



ArcGIS Enterprise: What's New

Scott M. MacDonald

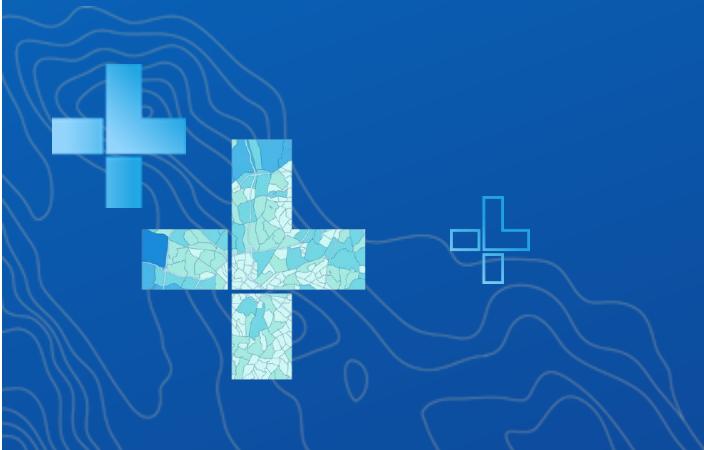
2020 ESRI FEDERAL GIS CONFERENCE | WASHINGTON, D.C.



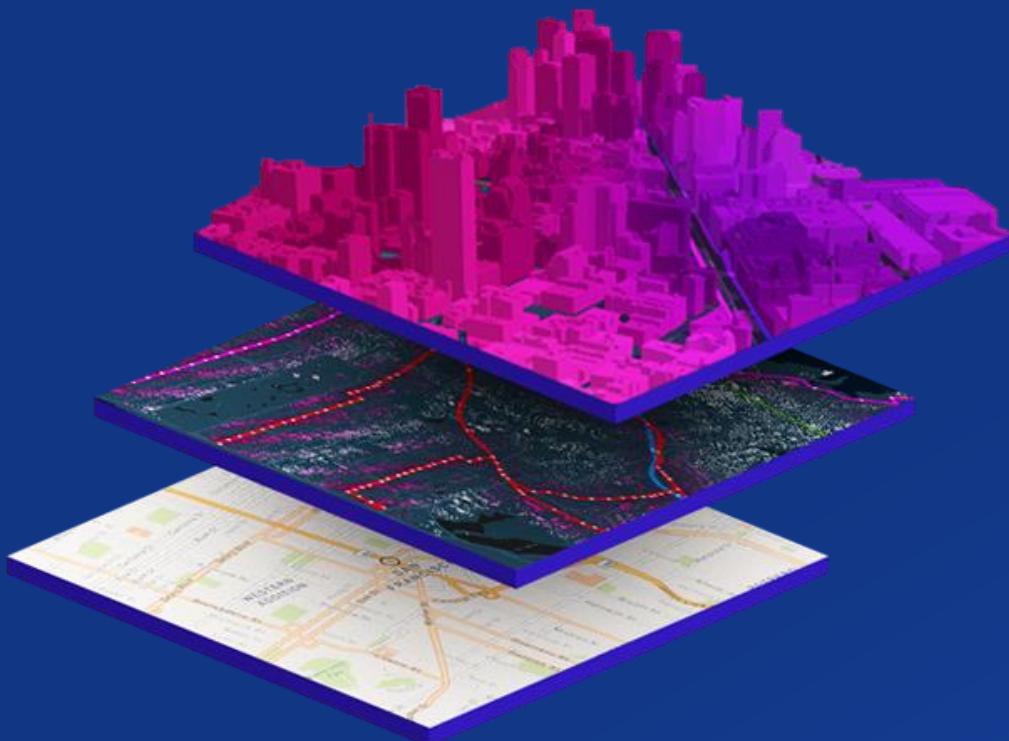
ArcGIS Enterprise releases



Data and mapping

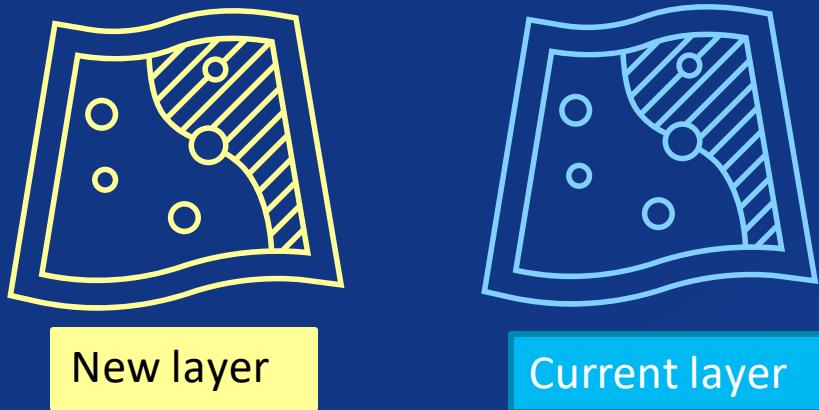


Hosted map image layers



- Fast, server-side rendering and advanced/complex symbology
- Source is a hosted feature layer
- Hosted map image layers provide read-only access to the data
- Workflow is to publish from ArcGIS Pro
- A hosted map image layer maintains its relationship to and dependency on its source hosted feature layer

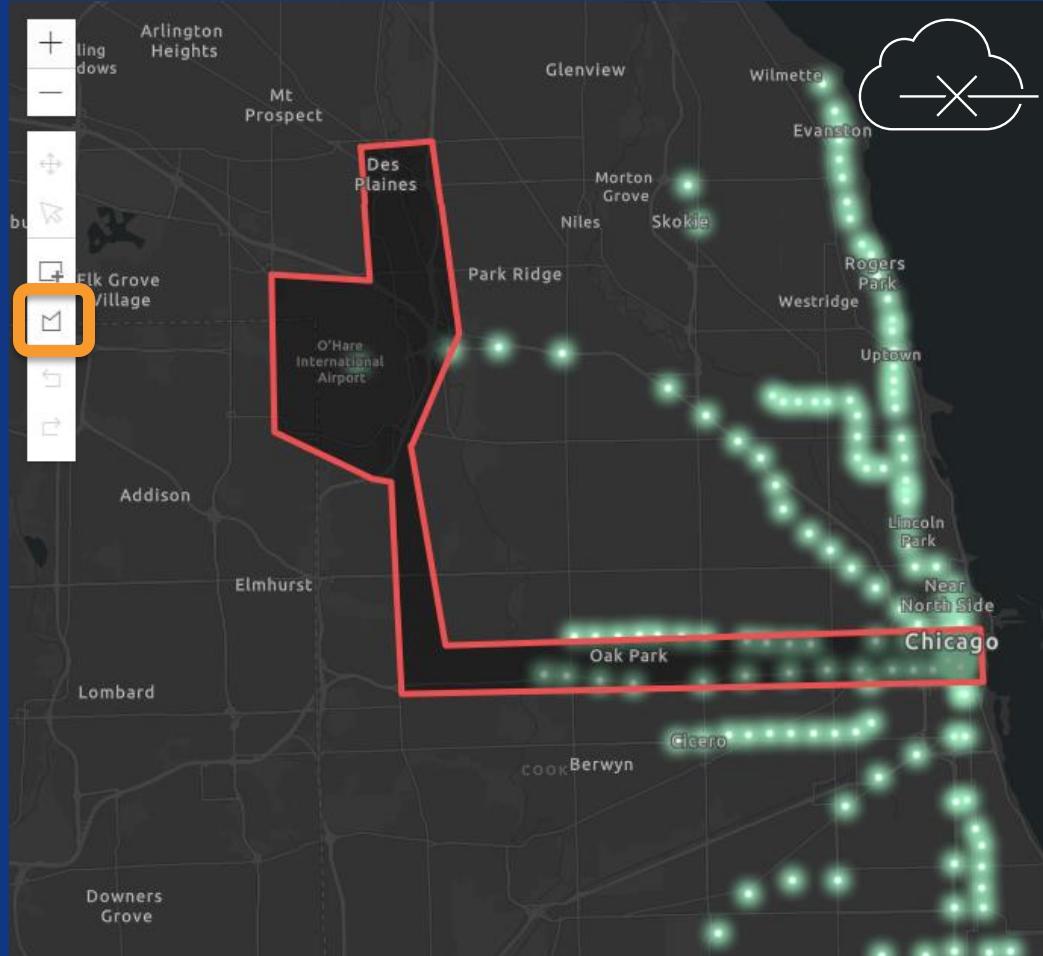
Replace vector tile layers



- Choose how to archive the layer being replaced
- Preview the style of the new layer
- Be alerted when the current and replacement layer don't match

Also, you can now update the style of your vector tile layers from within the Map Viewer!

