

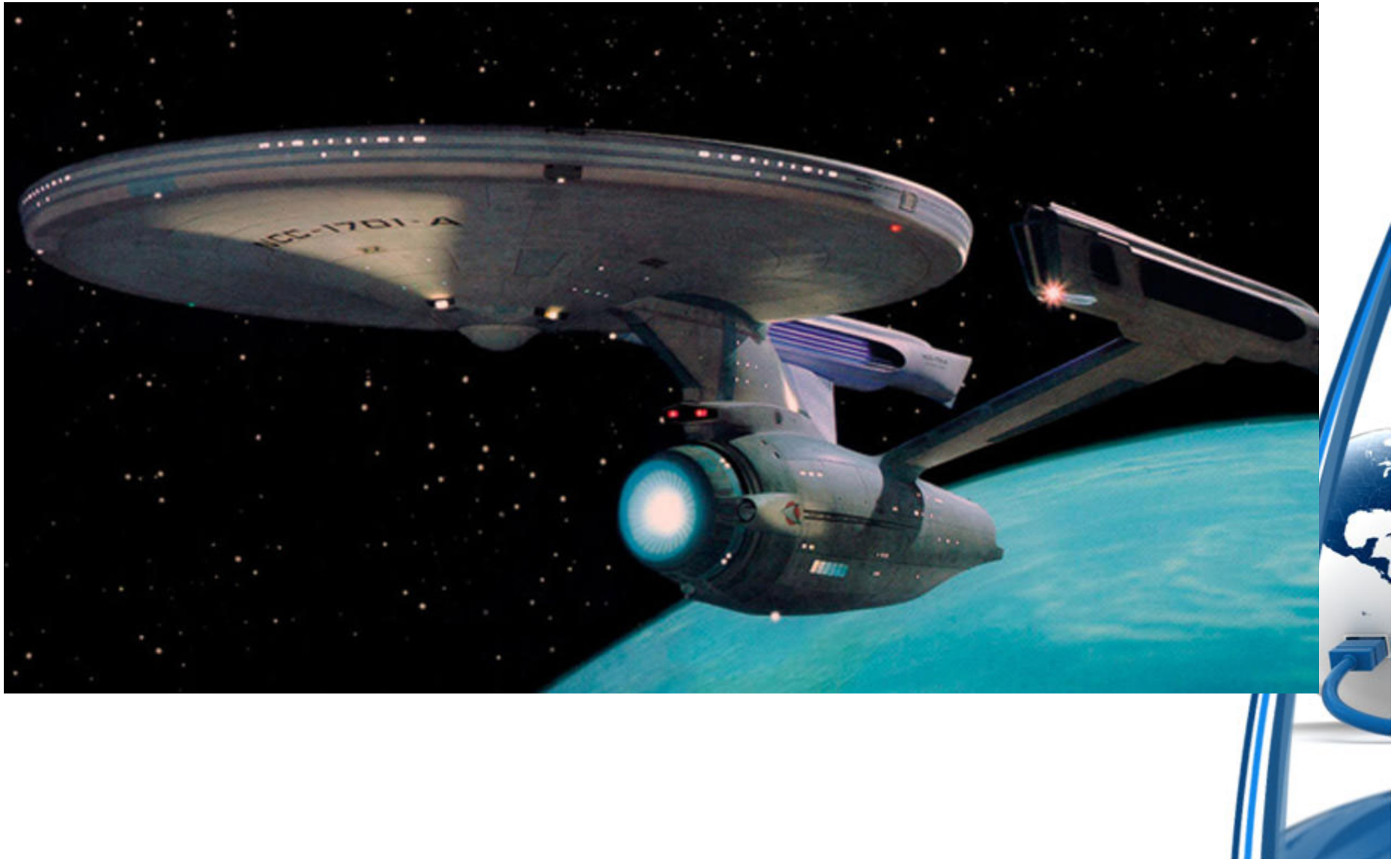


What is ArcGIS Enterprise

Todd Copeland
GIS Coordinator



Welcome to the Enterprise



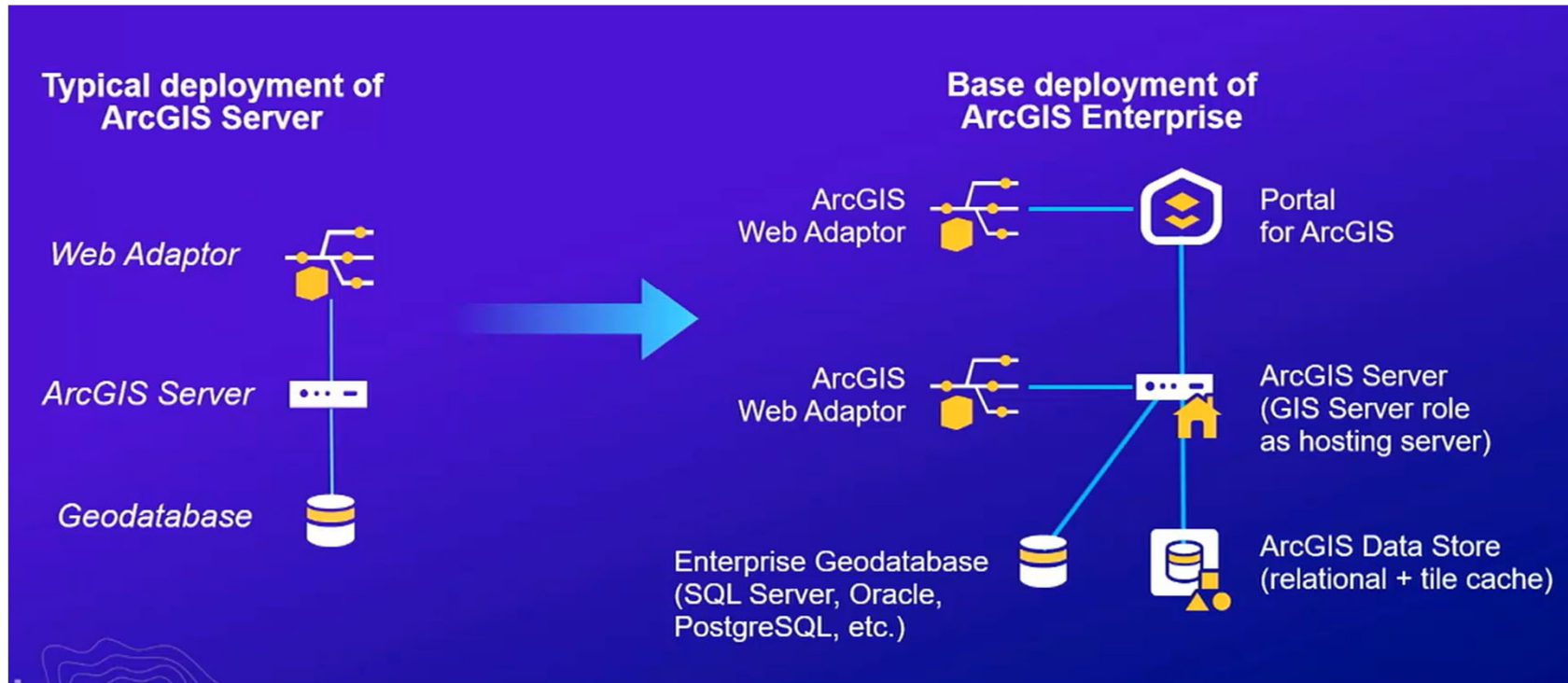
What is ArcGIS Enterprise?

