Agenda

• What is ArcGIS Enterprise?
  - Components
  - Architecture
  - Server Roles
• Enterprise Sites
• Collaboration
• What’s New at 10.7?
• Q and A
How did we get here?
ArcGIS Enterprise is comprised of 4 software components:

- ArcGIS Web Adaptor
- Portal for ArcGIS
- ArcGIS Server
- ArcGIS Data Store
ArcGIS Enterprise provides Web GIS in your infrastructure.

The Base ArcGIS Enterprise Deployment refers to the essential deployment pattern of the ArcGIS Enterprise software components that allow for a functional Web GIS.
Functionality of the base deployment

- **Everything from traditional ArcGIS Server**
  Ability to publish map services, feature services, network services, geoprocessing services, geocoding services, and much more.
  Ability to publish content from referenced data sources such as file-based data (file geodatabases, shapefiles) as well as enterprise geodatabase and other spatially-enabled databases.

- **Ability to give users option to do self-service mapping**
  Publishing hosted data where users do not need access to enterprise geodatabase or trusted file shares— they can copy data to the system in a seamless fashion similar to the experience from ArcGIS Online

- **Story Maps and other configurable app templates**
- **Web AppBuilder/Operations Dashboard for quickly creating customized web apps**
- **Full suite of Esri apps and other custom apps built on the ArcGIS API for Javascript and ArcGIS Runtime SDKs**
ArcGIS Enterprise | Components of the base deployment

ArcGIS Server
Set up as a GIS Server and configured as the **hosting server**, ArcGIS Server provides the layers, services, and horsepower required to power your Web GIS.

Portal for ArcGIS

ArcGIS Data Store

ArcGIS Web Adaptor
ArcGIS Enterprise | Components of the base deployment

Portal for ArcGIS

The web frontend and infrastructure backend that supports a user’s interaction and overall experience with your Web GIS.
ArcGIS Enterprise | Components of the base deployment

ArcGIS Server

Portal for ArcGIS

ArcGIS Data Store

The ArcGIS managed data repository that stores the spatial content that has been copied to the system

Relational | Tile Cache | Spatiotemporal
ArcGIS Enterprise | Components of the base deployment

ArcGIS Server

Portal for ArcGIS

ArcGIS Data Store

ArcGIS Web Adaptor

An Esri built software load balancer that appropriately directs network traffic and serves as a reverse proxy for Web GIS access.
ArcGIS Enterprise base deployment | Logical Architecture

- ArcGIS Web Adaptor
- Portal for ArcGIS
- ArcGIS Server (hosting server)
- ArcGIS Data Store (relational + tile cache)
Coming from ArcGIS Server to ArcGIS Enterprise

**Typical deployment of ArcGIS Server**
- Web Adaptor
- ArcGIS Server

**Base deployment of ArcGIS Enterprise**
- Portal for ArcGIS
- ArcGIS Server (GIS Server role as hosting server)
- ArcGIS Data Store (relational + tile cache)

ArcGIS Web Adaptor
Server Licensing Roles

ArcGIS Server

GIS Server
Business Analyst Server
GeoEvent Server
Image Server
GeoAnalytics Server
Notebook Server

One software component, multiple server roles
ArcGIS Enterprise base deployment | Conceptual

**INFRASTRUCTURE**
- ArcGIS Server (Hosting)
- GeoEvent Server
- Image Server
- Data Store
- Spatiotemporal SQL Server
- Raster File Share

**APPLICATIONS**
- Users - Groups - Layers - Items
- Web Maps - Web Layers - Tools - Files

**PORTAL**
- External Systems
  - Asset Management
  - Permitting
  - Real-Time
    - AVL
    - CAD
    - Waze
- Open Data
- Scalability

**GROUPS**
- Collaboration

**PATHS**
- /portal
- /server
- /geoevent
- /imageserver

**ArcGIS Online**
Enterprise Sites
The challenge
ArcGIS Enterprise Sites allows you to create a tailored web page experience for your users to help you share your portal's authoritative GIS data to other departments more easily, even if they are not used to working in your GIS. Instead of learning to navigate the portal and access groups, members can go directly to the custom web page you create to navigate the content relevant to them.
Who are sites for?

• Sites are for the end users of the portal - people who do not need to use the map making and data editing capabilities of the portal in their everyday work
  - Non-GIS users within the organization
  - Decision makers
  - External users

• Sites is not intended to be used by:
  - Admins
  - Data editors
  - Publishers
What is the best way to use Sites?

