Using ArcGIS Online Analysis Widgets
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Overview

- Using ArcGIS Online Analysis
  - Introduction
  - Demo 1

- Working with Analysis Widgets
  - What are Analysis Widgets?
  - Why use Analysis Widgets?
  - Demo 2
ArcGIS Online Analysis

• Prerequisite
  • Have an organization account
  • Permission to access feature services
• Online Analysis Categories and Tools
• Use the ArcGIS Online Analysis tool Find Nearest to find the nearest faults from oil well sites
Analysis Widgets in ArcGIS API for JavaScript
## Why Use Analysis Widgets?

<table>
<thead>
<tr>
<th>No Analysis Widgets</th>
<th>With Analysis Widgets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build your own UI</td>
<td>Ready-to-use UI</td>
</tr>
<tr>
<td>Your own GP server</td>
<td>ArcGIS Online analysis server</td>
</tr>
<tr>
<td>Hard-coded input parameters</td>
<td>Pre-defined input parameters</td>
</tr>
<tr>
<td>No status tracking</td>
<td>Built-in status checking</td>
</tr>
</tbody>
</table>
Demo 2: Creating a JavaScript App with the FindNearest Widget

Find nearest fault line(s) from an oil well.
Step 0: Finding Resources

js.arcgis.com
Step 1: Creating a Map

```html
<script>
  require(['esri/map', 'dojo/domReady!'], function(Map){
    var map = new Map('map', {
      basemap: 'topo',
      center: [-118.68,34.42],
      zoom: 11
    });
  });
</script>
```

Step 2: Adding Layers

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

    var map = new Map("map", {
        basemap: "topo",
        center: [-118.68, 34.42],
        zoom: 11
    });

    var faults = new FeatureLayer("http://services1.arcgis.com/hLJbHVT9ZrDizK0I/arcgis/rest/service");
    var productionWells = new FeatureLayer("http://services1.arcgis.com/hLJbHVT9ZrDizK0I/ArcGIS/rest/service");
    map.addLayers([faults, productionWells]);
});
```
Step 3: Creating the Widget

```javascript
<script>
    require(['
        "esri/map",
        "esri/layers/FeatureLayer",
        "esri/dijit/analysis/FindNearest",
        "dojo/domReady!"
    ], function(Map, FeatureLayer, FindNearest) {

        var map = new Map("map", {
            basemap: "topo",
            center: [-118.68, 34.42],
            zoom: 11
        });

        var faults = new FeatureLayer("http://services1.arcgis.com/hLJbHVT9ZrDizK0I/arcgis/rest/services/...(omitted)"
        var productionWells = new FeatureLayer("http://services1.arcgis.com/hLJbHVT9ZrDizK0I/ArcGIS/...(omitted)"
        map.addLayers([faults, productionWells]);

        var findNearest = new FindNearest({
            analysisLayer: productionWells,
            nearLayers: [faults],
            map: map,
            returnFeatureCollection: true,
            portalUrl: "http://www.arcgis.com",
        }, "tool");
    });
</script>
```
Step 3: Creating the Widget

Use widgets after all layers are added
Step 4: Listening for the `.on("job-result")` Event

```javascript
findNearest.on("job-result", function(result){
    var resultLayer = new FeatureLayer(result.value);
    map.addLayer(resultLayer);
});
```
More Resources

• ArcGIS Online Analysis
  - Video: http://training.esri.com/gateway/index.cfm?fa=catalog.webCourseDetail&courseid=2717

• Analysis Widgets:
  - Tutorial: https://developers.arcgis.com/javascript/jshelp/intro_analysiswidgets.html
  - Samples:
    https://developers.arcgis.com/javascript/jssamples/analysis_summarizenearby.html
    https://developers.arcgis.com/javascript/jssamples/analysis_hotspot.html
Thank you...

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Paper – pick up and put in drop box
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