

The background of the image is a photograph of the Vancouver skyline at sunset. The sky is a vibrant mix of orange, red, and purple. In the foreground, several skyscrapers are visible, including the prominent CN Tower on the right side, which is illuminated with purple lights. The city lights are beginning to glow as the sun sets.

THE LINUX FOUNDATION

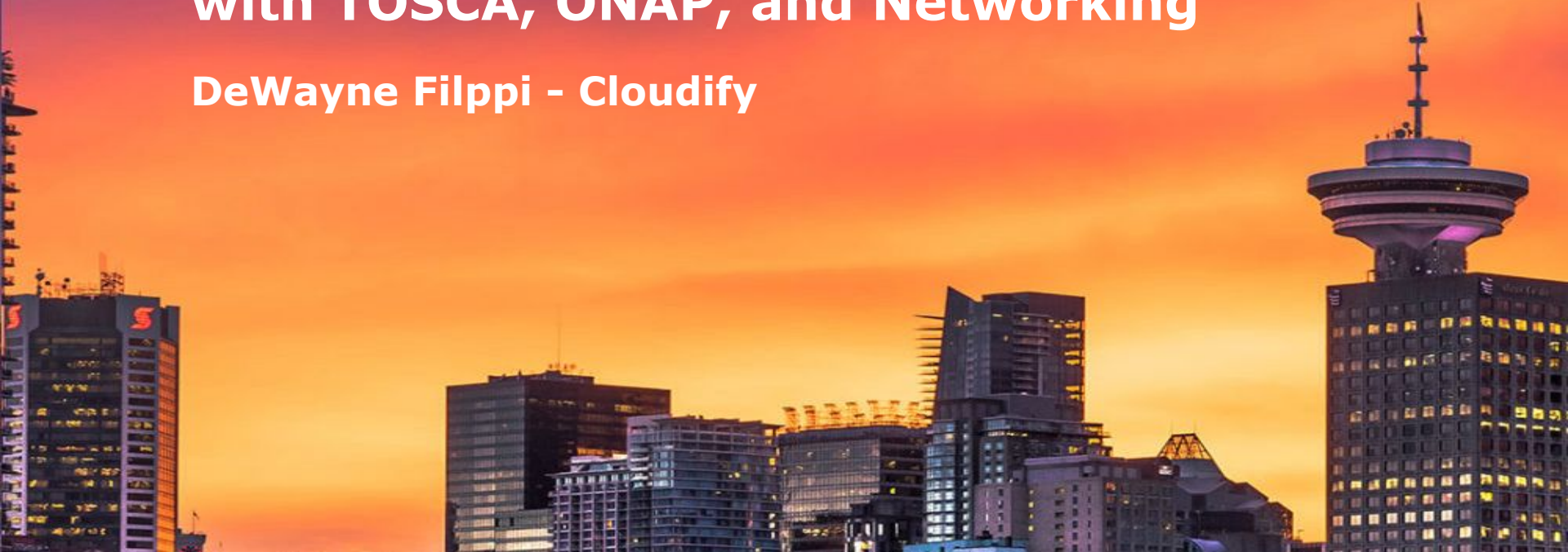
# OPEN SOURCE SUMMIT

NORTH AMERICA

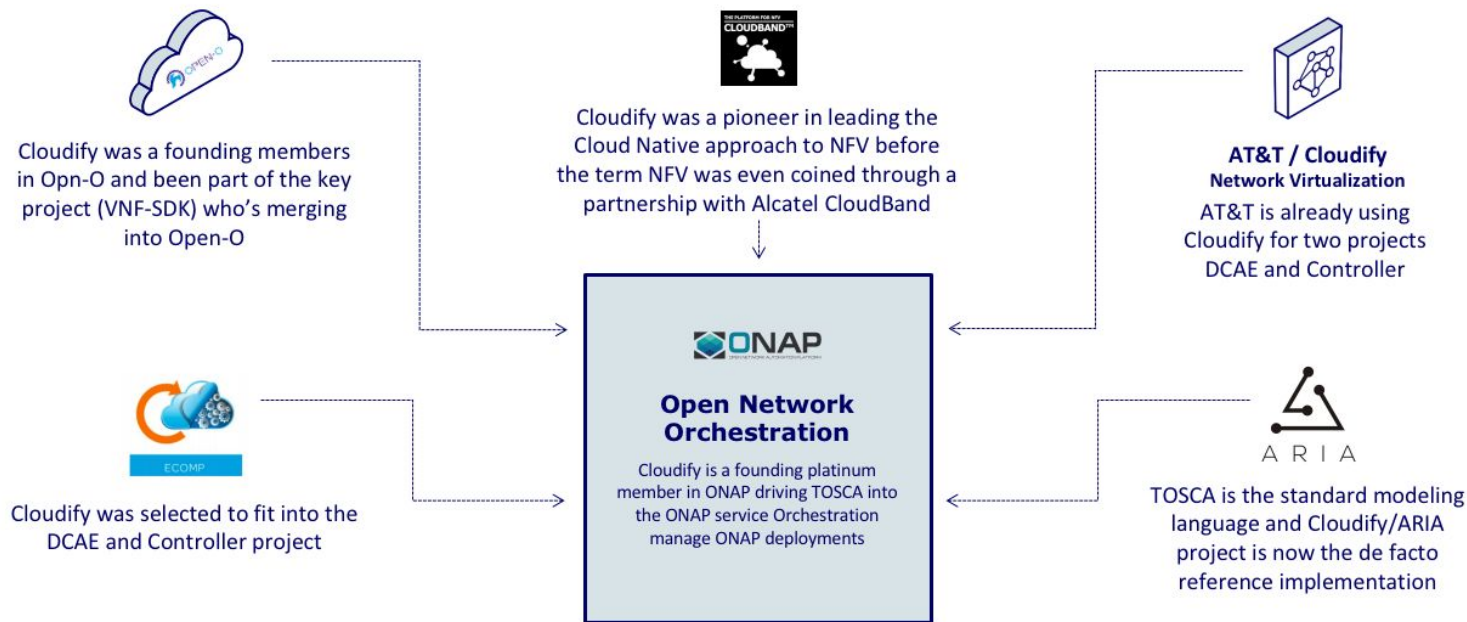