- ArcGIS Enterprise is the foundational software system for GIS, powering mapping and visualization, analytics, and data management.
 - ArcGIS Enterprise is tightly integrated with ArcGIS Desktop and ArcGIS Pro for mapping and authoring, and seamlessly connects with ArcGIS Online or Portal to share content between systems.
- A base deployment of ArcGIS Enterprise at a minimum consists of: ArcGIS Server, Portal, ArcGIS Data Store, and ArcGIS Web Adaptor
 - ArcGIS Server powers mapping and analysis in your GIS, including several specialized server roles, and scales dynamically to support traffic.
 - The ArcGIS Enterprise Portal is the central hub where users create, share, and manage maps, apps, and spatial data and share them with collaborators.
 - ArcGIS Data Store provides data storage for the hosting server used with your deployment.
 - ArcGIS Web Adaptor integrates ArcGIS Server and Portal for ArcGIS with your existing web servers and your organization's security infrastructure.

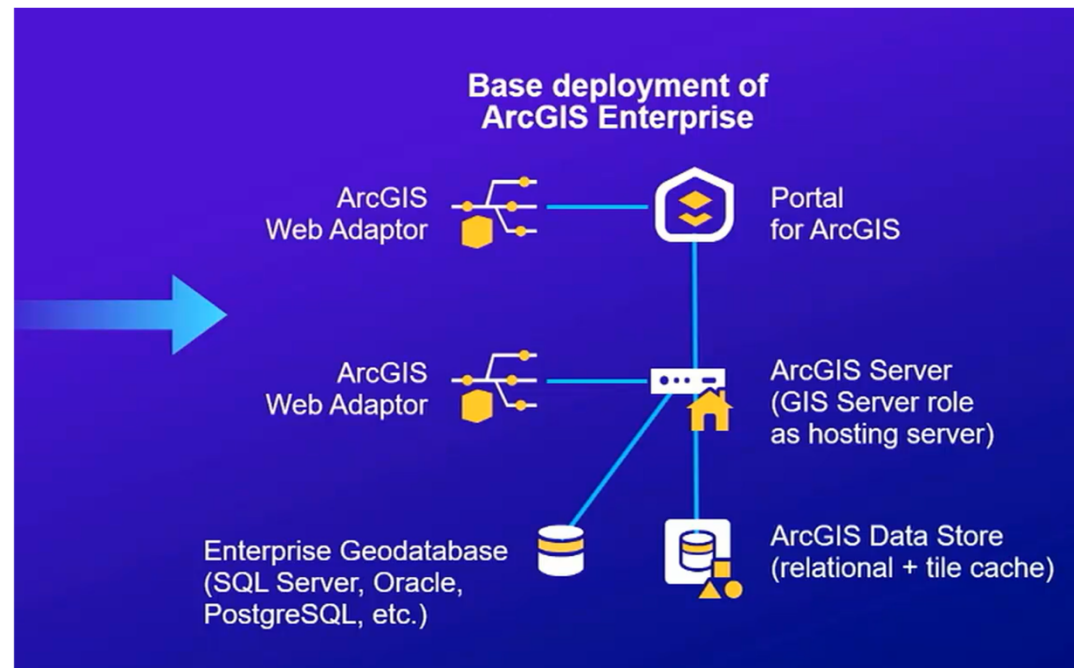
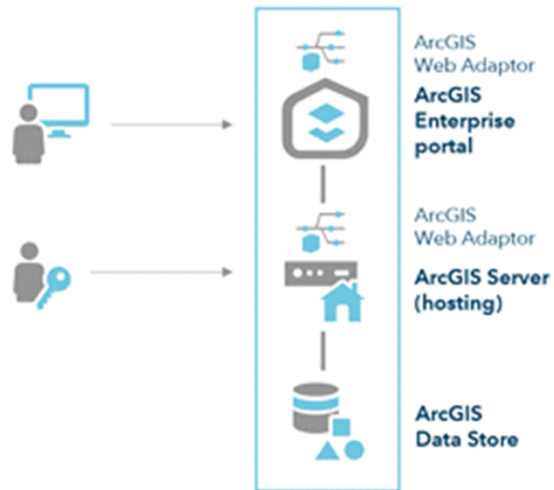


ArcGIS Server Enterprise Deployment

The following diagram shows the difference between a conceptual stand-alone ArcGIS Server site and a base ArcGIS Enterprise deployment.



ArcGIS Enterprise Base Deployment



Setup a base ArcGIS Enterprise Deployment

- Deployment includes
 - ArcGIS Server Machine
 - Licensed as ArcGIS GIS Server and used as a hosting server
 - Portal for ArcGIS
 - ArcGIS Data Store configured as a relational and tile cache stores
 - Two ArcGIS Web Adaptors (portal & server)



