



ArcGIS API for JavaScript An Introduction

Kelly Hutchins

Heather Gonzago

Why

- **Interactive maps**
- **Widgets**
- **Analysis**
- **Lots of samples**

Learn about the API

ArcGIS for Developers ▾ FEATURES PLANS DOCUMENTATION COMMUNITY SEARCH

ArcGIS API for JavaScript


Home Guide API Reference Sample Code

Use the API

Reference the ArcGIS JavaScript API from our CDN and you are ready to get started:

```
<link rel="stylesheet" href="http://jsdev.arcgis.com/3.14/esri/css/esri.css">
<script src="http://jsdev.arcgis.com/3.14/"></script>
```

Your first map



```
require(["esri/map", "dojo/domReady!"], function(Map) {
  var map = new Map("map", {
```

ArcGIS Integration

Use ArcGIS.com or your own on-premises ArcGIS Server. The API provides tools to make working with both simple.

Any Screen, Any Browser

Whether it's mobile devices or desktops, the API is designed to work in a wide variety of situations.

HTML5 and CSS3

Leverage the latest HTML 5 and CSS 3 standards to increase the flexibility and performance of your mapping applications.

[JS SDK OVERVIEW](#)

Developer Setup

- IDE (s)
- Code Assist
- Plugins





Build sample app

Widgets, Events, Graphics, Selection



Get the API

- Hosted

```
<head>  
  <link href="http://js.arcgis.com/3.14/esri/css/esri.css">  
  <script src="http://js.arcgis.com/3.14/"></script>  
</head>
```

- Download

<http://developers.arcgis.com/en/downloads>

Make a map

Class: Map

[AMD Module Require | Legacy Module Require] Constructors | CSS | Data Attributes | Properties | Methods | Events

```
require(["esri/map"], function(Map) { /* code goes here */ });
```

Description

(Added at v1.0)

The Map class creates a container and required DOM structure for adding layers, graphics, an info window, and other navigation controls.

Typically, a map is added to a page using a DIV. The map's width and height are initialized to those of the DIV container.

The `load` event is fired after the first layer has been added to the map. At this point, the map is fully functional. A `Map.on("load")` handler function should be used to add content and change map behaviors.

For an introduction on using the Map class, see [Adding a map](#).

Samples

Search for [samples](#) that use this class.

Constructors

Name	Summary
<code>new Map(divid, options?)</code>	Creates a new map inside of the given HTML container, which is often a DIV

Loading Modules

- Preferred arg alias

```
require(["esri/map", "dojo/domReady!"], function(Map) {  
  map = new Map("mapDiv", {  
    center: [-122.27, 47.58],  
    zoom: 14,  
    basemap: "streets"  
  });  
});
```



