Building an API with Node.js

Agenda

- **Building an API with Node.js**

  - What is an HTTP API?

  - Comparing with ASP.NET ASMX

  - Comparing with WCF

  - Comparing with ASP.NET MVC

  - Comparing with ASP.NET Web API

  - API Controllers

  - GET Actions

  - POST Actions

What is an HTTP API?*

Operations Over http(s)

Full Message Description

Built on Standards

Whether SOAP or REST

Body, Headers, Methods all matter
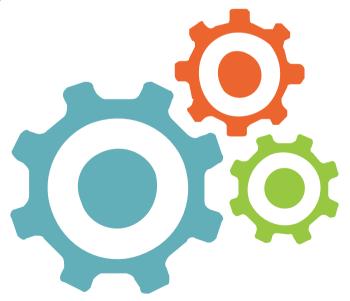
Don't Reinvent

* E.g. Web API, RESTful API, etc.

COMPARING WITH ASMX SERVICES

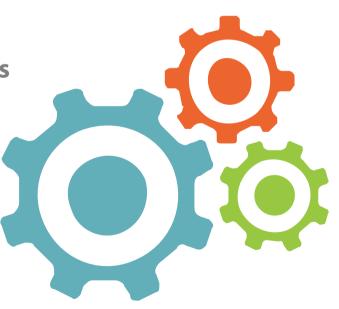**Node.js doesn't support SOAP, and neither should you**

- **ASMX attempts to separate you from how services work**

- **Node.js/Express give you front-line view of the service**

  - **JavaScript -> JSON Conversion is built in**

  - **Must understand verbs, headers and bodies**

  - **Security is layered on top, not magical**

COMPARING WITH WCF

WCF is Configuration over Convention

- **WCF tries to separate transport and interface**

- **Node.js/Express is about http(s) transport**

  - **Some middleware can help expose other transports**

  - **Little or no configuration**

  - **You're ultimately responsible for much of the stack**

- **WCF attempts to support REST via attributes**

  - **It's just lipstick on a pig**

COMPARING WITH MVC

MVC lets you create APIs by changing return types

- MVC uses attributes for non-GET verbs

- Node.js/Express assumes you will use lots of verbs

  - MVC was built as a layout engine (e.g. like Vash)

  - Implementing an API possible, but wrong tool

- MVC's route tables are a distraction

  - Discovery over simplicity

COMPARING WITH WEB API

Web API is closest to Node.js/Express

- Verbs are obvious in controllers in both cases

- Node.js/Express gives you freedom to structure code

  - E.g. Controller base class not required

- Routing in Web API 1.x: controller discovery

- Routing in Web API 2+: you decide route location

- Node.js/Express simply marries route + handler

demonstration

CREATING A CONTROLLER

demonstration

CREATING A GET ACTION

demonstration

CREATING A POST ACTION

demonstration

TESTING A POST ACTION

demonstration
SAVING DATA VIA AN API CALL

Summary

- **Building an API with Node.js**

  - When we talk about APIs, we're talking about APIs over the web…or HTTP APIs

  - ASP.NET ASMX's SOAP APIs are quite different from how Node.js allows you to build APIs

  - Being free of WCF's configuration over convention is a relief

  - ASP.NET MVC brings the protocol (e.g. http) closer, but still requires a bit of ceremony

  - ASP.NET Web API and simple Node.js/Express APIs are fairly similar

  - We can call the containers that describe actions as controllers…or routes…or whatever

  - Creating actions means mapping the verb to the action that is handling that action…simple