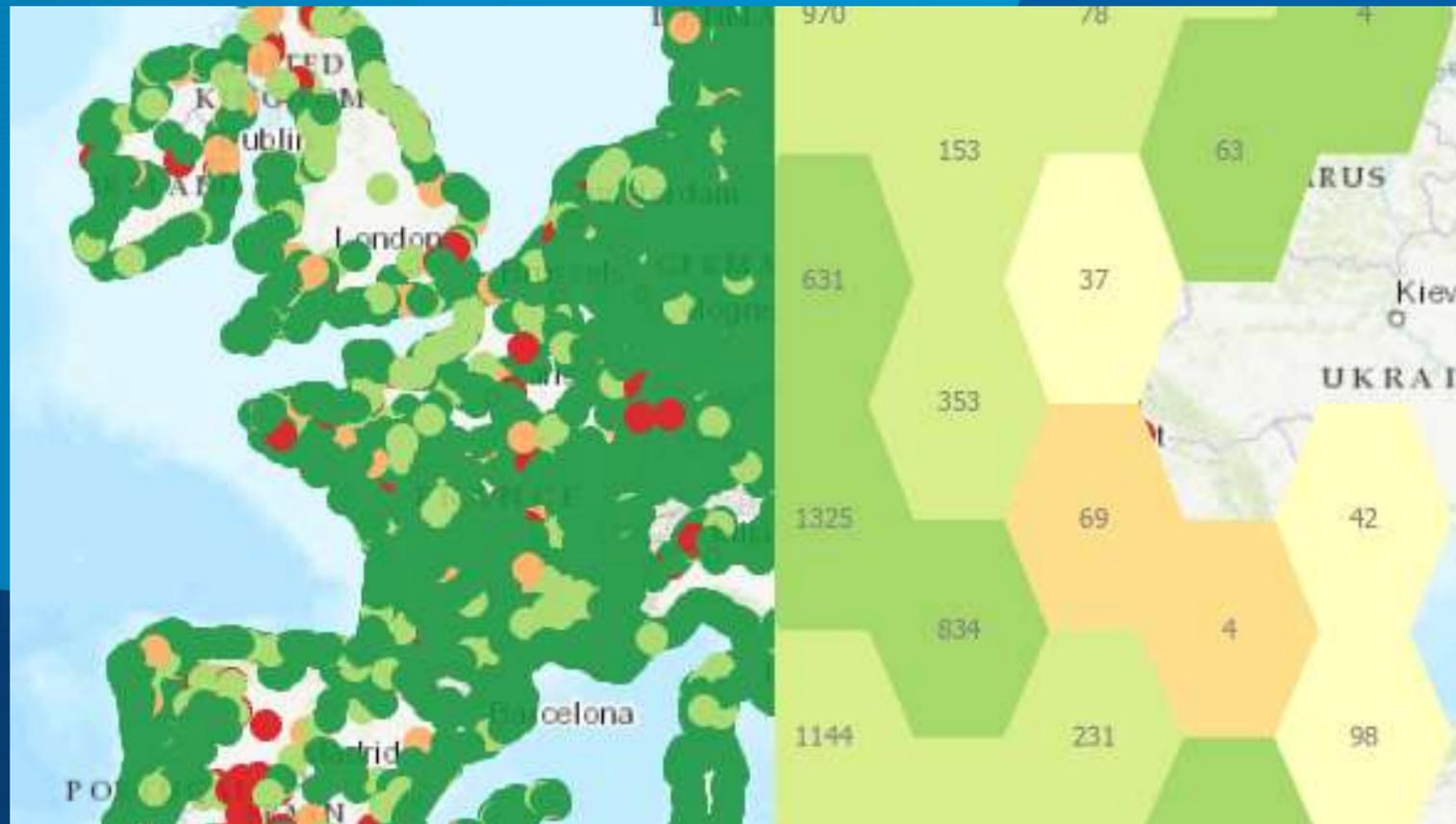
**Key enhancements:** making it easier to understand patterns in larger datasets and relationships within datasets using out of the box tools.

# Feature binning

Dynamic visualization of large datasets

- Use server-side rendering to quickly and easily aggregate data into bins
- Helpful for very large and very dense point datasets
- Understand your data and see it dynamically adjust as you pan and zoom
- New for map services published from your own databases (2.4 and 10.7.1)





# Feature Binning

Waterquality in Europe

# Analysis

**Key enhancements:** building a complete platform for spatial data science; delivering new tools for big data analysis and deep learning.

