



TOSCA on Kubernetes

Introducing: Puccini

Tal Liron
Principal Software Engineer
NFV Partner Engineering

ONAP Casablanca Release Developer Forum
Beijing, June 19-22, 2018

Puccini is not an official Red Hat project!

- Tal Liron's pet project
- (Yes, he should “get a life”...)
- Red Hat ♥ open source
- Employees are encouraged to build things and contribute upstream

Two Problems with TOSCA

1. Impractical Normative Types

The grammar is fine; the Simple Profiles are not

If TOSCA is to fulfil its potential its models must be platform-specific

2. No Intermediary Format

The topology will change after you install the service
("Day 2" problem)

Two Problems with Kubernetes

1. Good Plumbing, But No Architecture

Kubernetes resources are powerful and efficient, but they are orthogonal to how we model our applications

2. No Application Descriptor

Helm charts are not it, because they just bring together the (constantly evolving) resource descriptors

Why Not Both?

1. Architecture

Create domain-specific models for your application in TOSCA

2. Plumbing

...using Kubernetes-specific building blocks

Puccini

1. TOSCA-to-Clout compiler

“Clout” is the missing intermediary format

2. Kubernetes profile for TOSCA

Low-level plumbing packaged for high-level modeling

3. JavaScript inside the Clout

Domain-specific translations + validation/functions



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