Offline map areas



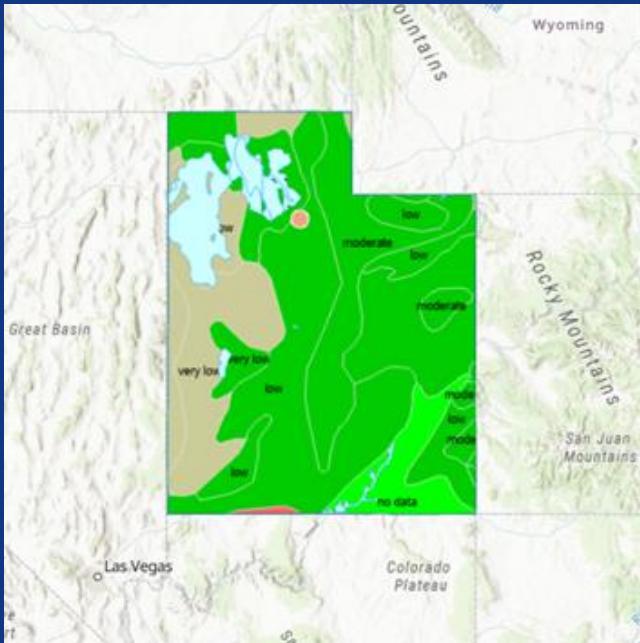
Draw offline map areas using a polygon

- Create more specific and defined map areas around the boundaries you want to take offline
- Adds to existing options of rectangle/square

Schedule updates for offline map areas

- Enable scheduled updates that control how often an app gets updated
- Can support a large number of read-only clients

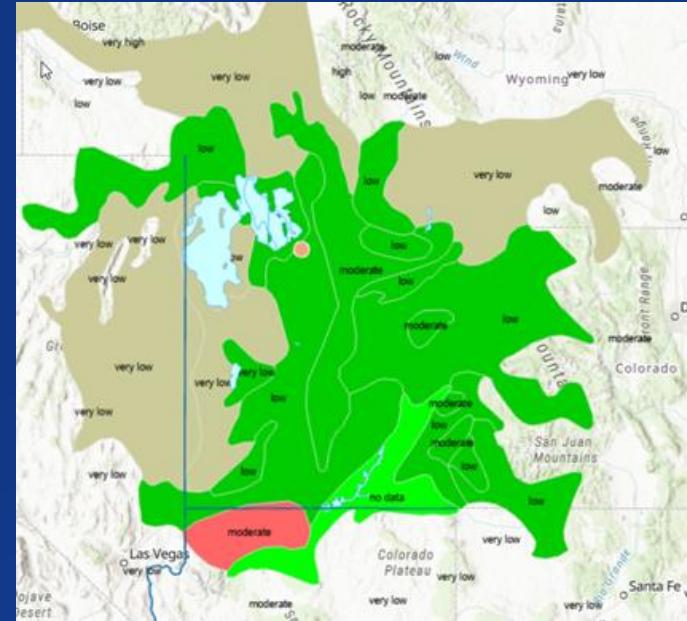
New map service parameters



1

Clipping

Masks the part of the layer outside of the clip polygon



2

spatialFilter

Only draw or query features that meet filter criteria

ArcGIS Data Store



A screenshot of the ArcGIS portal Content page. The page has a blue header with 'Content' and 'My Content' tabs. Below the header are buttons for 'Add Item' and 'Create', and a search bar. The main area shows a list of content items. On the left, there's a 'Folders' section with 'All My Content' (selected), 'admin' (selected), and 'Collaboration'. On the right, there's a list of items with a filter bar at the top set to 'Type: Data Stores'. One item is visible: 'Land use database' by 'admin', created on Aug 1, 2019, updated on Nov 6, 2019, with a view count of 2. There are edit, star, and more options buttons at the bottom of the item card.

10.7.1:

- Create a data store item in the portal from a user-managed data source
- Publish all content in bulk from a data store item as map image layers and feature layers
- *When would you use this?*

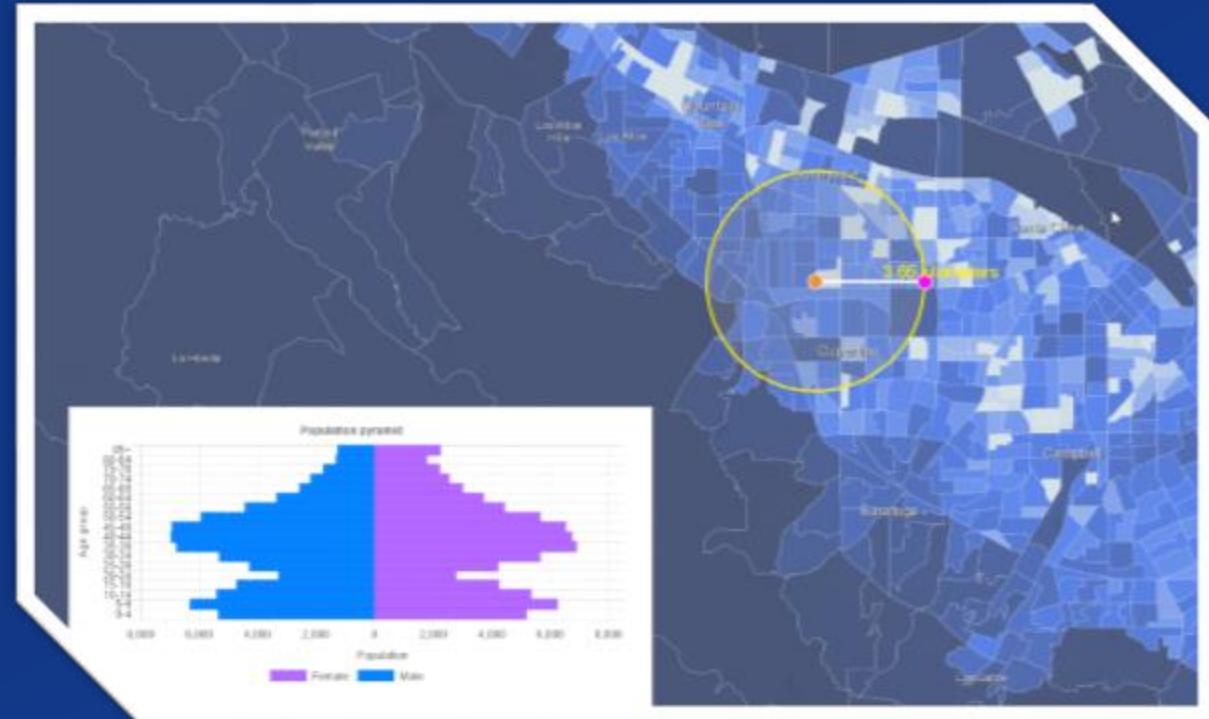
10.8:

- Create a data store item from an **existing** registered (user-managed) data store

