What is ArcGIS Enterprise?

ArcGIS Enterprise is server software that allows you to use infrastructure you manage to implement Web GIS, serve geospatial data, and perform advanced analytics.
The number of server roles in ArcGIS Enterprise.

Server roles define what capabilities the server has. Not all servers do the same thing.
• Server roles are applied through licensing

• You can put multiple server roles on the same machine*

• Any server role can be deployed on physical machines, virtual machines or in the cloud.

*Can does not always mean you should. We recommend not combining GeoAnalytics and Raster Analytics with other server roles.
The number of software components that make up ArcGIS Enterprise.

Don’t panic!
ArcGIS Enterprise software components

- ArcGIS Server
- Portal for ArcGIS
- ArcGIS Data Store
- ArcGIS Web Adaptor
ArcGIS Enterprise software components

ArcGIS Server
Serves content and powers analysis

Portal for ArcGIS
Enables Web GIS

ArcGIS Data Store
Stores data - does not replace enterprise geodatabases

ArcGIS Web Adaptor
Enables single sign on and acts as a load balancer.
ArcGIS Enterprise software components

- To get started these software components must be installed, authorized, and configured together to create a base ArcGIS Enterprise deployment.
ArcGIS Enterprise software components

- To complete the base deployment an ArcGIS Server site must be designated as hosting server
Key concept
Hosting server

- The hosting server is what is used to serve hosted layers
  - Hosted services

- Hosting server requirements:
  - GIS Server role
  - ArcGIS Data Store is the registered managed database
  - Has been designated as the hosting server within the portal

- Only 1 hosting server site per ArcGIS Enterprise deployment
Key concept

Federation

- A trust relationship between server and portal
- Allows the ArcGIS Enterprise deployment to function as a cohesive unit
- Once a server is federated security is set within the portal
  - To access secure content you need an identity within the portal

**Expert tip**: Once you have established federation **do not unfederate**
  - Unfederating can cause breaking changes and be catastrophic for your ArcGIS Enterprise deployment
Adding server roles

All servers are federated with the portal.
Key concept

Hosted content

All content is either

Hosted

• Underlying data is copied to ArcGIS Enterprise

Referenced

• Underlying data is registered with the server
The ArcGIS Data Store can be configured 3 different ways. Each data store type is best fit for a different type of data.
- When configured as a **relational data store** it stores the data that powers your hosted layers

- When configured as a **tile cache data store** it stores the 3D scene data that power the 3D layers, web maps, and apps within your Web GIS

- When configured as a **spatiotemporal big data store** it distributes (shards) your big datasets, making it more efficient to store and access

- In the base deployment we advise you have ArcGIS Data Store configured as relational and tile cache (can be combined or separate)
  - We recommend you never combine the spatiotemporal big data store with any other data store configuration
Data access in ArcGIS Enterprise
Your data + Esri curated content
Your data
Add practically anything

- feature
- tabular
- imagery
- real-time
- big data
- 3D
- field data
- secure data
- file-based
- business intelligence
Frequently asked question:

Do I need to put all my content in the ArcGIS Data Store?

Answer: No
Where does your data live?

• You can register your own data stores with ArcGIS Enterprise
  - This allows you to keep your data where it is – you do not need to copy the data to ArcGIS Enterprise when you publish
    - Maintain 1 copy of the data
    - The data must be registered with the server site you are publishing to

• You can register enterprise geodatabases, big data file shares, cloud stores, folders, etc. as data stores
  - Register data from ArcGIS Pro or ArcGIS Server Manager

• You can register multiple data stores to the same server

• You can also register the same data store to multiple servers
You can access Living Atlas content – even in disconnected deployments

Esri curated content

- A rich collection of base maps, imagery, demographics, earth observations …
- Apps, maps, tile layers, feature layers, scenes …
Configuring the Living Atlas

- Free content is enabled by default in ArcGIS Enterprise
- Subscriber and Premium content available
The number of membership levels within ArcGIS Enterprise.

All members of an ArcGIS Enterprise portal are assigned a role that is associated with a membership level.
To access secure content you must have an identity

Level 1 & 2 Named Users

1. Viewer (read only)
   - Ability to view maps, apps
   - Cannot create, own or share content
   - Cannot perform analysis or data enrichment
   - **No cost** for ArcGIS Enterprise Standard or Advanced

2. Can be assigned a User, Publisher or Administrator role, unlocking additional privileges
ArcGIS Enterprise is a single cohesive product designed to provide a seamless experience.
Using a deployment automation tool will make ArcGIS Enterprise setup easier.
What tool should you use?

- Cloud deployments
- Amazon Web Services
- Microsoft Azure
- Chef
- Powershell DSC
What tool should you use?

- **On-premises deployments**
  - All-in-one, single machine deployments *only*:
    - ArcGIS Enterprise Builder
  - Any deployment scenario:
    - Chef
    - Powershell DSC
Web GIS Capabilities
Web GIS allows you to make your content easily accessible to others.
Sharing beyond your organization
Distributed collaboration

Establishes a trusted, collaborative environment with others
Enables the sharing of data and information, quickly, easily and repeatedly
Common use patterns for Distributed Collaboration

One to One:

Between many:
Emergency Management Agency

Ensuring that families, communities, and key stakeholders are provided the tools they need to prepare for, mitigate against, respond to, and recover from the consequences of emergency and disaster events.

- **High Risk Census Tracts:** 222
- **Shelter locations:** 24
- **Shelters in High Risk Census Tracts:** 0

Available shelter locations: Search for nearby shelters.
Summary
• Remember 5-4-3-2-1

• ArcGIS Enterprise enables standard spatial analysis, 3D, real-time, big data, imagery and more

• Web GIS extends your data to others - whether in or outside of your organization, via apps, maps, and other information products

• Deployments and upgrades can be automated, based on your preferred method

• Data can be integrated from many different sources
Please Take Our Survey on the App

1. Download the Esri Events app and find your event.
2. Select the session you attended.
3. Scroll down to find the feedback section.
4. Complete answers and select “Submit”.
Questions?