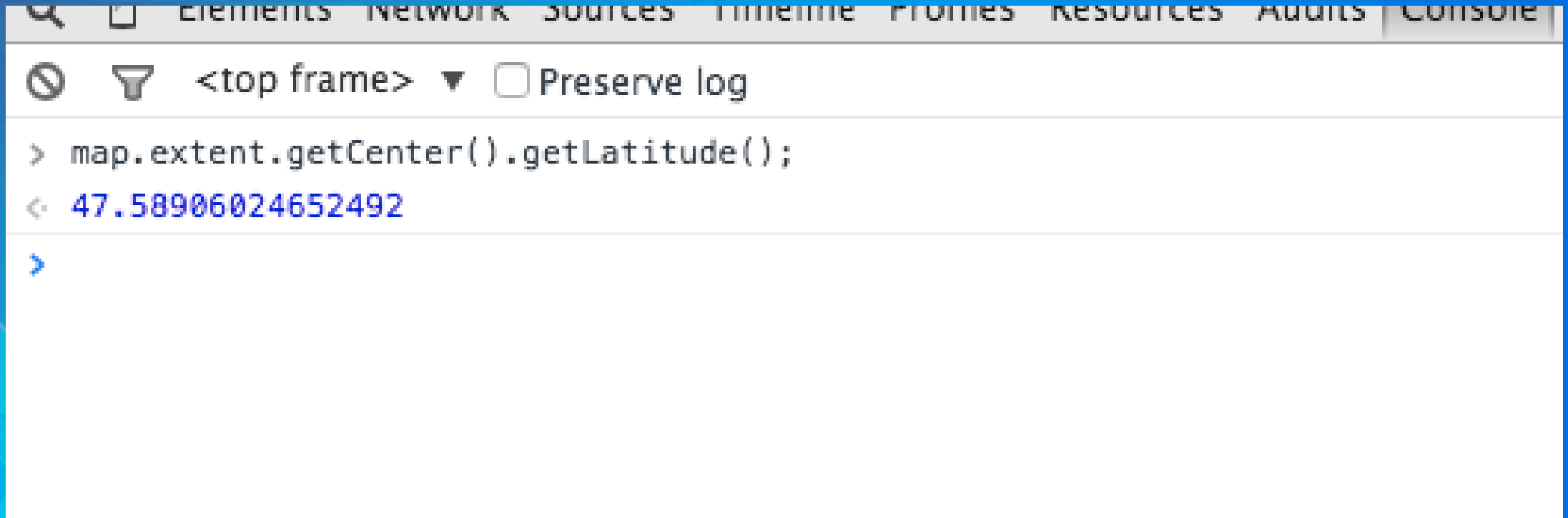
Scrambled Tiles



Basemaps



Developer Console

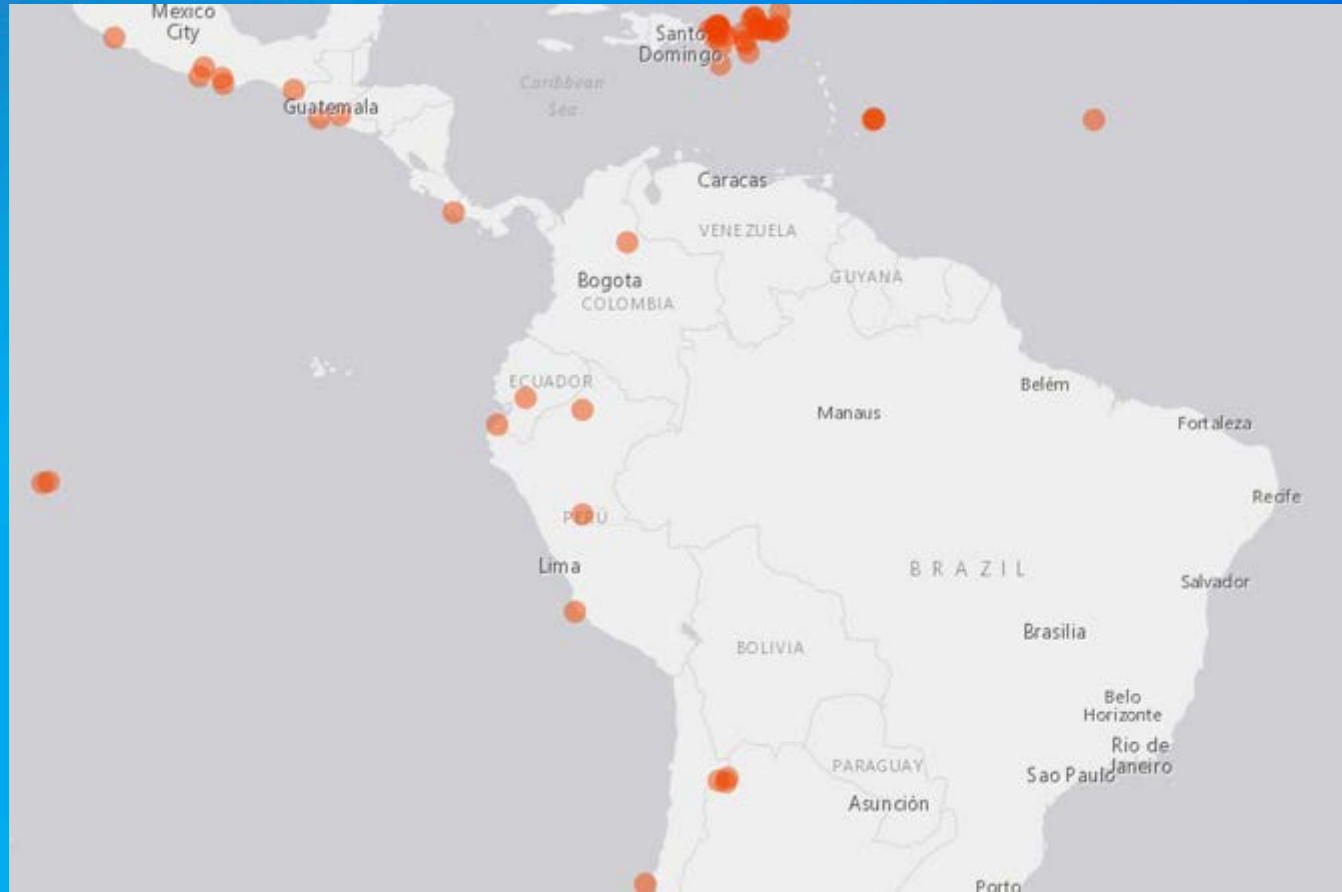


The image shows a screenshot of a web browser's developer console. The console is open to the 'Console' tab, which is highlighted in the top navigation bar. The console interface includes a search icon, a filter icon, and a dropdown menu showing '<top frame>'. There is also a checkbox labeled 'Preserve log' which is currently unchecked. The console contains the following text:

```
> map.extent.getCenter().getLatitude();  
← 47.58906024652492  
  
>
```

Add Layers

- Lots of types
 - Tiled
 - Dynamic
 - Graphics
 - **Feature layers**
 - CSV
 - KML
 - WMS/WMTS/WFS
 - Custom layers



Layer coding pattern

1. Load module
2. Create layer
3. Specify properties
4. Add layer to map

```
require(["esri/map",  
        "esri/layers/FeatureLayer",  
        "dojo/domReady!"], function(Map,  
        FeatureLayer)
```

```
var featureLayer = new  
FeatureLayer("http://  
sampleserver6.arcgisonline.com/arcgis/  
rest/services/USA/MapServer/2",{  
    outFields: ["*"]  
});  
  
map.addLayer(featureLayer );
```