Performance improvements

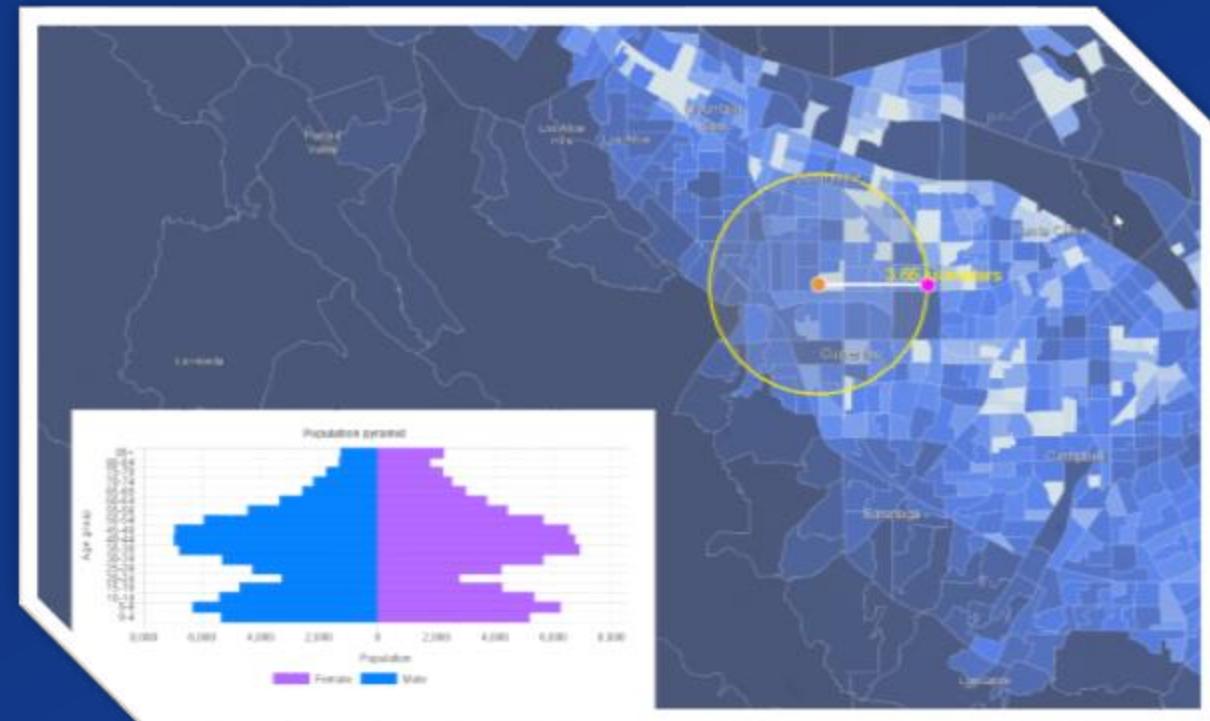
PBF is a new output format that is faster to generate and render in applications.

- (f=pbf) is smaller and faster for Esri clients to parse
- Available for Pro-based map and feature services since 10.7.1
- Available for hosted feature layers with 10.8
- ArcGIS API for JavaScript now requests .pbf by default



Performance improvements

- Recent releases (10.6.1+) include other optimizations, like quantization, that load and render large and complex layers very quickly.
- At 10.8, it takes less time to publish hosted feature layers when your relational ArcGIS Data Store already contains a lot of datasets.



Enterprise administration

Webhooks

Webhooks provide automatic notifications when something happens in your ArcGIS Enterprise portal. They work with platforms such as Zapier and Microsoft Flow to provide flexibility – monitor your portal as is best for you.

At 10.8, you can trigger webhooks when:

- New roles are created or deleted
- When members' roles and user types are updated
- Certain actions happen for any items (e.g. any item is deleted)

Answer questions like:

- When was a custom administrative role deleted?
- When was this user promoted to a Creator?

`/users/updateUserRole`
`/users/updateUserLicenseType`
`/roles`
`/roles/add`
`/roles/update`
`/roles/delete`
`/items/...`
`/groups/...`
`/users/...`



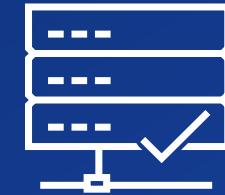
Shared instances



Optimize your services and server memory based on the amount of anticipated requests.

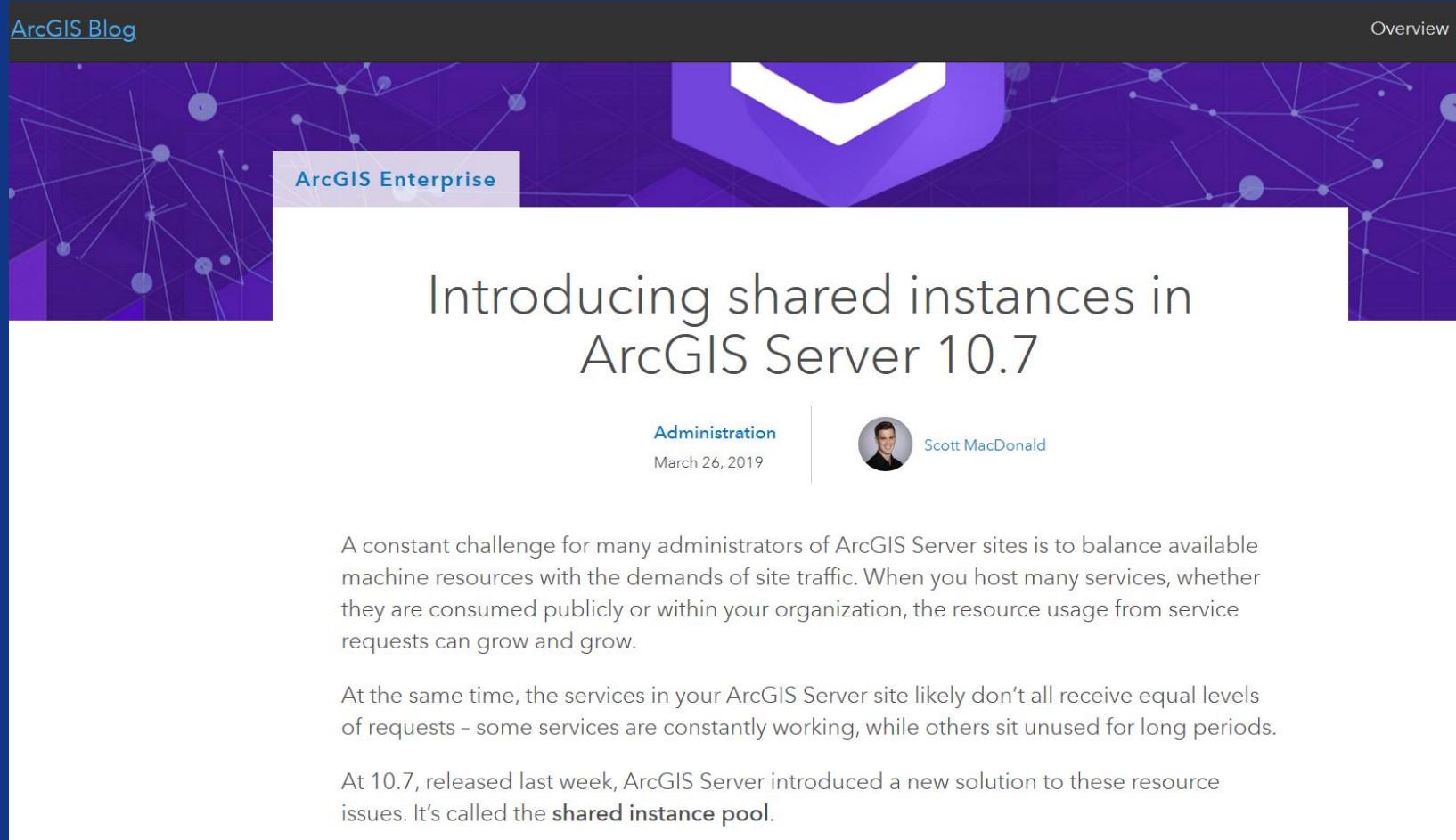


Instead of dedicated instances for each service, you can configure a shared pool used by many services.



This can save significant memory on your server machines and allow you to have more services on each machine.

Shared instances



The screenshot shows a blog post on the ArcGIS Blog. The header features a purple background with a network of nodes and a large white chevron icon. The title 'Introducing shared instances in ArcGIS Server 10.7' is centered in a white box. Below the title, the author is listed as 'Administration' on 'March 26, 2019' by 'Scott MacDonald'. The post content discusses the challenge of balancing resources and introduces the shared instance pool feature.

ArcGIS Blog Overview

ArcGIS Enterprise

Introducing shared instances in ArcGIS Server 10.7

Administration March 26, 2019 Scott MacDonald

A constant challenge for many administrators of ArcGIS Server sites is to balance available machine resources with the demands of site traffic. When you host many services, whether they are consumed publicly or within your organization, the resource usage from service requests can grow and grow.