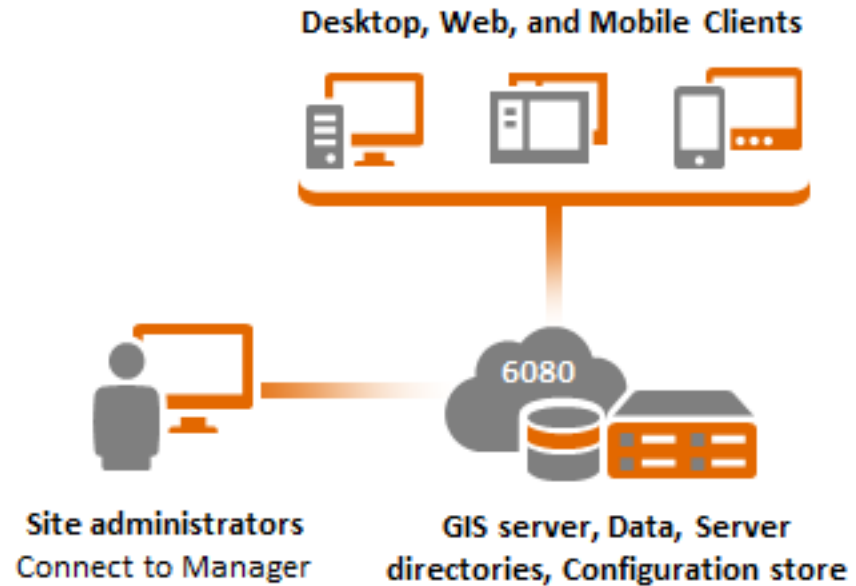
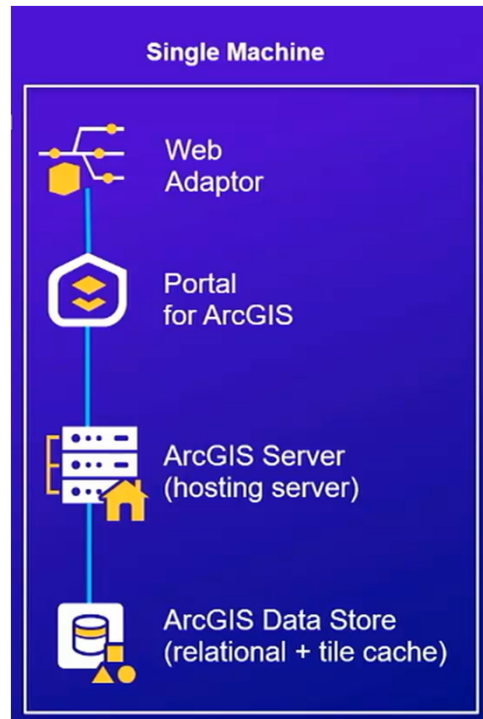
ArcGIS Enterprise Base Deployment Functionality

- All ArcGIS Server Functionality
 - Publish services (map, feature, network, geoprocessing, geocoding, etc.)
 - Publish content from a referenced database (fgdb, sde, etc.)
- Story maps and other configurable application templates
- Web AppBuilder for creating web applications
- Operations Dashboard, ArcGIS Enterprise Sites
- Other custom applications built on ArcGIS API for JavaScript and ArcGIS Runtime SDKs



