



What's new in ArcGIS Enterprise 10.7

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ARCDATA PRAHA

Release timeline

2016

10.5

December

2017

10.5.1

June

2018

10.6

January

10.6.1

June

2019

10.7

March

10.7.1

Updated product lifecycle

- **Starting with 10.7, ArcGIS Enterprise releases will be either:**
 - Short term support (STS): 3 years of support including 1.5 years of patches [10.7]
 - Long term support (LTS): 6 of support including 4 years of patches [10.7.1]
- **All previous versions will remain long term support**

Version	Support cycle	Release Date	General Availability	Extended Support	Mature Support	Retired
10.7	STS	March 2019	Mar 2019 – Aug 2020	–	Sep 2020 – Feb 2022	March 2022
10.7.1	LTS	June 2019	Jun 2019 – May 2021	Jun 2021 – May 2023	Jun 2023 – May 2025	June 2025

User Types



- New licensing model for users beginning at 10.7
- Provides the much requested 'intermediate level' user
- Each user type has an identity, capabilities and included applications
- Match your licensing to your workflows

Mapping & analysis

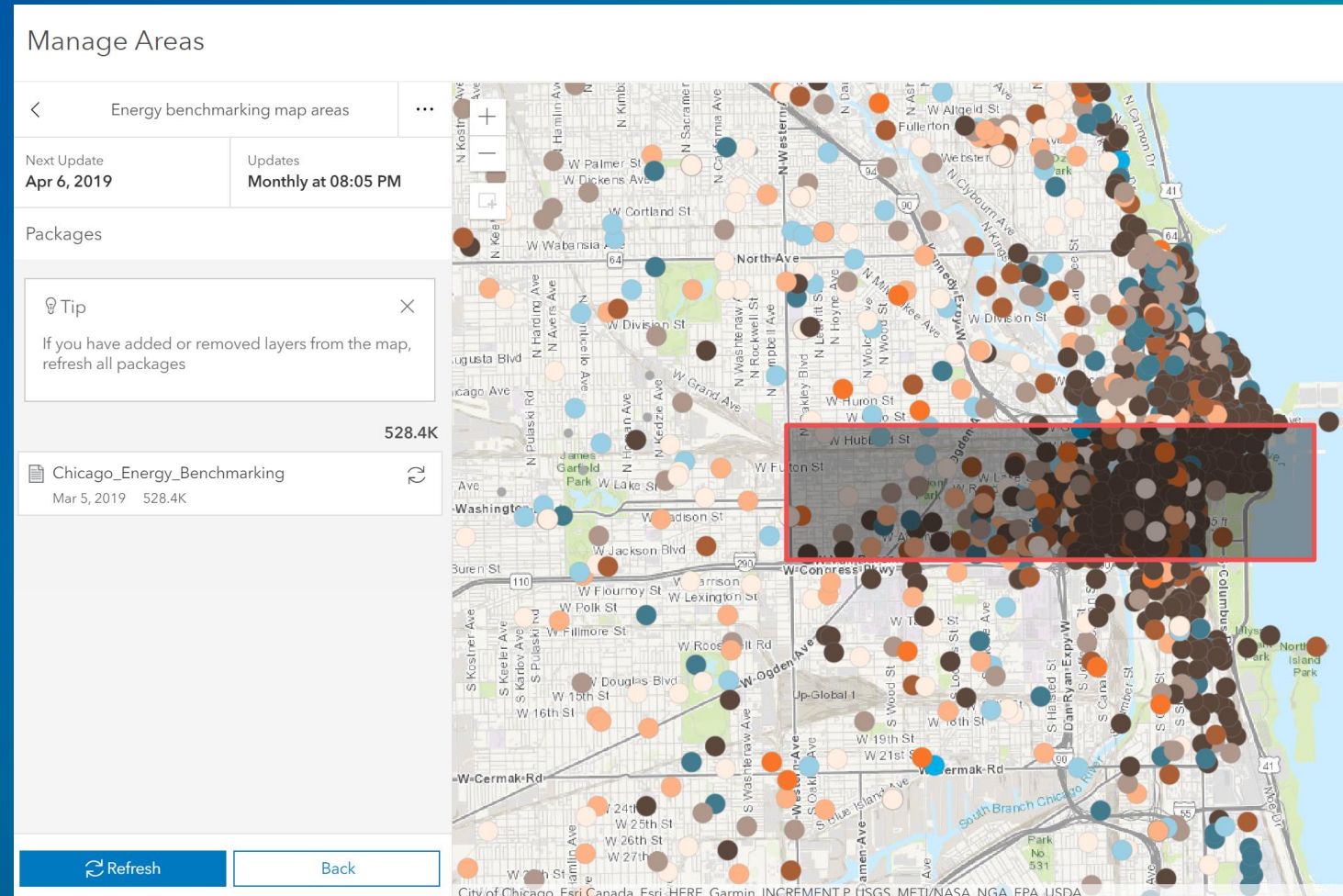


Create offline map areas

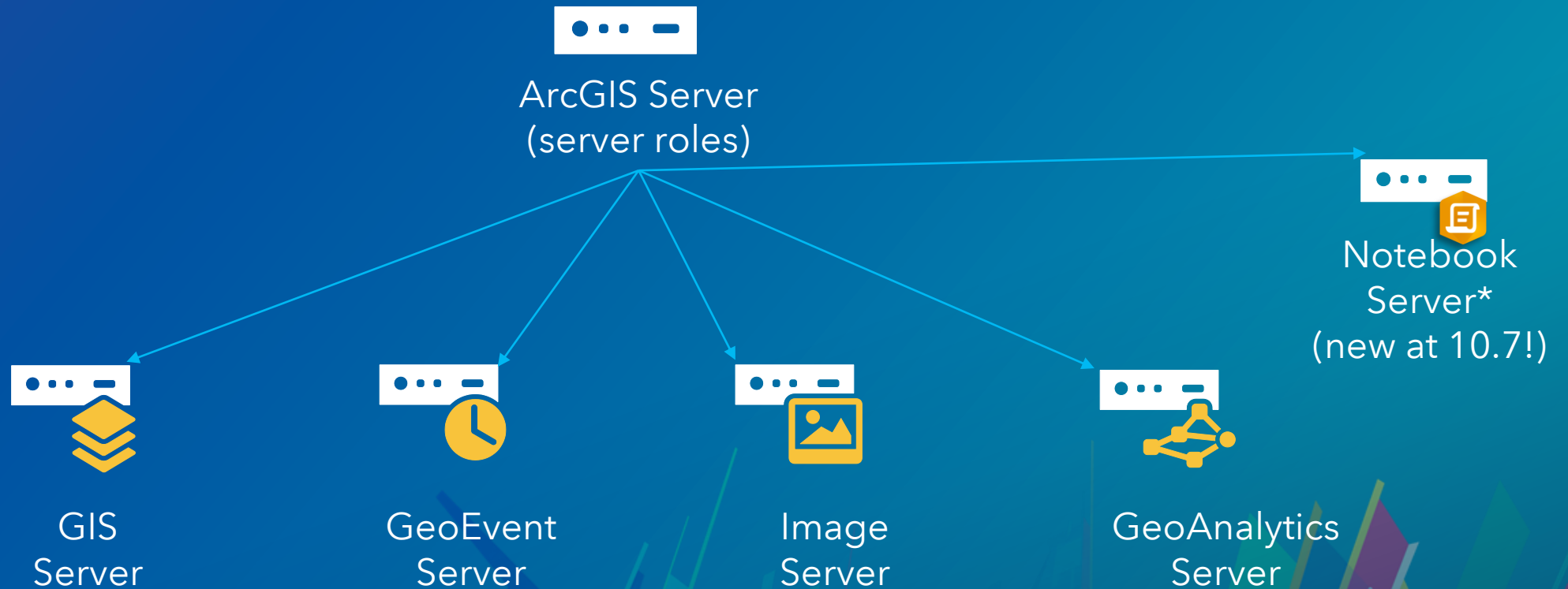
Support offline field workflows

Create pre-determined map areas to take offline:

- Makes it easier and faster to package up and take maps offline
- Update offline areas on a schedule to reflect changes in your web map
- Use in apps built using the Runtime SDK or Collector for ArcGIS