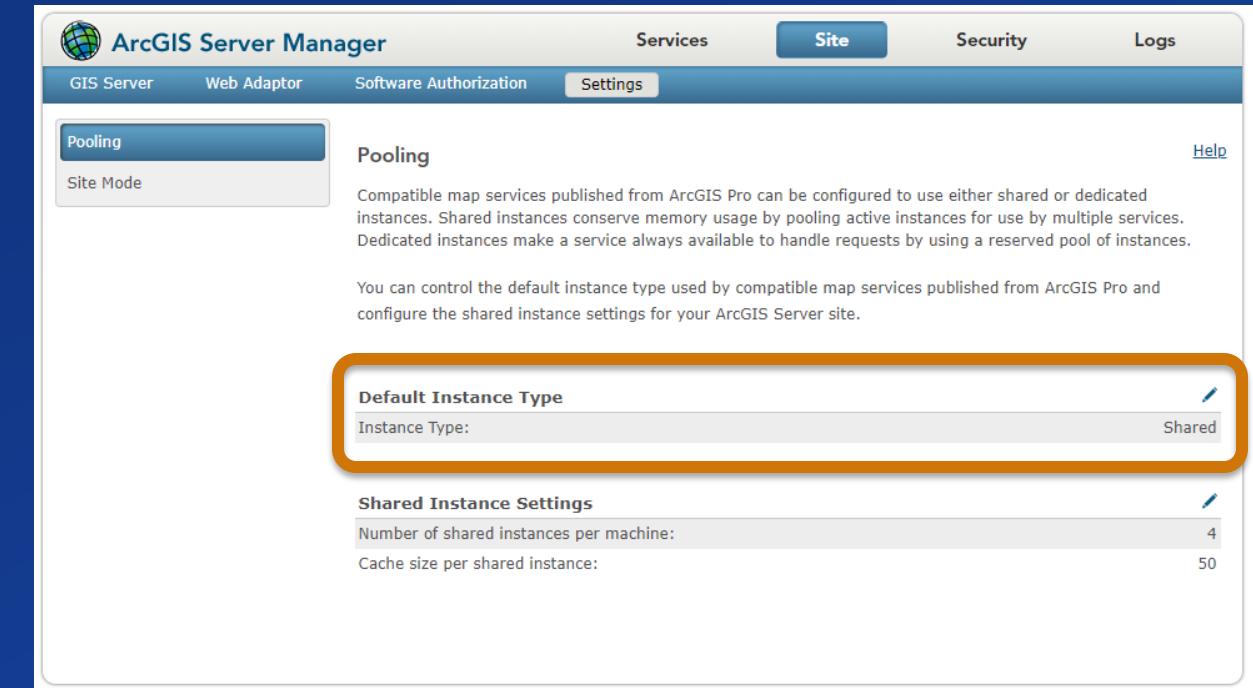
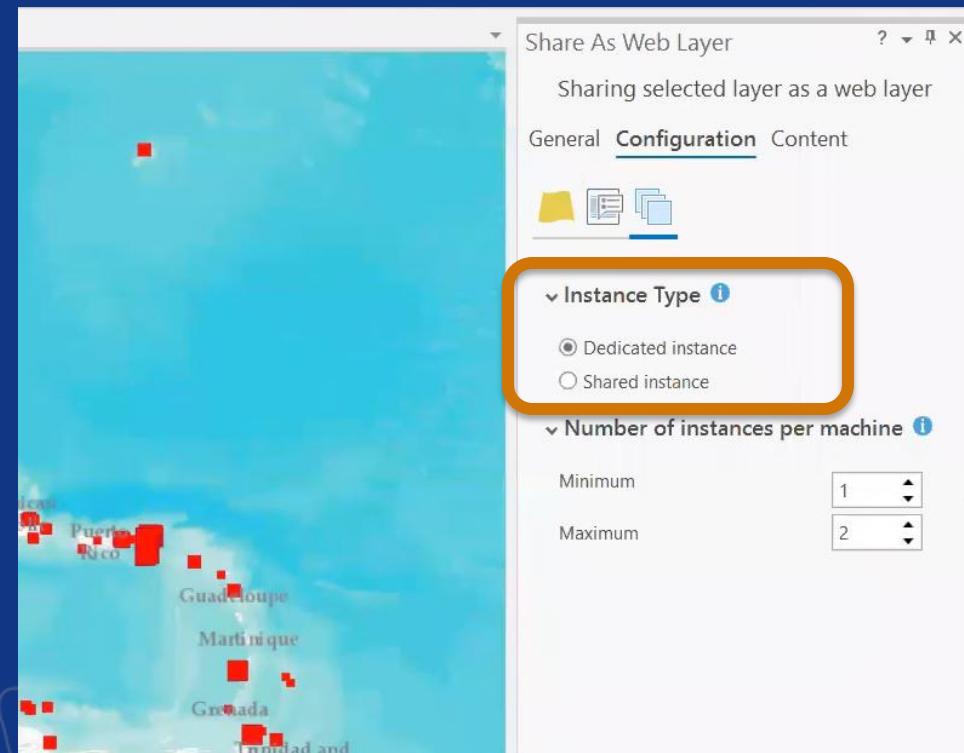
At the same time, the services in your ArcGIS Server site likely don't all receive equal levels of requests – some services are constantly working, while others sit unused for long periods.

At 10.7, released last week, ArcGIS Server introduced a new solution to these resource issues. It's called the **shared instance pool**.

Search for “ArcGIS Blog shared instances”

Shared instances

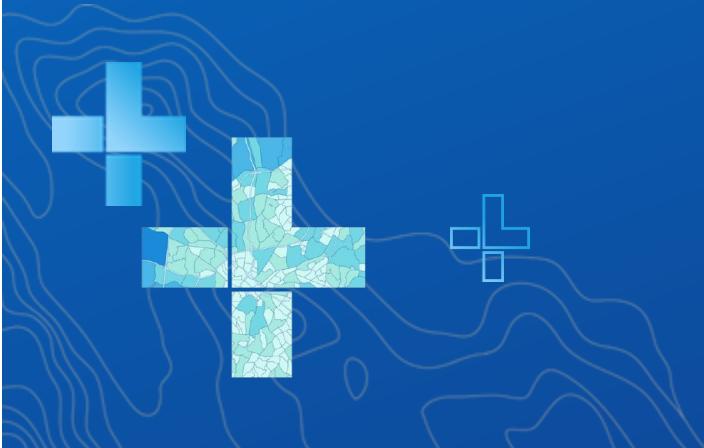
Choose shared or dedicated instances when publishing compatible services from ArcGIS Pro 2.5+



Shared instances will be the default for any new ArcGIS Server sites created at 10.8+

ArcGIS Enterprise portal

Administrators and group leaders

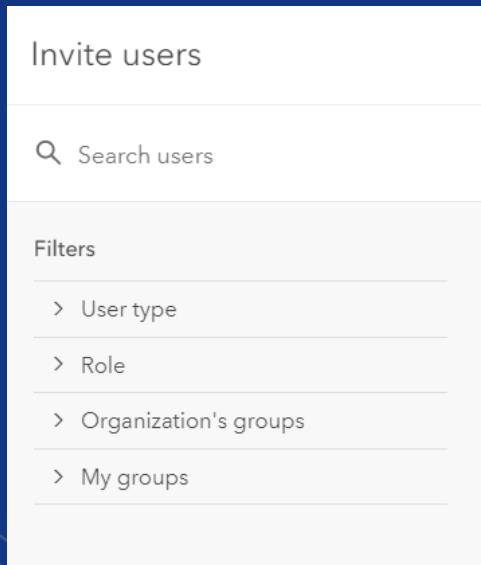


Portal group enhancements

Adding members to groups is

easier

- Filter by user types, roles, and membership
- Sort results in a variety of ways
- Better search algorithm for larger portals



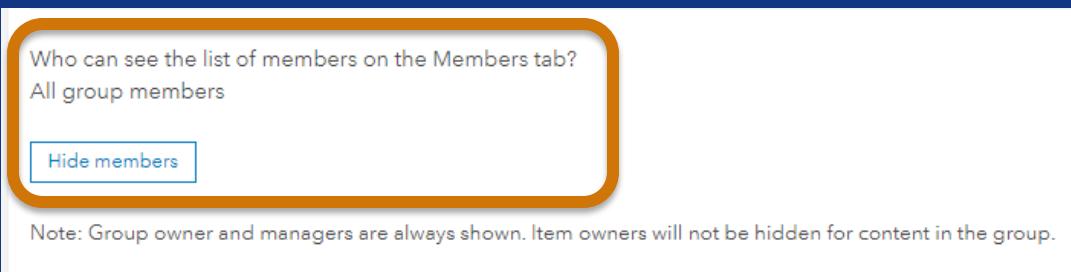
Directly add items from within a group

A screenshot of a portal interface. At the top, a navigation bar includes 'Home', 'Gallery', 'Map', 'Scene', 'Groups', 'Content', and 'Organization'. Below this, a blue header bar displays 'Fire Department Maps and Apps Content'. In the main content area, there is a button labeled '+ Add Item to Group' which is highlighted with an orange box. To the right of this button is a search bar with the placeholder 'Search group content'. Below these elements is a 'Filters' section containing six expandable categories: 'Group Categories', 'Item Type', 'Location', 'Date Modified', 'Shared', and 'Collaboration'. The background of the slide features a faint watermark of a topographic map with contour lines and a grid.