• Provide strategic touchpoints with portal capabilities
  - Example: “View as web map” option in a site

• Prioritize and organize data and content
  - Accomplished through site design:
    - What content is shown
    - The order
    - The widgets used

• Contextualizing content
  - Telling bigger, interconnected stories
Collaboration
Distributed collaboration

Establishes a trusted environment among participants.
  ...Providing insight, visibility and accessibility to content.
  ...Extending beyond geographic & organizational boundaries.
  ...Allowing users to work towards goals, initiatives and projects together.
Distributed collaboration

- A way to share and synchronize data and information across ArcGIS
- Establishes a trusted connection with other Enterprise deployments and ArcGIS Online
- Uses the existing, familiar group sharing model to send & receive data
- Keeps data updates in sync automatically
- Breaks down data sharing barriers within and across organizations and enables customers to work more productively together
Common Patterns

One to One
- Between Enterprise portals or with Online

Between many:
- Enterprise to Enterprise

Between many:
- Online to Enterprise

Multiple Enterprise portals with one central portal

Multiple Enterprise portals collaborating with ArcGIS Online
Why collaborate?

“I want to manage my data in ArcGIS Enterprise and share it with my constituents through ArcGIS Online.

I’d like to keep my data in sync between the two without maintaining two separate datasets.”
Why collaborate?

“I have four Enterprise portals across my Parks and Recreation, Bureau of Street Services, City Planning and Police departments. How can I ensure that everyone has access to the most current datasets?”
Collaboration - key technical concepts
Key technical concepts - a trusted environment

1. Host creates a collaboration and invites a guest
2. Host downloads an invitation file and sends to the guest
3. Guest Administrator receives & downloads the invitation and transfers their response file to the host
4. Host accepts the response and trust is established between both
Key technical concepts - hosts and guests

HOST
• Initiates the collaboration & invites guests
• Decides if their feature services are sent as reference or as copies
• Configures guest access mode (send, receive or send & receive)

GUEST
• Accepts the invitation
• Decides if their feature services are sent as reference or as copies
• If sent as copies, sets the sync interval
Key technical concepts - sharing methods for feature services

As reference:

Live access to owner’s item

As copies:

Creates new hosted feature service for recipient
Key technical concepts - sharing data

Share immediately:

- Any new content shared with groups will be sent to participants immediately

Share at scheduled interval:

- New content is shared at a scheduled interval (1 - 24 hours)
- Edits made to feature services shared as copies will be synced with recipients
What’s New at 10.7
Shared Instances
- Prior to 10.7 all services had dedicated capacity defined by the minimum and maximum service instances configured on a per-service basis.
- At 10.7, when publishing a map service, and setting it to use shared instances, the added memory cost of the new service is effectively zero.
- Instead of creating a dedicated pool of service instances (SOCs) the service will be handled by the shared instance pool.

New User Roles
- Viewer
- Editor
- Field Worker
- Creator
- GIS Professional
  - Basic
  - Standard
  - Advanced

ArcGIS Notebooks
- Access to Esri’s Python libraries for ArcPy and the ArcGIS API for python
- Integrated with ArcGIS Content

Location Tracker

Excalibur
- ArcGIS Excalibur introduces the idea of an Imagery Project, a dynamic way for users to organize resources that are required to complete an image-based task in a single location.

Web Hooks

Relationship Styles

Offline Map Areas
Moving to ArcGIS Enterprise

Base ArcGIS Enterprise deployment

ArcGIS Enterprise comprises four software components. The minimum setup of ArcGIS Enterprise is called a base ArcGIS Enterprise deployment, and consists of the following:

- ArcGIS Server, licensed as ArcGIS Server Standard or ArcGIS Server Advanced and configured as the hosting server for your portal.
- Portal for ArcGIS.
- ArcGIS Data Store, configured as a relational and tile cache data store.
- Two installations of ArcGIS Web Adaptor, one installation for traffic to your ArcGIS Enterprise portal and another for traffic to your hosting server.

You can install the base deployment across one or more machines, any of which can be physical, virtual, or cloud machines. For details about the required machine specifications for the ArcGIS Enterprise components, see the system requirements.

Single-machine deployment

In the all-in-one configuration of the base ArcGIS Enterprise deployment, all of the components are installed on a single machine. Use ArcGIS Enterprise Builder to set up a complete base ArcGIS Enterprise.

Moving to ArcGIS Enterprise

- There are many options for furthering your understanding of ArcGIS Enterprise
- Visit the Esri Training Catalog to view courses in various formats
- Consider these two instructor-led courses high priority for those that will be installing and administering ArcGIS Enterprise:
  - ArcGIS Enterprise: Configuring a Base Deployment
  - ArcGIS Enterprise: Administration Workflows
Moving to ArcGIS Enterprise

- Consult with your Esri representatives and consult with your peers to determine best path to value for you and your organization

- Whiteboarding system architecture is a great way to “see the whole picture”

- Still not Comfortable? Consider leveraging outside resources for an Enterprise “jumpstart“ and additional knowledge transfer
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