

Using the JSAPI in PS Projects: Part 1

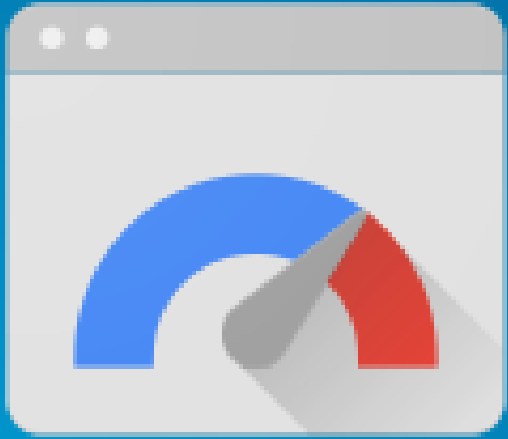
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Tech Trek 2020

Agenda

- Building for production – best practices
- Webpack vs. framework-of-choice-cli
 - Arcgis-cli
 - Esri-loader
- JSAPI tips, tricks, gotchas



PageSpeed Insights

<https://developers.google.com/speed/pagespeed/insights/>



Google Lighthouse

<https://developers.google.com/web/tools/lighthouse/#devtools>

<https://github.com/h5bp/serverconfigs>



Apache
Google App Engine (GAE)
Internet Information Services (IIS)
lighttpd
Nginx
Node.js

H5BP Server-Configs

<https://github.com/h5bp/server-configs>

HTTP/2 Protocol

Binary Protocol

Can get benefit without Server Push

Use for HTTPS only

Apache httpd Configuration

```
LoadModule http2_module modules/mod_http2.so  
LoadModule headers_module modules/mod_headers.so
```

```
Protocols h2 h2c http/1.1
```


If you build it they will come...





<https://developers.arcgis.com/javascript/latest/guide/using-webpack/>

<https://github.com/esri/arcgis-webpack-plugin>

```
"devDependencies": {  
  "clean-webpack-plugin": "^2.0.0",  
  "copy-webpack-plugin": "^5.1.1",  
  "css-loader": "^2.1.0",  
  "html-loader": "^0.5.5",  
  "html-webpack-plugin": "^3.2.0",  
  "mini-css-extract-plugin": "^0.5.0",  
  "raw-loader": "^1.0.0",  
  "uglifyjs-webpack-plugin": "^2.3.6",  
  "webpack": "^4.29.6",  
  "webpack-cli": "^3.2.3",  
  "webpack-dev-server": "^3.2.1"  
},  
"dependencies": {  
  "@arcgis/webpack-plugin": "^4.14.1"  
}
```