# ArcGIS Notebook Server

## Hosts Python notebooks in ArcGIS Enterprise

- Automate analysis and administration
- Open up access to a powerful data science platform
- Code with the Python API and ArcPy
- Isolate each author's workspace in Docker containers

The screenshot shows the ArcGIS Notebook Server interface. The top navigation bar includes 'ArcGIS', 'Crime Analysis: Boston Police', and 'last checkpoint: a few seconds ago (unsaved changes)'. Below the navigation bar are tabs for 'Add', 'Analysis', 'Files', 'Share', and 'Info'. The main content area displays a Python notebook with two cells. The first cell, labeled 'In [62]:', contains code to create a spatially enabled dataframe from a feature class and display its head. The output, 'Out[62]:', is a table with columns: OBJECTID, TIME\_STEP, START\_DATE, END\_DATE, TIME\_EXAG, ELEMENT, LOCATION, PRECINCTWARDID, VALUE, and SHAPE. The second cell, labeled 'In [73]:', contains code to create a 3D map of Boston. The output, 'Out[73]:', is a 3D map visualization showing a cityscape with buildings and terrain.

```
In [62]: # Create a spatially enabled dataframe with the results
crime_viz3d_sedf = SpatialDataFrame.from_featureclass(crime_viz3d_wgs)
crime_viz3d_sedf.head()

Out[62]:
```

OBJECTID	TIME_STEP	START_DATE	END_DATE	TIME_EXAG	ELEMENT	LOCATION	PRECINCTWARDID	VALUE	SHAPE
0	1	2016-12-31 22:20:01	2017-01-31 22:20:00	0.0000	0	0	1	3.0	[X: -71.00969271899999, Y: 42.388872945000...
1	2	2017-01-31 22:20:01	2017-02-28 22:20:00	128.1868	255	0	1	4.0	[X: -71.00969271899999, Y: 42.388872945000...
2	3	2017-02-28 22:20:01	2017-03-31 22:20:00	256.3736	510	0	1	1.0	[X: -71.00969271899999, Y: 42.388872945000...
3	4	2017-03-31 22:20:01	2017-04-30 22:20:00	384.5604	765	0	1	3.0	[X: -71.00969271899999, Y: 42.388872945000...
4	5	2017-04-30 22:20:01	2017-05-31 22:20:00	512.7472	1020	0	1	1.0	[X: -71.00969271899999, Y: 42.388872945000...

```
In [73]: # Create a map in 3D mode to visualize the results
viz3d_map = gis.map("Boston", zoomlevel=13, mode='3D')
viz3d_map.basemap='dark-gray-vector'
viz3d_map

Out[73]:
```

*Comes with a rich gallery of sample notebooks to illustrate workflows*

The screenshot shows the ArcGIS Online layer gallery. The search bar contains 'Search for layers' and the results show 3,316,224 layers. The first layer is 'World Topographic Map' by Esri, updated 8/21/18, with a red box around the 'Add to Notebook' button. Other layers include '2016 USA Population Density', '2016 USA Median Age', '2016 USA Per Capita Income', and '2016 USA Median Home Value'. A detailed view of the 'World Topographic Map' layer is shown on the right, with a red box around the 'Add to Notebook' button.

# ArcGIS Notebook Server

Hosts Python notebooks in ArcGIS Enterprise

Fully integrated with your Enterprise portal:

- Users are granted notebook privileges
- Add and reference portal items from within your notebook
- Share notebooks with other users within your portal

The screenshot shows the ArcGIS Notebook Server interface. The top bar displays 'ArcGIS | Crime Analysis: Boston Police' and 'last checkpoint: a few seconds ago (unsaved changes)'. Below the navigation bar, there are tabs for 'Add', 'Analysis', 'Files', 'Share', and 'Info'. The main area contains a Python notebook with two cells. The first cell, labeled 'In [62]:', contains code to create a spatially enabled dataframe from a feature class and display its head. The output, 'Out[62]:', is a table with columns: OBJECTID, TIME\_STEP, START\_DATE, END\_DATE, TIME\_EXAG, ELEMENT, LOCATION, PRECINCTWARDID, VALUE, and SHAPE. The second cell, labeled 'In [73]:', contains code to create a 3D map of Boston. The output, 'Out[73]:', is a 3D map visualization showing crime data points as vertical bars of varying heights on a map of Boston.

