The TOSCA Datacenter

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It’s for deploying applications on top of virtual machines hosted on any various private and public cloud platforms, right?

No, not really

The “Simple Profile” has been misleading, best to ignore it

TOSCA is for designing templates for cloud graphs ("Topology and Orchestration Specification for Cloud Applications")
The cloud is all about maintaining **fragile** relationships:

- Connections, channels, mounts, binds, tunnels, etc.
- Virtual LANs
- SD-WAN
- (Micro)(service) architectures (network instead of memory)
- Service mesh

TOSCA is useful for describing them according to rules (and describing those rules)
“O”: We Already Have Orchestrators

Ansible, Puppet, Chef, Terraform, Cloudify, middleware (J2EE, OpenDaylight), Kubernetes + Operators, Virtual Gizmo Manager from Vendor X, etc.

- Provisioning/scheduling resources
- Installing and configuring software
- Interacting with support systems (OSS/BSS)

No need to build a new one for TOSCA, just need to use TOSCA to provide orchestrators with the plan
Puccini TOSCA Compiler

https://github.com/tliron/puccini

- Strong validation
- “BYOO”: Bring Your Own Orchestrator
- Integrate into your platforms
- Comes with profiles for Kubernetes, OpenStack, BPMN, etc.
Examples

It’s TOSCA time!
Summary: Why TOSCA?

- Tame your heterogenous orchestration ecosystem
- Models that make sense of your technologies and organization
- Architectures that adhere to the models
- Every component can have access to the entire plan
- Can make smarter cloud-native decisions (configuration, healing, etc.)
- Easy to create policies that apply to the everything (See my “Next-Generation NFV Orchestration” presentation)
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