Demo: Add feature layer to application



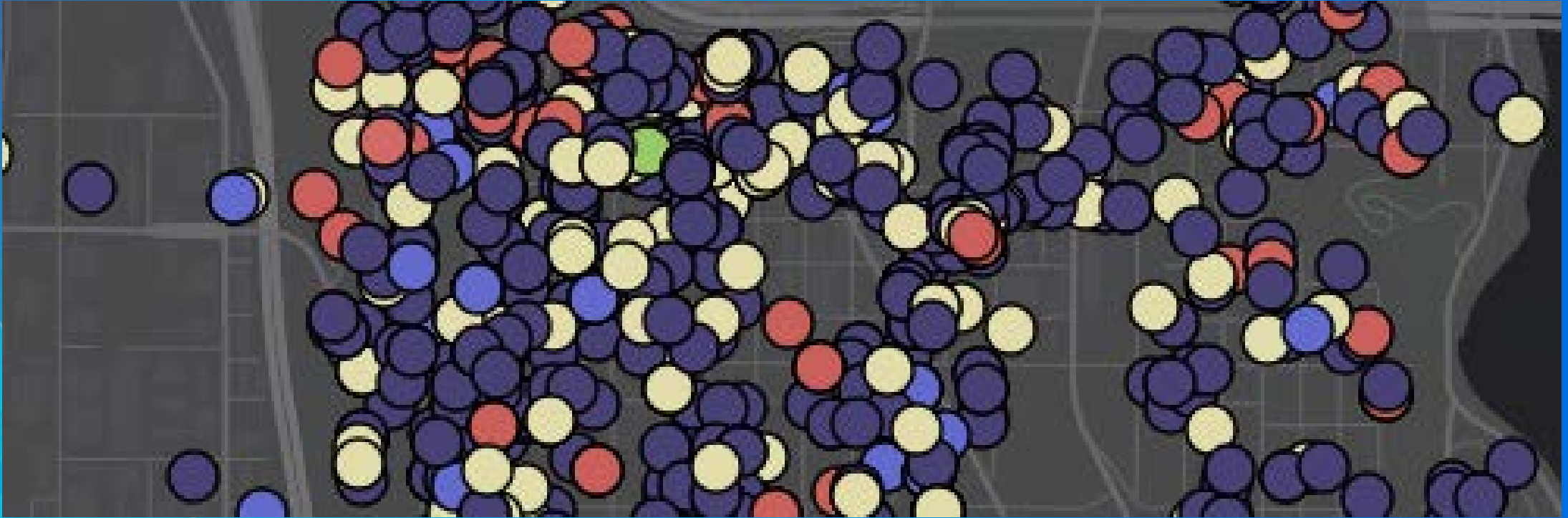
Deep Dive: Feature Layers

- Selection ...
- Query
- Edit
- Renderer

Renderers



Demo: Apply renderer

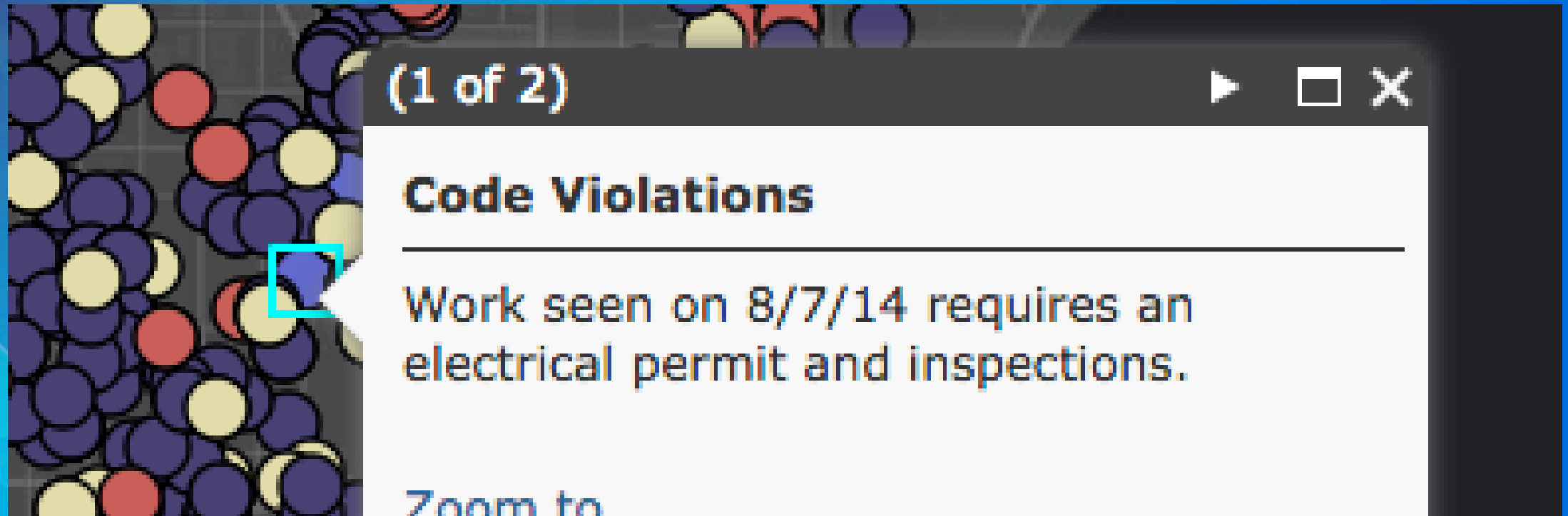


Popups

- Add interactivity
- Information about ..
 - A location
 - A feature
 - The results of a search
- Customizable