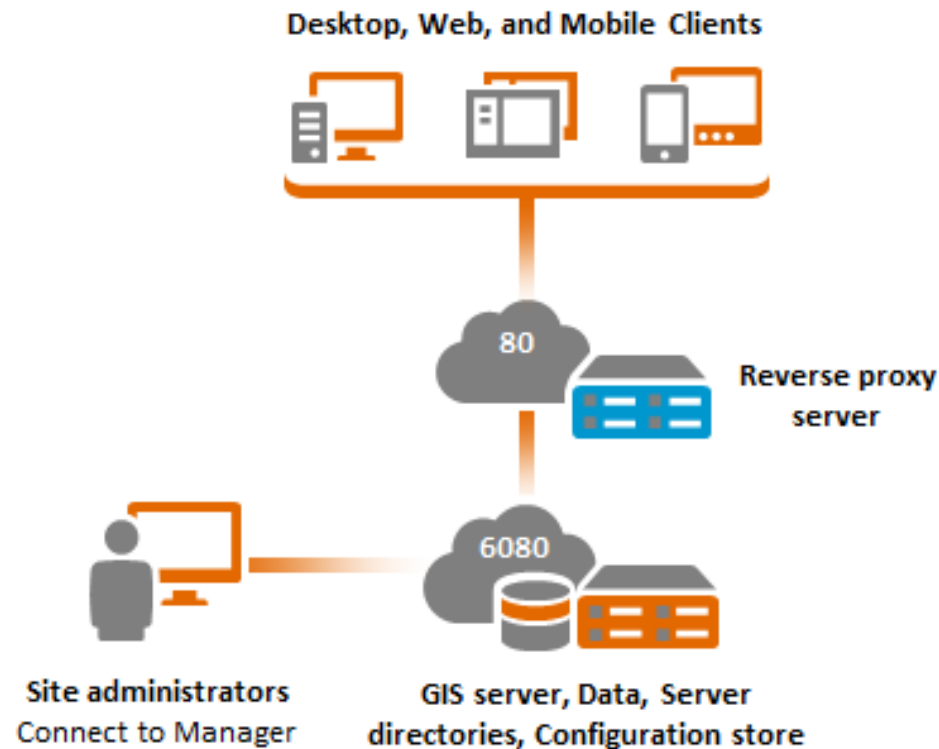
ArcGIS Server Single Machine Deployment

Single Machine Deployment



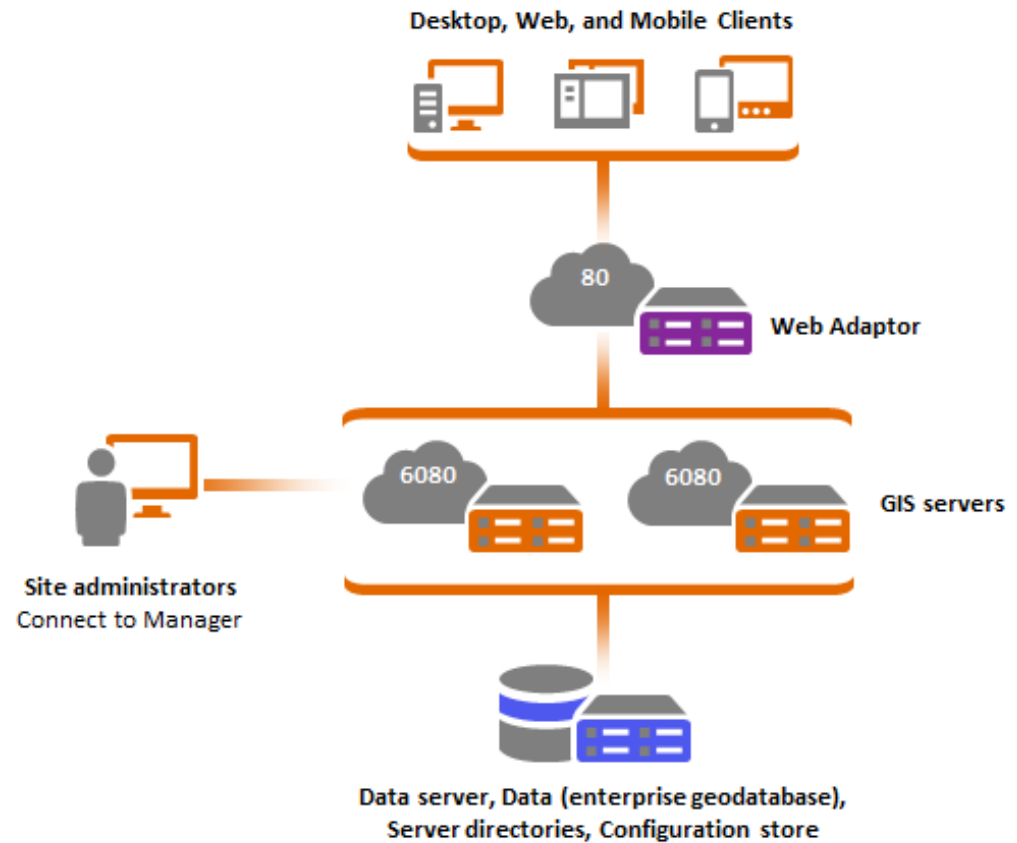
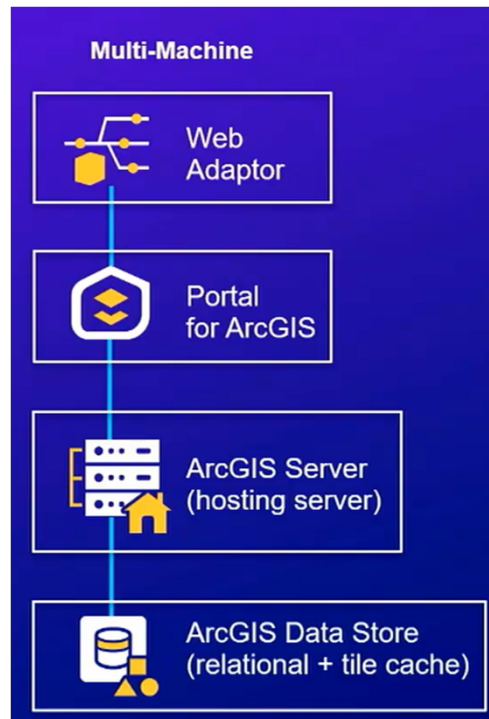
ArcGIS Server Single Machine Deployment

Single Machine Deployment w/ Reverse Proxy

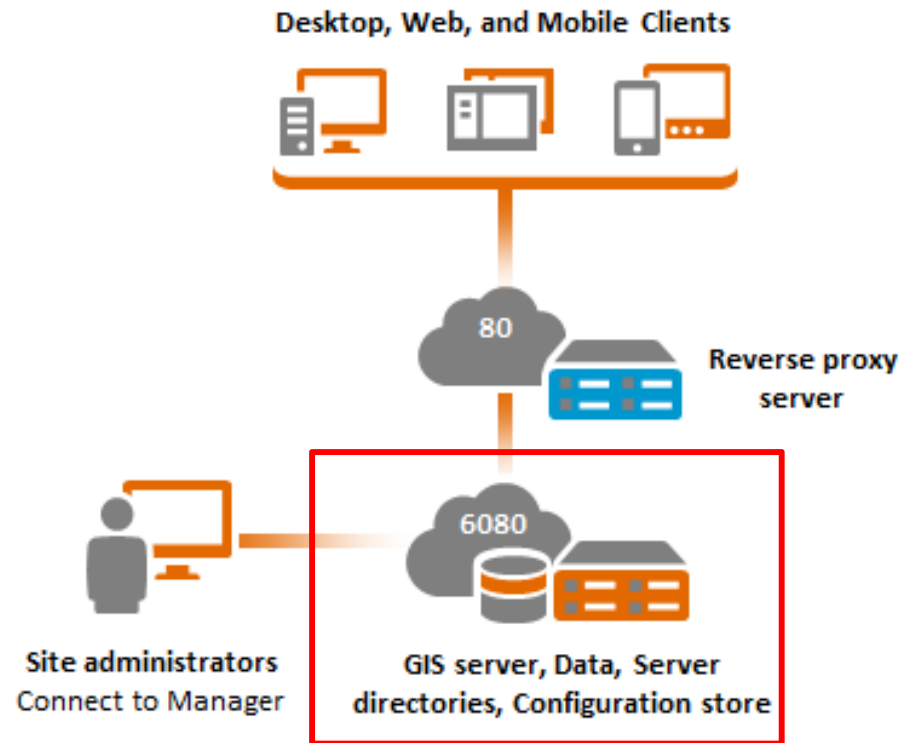


ArcGIS Server Multiple Machine Deployment

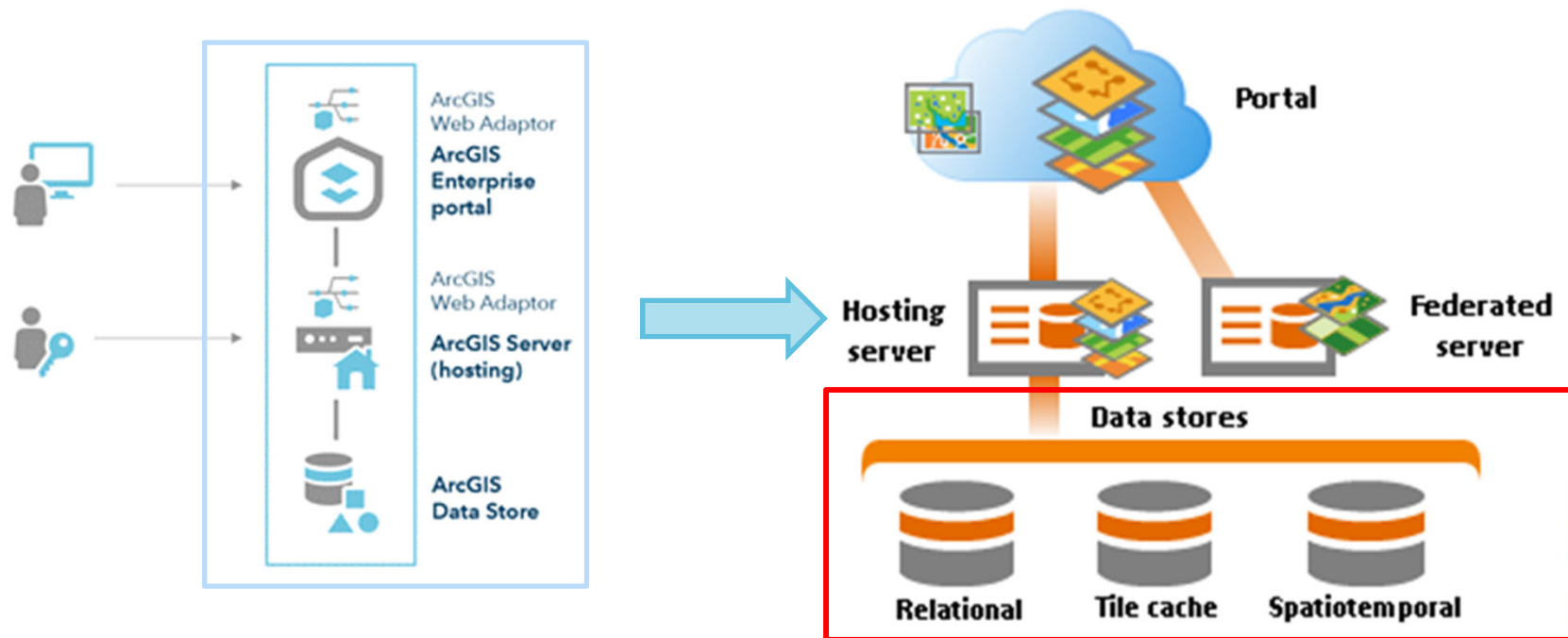
Multiple Machine Deployment w/ Web Adaptor



