



Introduction to ArcGIS Enterprise and Building Your First Deployment

Thomas Edghill & Jonathan Quinn

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WHAT
OTHERS
CAN'T

2019 ESRI DEVELOPER SUMMIT
Palm Springs

Overview

- **Web GIS options with Esri**
- **ArcGIS Enterprise Components**
- **ArcGIS Enterprise Base Deployment Overview**
 - Steps to Build
 - Key Concepts
- **ArcGIS Enterprise Builder**
 - Installation and configuration
 - Upgrading and command line tools
 - Quick tips for the ArcGIS Enterprise Builder

Web GIS Options with Esri

ArcGIS Online

ArcGIS Enterprise

Core Web GIS functionality
(Apps, visualization, smart mapping, analysis...)

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

- In your own infrastructure (Software)
 - Upgraded manually (by you)
 - You control your ArcGIS Enterprise SLA



ArcGIS Enterprise | Components



ArcGIS Web
Adaptor



Portal for ArcGIS



ArcGIS Server



ArcGIS Data
Store

ArcGIS Enterprise | Components



ArcGIS Web
Adaptor

An Esri built application that integrates with your existing **web server** and appropriately directs network traffic for access to ArcGIS Enterprise.



Portal for ArcGIS



ArcGIS Server



ArcGIS Data
Store

ArcGIS Enterprise | Components



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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
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ArcGIS Enterprise | Components



ArcGIS Web
Adaptor



Portal for ArcGIS



ArcGIS Server

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



ArcGIS Data
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Portal for ArcGIS



ArcGIS Server



ArcGIS Data
Store

The **Esri managed data repository** that stores the spatial content that has been copied to Portal.



ArcGIS Enterprise | Components



ArcGIS Web
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Portal for ArcGIS



ArcGIS Server



ArcGIS Data
Store

Three Types:

Relational

Tile Cache

Spatiotemporal

ArcGIS Enterprise | Components



ArcGIS Web
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Portal for ArcGIS



ArcGIS Server



ArcGIS Data
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Three Types:

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ArcGIS Enterprise | Components



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Portal for ArcGIS



ArcGIS Server

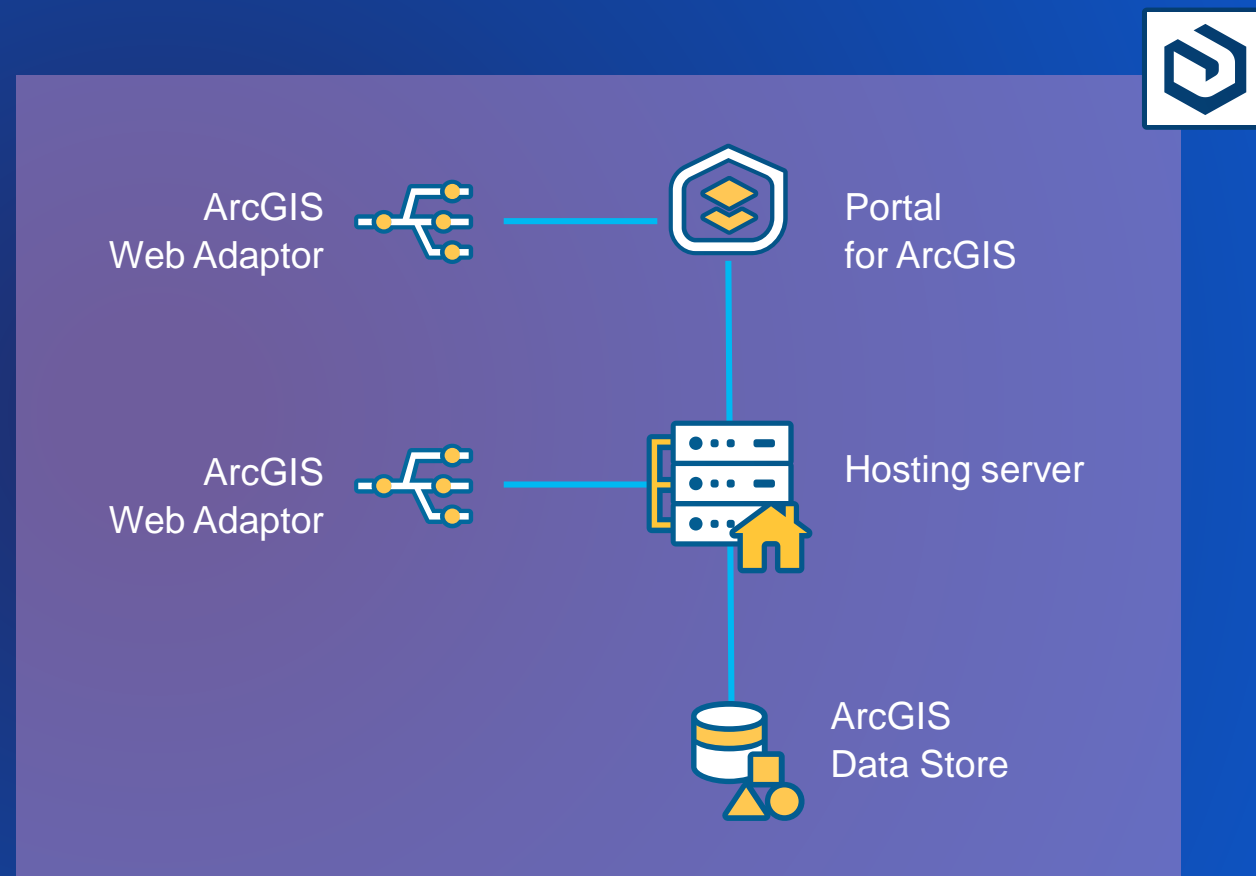


ArcGIS Data
Store

NOTE: It is not a
replacement to your
Enterprise
Geodatabases.