AUGUST 29–31, 2018 • VANCOUVER, CANADA

# Hold My Beer While I Open Source with TOSCA, ONAP, and Networking

DeWayne Filppi - Cloudify



# Cloudify Journey to Open NFV and ONAP



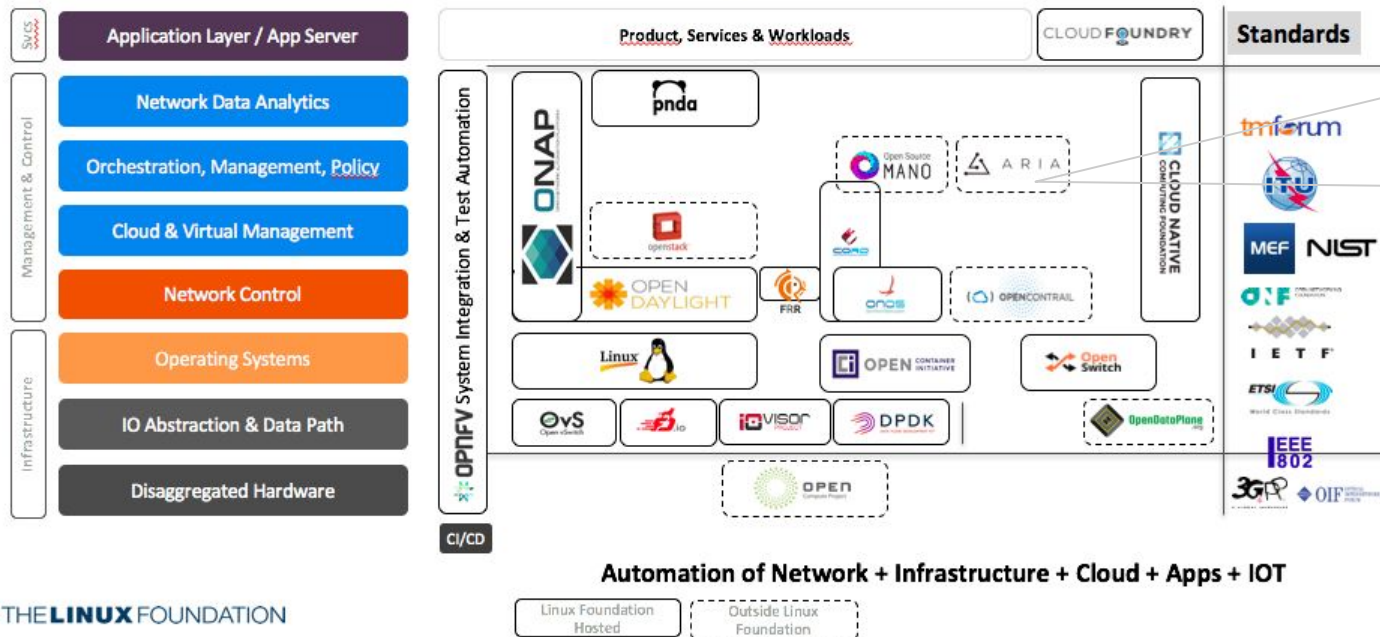
# Telco Standard Driven

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# Open Source and Open Standard

## Open Source Networking



Cloudify launched [Aria](#) as a mean to drive TOSCA modeling through open source.