*Comes with a rich gallery of sample notebooks to illustrate workflows*

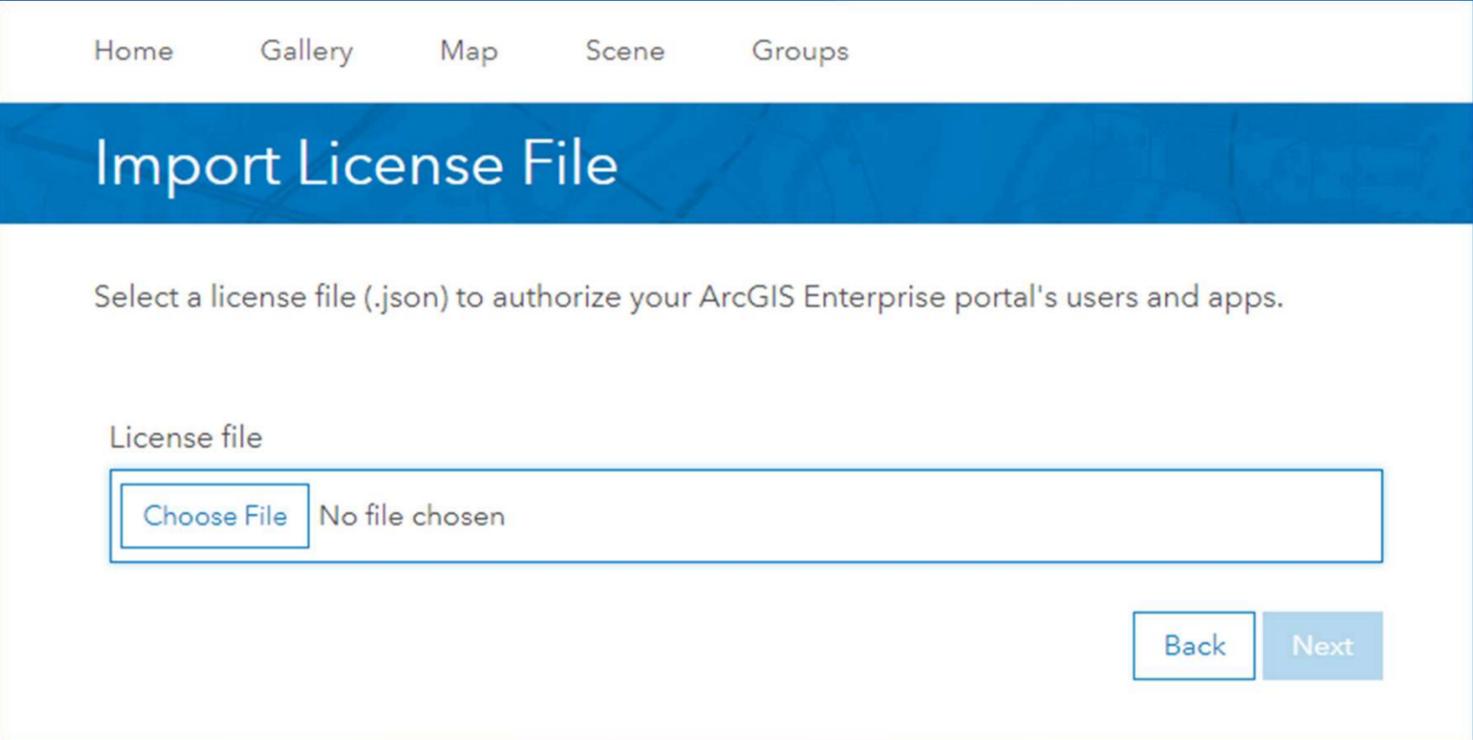
The screenshot shows the ArcGIS Online portal. The top bar displays 'ArcGIS Online'. Below the navigation bar, there is a search bar and a list of layers. The 'World Topographic Map' notebook is highlighted, and its details are shown in a side panel. The side panel includes a description of the notebook, a 'Description' section, and an 'Add to Notebook' button.

# Administration

**Key enhancements:** making it easier to manage users and licenses, automate notifications of events, and make your deployment more efficient.

# Easier ArcGIS Enterprise Licensing

- **Licensing on My Esri**
  - **Installing and upgrading**
  - Improved user administration
  - Improved license management
- Single portal json file for user types and applications
  - No more portal Software Authorization Wizard



The screenshot shows the 'Import License File' wizard in ArcGIS Enterprise. At the top, there is a navigation bar with links for 'Home', 'Gallery', 'Map', 'Scene', and 'Groups'. Below this, the title 'Import License File' is displayed in a blue header. The main content area contains the instruction: 'Select a license file (.json) to authorize your ArcGIS Enterprise portal's users and apps.' Underneath, there is a section labeled 'License file' with a file selection interface. This interface includes a 'Choose File' button and the text 'No file chosen'. At the bottom right of the wizard, there are two buttons: 'Back' and 'Next'.