ArcGIS Enterprise Base Deployment Overview

- Four software components, one product.
- Each component has its own administrative endpoints.
- Supported on Windows and Linux
 - Windows examples used in this session, but also applies to Linux
- Supported on cloud deployments
 - Full support on AWS and Azure



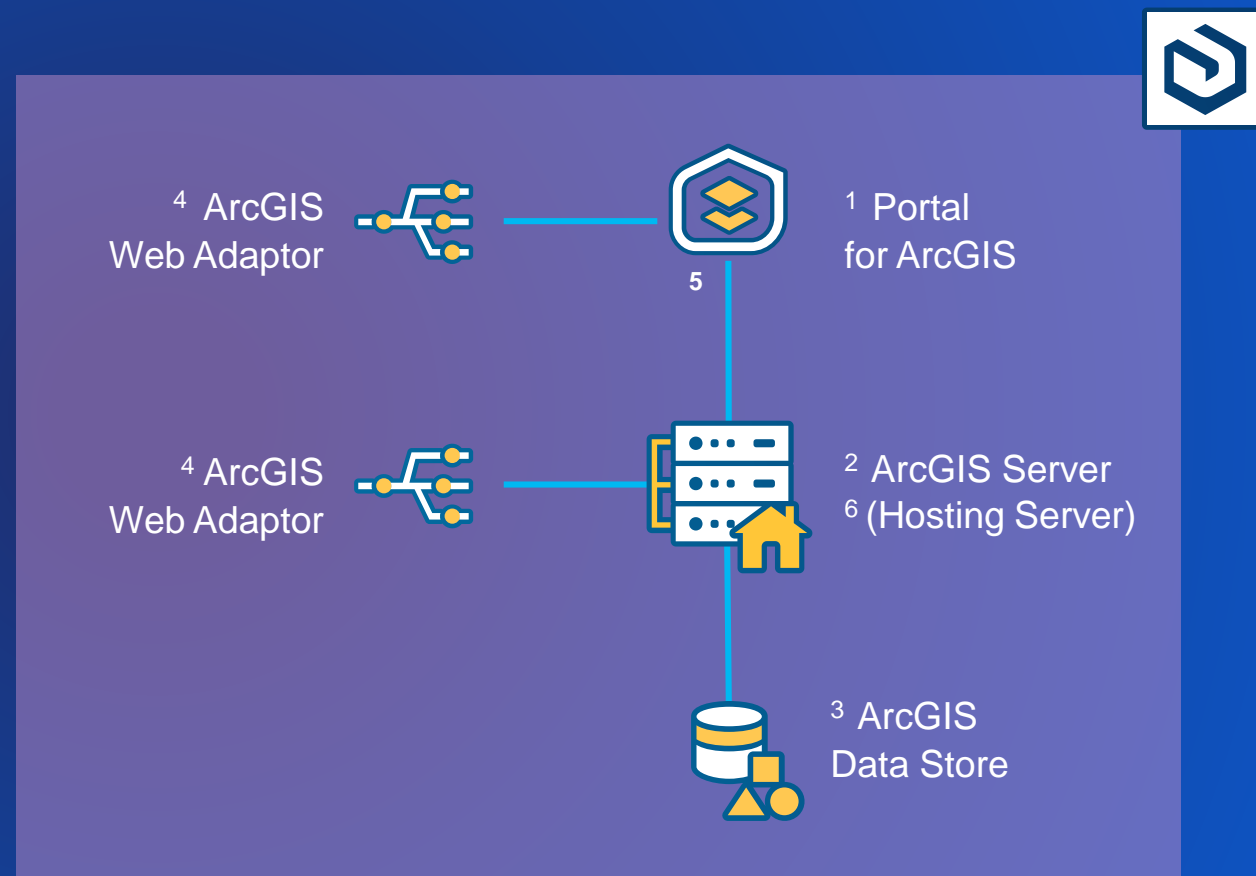
Manually Setup Base ArcGIS Enterprise Deployment

Steps to build:

1. Create the portal site
2. Create the ArcGIS Server site
3. Register the ArcGIS Data Store
4. Register the Web Adaptors
 - Portal for ArcGIS
 - ArcGIS Server
5. **Federate** ArcGIS Server with Portal for ArcGIS
6. Define the **Hosting Server**

Key Concepts

- Federation
- Hosting Server



Key ArcGIS Enterprise Concept: 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

Add ArcGIS Server

Enter the URLs for accessing and administering your ArcGIS Server site. Also enter credentials for an administrator of the ArcGIS Server site.

Services URL:
Example: <https://webadaptorhost.domain.com/webadaptorname>

Administration URL:
Example: <https://gisserver.domain.com:6443/arcgis>

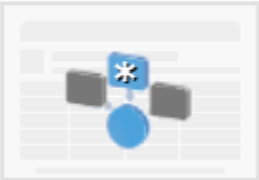
Username:

Password:

Key ArcGIS Enterprise Concept: 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 or csv to a map

Hosting Server



Optionally choose one of your servers to act as your portal's hosting server. Your portal members will be able to publish services to this server. ArcGIS Server's Managed Database must be configured on the site before it can be designated as the portal's hosting server.