[Aria](#) is now being part of the SO project in ONAP.

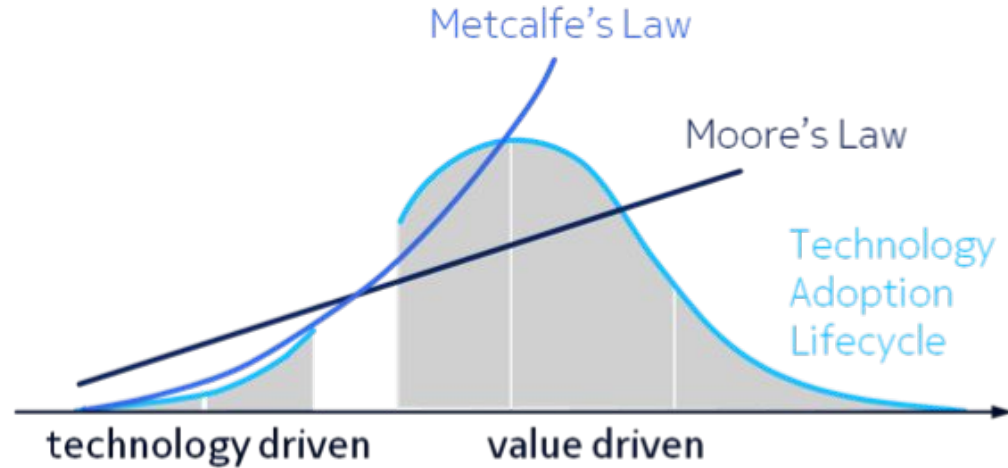
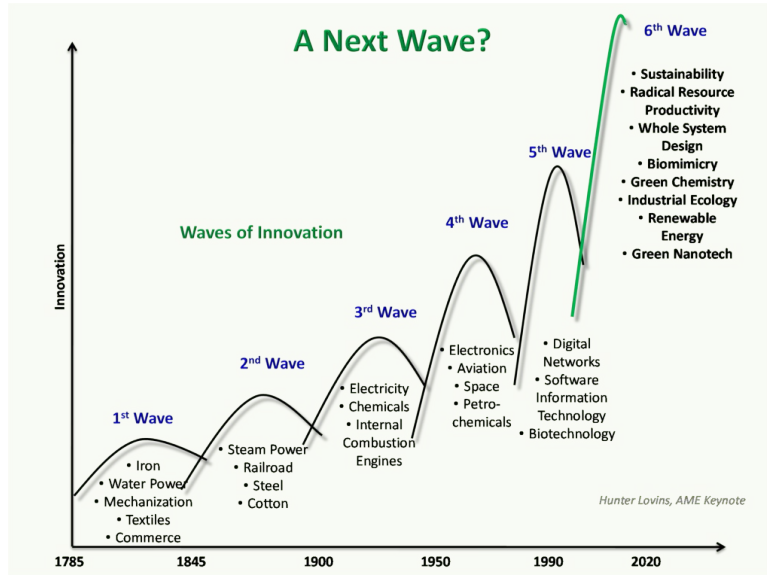


