

Optimizing Your JavaScript App for Performance

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Agenda

- Introductions
- Web Optimizer
- Bower
- Other considerations
- Questions

ArcGIS API for JavaScript Web Optimizerodoenet ↕esri

MY BUILDSHELP

My BuildsNEW BUILD

mesa	Created: 8/9/16	Status: Draft	CDN URL	Duplicate	Rename	Delete
cmv1	Created: 3/21/15	Status: Completed	CDN URL	Duplicate	Rename	Delete
TestSmall	Created: 3/17/15	Status: Completed	CDN URL	Duplicate	Rename	Delete

Web Optimizer

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Why?

- AMD - Asynchronous Module Definition
- AMD loader
- CDN is a canned build
- Initial load times
- Mobile specific apps

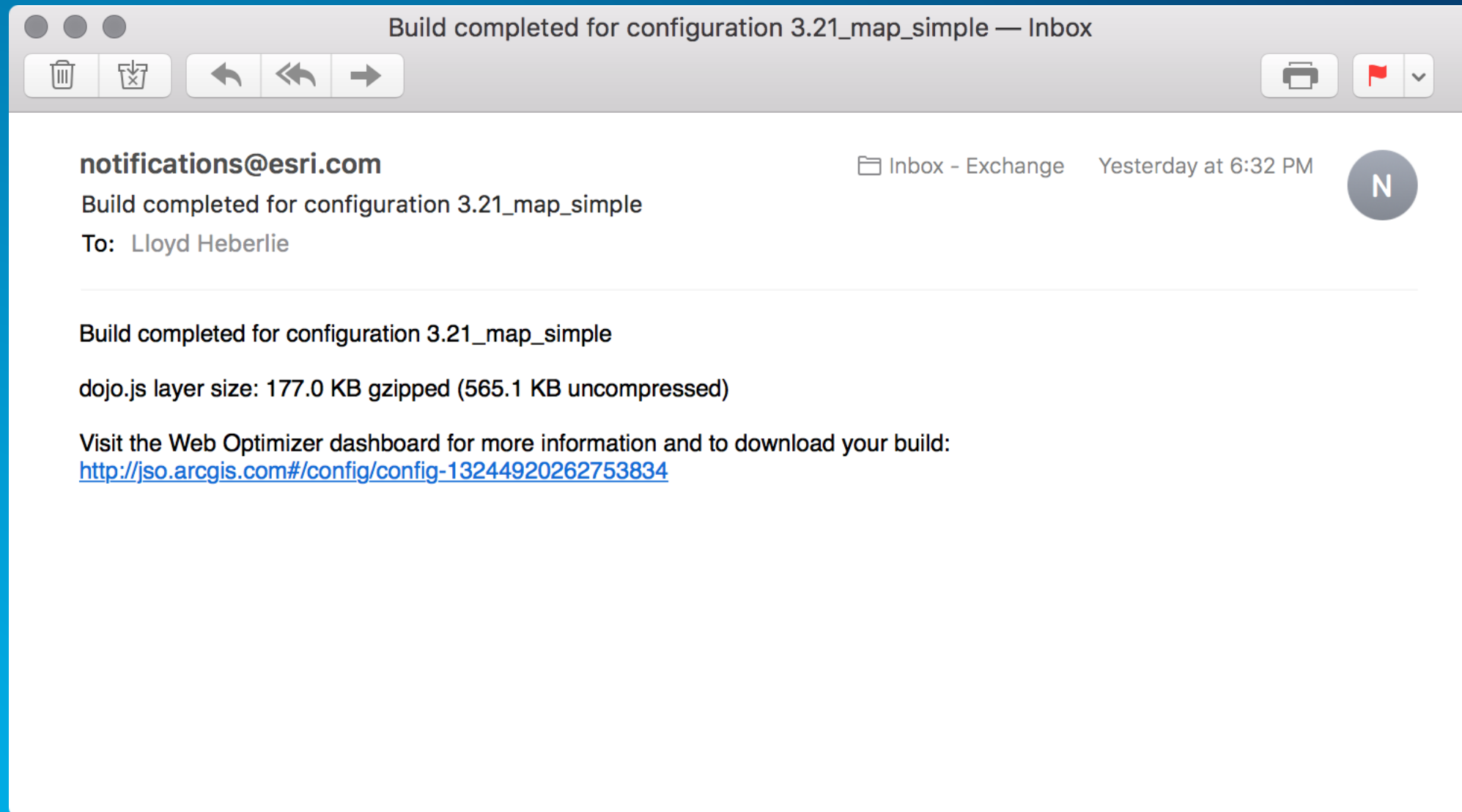
Build options

- Zipped app
- URL scrape
- Module list
- Manual selection

Module list magic

- Traverse your application's files
- Parse the network waterfall – HAR file
- Shell - grep
- Manually maintenance