WEBGIS.ESRI.COM/server

No hosting server

WEBGIS.ESRI.COM/server

Feature Analysis - Star

Key ArcGIS Enterprise Concept: HTTPS and Certificates

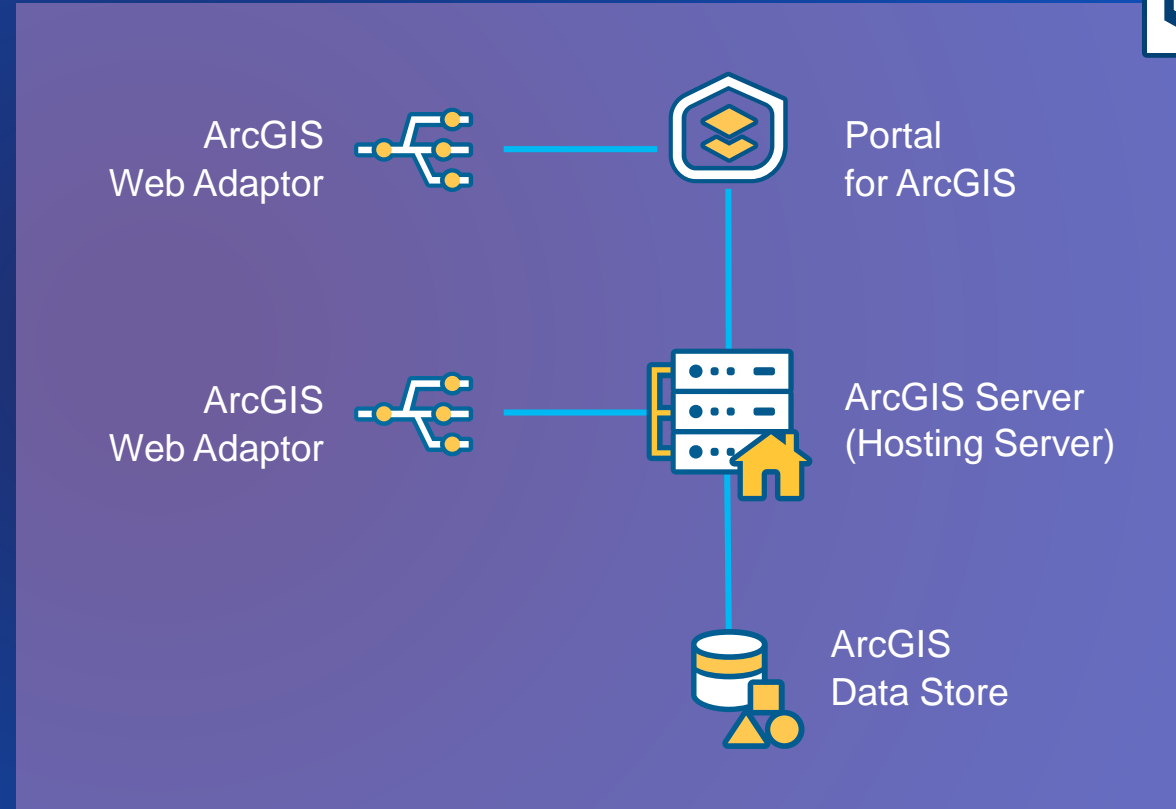
- **Encrypts web communication**
- **Required for Portal**
 - Registering the ArcGIS Web Adaptor
 - Login screens
- **Accessing the portal through SSL only**
- **SSL Certificate types**
 - Self-signed – appropriate for testing
 - Domain-signed – appropriate for portals accessible via intranet use
 - CA-signed – appropriate for a production, public facing site