Demo: Make map interactive



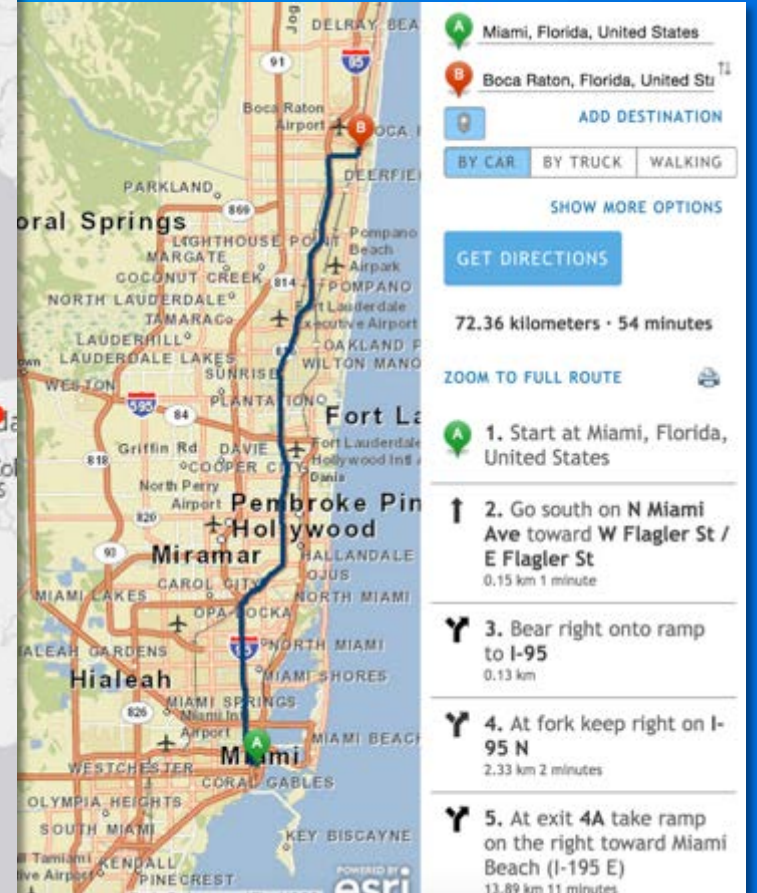
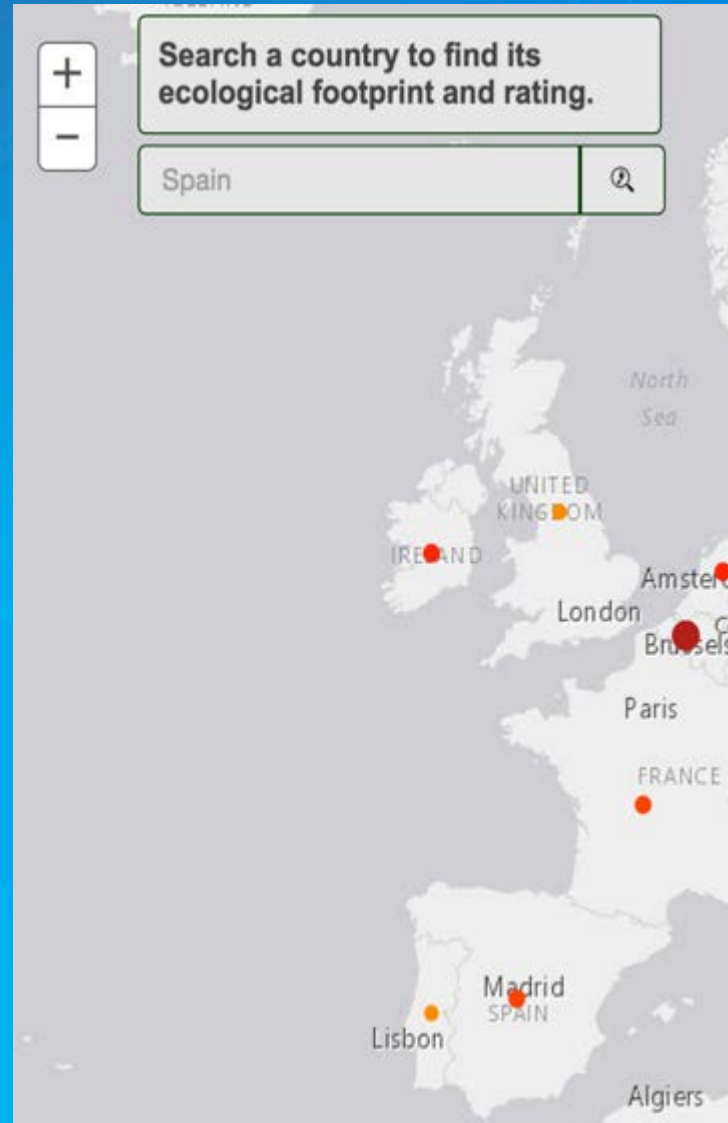
Tip: Reduce code by using a web map