Portal for ArcGIS and ArcGIS Server Sites with ArcGIS Data Store



Portal for ArcGIS and ArcGIS Server Sites with ArcGIS Data Store

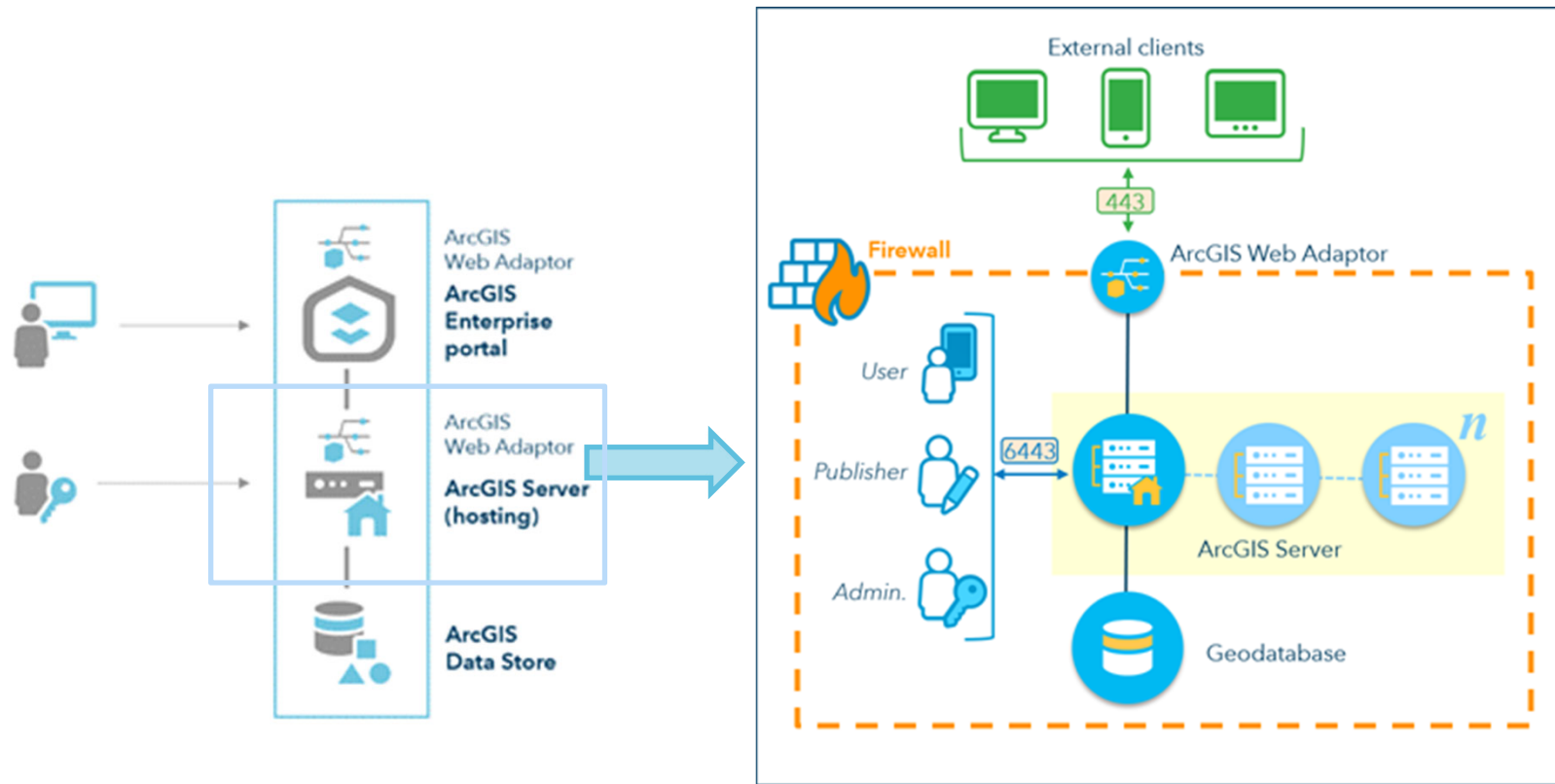


What is ArcGIS Server?

- ArcGIS Server is a back-end server software component of ArcGIS Enterprise that makes your geographic information available to others in your organization using GIS services.
- Two deployment scenarios
 - Standalone
 - Federated with Portal for ArcGIS (ArcGIS Enterprise)
- ArcGIS Server Site
 - ArcGIS Server
 - ArcGIS Web Adaptor
 - Web Server
 - Data Server



