

Enhancing Node.js with StrongLoop/Bluemix Integration



Interactivity Tips

1. Ask A Question



2. Download a PDF copy of today's presentation



3. Social Networking Tools



Bluemix & StrongLoop

Node.js

- Asynchronous, event-driven framework
- Unify language (JS) and data (JSON) across stack
- Easy development of real-time web applications
- Lightweight, performant, massive community backing



Difficulties with Node.js

When managing applications...

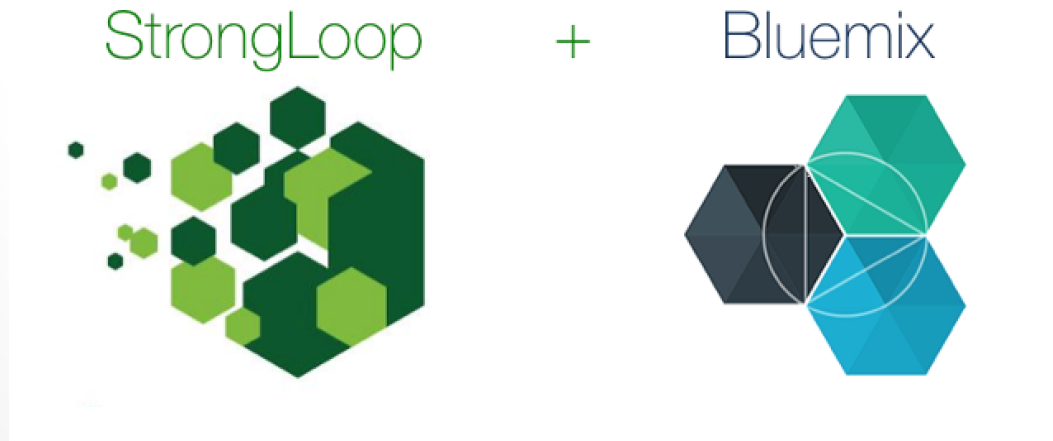
- Many solutions for debugging, but no industry standard
 - node-inspector
 - debugger
 - memwatch
 - profiler
- Even harder to manage Node.js on the cloud

When developing applications...

- Iterating on Node.js apps in a PaaS requires full restages/repushes
- Using cloud services locally requires maintaining two different development/deployment environments

StrongLoop to the Rescue

- DevOps capabilities to manage applications
 - Tracing
 - Profiling
 - Metrics
- LoopBack API framework to develop applications
 - StrongLoop Arc for visual composition
 - CLI/Text Editor for manual composition



App Management

- Starts app with StrongLoop Process Manager
- Allows you to use Arc to manage application
 - DevOps
 - Metrics
 - Tracing
- Great for rapid development <https://developer.ibm.com/bluemix/2015/10/05/advanced-debugging-node-apps-bluemix/>

StrongLoop Arc 1.8.1

StrongLoop Profiler

Profile Target: Server File

Hostname:

Processes: **77** Running

Self	Total	Function
995.7ms 99.57%	995.7ms 99.57%	(program)
2.2ms 0.22%	2.2ms 0.22%	Metrics.startCpuProfiling /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module.../node_modules/stron
2.2ms 0.22%	2.2ms 0.22%	packet /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module...odules/strong-supervi
0ms 0%	2.2ms 0.22%	channel.onread child_process.js:334
0ms 0%	2.2ms 0.22%	unrefdHandle timers.js:306
0ms 0%	2.2ms 0.22%	handleMessage child_process.js:315
0ms 0%	2.2ms 0.22%	wrapper timers.js:273
0ms 0%	2.2ms 0.22%	(anonymous function) /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_modules/strong-control-channe
0ms 0%	2.2ms 0.22%	Agent.poll /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module.../node_modules/stron
0ms 0%	2.2ms 0.22%	process /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_modules/strong-control-channe
0ms 0%	2.2ms 0.22%	emit events.js:68
0ms 0%	2.2ms 0.22%	onRequest /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_modules/strong-runner/node_r
0ms 0%	2.2ms 0.22%	(anonymous function) /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module.../node_modules/stron
0ms 0%	2.2ms 0.22%	publish /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module...modules/strong-supe
0ms 0%	2.2ms 0.22%	encode /home/vcap/app/node_modules/strong-start/node_modules/strong-pm/node_module...modules/strong-supe

