Optimizing Your JavaScript App for Performance

Lloyd Heberlie
Rene Rubalcava
Agenda

- Introductions
- Web Optimizer
- npm
- Questions
Demonstration

Lloyd Heberlie
Other considerations

• HTTP2
• Data generalization
• Attribute indexes, limit fields
• Gzip compression
• File minification
Summary

- Build options
- Publish to CDN
- Application benefits
Resources: module list

- [https://github.com/lheberlie/grunt-esrijso-modulelist](https://github.com/lheberlie/grunt-esrijso-modulelist)
- [https://github.com/odoe/esrijso-modules](https://github.com/odoe/esrijso-modules)
NPM Installation
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What is NPM?

- A JavaScript package manager
- [https://github.com/esri/arcgis-js-api](https://github.com/esri/arcgis-js-api)
- `npm install arcgis-js-api`
- 4x Only. 3x available via Bower installation
What do I get?

- Minified, but unbuilt JavaScript API
- Source Sass files for 4.x
- Unminified source for Widget Views (removed with NPM install)
arcgis-js-api

A minified, unbuilt version of the ArcGIS API for JavaScript.

Features

A minified, unbuilt version of the ArcGIS API for JavaScript. You can install this repo via npm and create your own custom builds with Webpack or the Dojo Toolkit.

Instructions

Building an ArcGIS API for JavaScript application requires signing up for an ArcGIS account.

npm install arcgis-js-api

Requirements

Please see our guide: Using npm for Custom Builds

Demonstration

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Using webpack

- @arcgis/webpack-plugin
- Preconfigured with npm install of API
- Includes all set up needed to use the API in a webpack build
@arcgis/webpack-plugin

Build ArcGIS API for JavaScript applications with webpack

- Features
- Usage
- Options
- Best Practices
  - Loaders
  - Promises
  - Node Globals
  - CSS
  - Asset Loaders
  - Excluding Modules
- Sample Applications
- How does it work?
  - Required Files
  - Feature Detection
  - Override loader plugins
  - Other loaders
  - Loader Configuration
- Things we’re working on
- Issues
- Contributing

Demonstration
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Custom Builds

- Dojo build system
- Webpack builds via plugin
- Both create optimized builds
Pros/Cons

- Over optimization
- HTTP2 benefits
- CDN hosted on HTTP2 server
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