# Improved user license management and user administration

- When adding members, can specify default properties & assign licenses

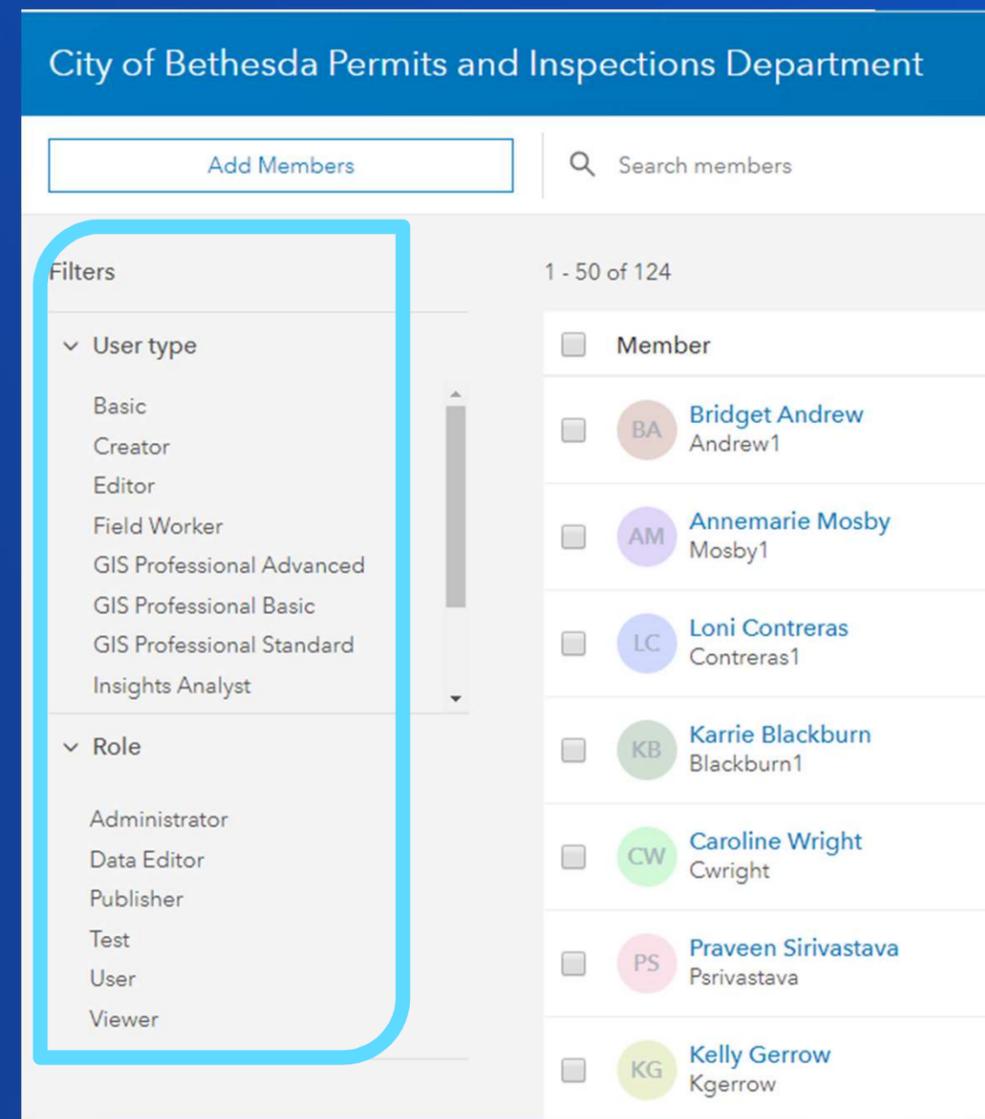
The screenshot displays the 'Add members' interface with a progress bar at the top. The progress bar has four steps: 'Choose method', 'Compile member list', 'Set member properties', and 'Confirm and complete'. The 'Set member properties' step is currently active. Below the progress bar, there is a 'Summary' section with a 'Members' subsection. A large box indicates 'Total members to be added' as 101. To the right, a 'Properties' section is highlighted with a blue border, showing default settings for 'Profile visibility', 'Start page', 'Language', and 'Number and date format'. Below the summary, a table lists the license types and their counts.

License Type	Count
Viewer	47
Creator	38
Field Worker	11
GIS Professional Advanced	5

Property	Value
Profile visibility	Organization
Start page	Home
Language	English - English
Number and date format	US - US

# Improved user license management and user administration

- When adding members, can specify default properties & assign licenses
- Enhanced filtering when managing users and licenses:
  - Role
  - User Type
  - Groups (coming soon)



# Introducing webhooks

Automate notifications based on portal actions

## An action occurs.

- Something is published
- A user creates a new account
- An item is deleted

## The webhook is triggered.

- Delivers JSON description of event
- Relevant info fields

```
{
  "info": {
    "webhookName": "Group monitoring",
    "webhookId": "72fed926aeb74c9ca8a22aacddc6725a",
    "portalURL": "https://machineURL/portal/",
    "when": 1543192196521
  },
  "events": [{
    "username": "administrator",
    "userId": "173dd04b69134bdf99c5000aad0b6298",
    "when": 1543192196521,
    "operation": "update",
    "source": "group",
    "id": "173dd04b69134bdf99c5000aad0b6298",
    "properties": {}
  }]
}
```