Portal group enhancements

Hide the list of group members

- Protects users' privacy
- Especially helpful for groups visible to everyone
- Item owners, group managers will remain visible
- Members list will not be visible



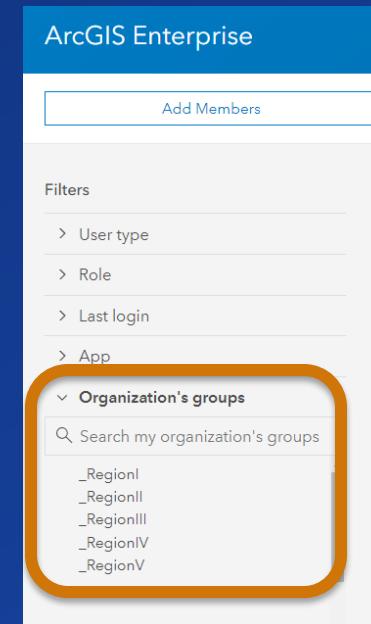
Who can see the list of members on the Members tab?
All group members

[Hide members](#)

Note: Group owner and managers are always shown. Item owners will not be hidden for content in the group.

Create administrative groups

- Can be used as a filter to help with user management: roles, licenses, user types, adding to groups
- **Idea:** name your administrative groups after departments, offices, regions, locations, and more



ArcGIS Enterprise

Add Members

Filters

- > User type
- > Role
- > Last login
- > App
- > Organization's groups

Search my organization's groups

- _RegionI
- _RegionII
- _RegionIII
- _RegionIV
- _RegionV

Administrative group

Members cannot leave this group. Only the group owner or a group manager can remove members from this group.

Information banners

Information Banner



Use information banners to alert all users who access your organization about your site's status and content, such as maintenance schedules, classified information alerts, and read-only modes. Banners will appear at the top and bottom of your pages.

[Set information banner](#)

This environment will be under maintenance beginning 11/8 and ending 11/9.

Home [Gallery](#) Map Scene Groups Content Organization [Search](#) [Bell](#) [More](#)  **Migrate Test**
MigrateTest

Gallery for ArcGIS Enterprise

- Displayed as a header and footer whenever anyone accesses the Enterprise portal
- Admins and members with the 'security and infrastructure' privilege can configure (workflow under settings)
- Can be used to notify for system downtime, provide a classification level, and more

Site access notices

Access Notice



Provide a notice of terms to be displayed to all users who access your organization. Users can proceed only if they accept the terms of the notice. They will not be prompted again for the remainder of their browser session.

[Set access notice](#)

Please accept to continue.

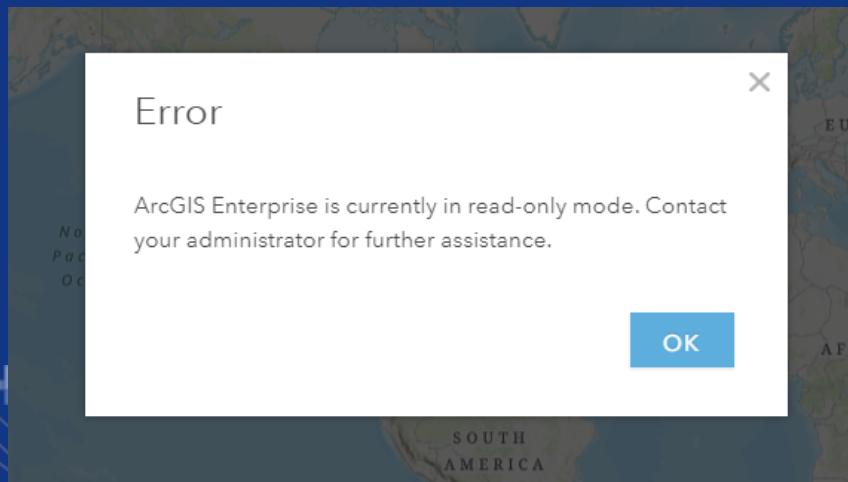
This organization assumes no responsibility or liability for any errors or omissions in the content of this site. The information contained in this site is provided on an "as is" basis with no guarantees of completeness, accuracy, usefulness or timeliness...

[Decline](#) [Accept](#)

- Displays at each browser session
- The Enterprise portal is inaccessible until a member selects OK or ACCEPT
- Can be used for:
 - Privacy statements
 - Terms of use
 - Disclaimers
 - General notices and updates

Portal read-only mode

- Turn on from Admin Directory
- Portal can still be accessed
- Items, services, and data can be viewed, but not edited, created, or deleted
- Settings can't be modified
- Use when upgrading, creating backups, and making system updates
- Prevents data loss



Portal Administrator Directory

Home > Mode

Site Root

Site Mode

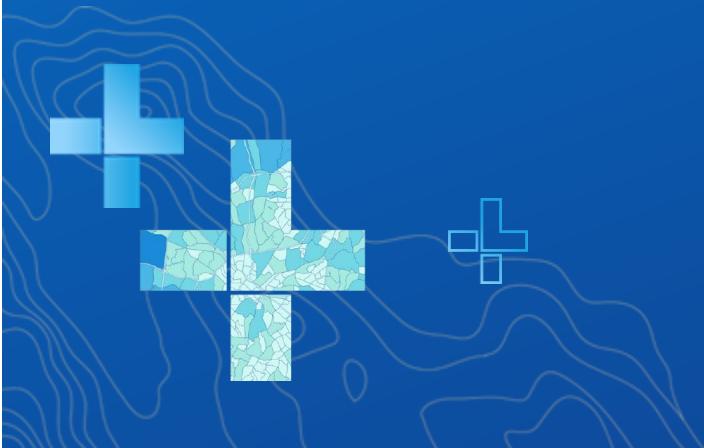
Read Only: true

Description: ArcGIS Enterprise is currently in read-only mode. Contact your administrator for further assistance.

Supported Operations: [Update](#)