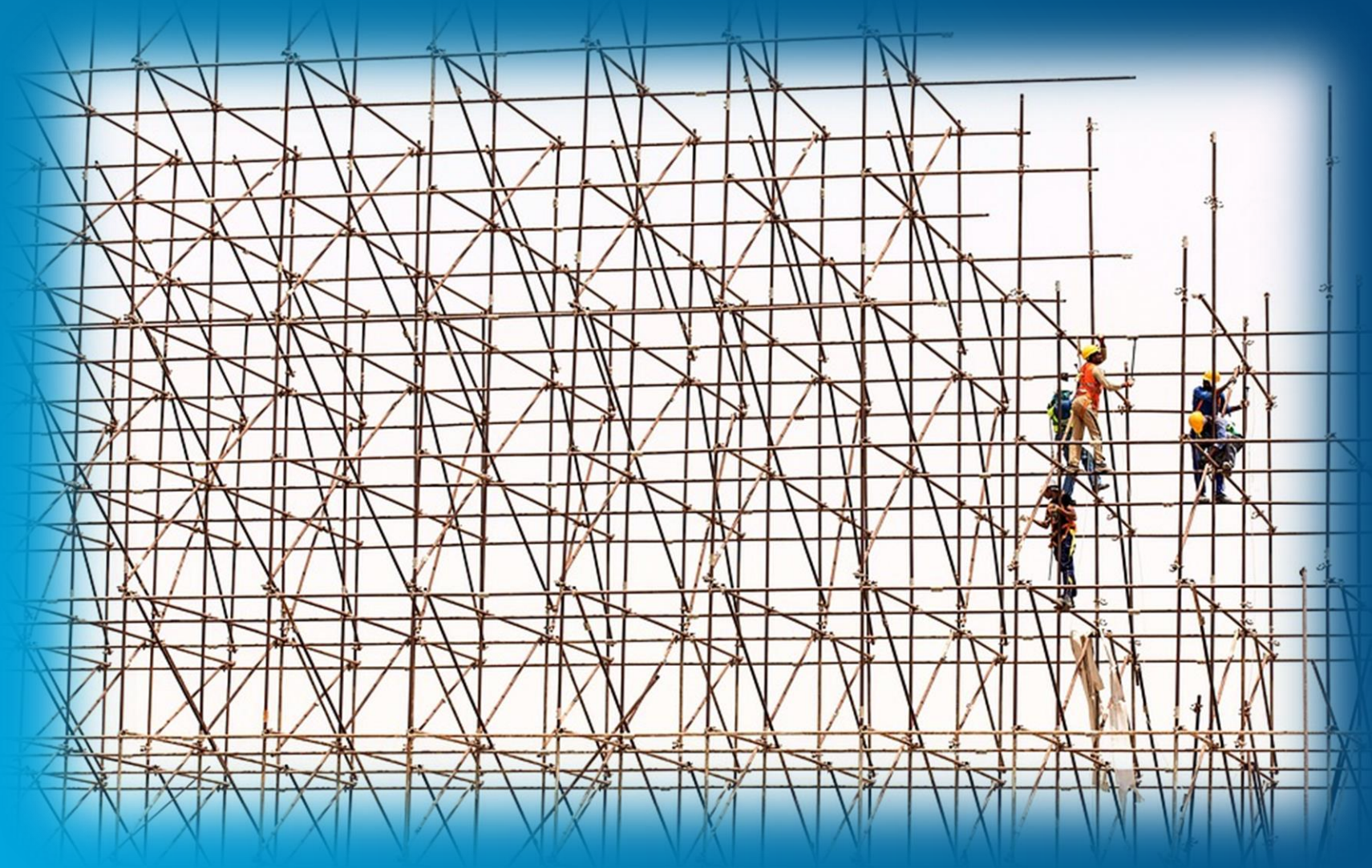

Legacy App Integration Tips and Tricks

- Relative Paths Are Easier
 - `require("buildProject/buildProject")` becomes `require("./buildProject")`
- Old School Templated Widgets

```
new webpack.NormalModuleReplacementPlugin(/^dojo\/text!/, function(data) {  
  data.request = data.request.replace(/^dojo\/text!/, "!!raw-loader!");  
}),
```

- Static Config Files
 - Use CopyWebpackPlugin

Setup Your Apps with a CLI



```
c:\git>arcgis create my-gis-app  
Creating ArcGIS project: my-gis-app
```

```
Preparing Application Directory
```

```
create : c:\git\my-gis-app  
ArcGIS Application template installed.
```

```
Running npm install
```

```
- Installing dependencies, this could take a while...
```

<https://github.com/Esri/arcgis-js-cli>

<https://github.com/Esri/jsapi-resources/tree/master/4.x/webpack/>

OUTPUT TERMINAL DEBUG CONSOLE PROBLEMS

1: bash



```
jack8693@JRoberts2 MINGW64 /c/github/EsriCa Tech Trek/lessons-learned-pt-1/tech-trek-arcgis-cli-react-app (master)
$ npm install -g create-react-app
C:\Users\jack8693\AppData\Roaming\npm\create-react-app -> C:\Users\jack8693\AppData\Roaming\npm\node_modules\create-react-app\index.js
+ create-react-app@3.4.1
removed 1 package and updated 8 packages in 6.426s

jack8693@JRoberts2 MINGW64 /c/github/EsriCa Tech Trek/lessons-learned-pt-1/tech-trek-arcgis-cli-react-app (master)
$ create-react-app tech-trek-lessons-learned-esri-loader-app
```

```
jack8693@JRoberts2 MINGW64 /c/github/EsriCa Tech Trek/lessons-learned-pt-1 (master)
$ cd tech-trek-lessons-learned-esri-loader-app/
```

```
jack8693@JRoberts2 MINGW64 /c/github/EsriCa Tech Trek/lessons-learned-pt-1/tech-trek-lessons-learned-esri-loader-app (master)
$ ls
node_modules  package.json  package-lock.json  public  README.md  src
```

```
jack8693@JRoberts2 MINGW64 /c/github/EsriCa Tech Trek/lessons-learned-pt-1/tech-trek-lessons-learned-esri-loader-app (master)
$ npm install --save esri-loader
```

<https://developers.arcgis.com/javascript/latest/guide/react>

<https://developers.arcgis.com/javascript/latest/guide/esri-loader/index.html/>

JSAPI tips, tricks, and gotchas

- Accessors and property watching replaces event listening
- Map/scene view: 2D ↔ 3D – swap webmaps!
- Layer queries – `createQuery()` vs. `Query()`

References

- What's New in ArcGIS API for JavaScript (April 2020) [blog post](#)
- JavaScript API [sample code](#)
- Arcgis-cli developer tooling [guide](#)
- Esri-loader [guide](#)
- <https://github.com/webdevjackie/esrica-tech-trek>
- [ArcGIS API for JavaScript: Using TypeScript](#)
- [ArcGIS API for JavaScript: Programming Patterns and Fundamentals](#)
- [JavaScript Applications for the Enterprise: Building for Production](#)



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