Building your first Web GIS

Thomas Edghill & Jonathan Quinn
ArcGIS Enterprise!

Building your first Web GIS

Thomas Edghill & Jonathan Quinn
Overview

• Web GIS options with Esri
• Building a Base ArcGIS Enterprise Deployment
  - Preparing components
  - Configuring components
  - Next steps: Administering your ArcGIS Enterprise
Web GIS Options with Esri

ArcGIS Online

- Hosted by Esri (SaaS)
  - Upgraded automatically (by Esri)
  - Esri controls SLA

ArcGIS Enterprise

- In your own infrastructure (Software)
  - Upgraded manually (by organization)
  - Organization controls SLA

Core Web GIS functionality
(Apps, visualization, smart mapping, analysis…)
An Esri built software load balancer that appropriately directs network traffic and serves as a reverse proxy for access to ArcGIS Enterprise.
ArcGIS Enterprise | Components

ArcGIS Web Adaptor

Portal for ArcGIS

The web frontend and infrastructure backend that supports a user’s interaction and overall experience with your ArcGIS Enterprise.

ArcGIS Server

ArcGIS Data Store
ArcGIS Enterprise | Components

ArcGIS Web Adaptor

Portal for ArcGIS

ArcGIS Server

ArcGIS Data Store

Provides the layers, services, and horsepower required to power your ArcGIS Enterprise.
ArcGIS Enterprise | Components

The *Esri managed data repository* that stores the spatial content that has been shared to Portal.
ArcGIS Enterprise | Components

ArcGIS Web Adaptor

Portal for ArcGIS

ArcGIS Server

ArcGIS Data Store

Three Types:
- Relational
- Tile Cache
- Spatiotemporal
ArcGIS Enterprise | Components

- ArcGIS Web Adaptor
- Portal for ArcGIS
- ArcGIS Server
- ArcGIS Data Store

Three Types:
- Relational
- Tile Cache
- Spatiotemporal
Installing Base ArcGIS Enterprise Components
Web Adaptor (IIS) Install

ArcGIS Web Adaptor (IIS) 10.5
IIS requirements verification
The ArcGIS Web Adaptor (IIS) 10.5 setup requires that specific IIS components be installed before proceeding.

The components listed below with an X are missing:
- Microsoft Internet Information Services (IIS) components
- IIS Management Console
- IIS Scripting Tools
- IIS Management Service
- ISAPI Extensions
- ISAPI Filters
- Request Filtering

Click 'I Agree' to automatically install the missing IIS components.
Click 'Cancel' to exit and manually install them using the Web instructions.

ArcGIS Web Adaptor (IIS) 10.5 Setup
New Virtual Directory
Specify the name of the ArcGIS Web Adaptor
Name for the ArcGIS Web Adaptor:
arcgis

This specifies the URL you will use to access services. For example:
http://[[Machine Name]/arcgis/rest

Web Adaptor Name
Machine Name
Portal Install

• Able to set user to run service when installing

• Portal accessible via :7443

https://webgis.esri.com:7443/arcgis/home/
Server Install

- Able to set user to run service when installing
- Manager and the REST endpoint accessible via :6443

https://webgis.esri.com:6443/arcgis/manager/
Data Store Install

- Able to set user to run service when installing
- Data Store registration page accessible via https://webgis.esri.com:2443/arcgis/datastore
Glossary of Key Terms

- **Federated Server** – An ArcGIS Server that has been added to the portal.
- **Hosting Server** – A federated server that expands the way users can publish tiles and features.
- **ArcGIS Web Adaptor** – Integrates ArcGIS Server and Portal for ArcGIS with an existing web server.
1. Create portal
2. Create ArcGIS Server site
3. Register Data Store (Relational & Tile Cache)
4. Register Web Adaptor for Portal for ArcGIS
5. Register Web Adaptor for ArcGIS Server
6. Federate ArcGIS Server with Portal for ArcGIS
Our setup