## Your platform of choice kicks in.

- IFTTT
- Integromat
- Microsoft Flow

## It performs an action.

- Emails you
- Posts in Slack
- Alexa announces it at the dinner table (maybe not)



The screenshot displays a workflow configuration interface. At the top, there is a tab labeled "events x". Below it, a step titled "Check if it is an update of an Item" is configured with an "And" condition. This condition consists of two rules: "operation x is equal to update" and "source x is equal to item". Below the condition, there are two paths: "If yes" (green background) and "If no" (red background). The "If yes" path leads to a "Send an email" step. The email configuration includes the following fields:

- To: m.schenker@esri.ch
- Subject: Portal Item Update Notification
- Body: An item in your Portal at `portalURL x` has been updated.  
The User `username x` has performed the action.  
Link to the item: `portalURL x /home/item.html?id=id x`

At the bottom left, there is a link to "show advanced options".

# Webhooks

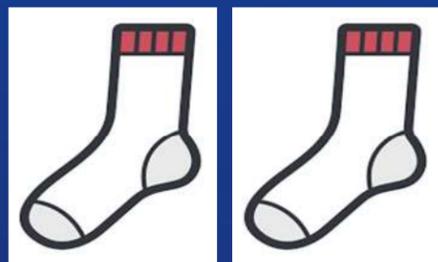
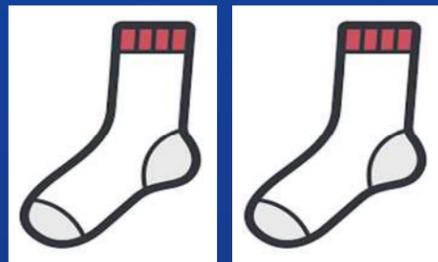
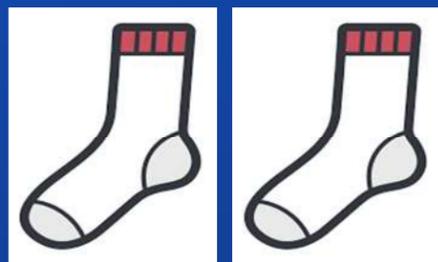
Notification email on updates

# Shared instance pool

A game changer for service performance in ArcGIS Enterprise



GPService



MapService1

Frequent traffic

Less frequent traffic



MapService2



FeatService2



MapService3



MapService4



FeatService1



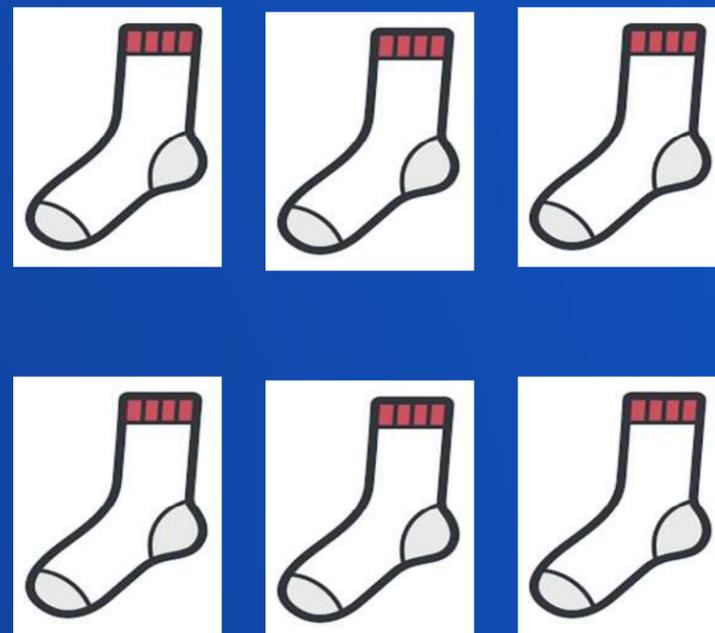
FeatService3

ARCGIS SERVER SITE



- Conserve memory and power usage from unused instances... without performance impact
- Isolate high-volume services in dedicated pools
- Reduce administrative overhead of maintaining separate pools for all services

## Shared instance pool New at 10.7



6 ArcSOCs

Participants:  
MapService2  
MapService3  
MapService4  
FeatService1  
FeatService2  
FeatService3