ArcGIS Enterprise Base deployment overview

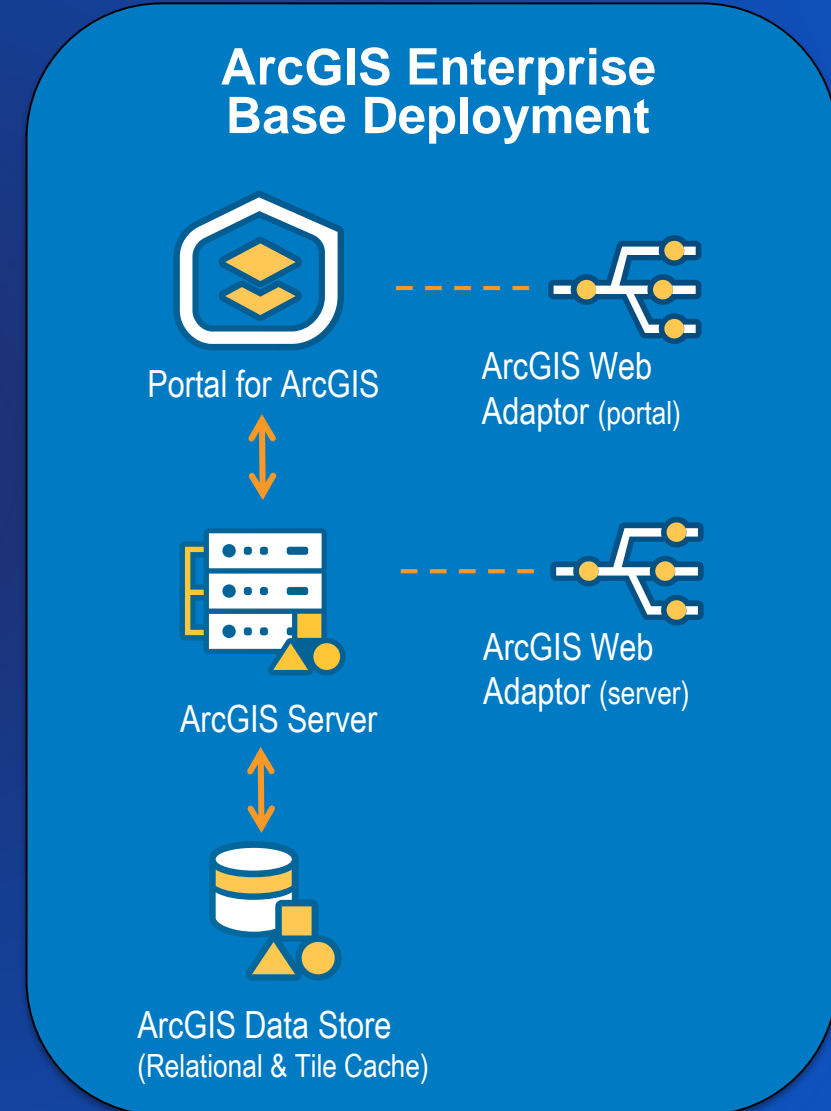
Key Components

- Installed Locations
- Content directories/Configuration Store
- Service Accounts
- Administrator Accounts

