

# Building an API with Node.js

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# 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)**



*Whether SOAP  
or REST*

**Full Message  
Description**



*Body, Headers,  
Methods all matter*

**Built on  
Standards**



*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