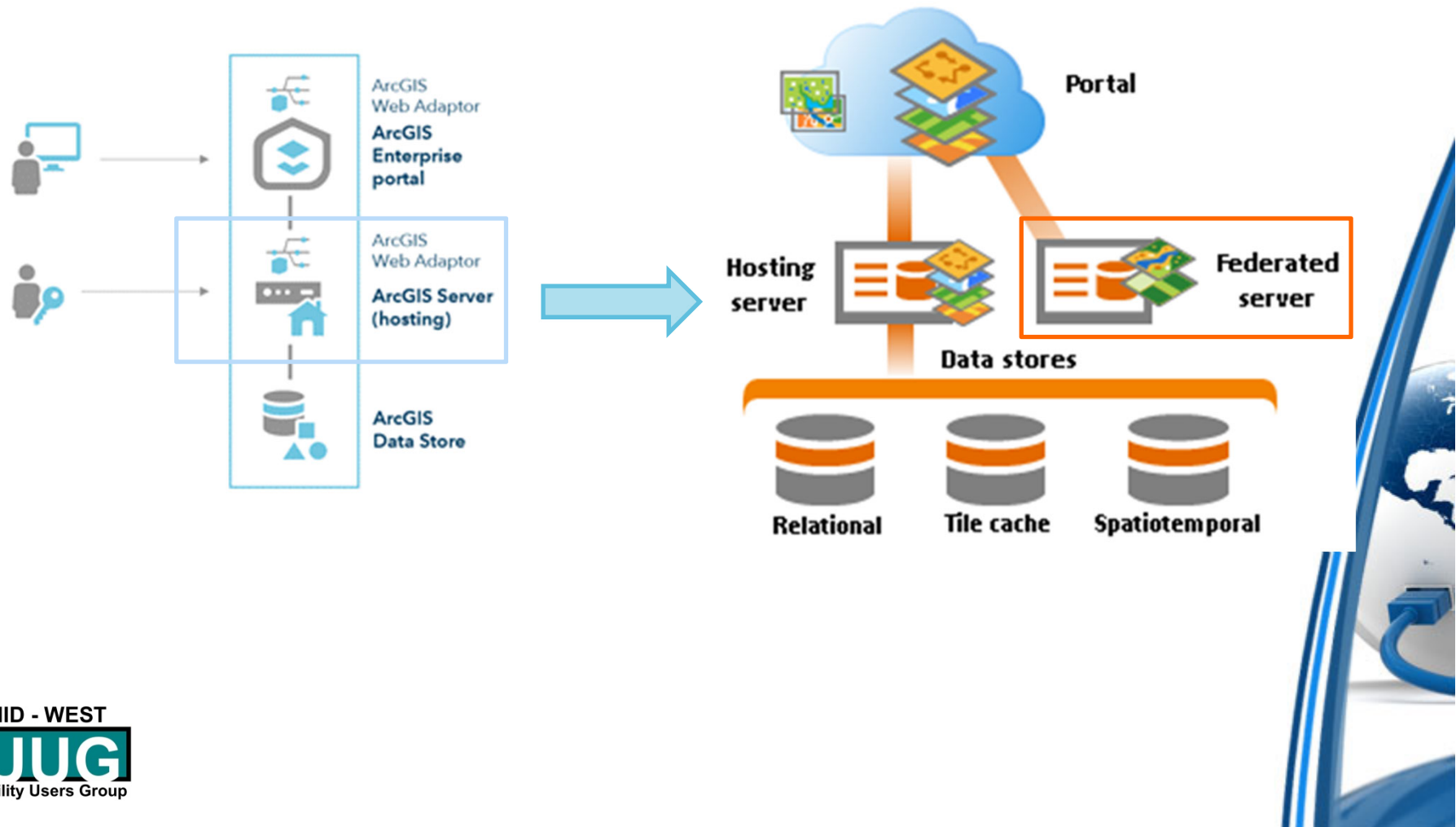
ArcGIS Server Site Example



Welcome to the Federation



Federated ArcGIS Server

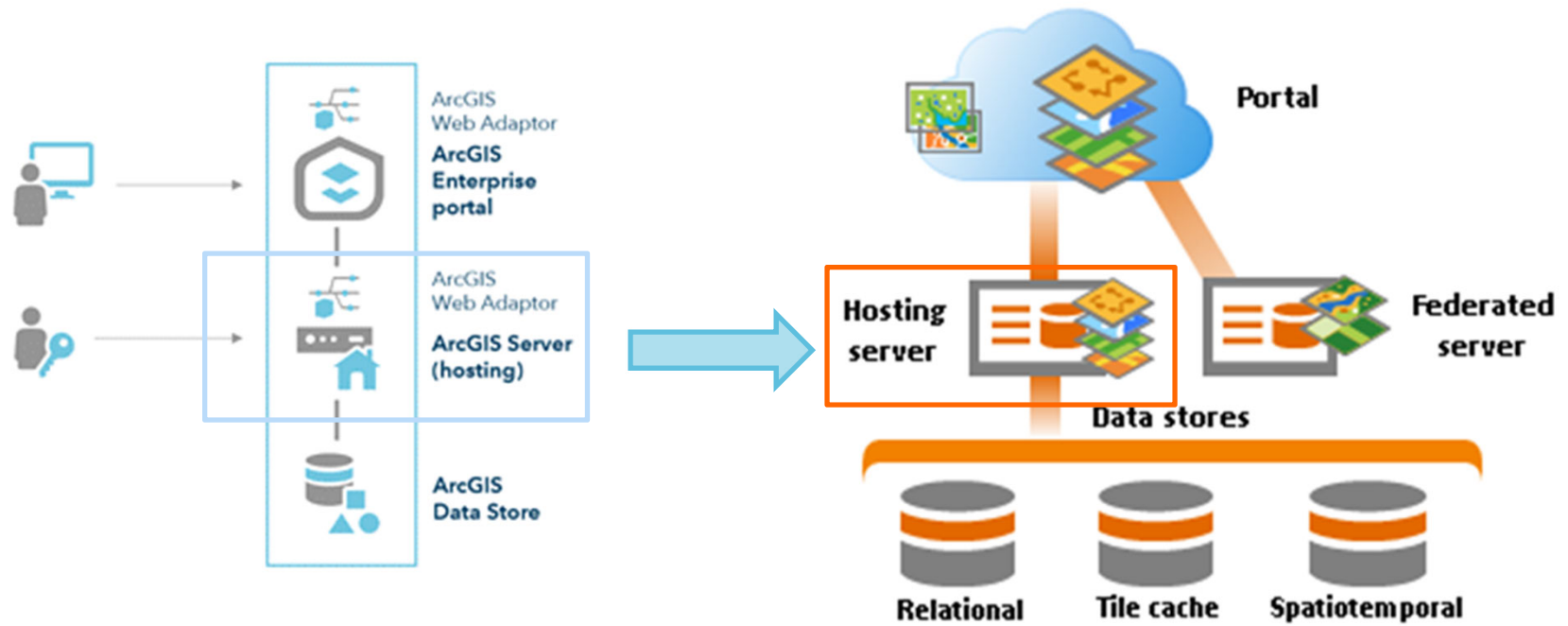


Federated ArcGIS Server

- Integration with ArcGIS Enterprise (Portal for ArcGIS)
 - You can federate one or more ArcGIS Server sites with the portal to integrate its security and sharing models.
 - You can assign a federated ArcGIS Server site to act as the portal's hosting server, allowing users to publish data and maps to a wider audience as web services.
 - You can register individual services from any ArcGIS Server site with the portal, whether or not it is federated (or even if it is your own server).
- Designate a hosting server
- Use ArcGIS Data Store for storing hosted layers published from ArcGIS Server