- [esri/arcgis/utils](https://esri.com/arcgis/utils)
 - `createMap`



Widgets

- Search
- Legend,
- Directions,
- Print,
- Basemap Toggle,
- etc

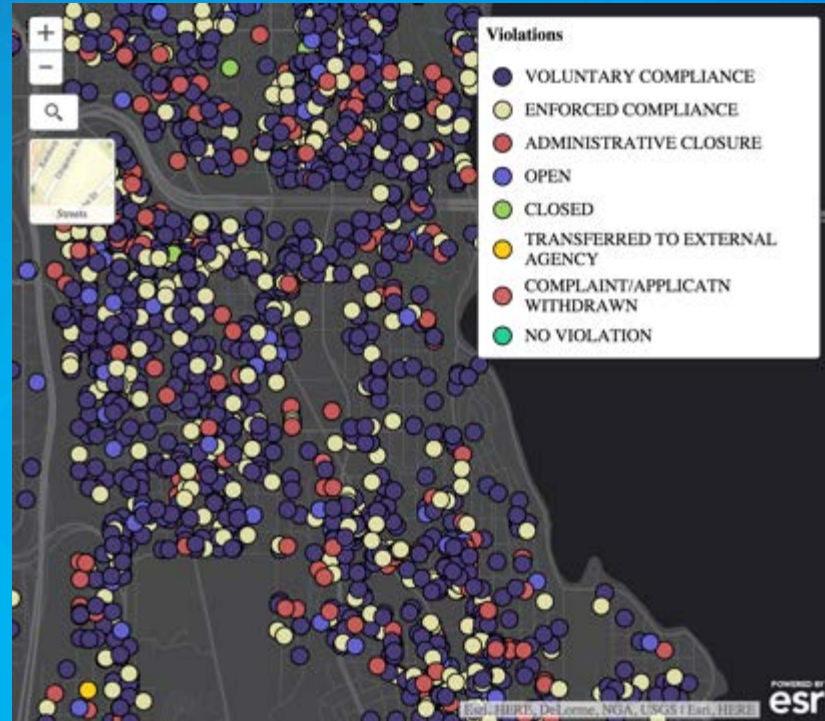


Widget coding pattern

- Load module
- Create widget
- Set widget properties
- Call startup

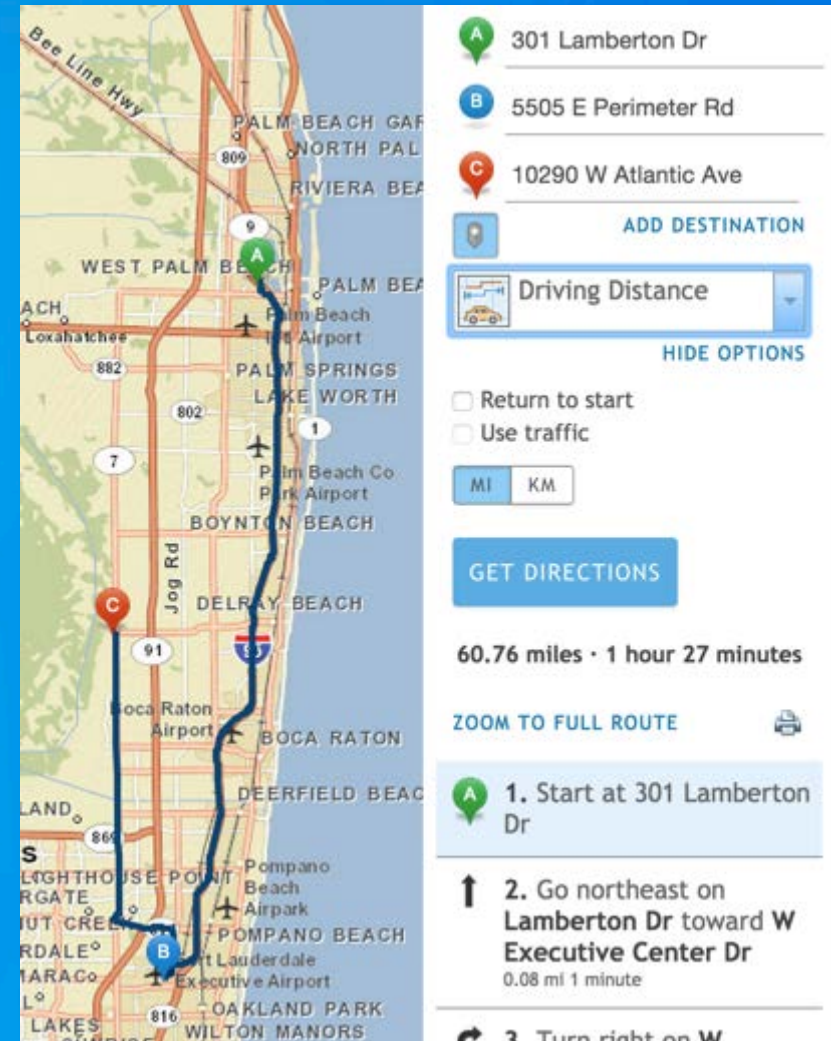
```
var basemapToggle = new BasemapToggle({  
    map: map,  
    basemap: "streets"  
}, "basemapDiv");  
basemapToggle.startup();
```