ARCGIS SERVER SITE



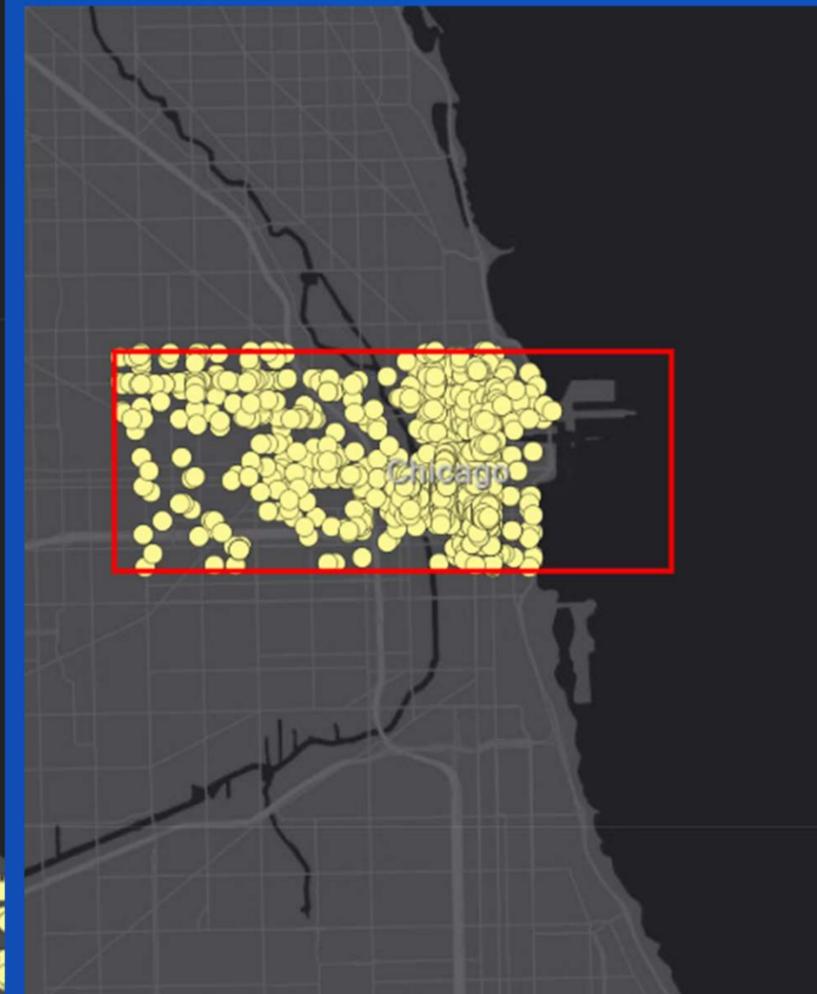
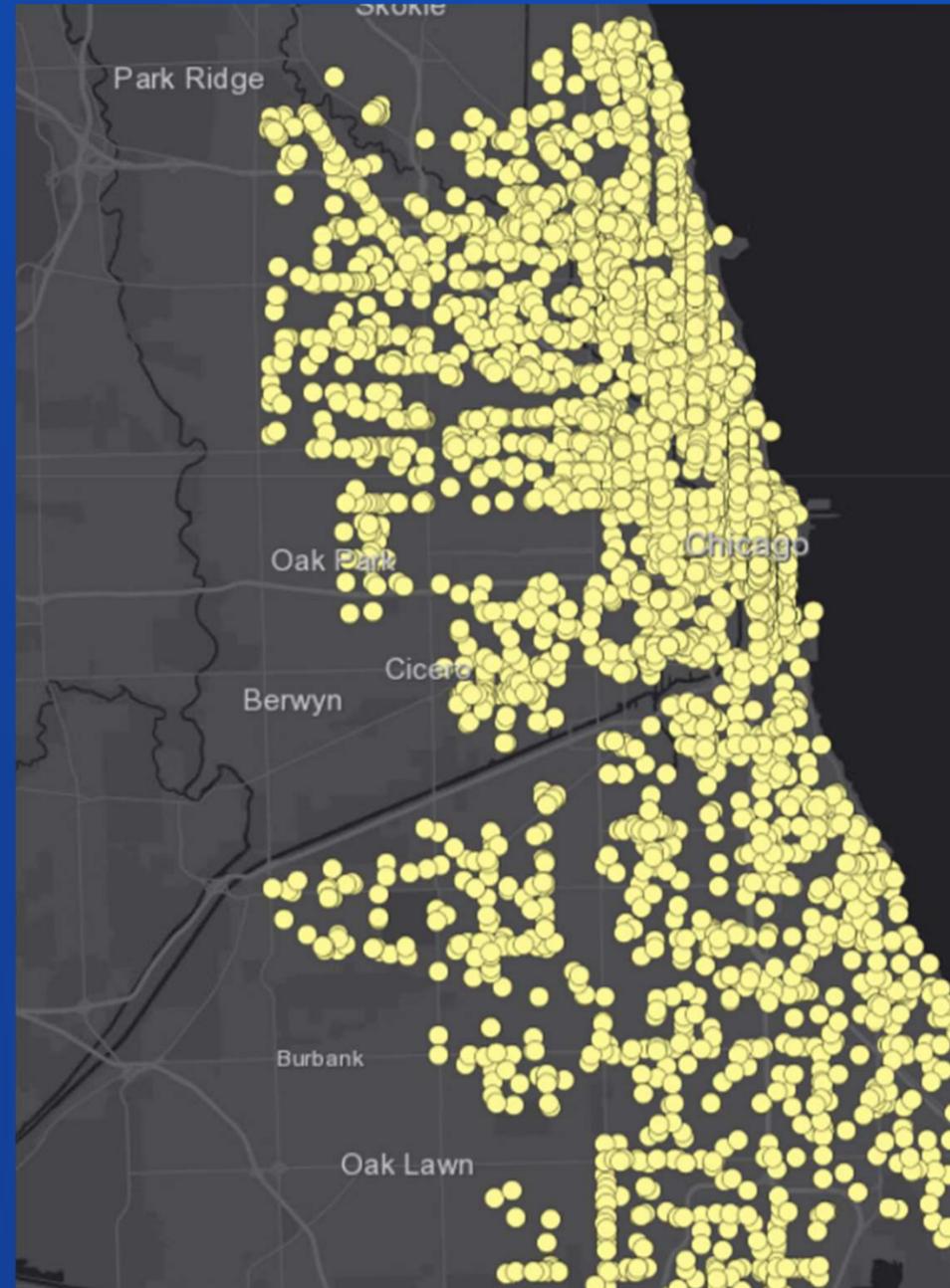
# Data