Notifications





Web Optimizer

Demos

Additional considerations

- Lazy loading of modules
- Removing too many files – 404 potential
- Removing locales – page fails to load
- Be ready to troubleshoot
- Mobile hybrid build considerations

Summary

- Build options
- Publish to CDN
- Application benefits



Local Builds

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Options

- A JavaScript package manager
- <https://github.com/esri/arcgis-js-api>
- `bower install arcgis-js-api`
- `npm install arcgis-js-api` *coming soon*
- `yarn add arcgis-js-api` *coming soon*
 - Can do this now, [guide](#)

Options

- Bower
 - Easier to manage the dependencies
 - Tooling fits with the build system
- NPM
 - You already have it
- Yarn
 - Can install packages with custom names

What do I get?

- Minified, but unbuilt JavaScript API
- Source Sass files for 4.x
- Unminified source for Widget Views

Custom builds

- Demystifying the Dojo build system... *kinda*
- Using RequireJS for custom builds
- Key points you should know
- ES6 and Rollup

Frustrations

- Why can't I just ...
 - Use Webpack (*working on it*)
- Why is the download so big?

Pros / Cons

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

arcgis-js-api

A minified, unbuilt version of the [ArcGIS API for JavaScript](#) to be used with [bower](#).

Features

A minified, unbuilt version of the [ArcGIS API for JavaScript](#). You can install this repo via [bower](#) and create your own custom builds with [Dojo](#) or [RequireJS](#).

Instructions

Building an ArcGIS API for JavaScript application requires signing up for an [ArcGIS account](#).

```
bower install arcgis-js-api
```

Requirements

To install and use as a `bower` installation:

- [node](#)
- [git](#)
- [bower](#)

This repo has dependencies on the following repos.