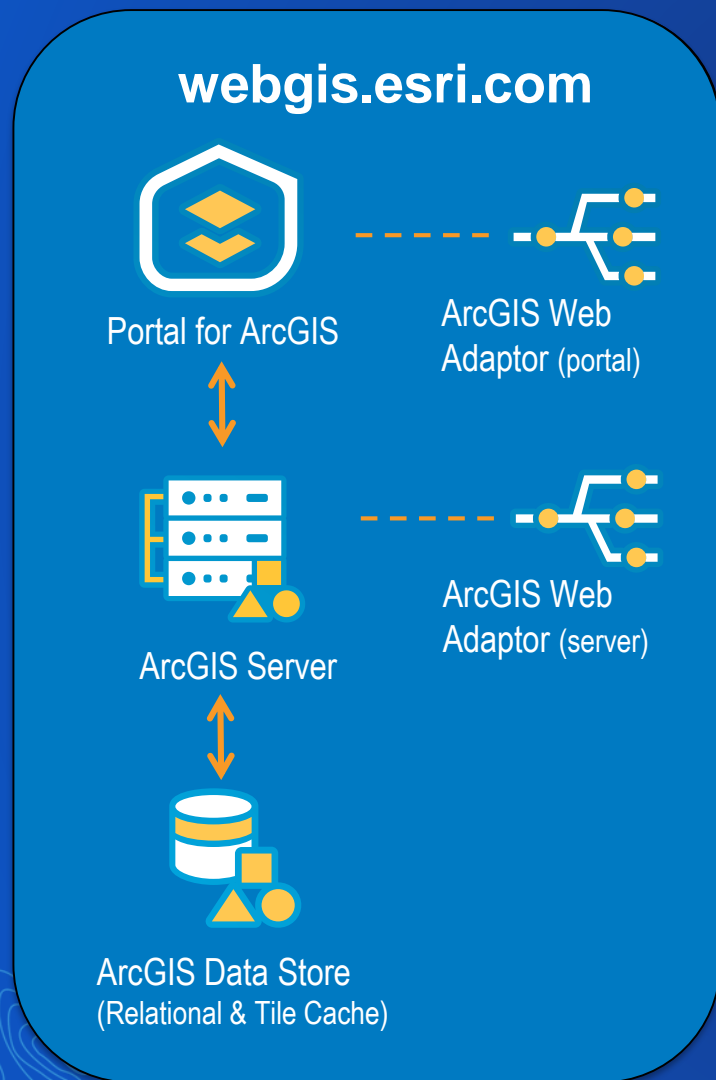


ArcGIS Enterprise Builder

- New 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



Demo: Our setup



Portal Home Page URL: <https://webgis.esri.com/portal/home/>

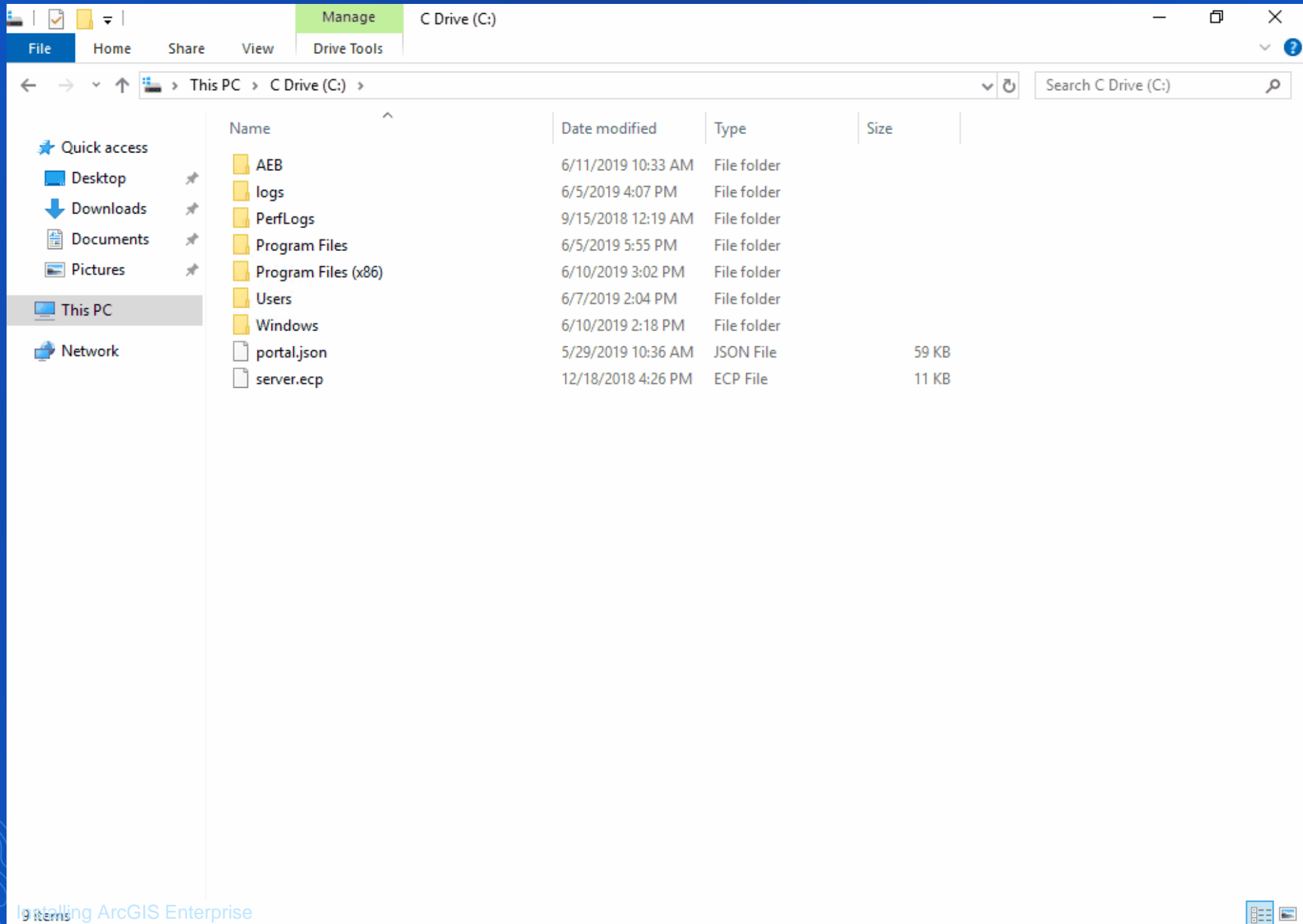
Portaladmin URL: <https://webgis.esri.com/portal/portaladmin/>

Services URL: <https://webgis.esri.com/server/rest>

Server Manager URL: <https://webgis.esri.com:6443/arcgis/manager>

Demo: ArcGIS Enterprise Builder

Installing and configuring the deployment





ArcGIS Enterprise Configuration Wizard

Welcome!

You are close to completing the configuration of your ArcGIS Enterprise base deployment.

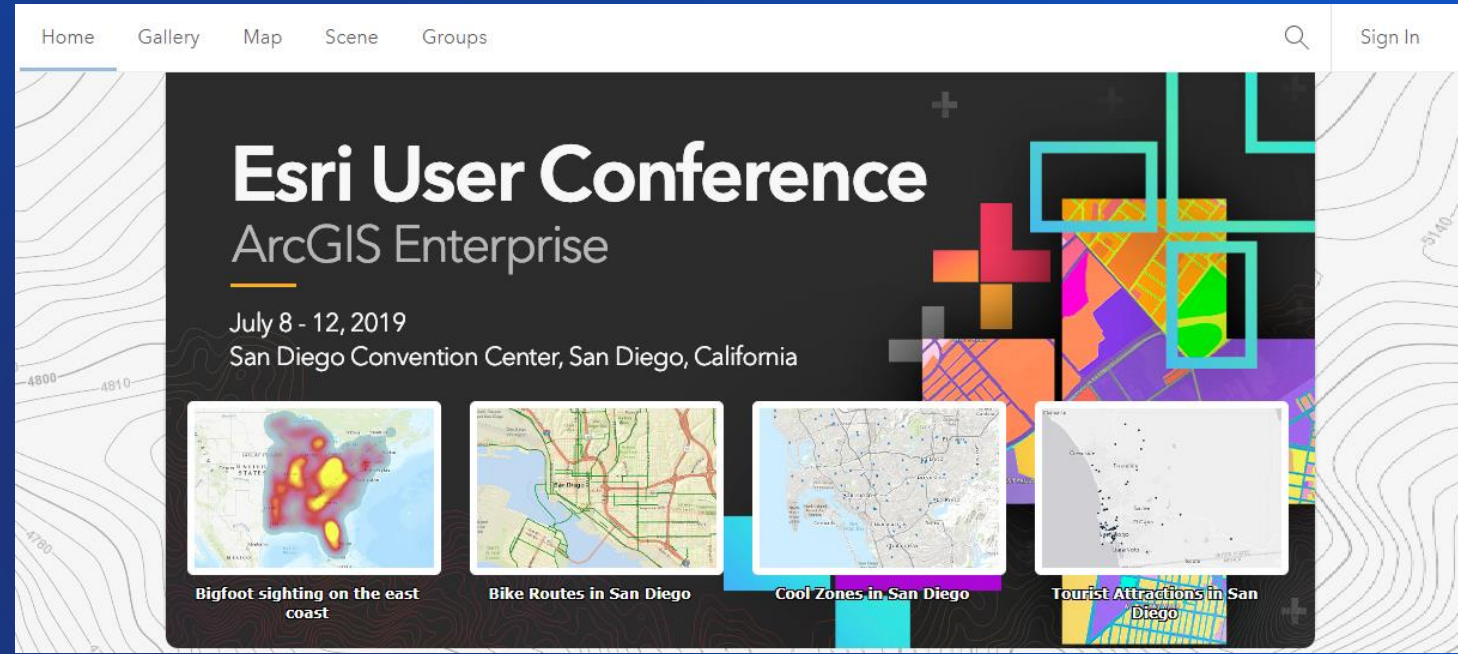
To complete the configuration, the browser must automatically switch to a secure (HTTPS) connection and display a warning message that you will need to advance through.