# What's Changed?

Innovation

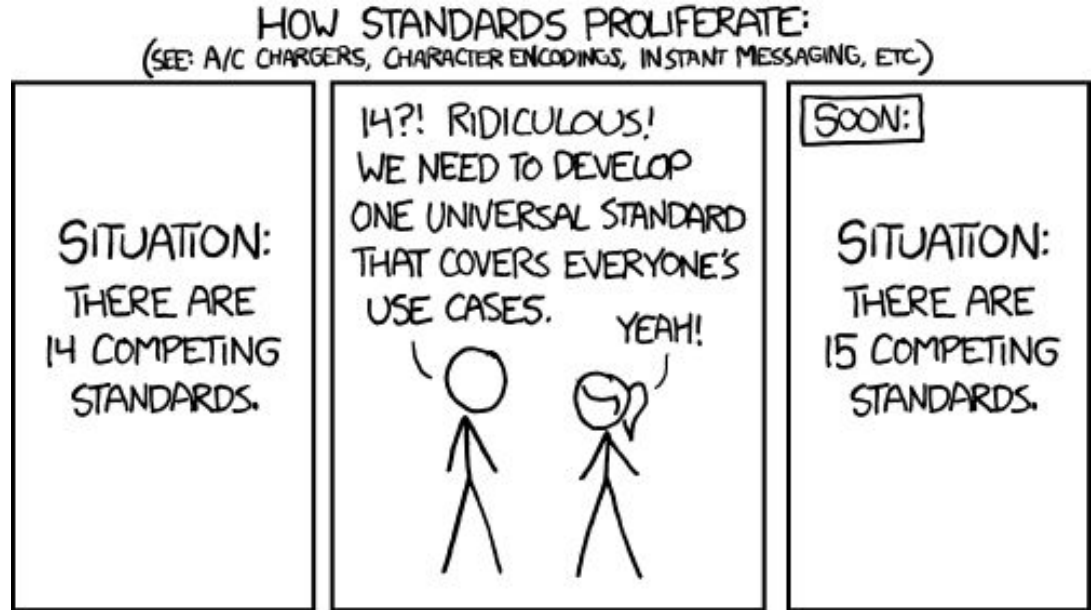
VS

Adoption



# The Challenges with Standards

- Standards can't keep up with the pace of innovation
- Standards are not enough to ensure compatibility and no vendor lock-in



# Standards in the Enterprise World

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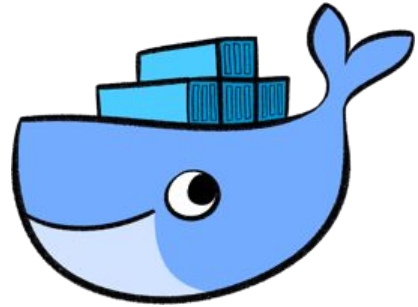
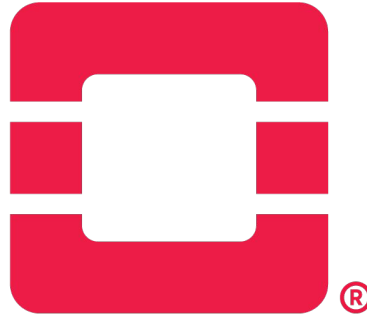




# De-Facto Standards

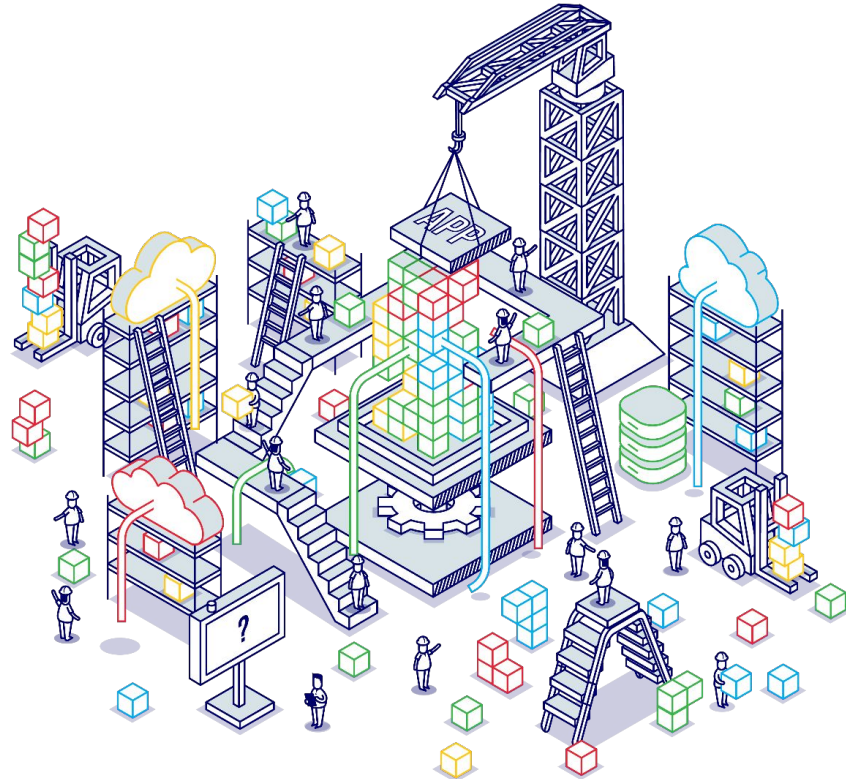
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Not  
Only SQL