Demo: Add search widget



Demo: Directions widget

- Requires credit-based route service



The screenshot displays a directions widget with the following components:

- Map:** Shows a route starting at 301 Lamberton Dr (A), passing through 10290 W Atlantic Ave (C), and ending at 5505 E Perimeter Rd (B). The route is highlighted in blue on a map of the Palm Beach area.
- Destinations:**
 - A 301 Lamberton Dr
 - B 5505 E Perimeter Rd
 - C 10290 W Atlantic Ave
- Buttons:** ADD DESTINATION, HIDE OPTIONS, GET DIRECTIONS.
- Mode:** Driving Distance (selected).
- Options:** Return to start (unchecked), Use traffic (unchecked).
- Units:** MI (selected), KM.
- Summary:** 60.76 miles · 1 hour 27 minutes.
- Actions:** ZOOM TO FULL ROUTE, Print icon.
- Directions List:**
 1. Start at 301 Lamberton Dr
 2. Go northeast on Lamberton Dr toward W Executive Center Dr
0.08 mi 1 minute
 3. Turn right on W

Tip: Working with secure resources

- Identity Manager
- OAuth Support
- Proxies

UC – User Login Oauth wants to access your ArcGIS Online account information

Sign In

esri

Username

Password

Keep me signed in

SIGN IN

CANCEL

[Forgot password?](#) [Forgot username?](#)

[Sign in with your enterprise login](#)

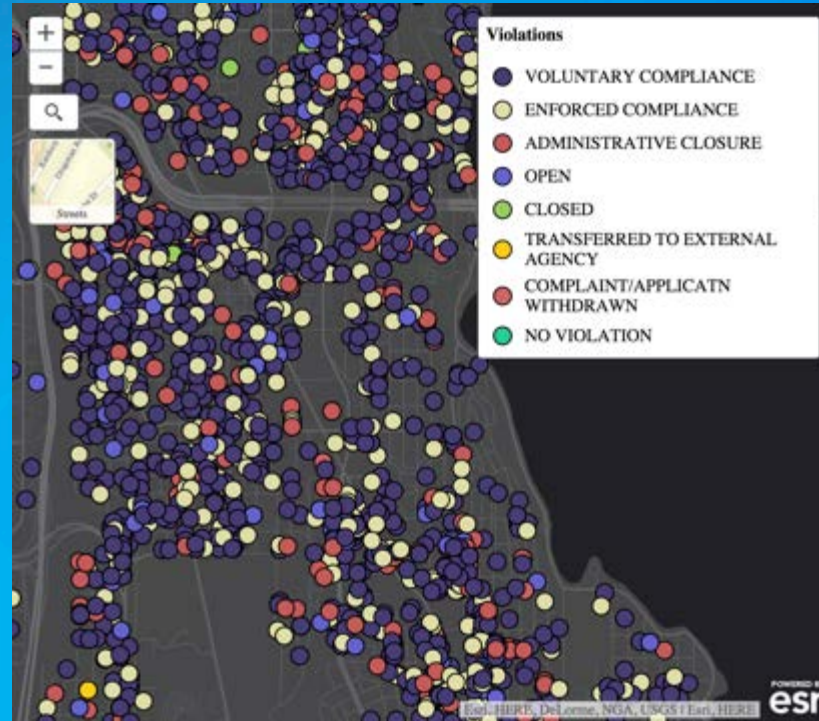
UC – User Login Oauth
developed by:



ESRI JSAPI

Team organization for the ArcGIS API for JavaScript. Apps generated by the Esri JSAPI team are examples of what you can do with the api.

Demo: Customize widget appearance



Events

- Event handlers
 - Load page, click map, execute task, add layer
- dojo/on

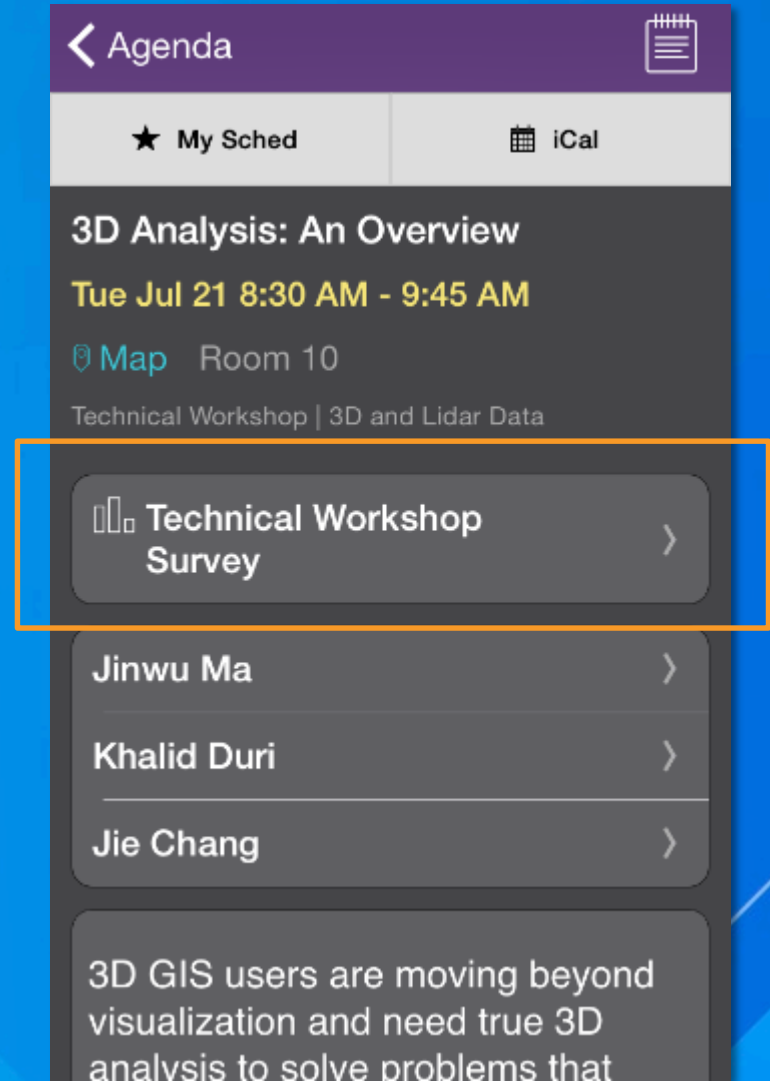
```
map.on("click", buffer);  
  
// or  
//on(map, "click", buffer);
```

Want to learn more?

- **Documentation**
 - <https://developers.arcgis.com/javascript/>
 - **Dojo documentation**
- **Related Esri Training and Tutorials**
 - **Esri class: Building Applications with the ArcGIS API for JavaScript**
 - **Esri webinar: Data visualization and time saving tips**
- **Additional Resources**
 - **JavaScript online training classes: free and fee-based**

Thank you...

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- Answer a few short questions and enter any comments





Understanding our world.