

Node.js at Cloudkick

Paul Querna
July 26, 2011



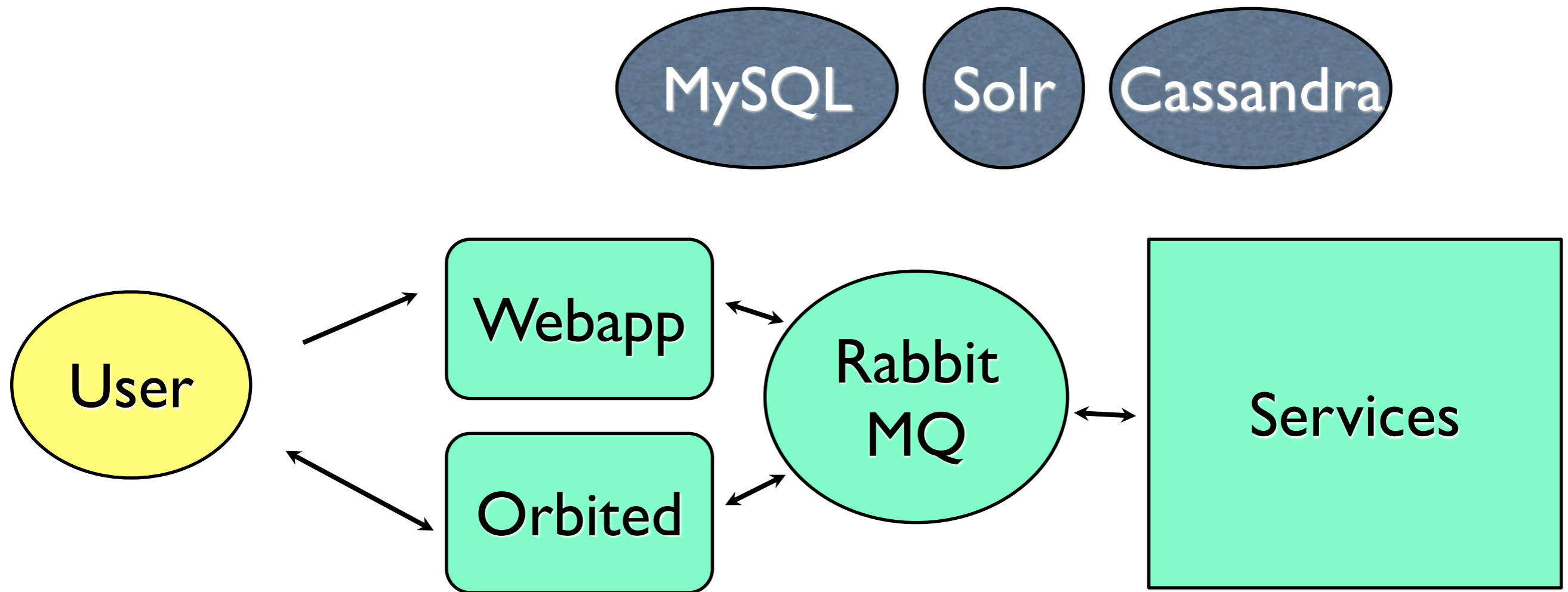
What is Cloudkick?

- Cloud Server Management
 - Dashboard across providers
 - Metadata container (tags, etc)
 - Monitoring as a Service
- Acquired by Rackspace in December 2010

Python, Python, Python!

- Django
 - UI
 - API
- Twisted
 - Services
- Orbited
 - Realtime

Cloukick Classic



monitoring system (complicated)