ArcGIS Hosting Server

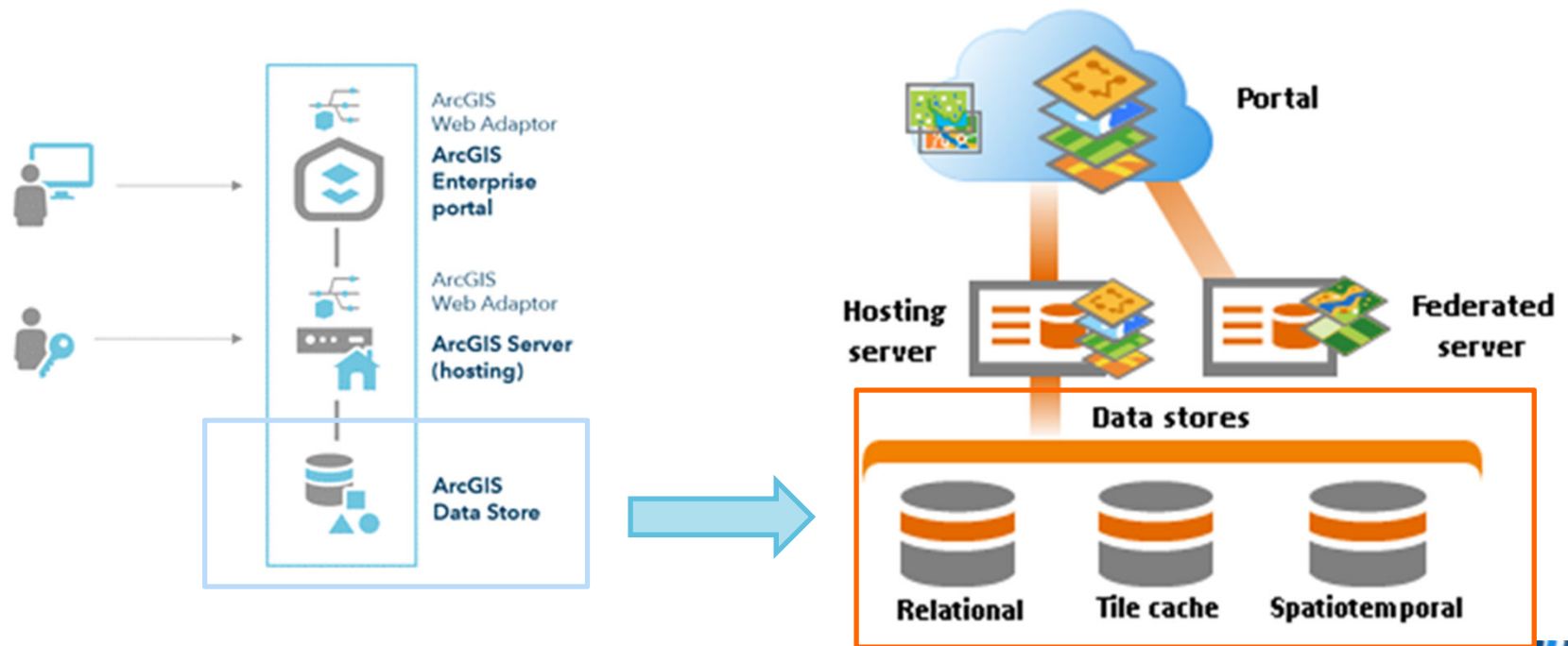


ArcGIS Hosting Server

- A hosting server is the highest level of integration that can be achieved between a portal and a GIS Server site.
- A federated ArcGIS GIS Server can be further integrated with your portal if you designate it as a hosting server and allows portal users to:
 - Publish cached maps, feature services, WFS services, and scene services (hosted tile layers, feature layers, WFS layers, and scene layers) to the portal from other clients or within the portal website.
 - Create maps by adding CSV files from local machines.
 - Share layers and maps from ArcGIS Maps for Office.
 - Perform analysis Insights for ArcGIS.