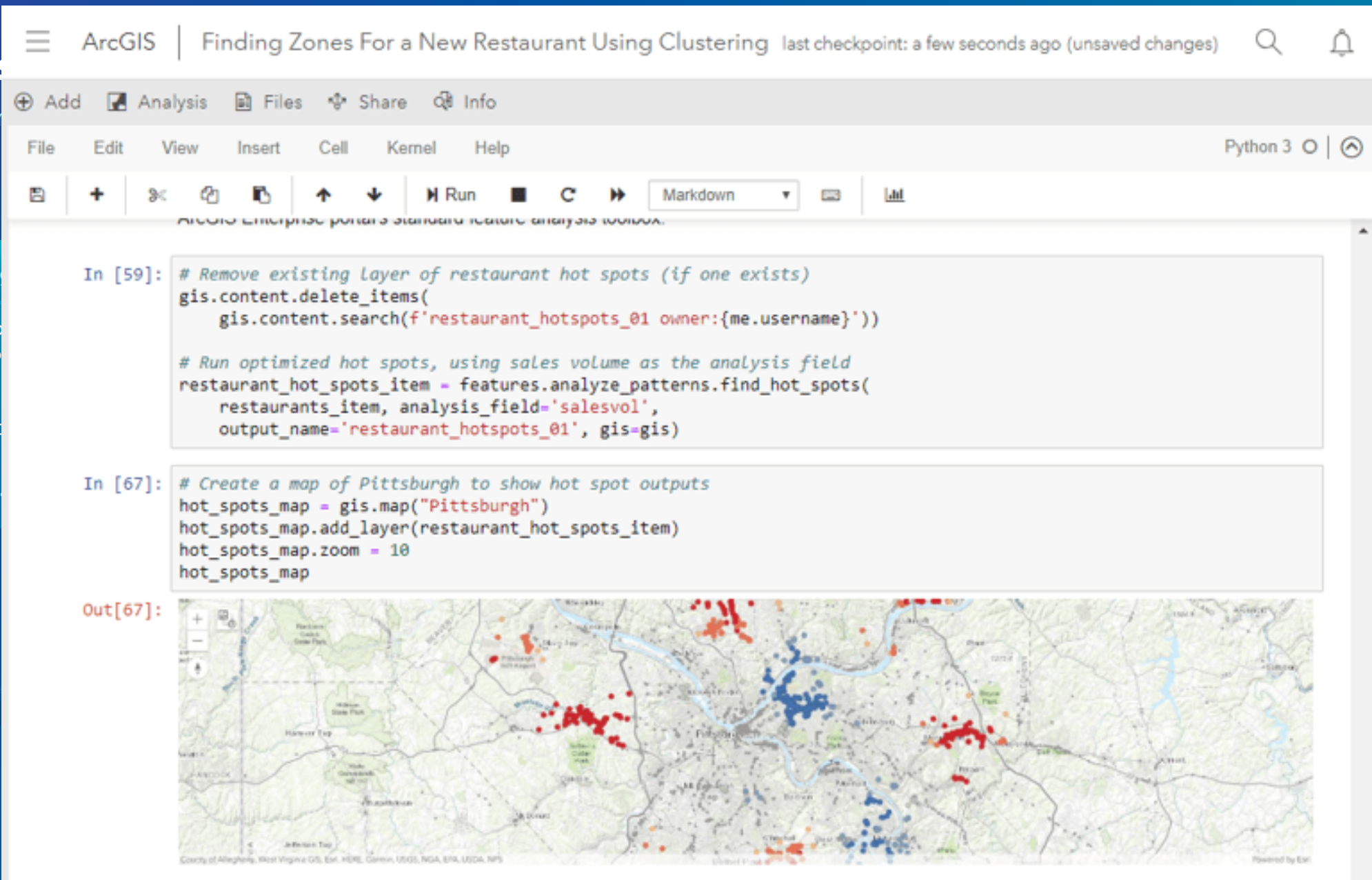


ArcGIS Notebook Server



*Notebook = web-based, interactive, computational environment for you to write, document, and run code all in one place.

- Open Lib
- All
- Arc for
- An



- Organizes
- Code
- Data
- Visualization
- Documentation

Open Science

Administrative



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
- Zapier
- Microsoft Flow

It performs an action.