# The Siloes Challenge

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# Finding a Happy Medium

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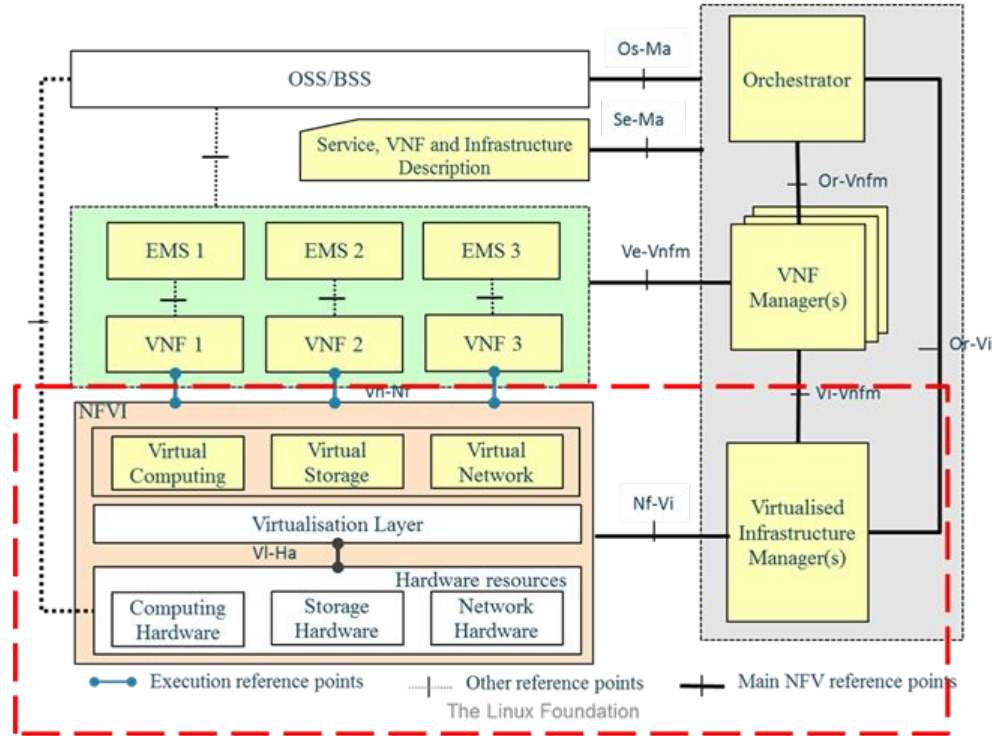