Profiles

CPU Profiles

- 77 10/12/15 2:49 PM loaded
- 56 10/5/15 1:44 PM ready

Heap Snapshots

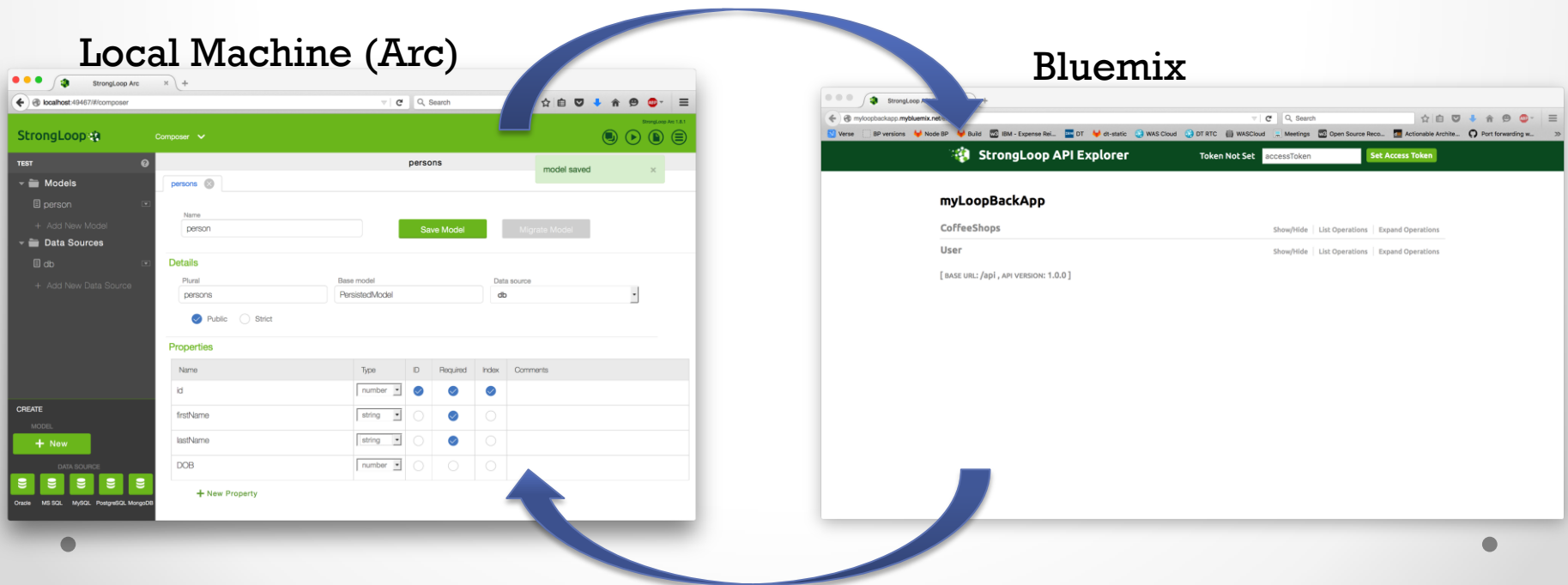
- 56 10/5/15 1:44 PM

Managing Node.js Apps

DEMO

Bluemix Live Sync

- Develop LoopBack apps as they run on Bluemix
 - Sync Arc Composer to Jazz Hub for Bluemix
- Rapidly iterate on applications within seconds, not minutes
- Create fully CRUD capable applications connected to Bluemix services



Live Sync

DEMO

Thank You

QUESTIONS?