- Emails you
- Posts in Slack
- Alexa announces it
- Turns on your lights



Don't call us, we'll call you



Webhooks

3 example use cases



- **/groups:** When someone shares an item to a collaboration group, notify group members through Slack.
- **/items:** If the sharing settings are changed for a layer that contains confidential information, email administrators.
- **/users:** Once a user is deleted, notify your admin via text.

Enterprise SDK

for SOE/SOI development



ArcObjects SDK vs ArcGIS Enterprise SDK

The ArcGIS Enterprise SDK is complementary to the ArcObjects SDK.

- **Publishing from ArcMap?**
 - Use the ArcObjects SDK for Java/.Net
- **Publishing from Pro?**
 - Use the ArcGIS Enterprise SDK
- **Enterprise SDK simpler and focused**
 - AO scope too large, overwhelming
 - Enterprise SDK pared down to just what SOE/SOI developers need
 - We also simplified existing interfaces - no more IMapServer4!

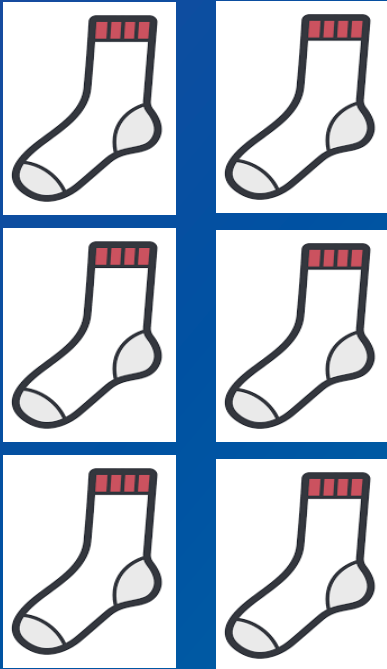
Shared instance pool





Min: 3 SOC's
Max: 5 SOC's

MapService1



Min: 4 SOC's
Max: 10 SOC's

MapService2

Shared instance pool New at 10.7



4 SOC's

Participants:

- MapService3
- MapService4
- MapService5
- MapService6
- MapService7
- MapService8
- ...

ARCGIS SERVER SITE



Data & publishing



New in publishing



1

Publish map services from Pro 2.3 to a standalone ArcGIS Server

- Arcpy.sharing module
- Create draft, then share to server
- GUI planned for Pro 2.4

```
import arcpy
import os

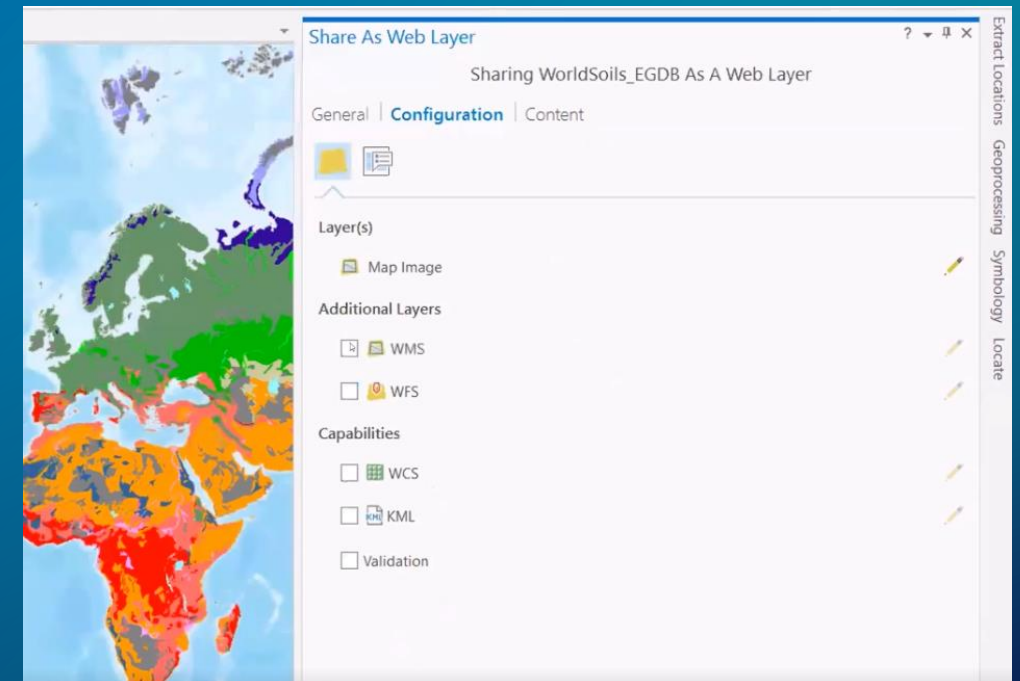
# Set output file names
outdir = r"C:\Project\Output"
service = "MapServiceDraftExample"
sddraft_filename = service + ".sddraft"
sddraft_output_filename = os.path.join(outdir, sddraft_filename)

# Reference map to publish
aprx = arcpy.mp.ArcGISProject(r"C:\Project\World.aprx")
m = aprx.listMaps("World")[0]
```