# Standards Driving Open Source

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# ETSI NFV



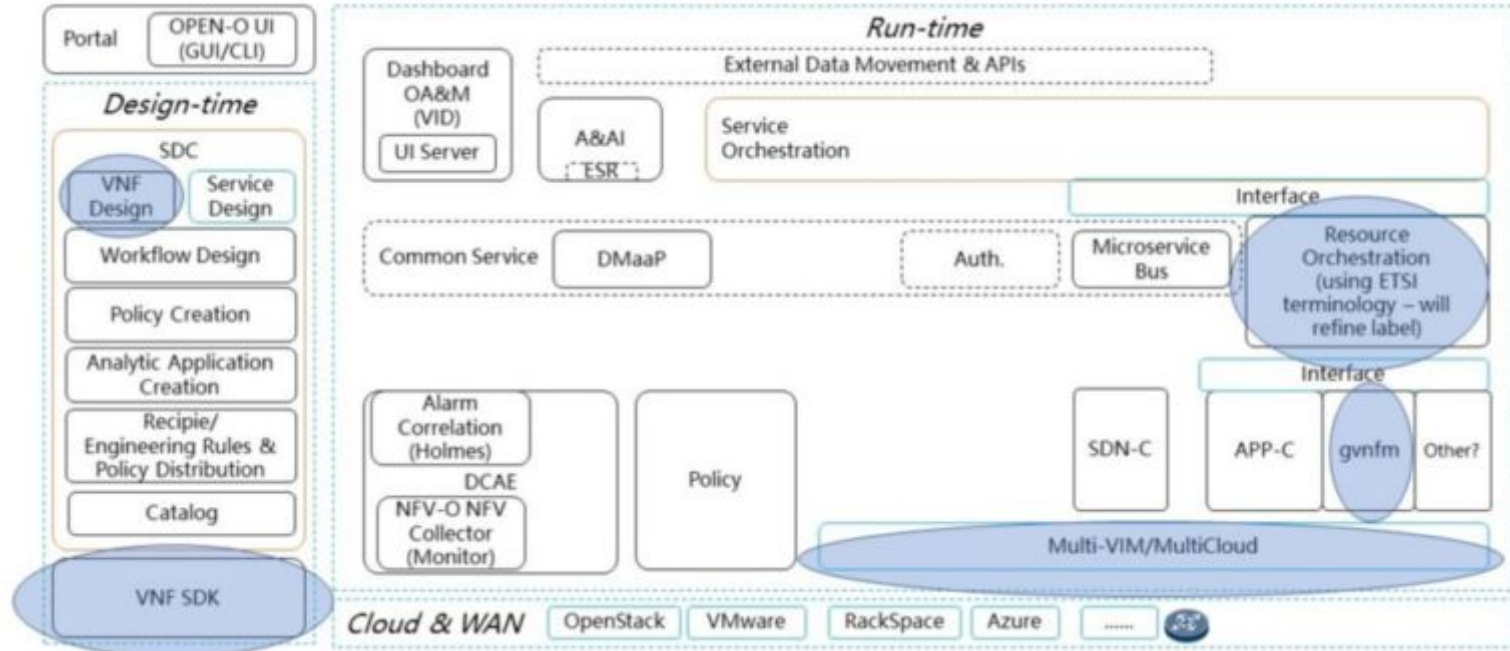
# Open Source Driving Standards

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# ONAP vs ETSI



ETSI is covering 20% of ONAP Scope

Source: [Michael Brener Post](#)

# Just Enough Standards

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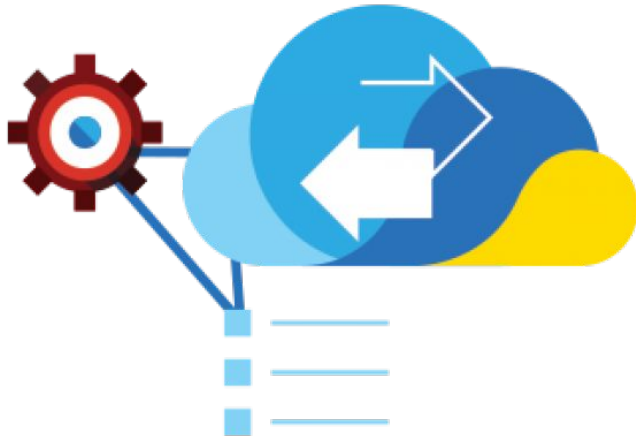


Taking a Pragmatic Approach to  
Standards

# Interop in a Non-Standard World

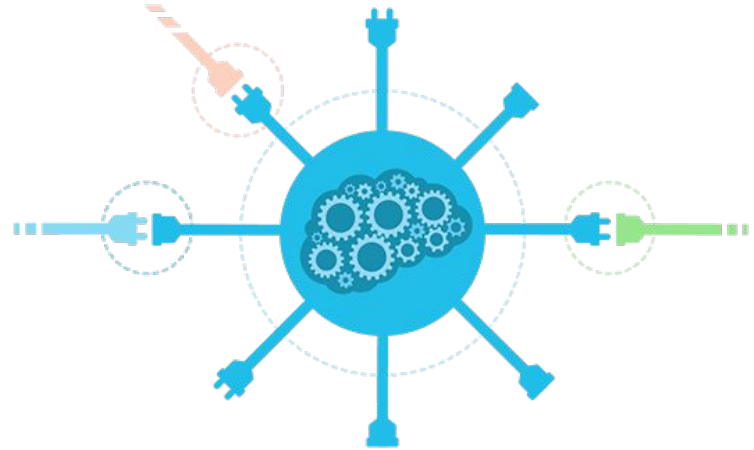
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Least Common  
Denominator approach



VS

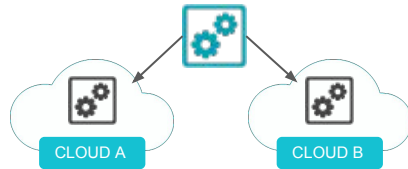
Brokerage Approach



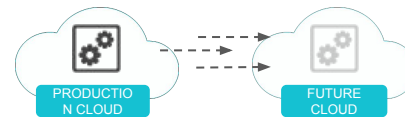
# Multi-Cloud/Multi-VIM

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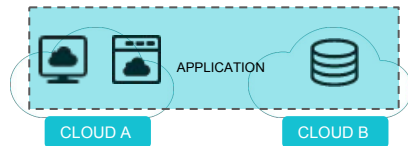
Application Deployment Portability