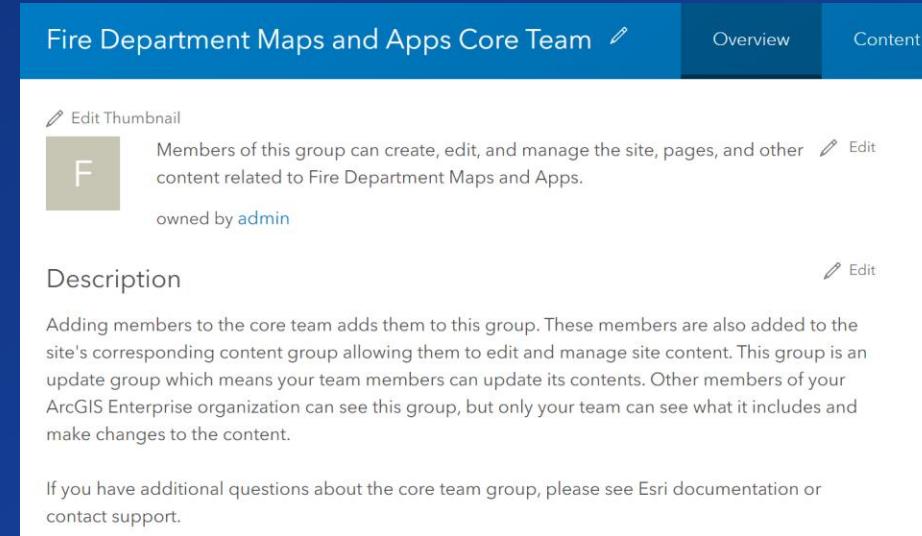
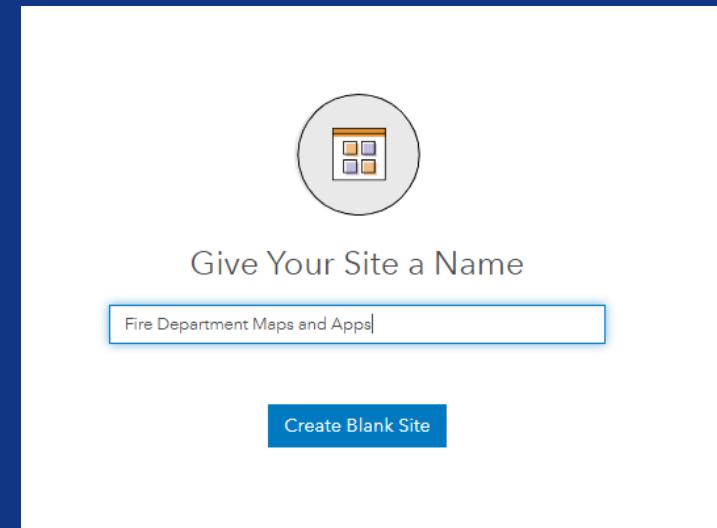
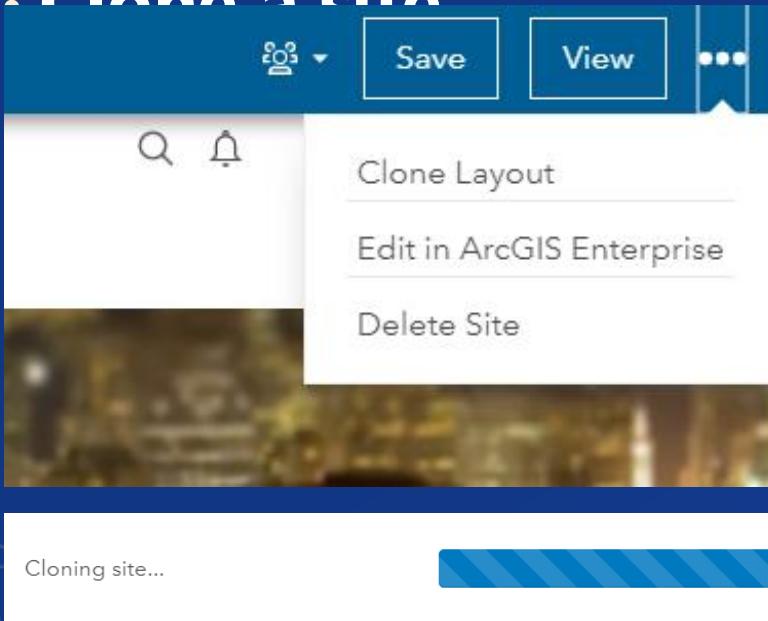
Supported Interfaces: [REST](#)

Apps and server roles



ArcGIS Enterprise Sites

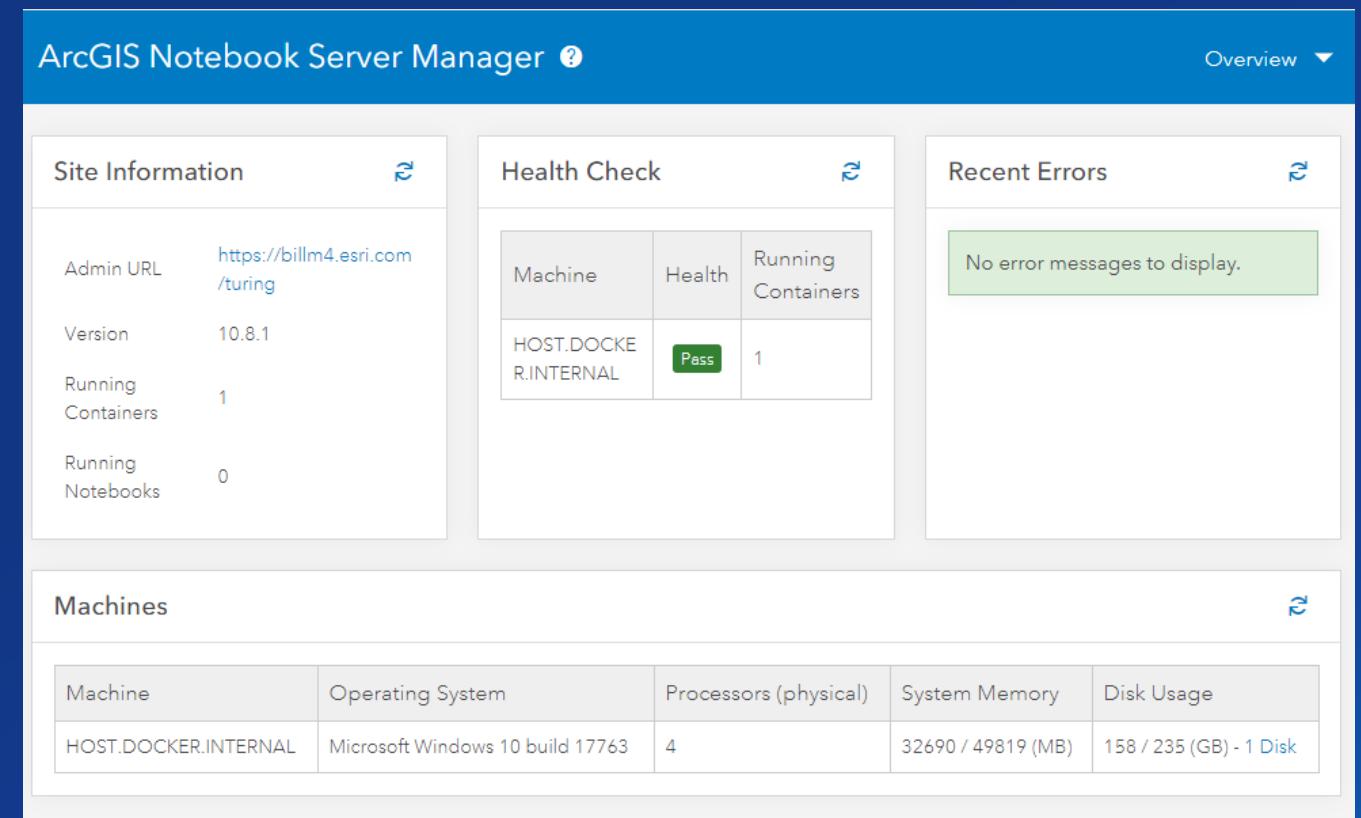
- New layout
- More flexibility with admins
- Clone a site



ArcGIS Notebook Server

10.8: New Manager app

- **Check site stats**
- **Manage resources**
- **View and query logs**
- **Change key settings**



The screenshot shows the ArcGIS Notebook Server Manager interface with the following sections:

- Site Information**:

Admin URL	https://billm4.esri.com/turing
Version	10.8.1
Running Containers	1
Running Notebooks	0
- Health Check**:

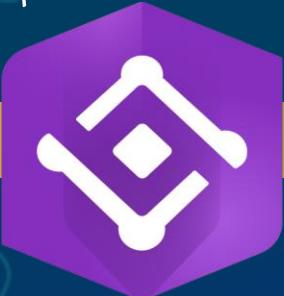
Machine	Health	Running Containers
HOST.DOCKER.INTERNAL	Pass	1
- Recent Errors**:

No error messages to display.
- Machines**:

Machine	Operating System	Processors (physical)	System Memory	Disk Usage
HOST.DOCKER.INTERNAL	Microsoft Windows 10 build 17763	4	32690 / 49819 (MB)	158 / 235 (GB) - 1 Disk