2

Publish OGC services from ArcGIS Pro

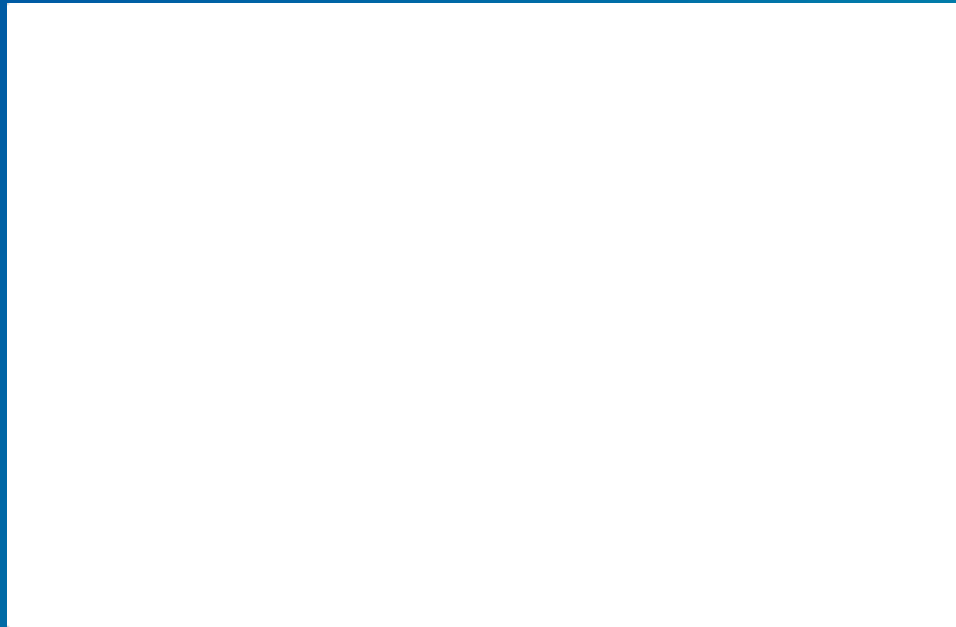
- WMS, WFS, WCS, KML



Quantization for map and feature service query results

Supports WebGL-based rendering in the JS API 4.x and Pro 2.2+

- Faster processing on the server (less data to serialize into JSON or PBF)
- Fast delivery to the client (less data sent over the network)
- Faster rendering on the client (webgl rendering in modern JS apps)