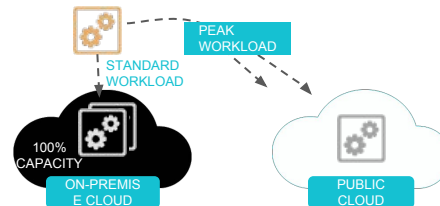
Future Proofing & Migration



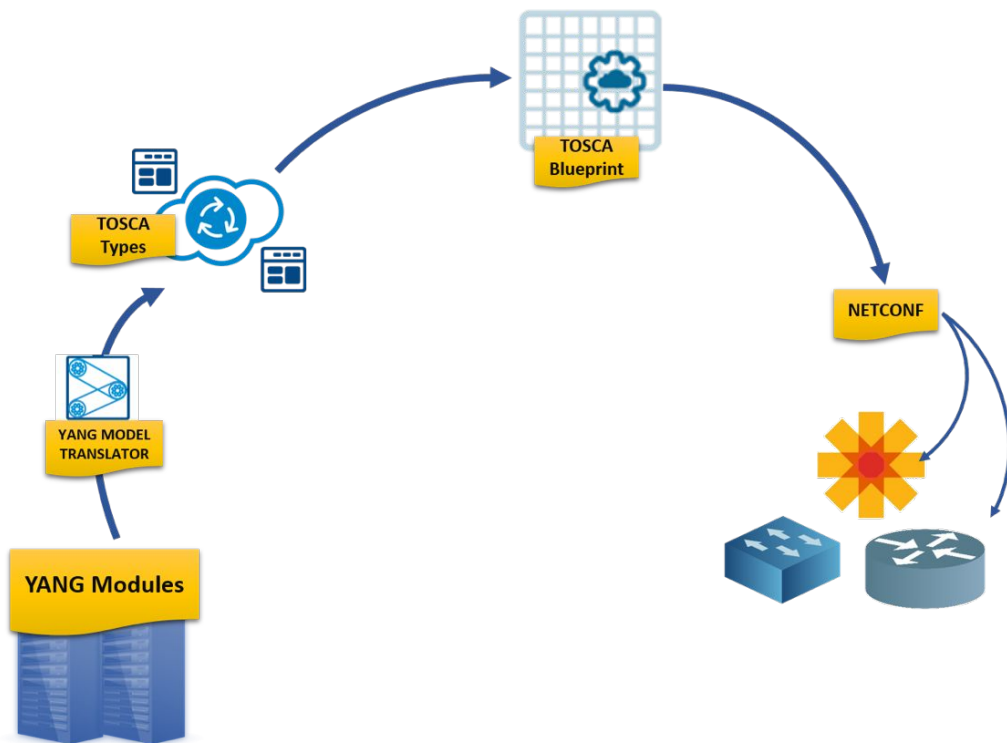
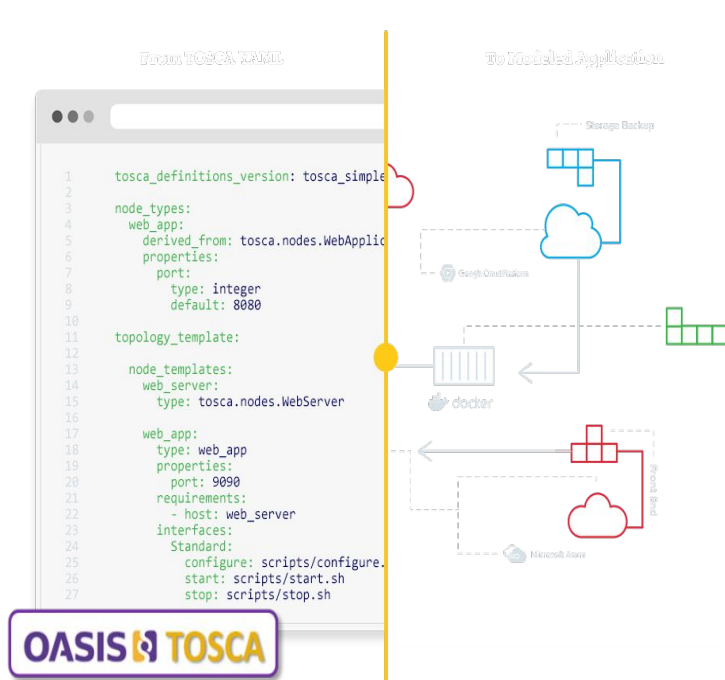
Multi-Cloud