New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



Workforce for ArcGIS
web app



New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



Workforce for ArcGIS
web app



Mission-focused
situational awareness
tools

ArcGIS Mission



Mission planning

Define Area
Provision Data
Assign People

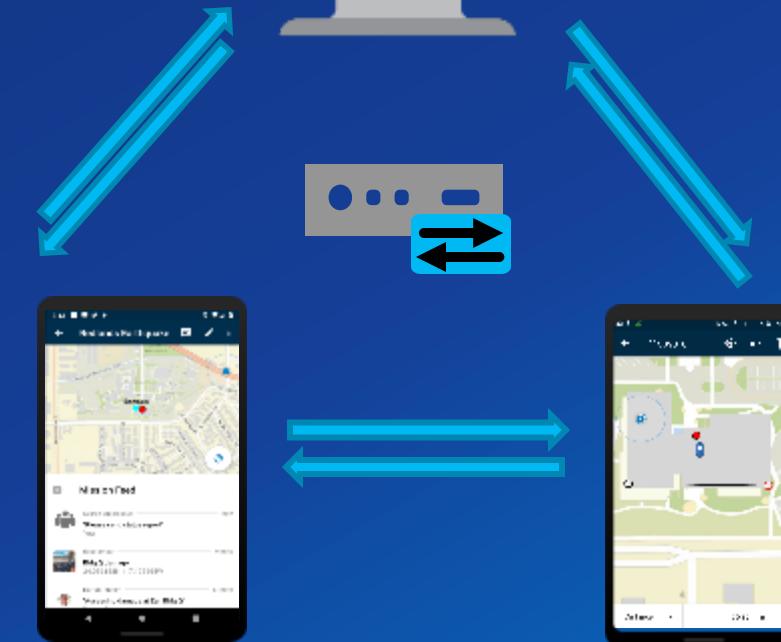
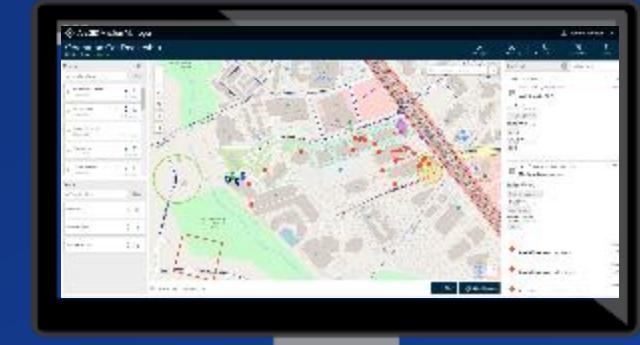


Mission management

Monitor Activities
Engage Team

Situational awareness

Peer-to-Peer Communication
Location Tracking
Chat & Messaging



ArcGIS Mission



ArcGIS Mission Manager

Focused web application for Mission Analysts to:

- Create and provision missions to Mission Responder
- Collaborate with Mission Members
- View a Common Operational Picture of the current Mission
- Assign Ad-hoc tasks and data during active missions



ArcGIS Mission Responder

Focused mobile application for Mission Responders to:

- Work off the same authoritative map
- Send status and location updates
- Share information through peer-to-peer communication.

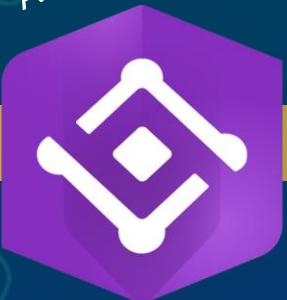


ArcGIS Mission Server

- Server technology to facilitate peer-to-peer networking, sharing, communication, and collaboration
- Relays location and presence information of Mission Members

New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



Workforce for ArcGIS
web app



Create views, visualize,
and interrogate
Tracker for ArcGIS tracks

Now comes installed

New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



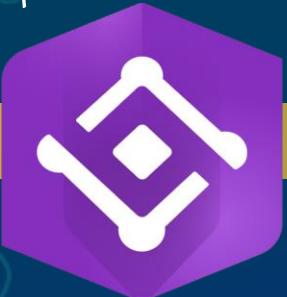
Workforce for ArcGIS
web app



Integrate ArcGIS Enterprise
content and services
with Microsoft Power BI

New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



Workforce for ArcGIS
web app

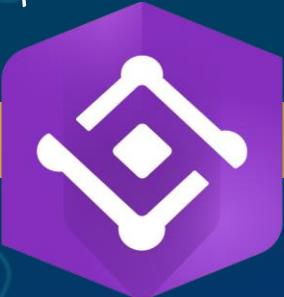


Create and manage
QuickCapture
(field observation)
projects

Now comes installed

New apps and products

ArcGIS Mission



Tracker Viewer
web app



ArcGIS Maps for Power BI
with Enterprise



ArcGIS QuickCapture
Designer



Workforce for ArcGIS
web app



Administer and dispatch
workforce coordination

Now comes installed

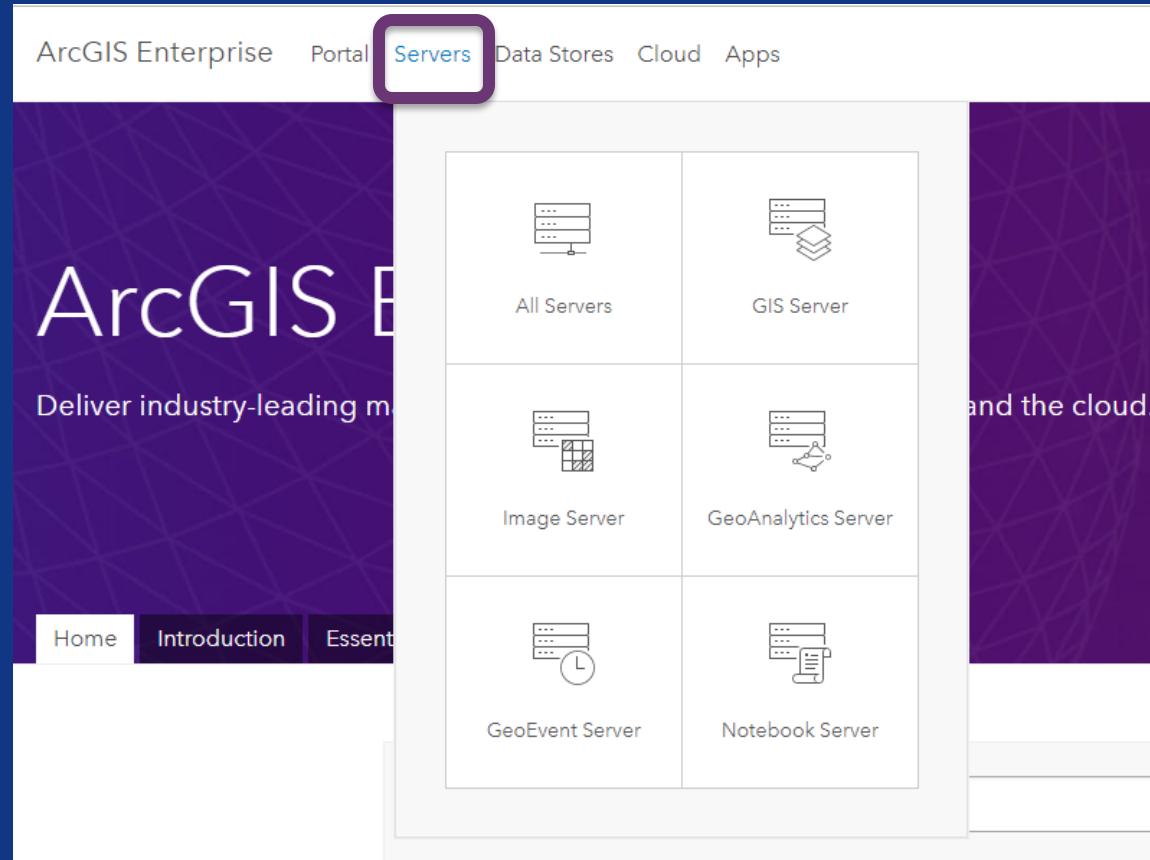
Best practices for ArcGIS Enterprise in 2020

- 1. Deploy and upgrade your system using an automated tool.**
- 2. Design for isolation, know your security, and have a backup strategy.**
- 3. Keep distributed collaboration in mind.**
- 4. Use the layers and service types that are appropriate for each setting.**
- 5. Don't be afraid to use ArcGIS Online alongside ArcGIS Enterprise.**
- 6. Read the documentation and other resources.**



**Where can you find more
information about what's
new and what's coming?**





ArcGIS Enterprise Portal **Servers** Data Stores Cloud Apps

ArcGIS Enterprise

Deliver industry-leading maps and analysis to your organization.

Home Introduction Essential

All Servers GIS Server

Image Server GeoAnalytics Server

GeoEvent Server Notebook Server

and the cloud.