Click Next to continue.

[Next](#)

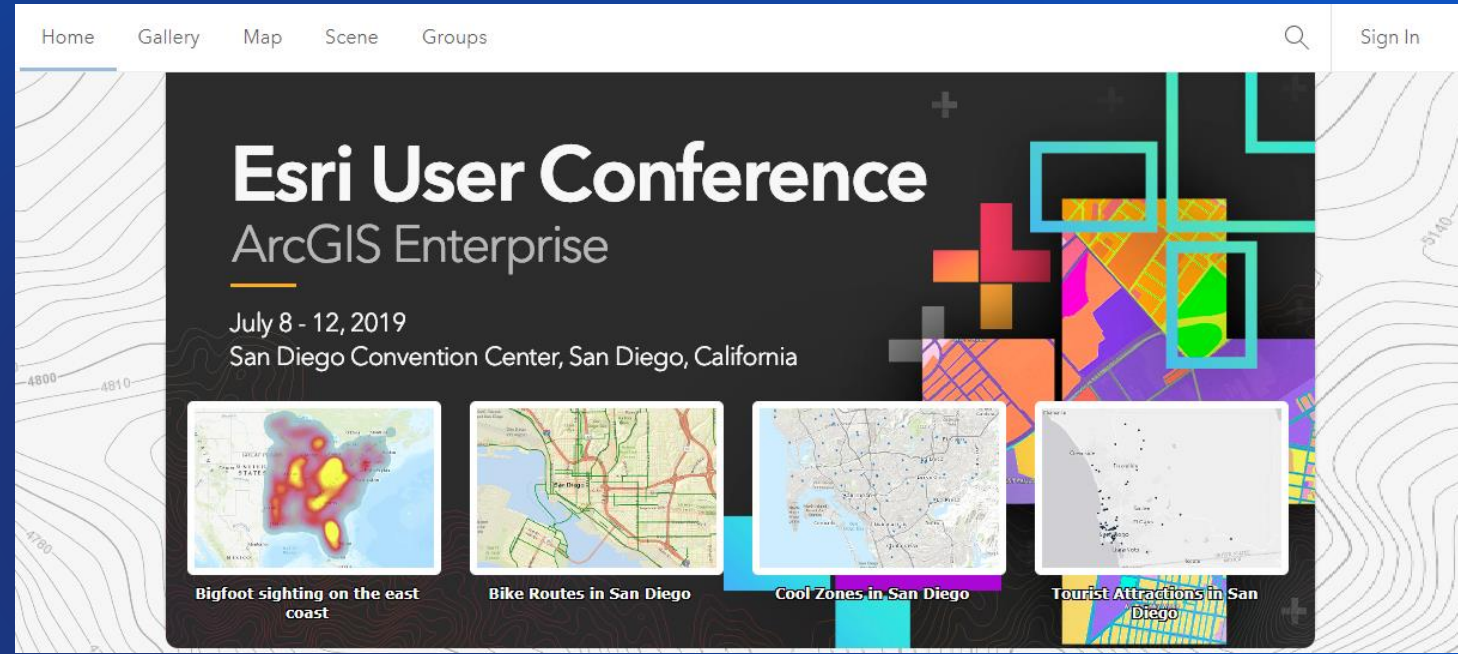
Next Steps: Administering your Enterprise

- **Verify deployment**
 - Publish test data
- **Adding members**
 - Built-in or enterprise users
- **Customize the home page**
 - Branding your portal
- **Updating the behavior of the portal**
 - Custom utility services and basemap gallery
- **Review and monitor ArcGIS Enterprise Logs**
 - Portal for ArcGIS and ArcGIS Server logs



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Demo: ArcGIS Enterprise Builder

