What’s new in ArcGIS Enterprise

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ArcGIS Enterprise Releases

Today’s focus

10.6 10.6.1
Jan April July Oct
2018 2019

10.7 10.7.1
Jan April July Oct
2019
Things to consider – ArcGIS Enterprise Update Checker
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?
Things to consider - HTTPS and TLS

• 10.7+ enforces the use of HTTPS and TLS (Transport Layer Security) version 1.2
• On April 16, ArcGIS Online switched to only supporting TLS 1.2
• ArcGIS Online will switch to HTTPS only in 2020
What’s new:

Mapping
Analysis
Administration
Data
Publishing
New apps & products
Mapping

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

- Compare two numerical values within the same dataset
- Use color variation to see where they are and aren’t related
- Easily configurable in your web maps in the Enterprise portal
How to: Relationship styles

1. Add a layer to your web map
2. Select two numerical values
3. Select relationship style
   - Change symbology and legend as needed
4. Explore your data!
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.
GeoAnalytics Server
Big data analysis for vector and tabular data
- Clip Layer
- Merge Layers
- Dissolve Boundaries
- Enrich from Grid
- Describe Dataset
- Random Forest
- Linear Regression
- Run Python Script (custom)

Raster Analytics (Image Server)
Distributed raster analysis
- Classify Pixels Using Deep Learning
- Detect Objects Using 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

Comes with a rich gallery of sample notebooks to illustrate workflows
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

Comes with a rich gallery of sample notebooks to illustrate workflows
Identify insecure items

Content Management: Identify insecure items

- Ready To Run
- Administration
- Content Management

Items of type WebMap, WebScene, or App contain collections of layers, basemaps, and other external services hosted on ArcGIS Online via http:// or https://, with HTTPS being the more secure protocol since it encrypts the connection. It is recommended that all services use the HTTPS protocol.

This notebook will search through all WebMap/WebScene/App items in an Organization, identifying the ‘insecure’ ones if one or more of the external services displayed in this notebook, persisted in .litx files, and can have the potentially_insecure tag added to them.

**Table of Contents**

- Identify Items That Use Insecure URLs
- Configure Behavior
ArcGIS Enterprise: Getting Started with ArcGIS Notebook Server

*Tuesday, 09:00pm – 09:45pm*

*Wednesday, 10.00am – 10.45am*
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
Improved user license management and user administration

- When adding members, can specify default properties & assign licenses
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)
Improved user license management and user administration

• When adding members, can specify default properties & assign licenses
• Enhanced filtering to when managing users and licenses
  • Role
  • User Type
  • Groups
• Bulk change user types, roles, license assignments
Improved user license management and user administration

• When adding members, can specify **default properties & assign licenses**
• **Enhanced filtering** to when managing users and licenses
  • Role
  • User Type
  • Groups
• **Bulk change user types, roles, license assignments**
Fine-grained administrative privileges

In previous versions, an admin can:
• Customize the portal website
• Create collaborations
• Enable Living Atlas
• Federate servers
• Set the hosting server

Now, an admin can:
• Customize the portal website
• Create collaborations
• Enable Living Atlas

The same admin will be unable to:
• Federate servers
• Set the hosting server
New for ArcGIS Server administration

1. **Request ID**
   - Each request gets a unique ID
   - Query logs using ID for a comprehensive timeline

2. **Inactivity properties**
   - Suspend and then unregister inactive machines after a set duration
   - Particularly useful for large cloud deployments

3. **Jobs page**
   - Identify the status of geoprocessing jobs in Server Manager
   - Intervene if needed
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

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)
ArcGIS Enterprise: Using Webhooks

*Wednesday, 12:00pm – 12:45pm*
Shared instance pool

A game changer for service performance in ArcGIS Enterprise
Conserve memory using the shared instance pool

Beginning at 10.7, ArcGIS Server includes a new feature called the shared instance pool. As opposed to the existing model, where each service running on a site has its own dedicated pool of service instances, services that use the shared pool use its instances to handle their requests - and consume no additional memory when they aren’t in use.

Shared instances provide a better solution to the problem of balancing site performance with available machine resources.

For compatible services that don’t constantly receive traffic, using the shared pool allows you to provide appropriate resources to handle their traffic, while drastically reducing their memory footprints on your machines.
CLIENT APPS

ArcGIS Server Site

Service

ArcSOC.exe

ArcSOC.exe

Service
Dedicated instance pools

Service

Service
Goal: Optimize instances so you’re only using as many as you need.
ARCGIS SERVER SITE

Frequent traffic

MapService1

GPService

Less frequent traffic

FeatService1

FeatService2

MapService2

FeatService3

MapService3

MapService4
• 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 ArcSO Cs

**Participants:**
MapService2
MapService3
MapService4
FeatService1
FeatService2
FeatService3
How to: Shared instances

1. Publish compatible map services from ArcGIS Pro
2. Change instance type from Dedicated to Shared under Pooling
   - Dedicated instance settings grey out
   - Change back at any time
3. Optionally change the default setting for compatible map services to use shared instances:
   - Site > Settings > Pooling

Check the Authoring Application:
   - Service editor > General tab
Data

**Key enhancements:** supporting offline workflows, data integrity and quality & improvements to search, sharing, and collaboration.
Preplanned offline map areas
Supporting disconnected and low connectivity workflows

• Makes it easier and faster to package up your data for offline use
• Select specific areas rather than an entire, heavy map
• Refresh areas and updates to the web map on a schedule to stay in sync with your offline area
• Use in apps built using the Runtime SDK and Collector for ArcGIS
How to: Offline map areas

1. Configure layer(s) for offline use

2. Create your web map
   - Draw your preplanned areas
   - Set a refresh interval (optional)

3. Access data on your device
   - Feature layers = SQLite database
   - Tile layers = tile packages
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
Distributed collaboration
Sharing content across systems

• Share data with other ArcGIS Enterprise deployments and ArcGIS Online
• Automatically keeps data in sync and up to date

New:
• Share Insights for ArcGIS items
• Copy hosted feature layer views
• Pause and resume data synchronizations
• Collaborated content now more identifiable
ArcGIS Enterprise Sites
Tailored websites and pages for your end users

- Tailor the entryway to your GIS content based on your audience
- Display the data that matters the most (maps, dashboards, Twitter feeds, etc)
- Drag-and-drop builder for site creation
- HTML and CSS options for deep customization

New:
- Rich text editing
- Directly upload images
- Choose an image focal point
- Streamlined UI for adding and managing widgets
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
How to: Publish in bulk

1. Register data store with your server (new: registration happens in portal)
2. Sync layers
3. Share with groups and your organization
New applications & products

ArcGIS Indoors
Complete system for indoor mapping used to create a connected workplace

ArcGIS Notebook Server
Complete spatial data science platform with powerful Python analysis capabilities

ArcGIS Excalibur
Imagery exploitation and management web application

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

ArcGIS QuickCapture
Capture field observations from a single tap on your device
What is coming in ArcGIS 10.8
A sneak preview
Configure an access notice for your Enterprise portal

- Privacy and security prompts (accept/decline)
- General updates and notices
Easily swap vector tile layers with new versions

- Archive current content
- Preview styles in the new version
- Correct and troubleshoot issues
- Keep the same item ID
Questions ?
Download the Esri Events app and find your event

Select the session you attended

Scroll down to find the feedback section

Complete answers and select “Submit”

Please Take Our Survey on the App