ArcGIS Server with ArcGIS Data Store

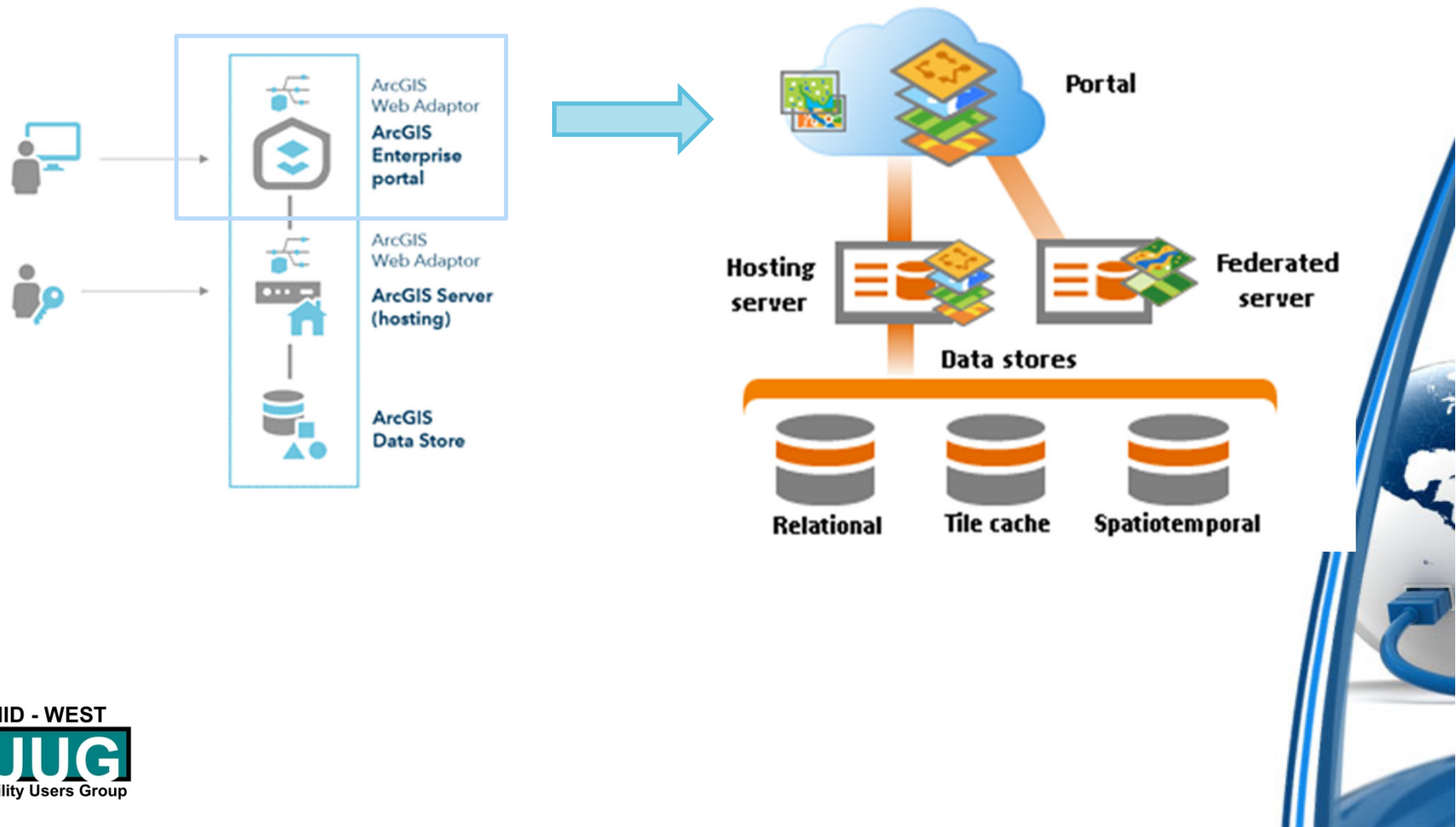


ArcGIS Server Site with ArcGIS Data Store

- ArcGIS Data Store is a separate installation available with ArcGIS Enterprise that lets you create and maintain the following data stores for hosted web layers you publish to an ArcGIS Enterprise portal:
 - Relational data store—Stores your portal's hosted feature layer data, including hosted feature layers created as output from standard feature analysis tools run in the portal Map Viewer or ArcGIS Pro.
 - Tile cache data store—Stores caches for your portal's hosted scene layers.
 - Spatiotemporal big data store—Archives real-time observational data from a federated ArcGIS GeoEvent Server site and locations recorded through Tracker for ArcGIS. It also stores the results generated using GeoAnalytics Tools run in the portal Map Viewer or ArcGIS Pro.



What is Portal for ArcGIS?



What is Portal for ArcGIS?

- Portal for ArcGIS is a component of ArcGIS Enterprise that allows you to share maps, scenes, apps, and other geographic information with other people in your organization.
- What comes with Portal
 - The ArcGIS Enterprise portal website
 - Map Viewer
 - Web AppBuilder for ArcGIS
 - Dashboard for ArcGIS
 - Scene Viewer
 - ArcGIS Apps
 - Living Atlas
 - Admin Tools
 - ArcGIS Portal Directory



Why Portal for ArcGIS?

- Portal for ArcGIS plays a central role in creating, organizing, and sharing information within your ArcGIS system and provides a user-friendly directory maps and apps.
- Portal for ArcGIS is complimentary to ArcGIS Online but runs on your own infrastructure or in the Cloud.
- Use a Relational and Tile Cache Use ArcGIS Data Stores with Portal
- Integrated with ArcGIS Server as Federated Servers
- Utilize a GIS server site a hosting server
- Connect to ArcGIS Server Service Directory (RESTful representation)



What is Portal Federation?

- Federating an ArcGIS Server site with your portal integrates the security and sharing models of your portal with one or more ArcGIS Server sites. Federation is optional unless you want to do the following:
 - Configure your site with a [Security Assertion Markup Language \(SAML\)](#) identity provider.
 - Host tile layers, feature layers, and scene layers published by members of the portal.
 - Allow members of the portal to perform spatial analysis in Map Viewer.
- Provides a convenient single sign-on experience.
- Access to services are determined by portal members, roles, and sharing permissions.



References

- ArcGIS Enterprise
 - <https://enterprise.arcgis.com/en/get-started/latest/windows/what-is-arcgis-enterprise-.htm>
- ArcGIS Server Documentation
 - <https://enterprise.arcgis.com/en/server/latest/get-started/windows/about-arcgis-server-documentation.htm>
- Portal for ArcGIS
 - <https://enterprise.arcgis.com/en/portal/10.7/administer/windows/what-is-portal-for-arcgis-.htm>
- ArcGIS Pro
 - <https://pro.arcgis.com/en/pro-app/latest/get-started/get-started.htm>



References

- Utility Network
 - [What is a utility network?—ArcGIS Pro | Documentation](#)
 - [Utility Network Package Tools | ArcGIS Solutions](#)
 - [What are the Utility Network Package Tools?—Help | ArcGIS Solutions](#)
- Esri Learning Paths
 - ArcGIS Enterprise: Architecting Your Deployment
 - Tutorial: Setup a base ArcGIS Enterprise deployment



Portal & ArcGIS Server Federation

- Setup a base ArcGIS Enterprise Deployment
 - <https://enterprise.arcgis.com/en/get-started/latest/windows/tutorial-creating-your-first-web-gis-configuration.htm>
- Components of ArcGIS URLs
 - <https://enterprise.arcgis.com/en/portal/10.7/administer/windows/components-of-arcgis-urls.htm#>
- Common Problems and Solutions
 - <https://enterprise.arcgis.com/en/portal/10.7/administer/windows/common-problems-and-solutions.htm#>



Portal & ArcGIS Server Federation

You can access different parts of your deployment using the URLs below.

Location	URL format	Example URL
Your portal	<code>https://portal_webadaptorhost.domain.com/portal_webadaptorname/home</code>	<code>https://ansible.hynes.com/portal/home</code>
The ArcGIS Portal Directory	<code>https://portal_webadaptorhost.domain.com/portal_webadaptorname/portaladmin</code>	<code>https://ansible.hynes.com/portal/portaladmin</code>
ArcGIS Server Manager	<code>https://gisserverhost.domain.com:6443/arcgis/manager</code>	<code>https://picard.hynes.com:6443/arcgis/manager</code>

You can further configure the portal, including security, membership, groups, and utility services by following the instructions in the Portal Administrator Guide.



Portal for ArcGIS Requirements

- [Portal for ArcGIS System Requirements](#)
- SSL Certificates
- ArcGIS Web Adaptor
 - [ArcGIS Web Adaptor System Requirements](#)
- It can be deployed as stand-alone software and can be integrated with ArcGIS Server
- [Portal for ArcGIS System Requirements](#)
- SSL Certificates
- ArcGIS Web Adaptor
 - [ArcGIS Web Adaptor System Requirements](#)



Live Long and Prosper