Verifying and Using the ArcGIS Enterprise

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

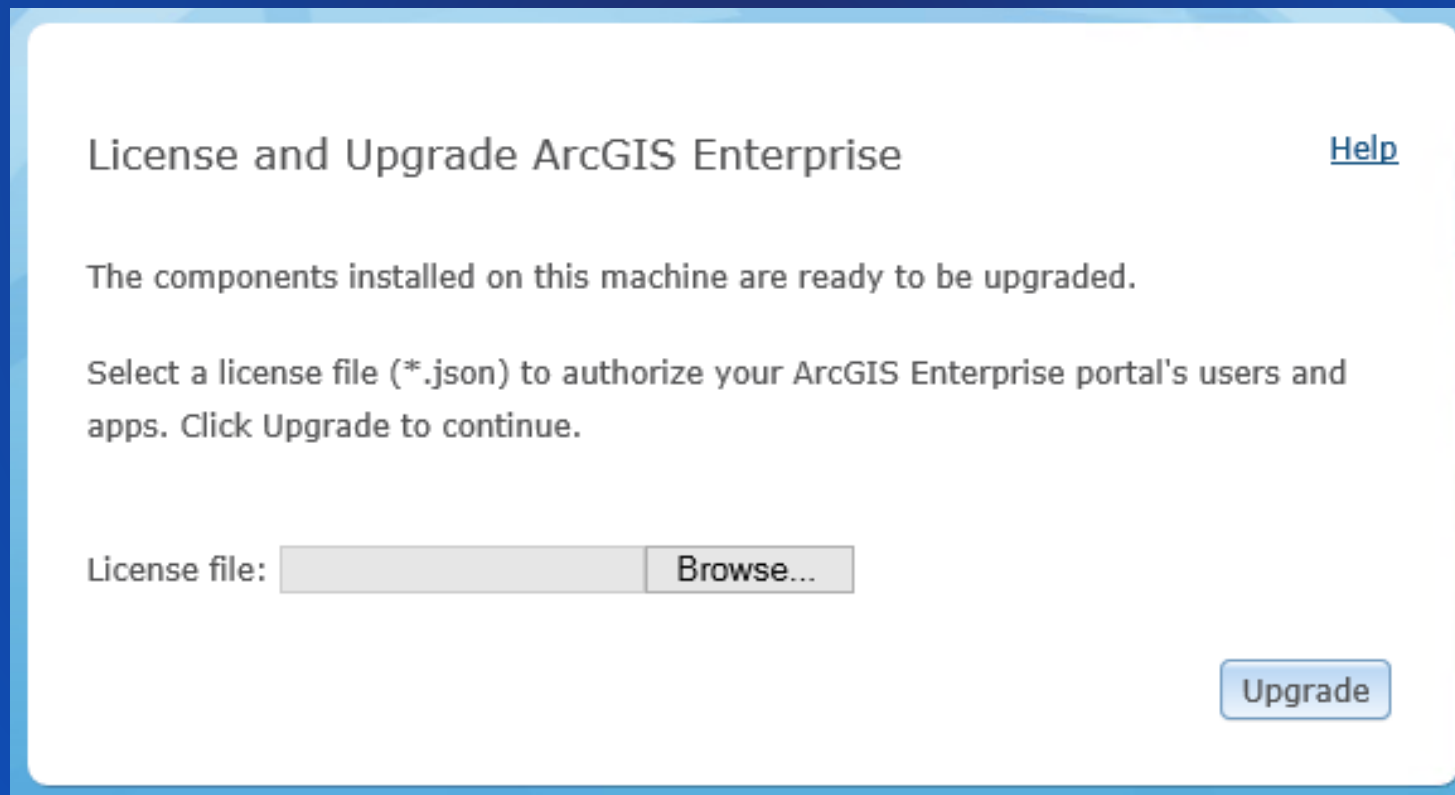


Upgrades and Command Line Tools

Overview, Demo, Command Line Tools

Upgrading an Enterprise Deployment

- Supports upgrades from 10.5.1
- One click experience that upgrades all components



The screenshot shows a dialog box titled "License and Upgrade ArcGIS Enterprise" with a "Help" link in the top right corner. The main text states: "The components installed on this machine are ready to be upgraded. Select a license file (*.json) to authorize your ArcGIS Enterprise portal's users and apps. Click Upgrade to continue." Below this text, there is a "License file:" label followed by a text input field and a "Browse..." button. In the bottom right corner, there is a blue "Upgrade" button.

License and Upgrade ArcGIS Enterprise [Help](#)

The components installed on this machine are ready to be upgraded.

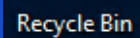
Select a license file (*.json) to authorize your ArcGIS Enterprise portal's users and apps. Click Upgrade to continue.

License file: [Browse...](#)

[Upgrade](#)

Demo: ArcGIS Enterprise Builder

Upgrades



The screenshot shows a Windows File Explorer window titled 'AEB'. The address bar indicates the path: 'This PC > C Drive (C:) > AEB'. The left sidebar shows the navigation pane with 'C Drive (C:)' selected. The main pane displays a table of files and folders:

Name	Date modified	Type	Size
SetupFiles	6/10/2019 4:06 PM	File folder	
Builder	5/8/2019 8:14 AM	Application	3,677 KB
Install	3/8/2017 7:01 PM	Chrome HTML Do...	1 KB
README_BEFORE_INSTALLING	6/3/2019 10:07 AM	Chrome HTML Do...	2 KB

The status bar at the bottom indicates '4 items'.

Command Line Utilities - Install

- Install a base deployment
 - Usage: <location of setup>/Builder.exe
 - Supported options:
 - GIS_INSTALLDIR= (Install directory)
 - GIS_USER_NAME= (Username of account to run the software)
 - GIS_PASSWORD= (Password of account to run the software)
 - SERVER_AUTHORIZATION= (Path to Server authorization file)
 - WAPortal= (Name of the ArcGIS Web Adaptor for Portal for ArcGIS)
 - WAServer= (Name of the ArcGIS Web Adaptor for your hosting Server)



Command Line Utilities - Configure

- Configure a base deployment

- Usage: **<ArcGIS Server Install Dir>/tools/configurebasedeployment/configurebasedeployment.bat**
- Supported options:
 - **-fn (First Name)**
 - **-ln (Last Name)**
 - **-u (Username)**
 - **-p (Password)**
 - **-e (Email)**
 - **-qi (Security Question index)**
 - **-qa (Security Question answer)**
 - **-ws (Server Web Adaptor URL for Java Web Servers)**
 - **-wp (Portal Web Adaptor URL for Java Web Servers)**
 - **-d (Content Directory)**
 - **-lf (The path to the portal license file)**
 - **-ut (The user type ID for the Initial Administrator)**
 - **-f (Properties file for the configurebasedeployment utility)**
 - **-h (Display help)**