**Key enhancements:** supporting offline workflows, data integrity and quality & improvements to search, sharing, and collaboration.

# Hosted feature layer views

New option for drawing an area of interest

- Views stay connected to your source data but can have different:
  - Editing settings
  - Sharing settings
  - Symbology
- Expose only a subset of your data using any of these definitions:
  - Area of interest (new!)
  - Feature definition
  - Field definition



# Publishing

**Key enhancements:** new options for making your data widely accessible to others, new features and functionality when publishing from ArcGIS Pro.

# New in publishing

1

**Publish services from ArcGIS Pro to a standalone (unfederated) ArcGIS Server**



2

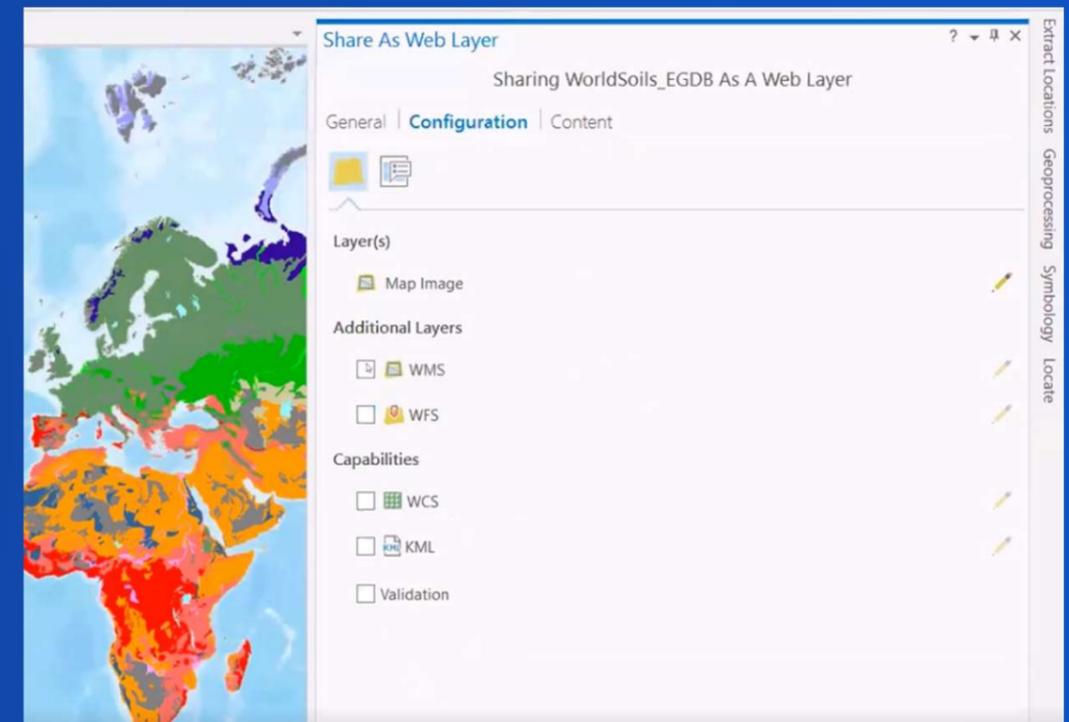
**Publish OGC services from ArcGIS Pro**  
• WMS, WFS, WCS, KML