**webgis.esri.com**

- Portal for ArcGIS
- ArcGIS Server
- ArcGIS Data Store
- Portal Web Adaptor
- ArcGIS Web Adaptor (portal)
- ArcGIS Web Adaptor (server)

**Portal Home Page URL:** https://webgis.esri.com/portal/home/
**Portaladmin URL:** https://webgis.esri.com/portal/portaladmin/
**Services URL:** https://webgis.esri.com/server/rest
**Server Manager URL:** https://webgis.esri.com:6443/arcgis/manager
Preparing and configuring components

- **Preparing components**
  - ✓ Installing and authorizing:
    - ✓ Web Adaptor (Portal & Server)
    - ✓ Portal for ArcGIS
    - ✓ ArcGIS Server
    - ✓ ArcGIS Data Store

- **Configuring components**
  1. Create the portal
  2. Create the ArcGIS Server Site
  3. Register the ArcGIS Data Store (Relational & Tile Cache)
  4. Register the Web Adaptor for Portal for ArcGIS
  5. Register the Web Adaptor for ArcGIS Server
  6. Federate ArcGIS Server with Portal for ArcGIS
Preparing and configuring components

✓ Preparing components
✓ Installing and authorizing:
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● Configuring components
✓ Create the portal
✓ Create the ArcGIS Server Site
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✓ Register the Web Adaptor for Portal for ArcGIS
✓ Register the Web Adaptor for ArcGIS Server
6. Federate ArcGIS Server with Portal for ArcGIS
Federation

- Integrates security for Portal and Server
  - Portal user store controls access to the server
  - Services added as items in the portal
  - Sharing model controls access to services
    - Share with no one
    - Share with a group or the organization
    - Share with everyone
Hosting server

- A server that hosts content published to the portal (copying data)
  - Requires a registered relational ArcGIS Data Store
- Needed for:
  - Standard analysis and GeoAnalytics
  - Publishing hosted layers
  - Batch geocoding
  - Adding shapefiles to a map
Federating and setting hosting server
Preparing and configuring components

✓ Preparing components
✓ Installing and authorizing:
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  ✓ Portal for ArcGIS
  ✓ ArcGIS Server
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✓ Configuring components
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Sneak Peek: ArcGIS Enterprise Builder

• Coming at 10.5.1
• Simplifies the setup and configuration of a single machine ArcGIS Enterprise deployment
• Asks the minimum number of questions required to get a deployment up and running
Administering your portal

  - Security and SSL certificates
  - Portal logs
  - Licensing ArcGIS Pro and additional products
Next Steps: Customizing your portal

- Adding members
  - Built-in and enterprise users

- Customizing the home page
  - Updating the banner and gallery

- Updating the portal behavior
  - Configuring utility services
  - Configuring a custom basemap gallery

Customizing the portal website
Using the ArcGIS Enterprise – connecting to the portal

- Portal home app URL: https://webgis.esri.com/portal/home
- Client apps URL: https://webgis.esri.com/portal
  - ArcGIS Pro
  - ArcMap
  - ArcGIS Maps for Office
  - Collector for ArcGIS
Resources

  - Topic - "Tutorial: Set up a base ArcGIS Enterprise deployment”
  - Other subjects – Pro licensing, SSL certificates, upgrading
• Technical Support – https://support.esri.com
• Dev Summit Showcase– ArcGIS Enterprise area
Other sessions

• **ArcGIS Enterprise: Architecting your Deployment**
  - Thursday March 9, 2:30 PM – 3:30 PM
    - Catalina-Madera

• **ArcGIS Enterprise Security**
  - Wednesday, March 8, 4:00 PM – 5:00 PM
    - Primrose C-D
  - And Friday, March 10, 1:00 PM – 2:00 PM
    - San Jacinto

• **ArcGIS Enterprise in the Microsoft Azure Cloud**
  - Thursday, March 9, 9:00 AM – 10:00 AM
    - Smoketree A-E

• **ArcGIS Enterprise in the Amazon Cloud**
  - Thursday, March 9, 10:30 AM – 11:30 AM
    - Smoketree A-E
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