Command Line Utilities - Upgrade

- Upgrade a base deployment
 - Usage: **<ArcGIS Server Install Dir>/tools/upgradebasedeployment/upgradebasedeployment.bat**
 - Supported options:
 - -lf (Path to the portal license file)
 - -s (Performs silent upgrade)
 - -h (Displays help)



Quick Tips for the ArcGIS Enterprise Builder

- Don't reinstall or uninstall components manually
- Can only upgrade ArcGIS Enterprise Builder deployments
- Run Patch Notification tool to check for available patches
- Run the security scans for Server and Portal



Resources

- Review help documentation – <https://enterprise.arcgis.com/en/documentation>
 - Topic - "Tutorial: Set up a base ArcGIS Enterprise deployment"
 - Other subjects – Pro licensing, SSL certificates, upgrading
- Technical Support – <https://support.esri.com>
- Esri Showcase – ArcGIS Enterprise Area

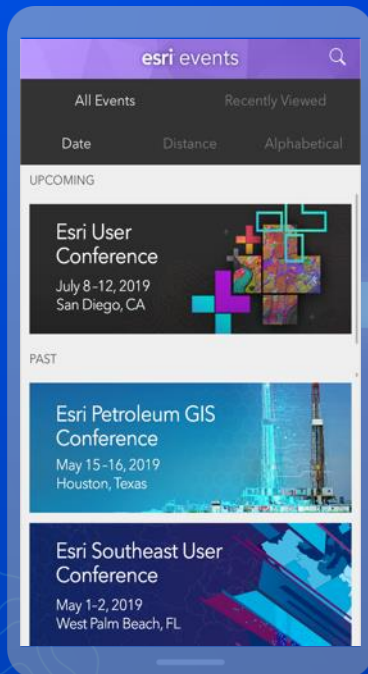
See Us Here

WORKSHOP	LOCATION	TIME FRAME
<ul style="list-style-type: none">• ArcGIS Enterprise Customization and Administration• Extending ArcGIS Enterprise• Upgrading ArcGIS Enterprise• Upgrading ArcGIS Enterprise (Repeat Session)• Using WebHooks in ArcGIS Enterprise• ArcGIS Enterprise and SSL Considerations• ArcGIS Enterprise and SSL Considerations (Repeat)• ArcGIS Enterprise: Architecting your Deployment• ArcGIS Enterprise: The Road Ahead	<ul style="list-style-type: none">• Primrose B• Mesquite G-H• Primrose B• Mesquite G-H• Demo Theater 3• Primrose B• Primrose C-D• Ballroom 06 C• Catalina/Madera	<ul style="list-style-type: none">• Tuesday: 4:00pm – 5:00pm• Tuesday: 5:30pm – 6:30pm• Tuesday: 5:30pm – 6:30pm• Friday: 1:00pm – 2:00pm• Wednesday: 1:30pm – 2:00pm• Thursday: 1:00pm – 2:00pm• Friday: 1:00pm – 2:00pm• Friday: 1:00pm – 2:00pm• Friday: 10:00am – 11:00am

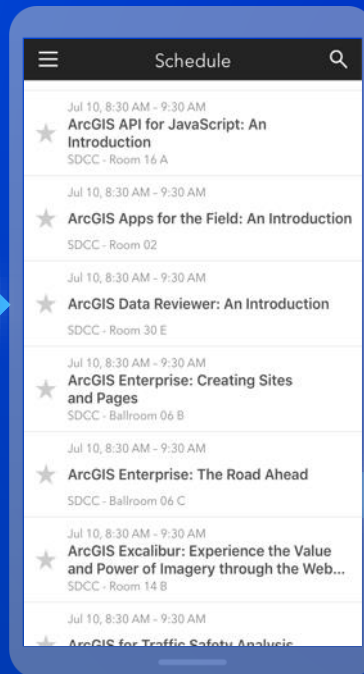


Please Share Your Feedback in the App

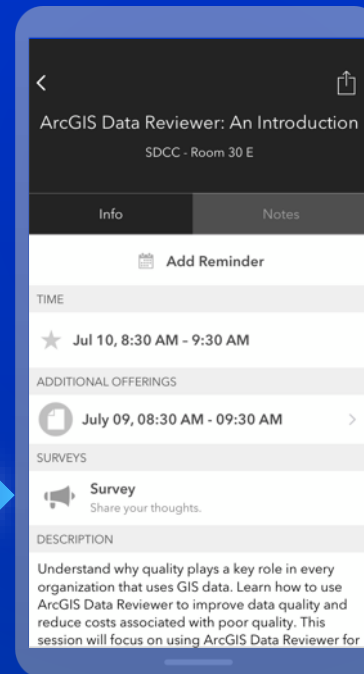
Download the Esri Events app and find your event



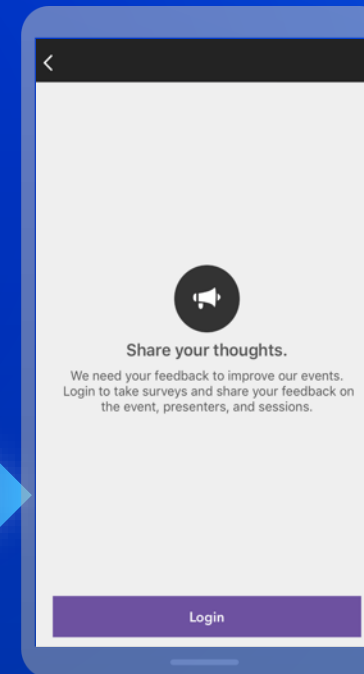
Select the session you attended



Scroll down to "Survey"



Log in to access the survey



Complete the survey and select "Submit"

