Changing the development culture at Comcast, our evolution from legacy SOA to cloud native Microservices

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Who am I?

Hello
my name is

Nick
What is the Enterprise Service Platform?

250,000,000 transactions per day

Hosted on 500+ Servers

Oracle, JavaEE, and Weblogic
The problem that faced us

Large legacy codebase

Manual and people based processes

Physical Infrastructure

Comingled data

No loss of velocity to other teams
The Approach

Cultural
Technical
How we worked then

- Dev
- QA
- Ops

Arrows indicate the flow of work between departments.
Reorganized teams to be self contained
I don’t have to...
I don’t want to...
You can’t make me.
We avoided running into...

WORKED FINE IN DEV

OPS PROBLEM NOW
And we started to …

Standardize for Scale
Decomposing services into Microservices

Clients

ESPRouter

Service A

Service B
De-Mingling of data

Service A

Service B

Data Access
Changes in the technology stack

- **Platform**
  - Weblogic
  - Cloudfoundry

- **Data**
  - Oracle
  - Couchbase

- **Routing**
  - IP based
  - Consumer
Changes in the delivery stack

- Continuous Delivery
  - Jenkins
  - GoCD

- Build
  - Maven
  - Gradle

- Deployments
  - Script
  - CD
CF Components

**Recycle Plugin:** Recycles application instances
[https://github.com/comcast/cf-recycle-plugin](https://github.com/comcast/cf-recycle-plugin)

**ZDD Plugin:** Zero Downtime deployments
Open source pending

**Scaler Service:** Allows the sending of messages to scale applications
Open source pending
Current Opportunities

Change Management

- Manual process.
- Creates a bottleneck in the delivery process.
- Requires external approvals and input.

Continuous Deployment

- Continuous deployment to production causes worry.
- Maturity level is not consistent across organization.
- Integration of stateful and data systems
On the horizon

Piloting Chat Ops with Slack
Exploring the use of Concourse
Onboarding more teams and services to CF
Concourse Components

Rally Toolkit: Recycles application instances
https://github.com/Comcast/rally-rest-toolkit

Rally Build Resource: Resource for pushing build info to Rally
https://github.com/Comcast/rally-build-resource
Building the runway

“Always be wary of any helpful item that weighs less than its operating manual.”
— Terry Pratchett, Jingo
Questions?