ArcGIS Enterprise is designed to extend the use of maps and apps across a platform of products. [Learn more about using apps in ArcGIS Enterprise.](#)

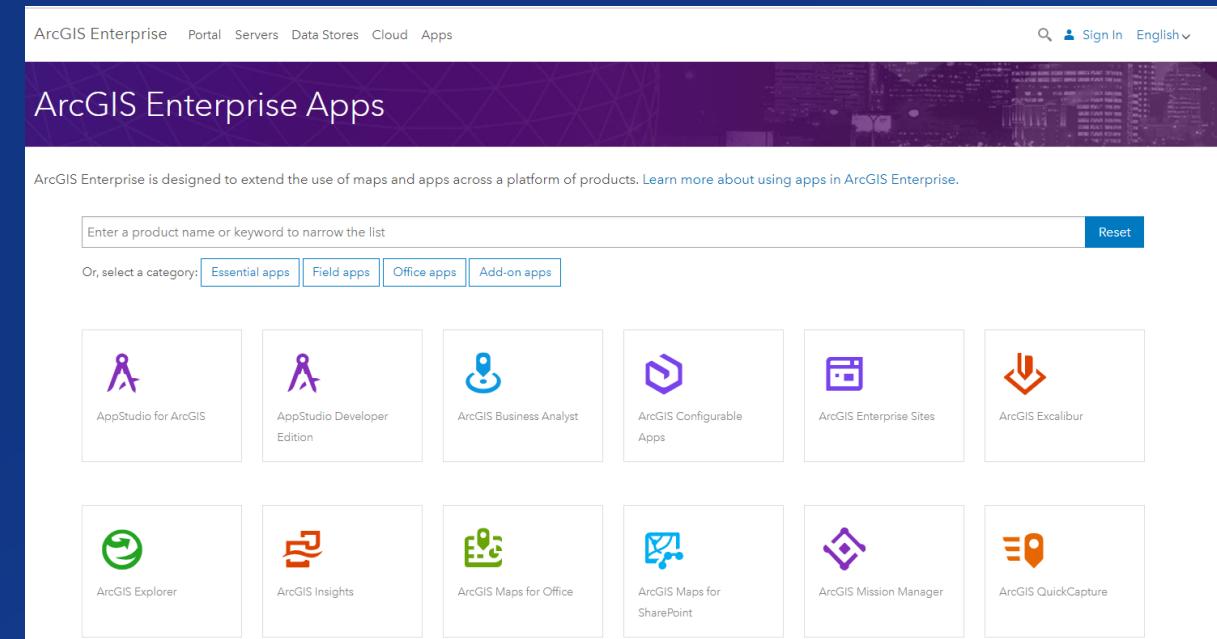
Enter a product name or keyword to narrow the list

Or, select a category: [Essential apps](#) [Field apps](#) [Office apps](#) [Add-on apps](#) [Reset](#)

AppStudio for ArcGIS AppStudio Developer Edition ArcGIS Business Analyst ArcGIS Configurable Apps ArcGIS Enterprise Sites ArcGIS Excalibur

ArcGIS Explorer ArcGIS Insights ArcGIS Maps for Office ArcGIS Maps for SharePoint ArcGIS Mission Manager ArcGIS QuickCapture

Easy access to server role documentation



ArcGIS Enterprise Portal Servers Data Stores Cloud Apps

ArcGIS Enterprise Apps

ArcGIS Enterprise is designed to extend the use of maps and apps across a platform of products. [Learn more about using apps in ArcGIS Enterprise.](#)

Enter a product name or keyword to narrow the list

Or, select a category: [Essential apps](#) [Field apps](#) [Office apps](#) [Add-on apps](#) [Reset](#)

AppStudio for ArcGIS AppStudio Developer Edition ArcGIS Business Analyst ArcGIS Configurable Apps ArcGIS Enterprise Sites ArcGIS Excalibur

ArcGIS Explorer ArcGIS Insights ArcGIS Maps for Office ArcGIS Maps for SharePoint ArcGIS Mission Manager ArcGIS QuickCapture

Brand new applications landing page

ArcGIS Enterprise Portal Servers Data Stores Cloud Apps

ArcGIS Enterprise

Home Introduction Essentials Installation and deployment

Let's get started. These topics help you learn more about ArcGIS Enterprise.

Discover best practices

				
System architecture Design a strategy for optimal performance, reliability, and security. Learn more	Certificates Ensure consistent, secure communication through your deployment's certificates. Learn more	Portal security Keep your portal and its content safe from threats. Learn more	Server security Maintain control over your site's services, even if they're consumed by the public. Learn more	Sharing content Share portal content reliably with the people who need it. Learn more

Find your way around

Overview of ArcGIS Enterprise
System requirements
Installation guides

Publishing in ArcGIS Enterprise
The ArcGIS Enterprise security model
Cloud deployments

Functionality Matrix (PDF) ↗
Acknowledgements
ArcGIS Enterprise SDK

New Essentials tab with best practices

ArcGIS Enterprise Portal Servers Data Stores Cloud Apps

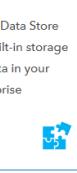
ArcGIS Enterprise

Home Introduction Essentials Installation and Deployment

You can deploy ArcGIS Enterprise using automation tools or manually by installing and configuring individual components. In both cases, guidelines for system requirements and installation steps are included here. To get started quickly with a base deployment, review our [Quick Start guide](#). For a full list of capabilities, reference our latest [Functionality Matrix](#).

A **base deployment** is foundational to ArcGIS Enterprise and is configured as shown. You may also extend a base deployment to include additional server roles and extensions.

Enter a deployment option or keyword to narrow the list
Or, select a category: [Base deployment](#) [Server roles](#) [Extensions](#) [Automation tools](#) [Cloud deployments](#) [Other](#) [Reset](#)

ArcGIS Server Install ArcGIS Server to host web services and power geoprocessing. The GIS Server role is part of a base deployment.  Learn more	Portal for ArcGIS Install Portal for ArcGIS to enable your Enterprise portal, where you can organize and share your GIS information.  Learn more	ArcGIS Data Store Install ArcGIS Data Store to provide built-in storage for hosted data in your ArcGIS Enterprise deployment.  Learn more	ArcGIS Web Adaptor Install ArcGIS Web Adaptor to integrate with your web server and forward requests.  Learn more
--	---	--	--

Updated installation guides landing page

ArcGIS Blog

What's new in ArcGIS Enterprise 10.7.1

Administration June 27, 2019 Hilary Curtis, Scott MacDonald

What a better way to kick off the summer than an ArcGIS Enterprise release? Available today for all eligible customers, the 10.7.1 release delivers new possibilities for data and services, granularity for custom administrator roles, new triggers for webhooks, and additional enhancements woven in throughout many parts of the software.

This release builds off of the 10.7 release earlier this year, which was full of new features and functionality to support your data management, mapping, and analysis needs. 10.7.1 is a long term support release and will receive a total of 6 years of support (10.7 was a short term support release, receiving 3 years of support).

ArcGIS Blog “What’s New” series

GeoNet
The Esri Community

Home My News Browse GeoNet Communities ArcGIS Ideas GeoNet Resource Hub

esri

All Places > GIS > Enterprise GIS
ArcGIS Enterprise

Overview Activity Content People Subspaces Calendar

Log in to follow, share, and participate in this community.

Welcome to the ArcGIS Enterprise space
(Formerly the ArcGIS for Server space) This is the spot to discuss, ask questions and collaborate with others about ArcGIS Enterprise.

Browse Content Share File Start Discussion

GeoNet announcements and ideas

What we covered today

ArcGIS Enterprise 10.8 to be released this month

Data and mapping

- Hosted map image layers
- Replace Layer for vector tiles
- Clipping and Spatial Filter for map services
- PBF output format
- Quantization and publishing improvements
- Data store items in the portal
- Bulk publishing

Offline map areas

- Draw them using a polygon
- Schedule updates

Administrative updates

- Webhooks - new endpoints
- Shared instances - expanded at 10.8

For portal administrators

- Administrative groups, hide member lists
- Share items from within a group
- Improved experience when inviting members
- Information banners
- Access notices
- Portal read-only mode

ArcGIS Enterprise Sites

- New layout
- Content and core teams
- Clone a site

Apps and server roles

- ArcGIS Notebook Server Manager
- Introducing ArcGIS Mission
- Nearby configurable app with Zone Lookup
- New tools for GeoAnalytics and Image Servers

Thank you! Feel free to email me – SMMacDonald@esri.com