New applications & products



ArcGIS Excalibur



- Imagery exploitation and management web application

ArcGIS Indoors



- Complete system for indoor mapping used to create a connected workplace

Tracker for ArcGIS



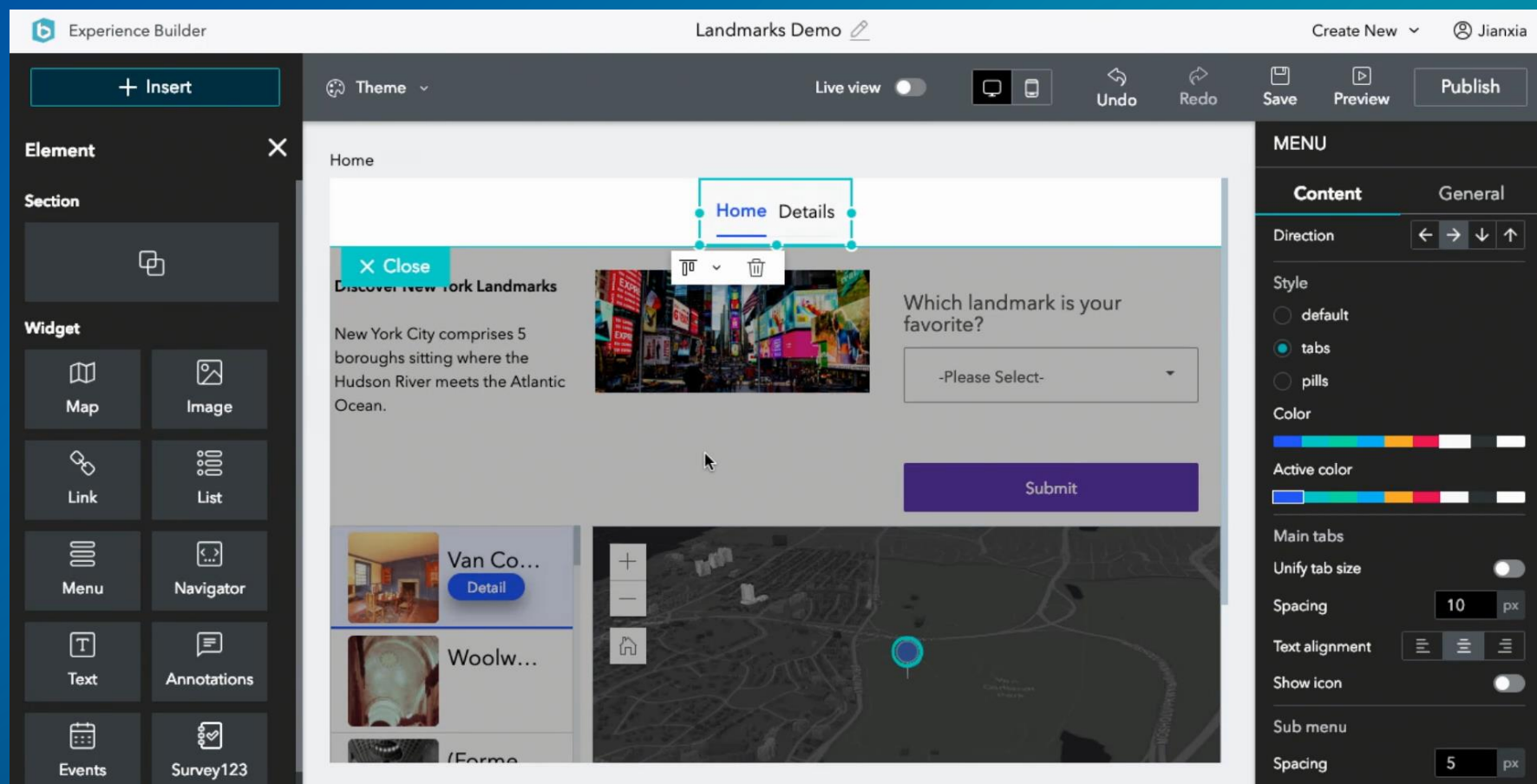
- New mobile and web app for tracking your workforce, improving situational awareness

Experience Builder

Next Generation of WAB



- Multi-page experience
- Mobile first design
- JS API 4.x + React
- Beta 6/2019



Architecture



Moving from ArcGIS Server to ArcGIS Enterprise

Typical deployment of
ArcGIS Server

Web Adaptor



ArcGIS Server



Base deployment of
ArcGIS Enterprise

ArcGIS
Web Adaptor



ArcGIS
Web Adaptor



Portal
for ArcGIS



ArcGIS Server
(GIS Server role
as hosting server)



ArcGIS Data Store
(relational + tile cache)



Integrated GIS Security

Typical deployment of
ArcGIS Server

Web Adaptor



ArcGIS Server



Token & IWA

Base deployment of
ArcGIS Enterprise

ArcGIS
Web Adaptor



ArcGIS
Web Adaptor



Portal
for ArcGIS



+ OAuth2 with SAML 2.0



ArcGIS Server
(GIS Server role
as hosting server)