Show me the goods

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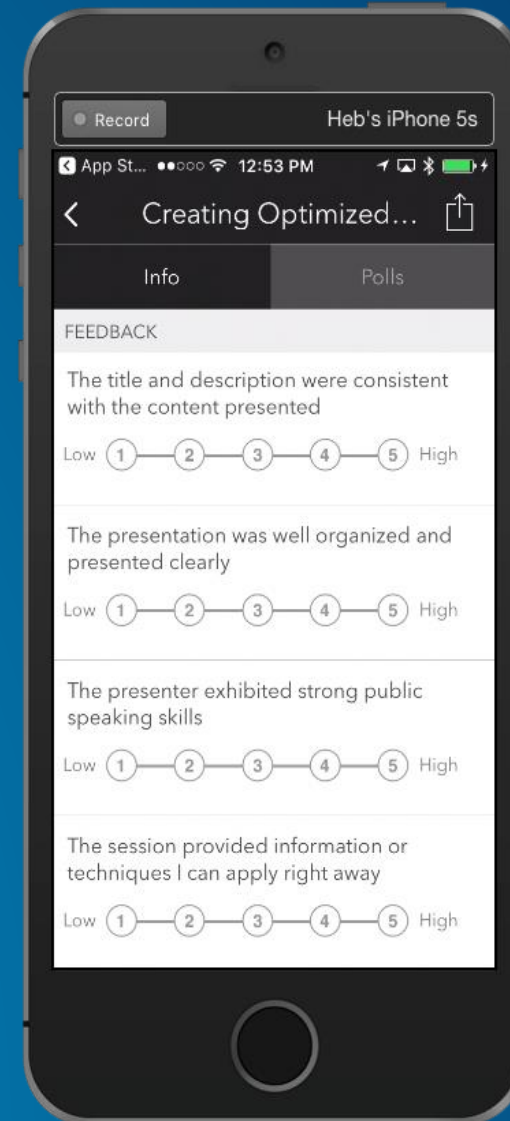
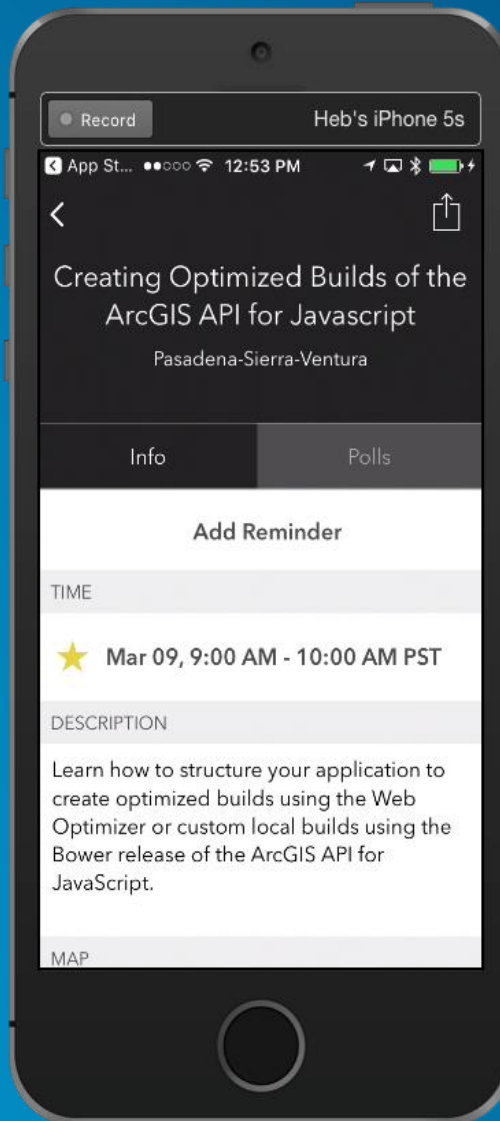
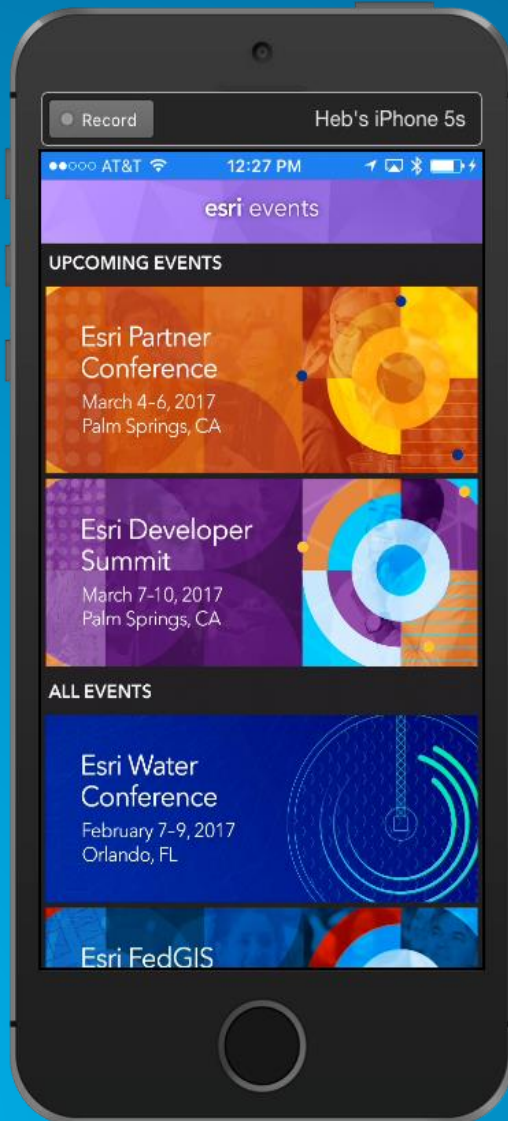
Other considerations

- Data generalization
- FeatureLayer considerations
- Indexes on query fields
- Gzip compression
- File minification

Questions?

- <https://github.com/Esri/jsapi-resources/tree/master/bower>
- <https://github.com/lheberlie/web-optimizer-js>
- https://developers.arcgis.com/javascript/jshelp/inside_web_optimizer.html
- https://developers.arcgis.com/javascript/jshelp/inside_bower_custom_builds.html
- <https://github.com/Esri/enterprise-build-sample-js>
- <https://github.com/gbochenek/web-app-builder-build>

Session Feedback





esri

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SCIENCE
OF
WHERE