3

**Replace vector tile layer (with enhancements at 10.8)**

4

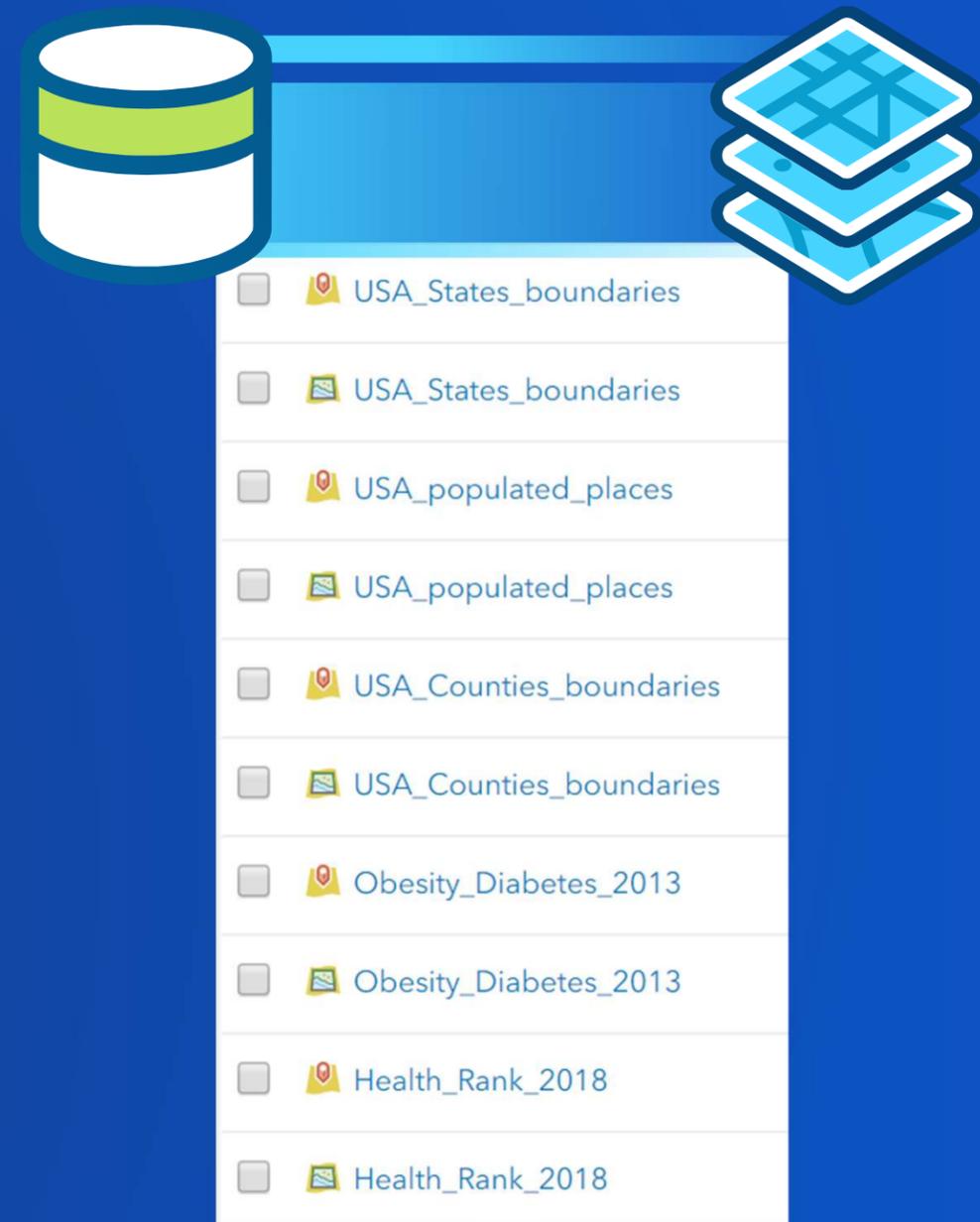
**Publish feature classes, tables, and imagery in bulk**



# Bulk publishing

Quickly and easily create web services from your own data stores

- Creates layers, en masse, from user-managed storage: databases, folders
- Makes data from your own sources easily accessible across your organization: 10s, 100s of layers
- Layers (map and feature) will by default be read-only and use shared instances



**Questions ?**



**esri** Deutschland

*THE SCIENCE OF WHERE*



**esri** Suisse

*THE SCIENCE OF WHERE*