ArcGIS Data Store
(relational + tile cache)



Expanding out from the base deployment

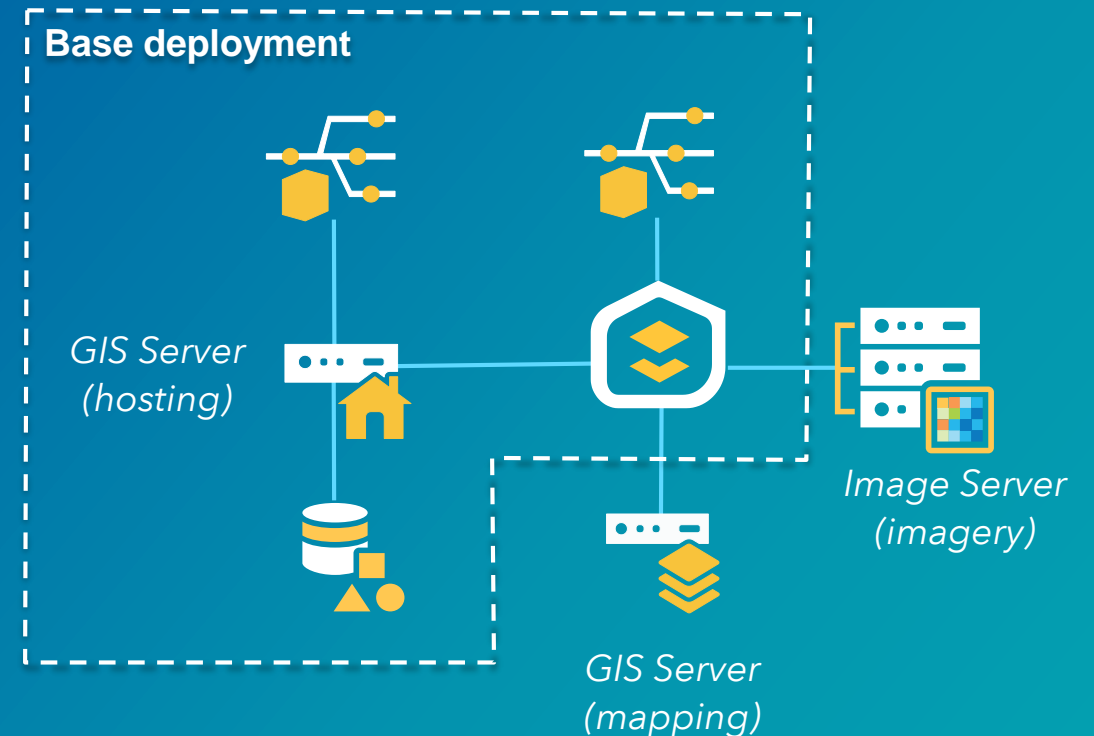
Multiple reasons to add to the base deployment

1. Adding additional GIS Server sites

- Isolate Hosting from traditional GIS Server
 - heavily used map services
 - geoprocessing services, ...

2. Adding additional capabilities

- Image Server
- GeoAnalytics Server
- GeoEvent Server
- Notebook Server



Other important topics

- **Do *not* use clusters!**
 - Discouraged on any version. Officially deprecated as of 10.5.1.
No longer supported in 10.7!
- **Do federate your ArcGIS Server sites**
 - Required for the modern deployment patterns and newer functionality
 - 3D scene layers, Vector Tile Layers, Utility Network, Parcel Management (coming at 10.7.1)
 - Raster Analytics and GeoAnalytics
 - Archiving large volumes of data from GeoEvent Server
 - Integrated GIS Security

Resources for web developers

- [ArcGIS API for JavaScript 4.x](#)
 - High performance 2D/3D mapping library
 - TypeScript, Virtual DOM, WebGL, widgets, Widget API, ...
 - Easy integration with JS frameworks (React, Angular, ...)
 - [@arcgis/webpack-plugin](#)
 - [esri-loader](#)
- [Calcite](#)
 - Geo-centric design language
- [Cedar](#)
 - Charts for ArcGIS
- [arcgis-rest-js](#)
 - Compact and modular JS wrappers for ArcGIS REST API



esri

THE
SCIENCE
OF
WHERE