Web AppBuilder for ArcGIS: JavaScript Apps Made Easy

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Agenda

1. Product Overview
   - What it is

2. Tours
   - Build 2D and 3D apps effectively

3. Customization
   - How to extend your workflows

4. Templates
   - How to publish templates

5. Community and resources
   - Get help
The ArcGIS Platform enables Web GIS
Enabling GIS Everywhere

Simple
Integrated
Open

Available in the Cloud . . .
. . . and On-Premises
Create a web app running on any device without writing code
Rich Set of Built-in Tools for Your Workflows and Your Brand

50+ widgets

9 themes

- Billboard Theme
- Box Theme
- Dart Theme
- Foldable Theme
- Dashboard Theme
- Launchpad Theme
- Jewelry Box Theme
- Plateau Theme
- Tab Theme
2D or 3D, Your Choice
Extensibility

Solid framework

Easily plug in tools and solutions

Rich SDK (*jimu* library)

Rapidly develop tools and solutions

ArcGIS API for JavaScript
Web AppBuilder for ArcGIS

• Functionality within ArcGIS Online and Portal for ArcGIS
  - ArcGIS Online since Dec 2014
  - Portal for ArcGIS in 10.3 and later
• Enables new apps to be created without coding
  - Interactive WYSIWYG user experience
  - Supports 2D and 3D apps
  - 2D apps runs on any device, in a web browser
• Fully integrated with the ArcGIS Platform
• Built with ArcGIS API for JavaScript and HTML 5 technology
• Extensible
2 Options to Work with Web AppBuilder

1. **Within ArcGIS Online or Portal for ArcGIS**
   - Embedded in the web site
   - Activate from the map viewer or My Contents

2. **Developer Edition**
   - Separate download and installed locally
   - Sign into ArcGIS Online or Portal for ArcGIS
   - Support for custom widgets and themes

- Both offer the same “builder” user experience, same capabilities
Web AppBuilder Live Sites Showcase
Access Type

36% Private
14% Shared
34% Public
15% Account

324,000 Total Web AppBuilder Apps
Workflow for Creating a new App

1. Create new app
2. Pick style
3. Select map or scene
4. Add widgets
5. Configure attributes
6. Preview and launch

2D or 3D
Tour of Web AppBuilder
Widgets for 2D App

- **Widget**: provides a specific functionality with configuration options
- 50+
Foundation Widgets

- Navigation
- Query
- Search
- Filter
- Editing
- Geoprocessing
- Printing

- Legend
- Layer List
- Basemap Gallery
- Attribute Table
- Add Data
- Select
Widgets for 3D App

- Real world representation
- Data visualization (3D animation)
  - 2D feature service
Themes

- **Theme**: Define the look and feel of the app
- **9 themes** available
Creating 3D Apps with Web AppBuilder
Customization
2 Tiers of Customization

- **Enabling custom functionality – Configurator**
  - Add custom widgets to your apps
  - Non-developer

- **Extending custom functionality – Developer**
  - Create new widgets from scratch
  - Programmer
Web AppBuilder Developer Edition

Download and install locally
- Sign into ArcGIS Online or Portal for ArcGIS
- Same “builder” user experience as embedded Web AppBuilder
- Work with custom widgets and themes

Provides extensibility framework for apps
Leverages ArcGIS API for JavaScript
Create web apps on your own computer

Developers.ArcGIS.com/web-appbuilder
Web AppBuilder and App ID

- Register Web AppBuilder Developer Edition with ArcGIS Online or Portal for ArcGIS with App ID
- Create new item for Web AppBuilder, generate App ID
  - App ID is used to enable users to sign into ArcGIS Online or Portal for ArcGIS with OAuth 2.0 authentication
  - Enables app to work with user content and work with utility services
GitHub: Custom Widgets

- Some Dev sample widgets available from Esri
  - Solutions Team: https://github.com/Esri/solutions-webappbuilder-widgets
  - Raster Team: https://github.com/Esri/WAB-Image-Services-Widgets
GeoNet: Custom Widgets shared by Community

https://geonet.esri.com/groups/web-app-builder-custom-widgets

- Mixture of enhanced and brand new widgets
- Approx. 35+ widgets
- Some supporting docs
- Custom widgets by the community: over 2400+ downloads
Web AppBuilder for ArcGIS Components

GUI Builder

Widgets

Themes

Stem App

Web App

config
Widget

- HTML/JavaScript/CSS (appearance)
- Specific task (functionality)
- Configuration in JSON
- Localization support
- Builder configuration UI

Theme

- HTML/JavaScript/CSS
- Layout
- Branding
- Widget panel and behavior
- Style (color, etc.)
- Default widgets
Web AppBuilder Developer Edition Templates

• Makes it even easier to deploy a new app
• Templates contain a pre-selection of widgets → purpose driven app
  - Option to add/remove widgets as you like
• You can create your own templates
Using Web AppBuilder Developer Edition
Custom Widgets in ArcGIS Enterprise

1) Develop your custom widgets with Web AppBuilder Developer Edition
   - You can also buy custom widgets from the ArcGIS Marketplace!

2) Host custom widgets in your web server

3) Register them in your ArcGIS Enterprise instance
   - Requires administrative privileges in your Portal

4) Share your custom widget item:
   - With a Group
   - The entire Organization
   - Everyone

5) Bring the custom widget in your Web AppBuilder apps
   - Click!
   - Requires Level 2 Named User
Custom Widgets in ArcGIS Enterprise Video
## Version Compatibility Table

### About release versions

Web AppBuilder for ArcGIS has three release formats—ArcGIS Online, Portal for ArcGIS, and Developer edition. Internally the variable `wabVersion` is to track the framework and config changes, and variable `productVersion` is to track the product changes. You can retrieve their values by typing each variable name in the browser console when the app starts. The table below shows the relationship among three formats and associated ArcGIS API for JavaScript in terms of release versions.

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Templates in Web AppBuilder
Export Web Apps as New Templates

- Leverage Web AppBuilder to **create new templates** which can be used in the ArcGIS Online/Portal for ArcGIS map viewer

- **Workflow**
  - Select *Export As Template* option
  - Set configurable parameters
  - Generates a new template item
  - Add to a group
  - Select group for the Map > Web App Templates option
Templates in Web AppBuilder
Community and Resources
GeoNet – Esri Community

- 3 places for Web AppBuilder user community
- All are very active
- Top GeoNet contributors post in these forums/places

- Created, owned, and maintained by the community
- Rebecca Strauch
Please Take Our Survey!

Download the Esri Events app and go to DevSummit

Select the session you attended

Scroll down to the “Feedback” section

Complete Answers, add a Comment, and Select “Submit”