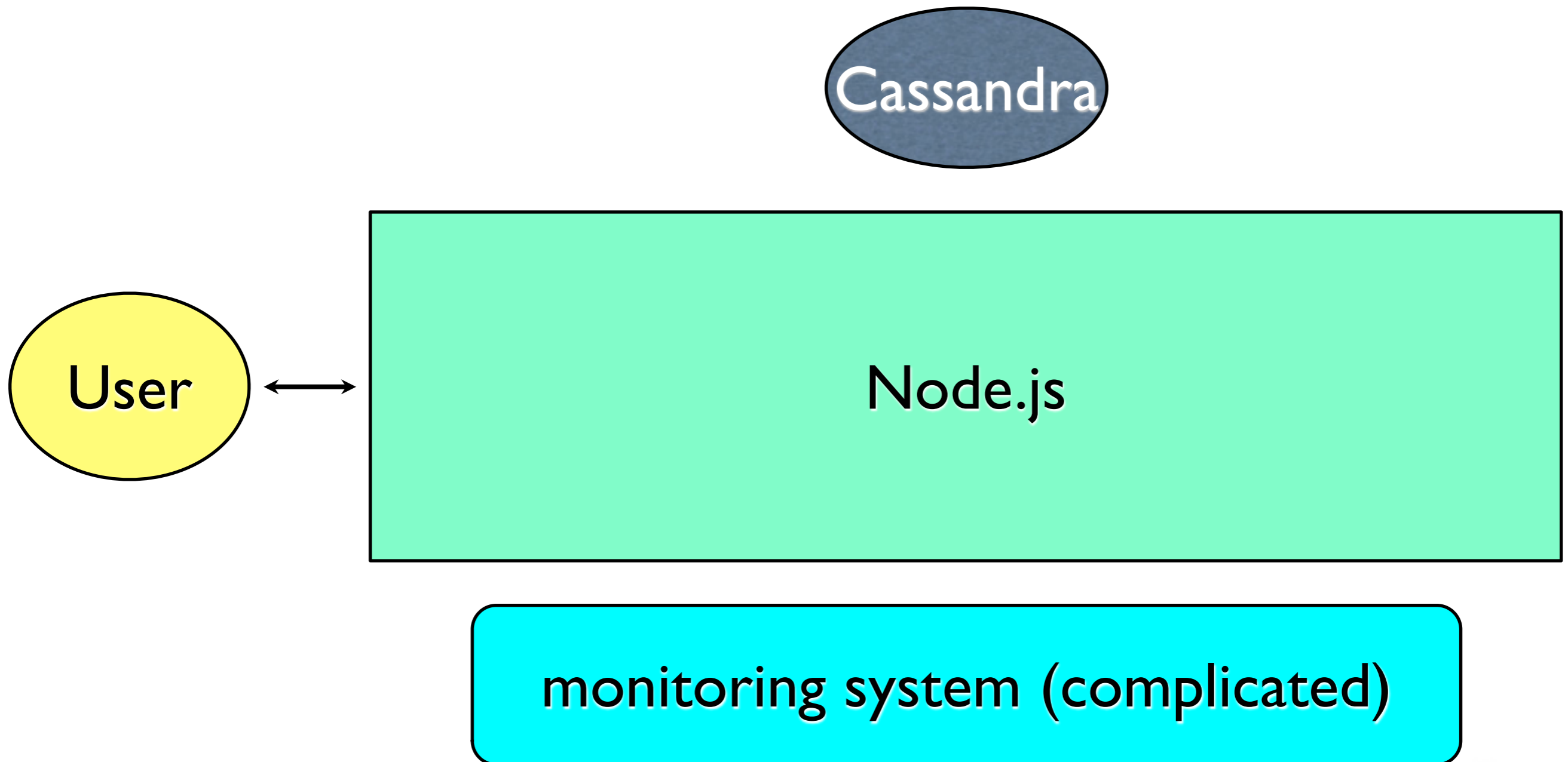
What's wrong?

- Django vs Twisted
- Twisted in general
- RabbitMQ
- orbited is dead
- Multi-Region durability

Node.js

- Express
 - API
 - Services
 - Realtime

New Architecture



In Production

Running

- runit / daemontools

Configuration

- Puppet
 - `local_settings.js` (django style)

Load Balancer

- apache 2.2, event mpm, mod_ssl, mod_proxy_balancer
 - Want to remove it.
- ssl/tls termination (sad face)
- consider stunnel+haproxy. for now.
- examining stud+haproxy:
 - <https://github.com/bumptech/stud>

Internals

package.json

```
"async": "0.1.9",  
"cassandra-client": "0.2.1",  
"express": "2.4.0",  
"ipv6": "0.0.1",  
"jade": "0.10.7",  
"logmagic": "0.1.4",  
"long-stack-traces": "0.1.2",  
"metrics-ck": "0.0.1",  
"node-dev": "0.1.5",  
"node-uuid": "1.2.0",  
"nodelint": "0.4.0",  
"optimist": "0.2.0",  
"sax": "0.1.2",  
"showdown": "0.0.1",  
"strtok": "0.1.1",  
"swiz": "0.3.1",  
"thrift": "0.6.0-1",  
"whiskey": "0.4.0"
```

npm, private registry

- Replicate Issac's CouchDb
- ~/.npmrc
 - always-auth = true
 - registry = <https://npm.example.com/>

npm

- Prevent Publishing:
 - "private" : true,
 - "publishConfig" : { "registry": "http://127.0.0.1:33333/invalid_registry_do_not_publish"},

Dealing with Patches

- Fork on github.
- Patch in branch.
- Publish to private NPM registry.
- Pray upstream accepts.
- Switch back to public package once released.

Flow Control

- Async
- <https://github.com/caolan/async>

Cassandra Client

- CQL
 - It's like SQL, but for NoSQL (troll face)
- Relational and Timeseries data
- <https://github.com/racker/node-cassandra-client>

Logging

- Log Magic:
 - <https://github.com/pquerna/node-logmagic/>
- `logmagic.route("mylib.*", logmagic.DEBUG, "stdout")`

Metrics

- <https://github.com/mikejihbe/metrics>
- Metrics Broker:
 - Collect across multiple processes
 - (not open source yet, working on it)

Testing

- Whiskey:
 - <https://github.com/cloudkick/whiskey>
 - <http://cast-project.org/test-coverage/>

Linting

- node-jshint
- Google Closure Linter:
 - <http://code.google.com/p/closure-linter/>

Continuous Integration

- BuildBot against
 - Production (v0.4.10-99b210d7eac)
 - Stable Branch (v0.4.x)
 - Dev (master / v0.5.x)
 - (need to add --use-uv)

Questions?

- Slides:
 - <http://paul.querna.org/slides/>