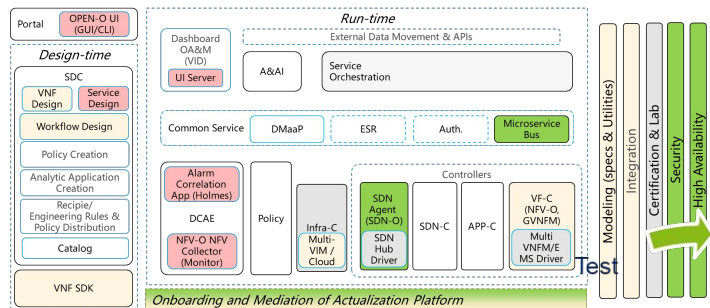
Cloud Bursting



# TOSCA/YANG



# Interop between Azure VNF and ONAP



Build

Design

On-Board

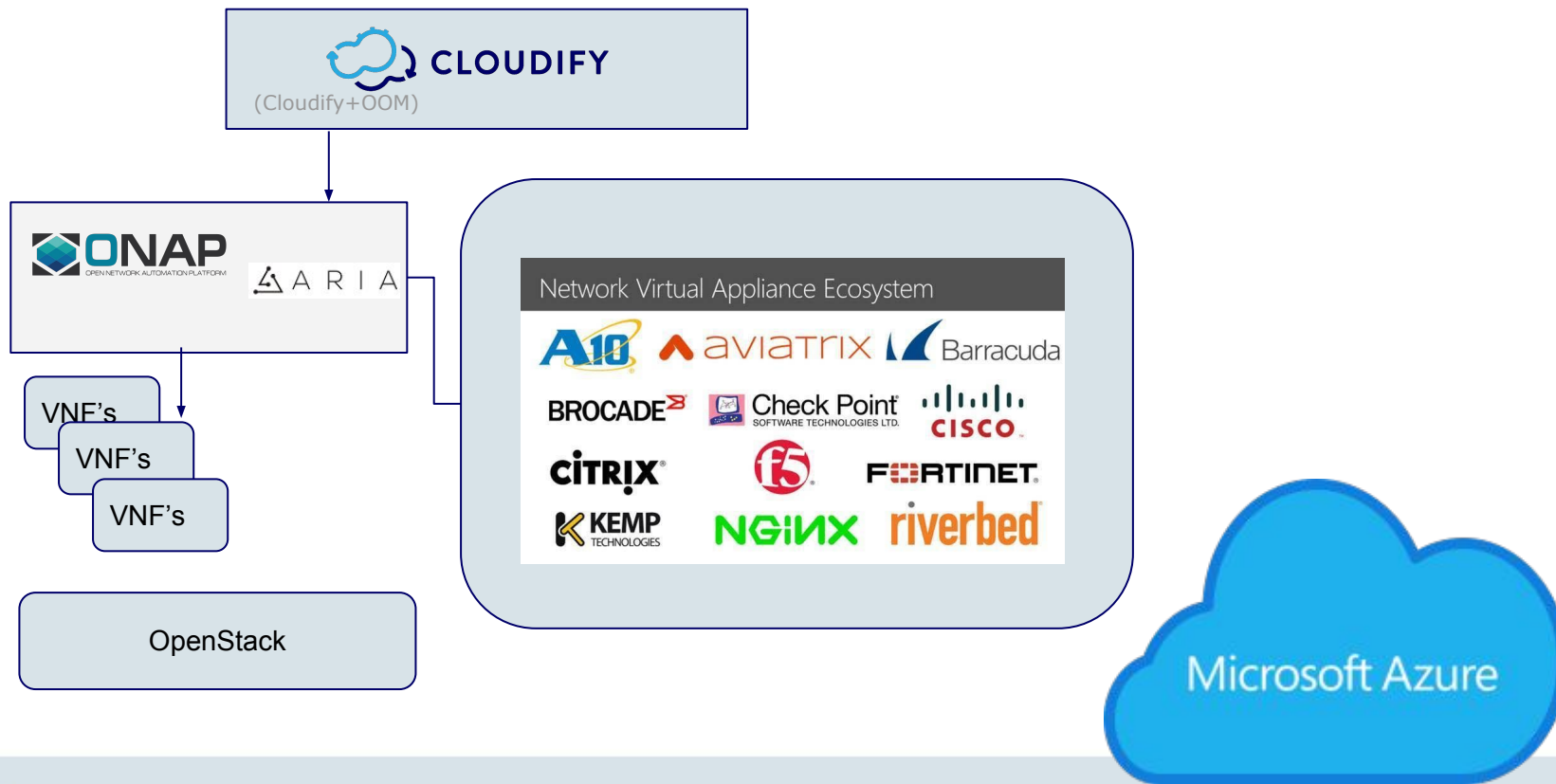
Specifications

The screenshot shows the Microsoft Azure Marketplace interface. The top navigation bar includes links for Why Azure, Solutions, Products, Documentation, Pricing, Training, Marketplace, Partners, Blog, Resources, and Support. A "FREE ACCOUNT" button is visible on the right. Below the navigation bar, there's a search bar and a "Sign in" button. The main content area is divided into sections:

- Product Category:** A list of categories including Compute, Networking (selected), Storage, Web + Mobile, Databases, Intelligence + analytics, Security + Identity, Developer tools, Monitoring + Manag..., Add-ons, and Blockchain.
- Featured:** A grid of featured products:
  - NetScaler 12.0:** By Citrix, NetScaler VPX 12.0. Software plans start at \$0.26/hour. "Get it now" button.
  - LoadMaster Load Balancer ADC Content Switch:** By KEMP Technology, Layer 4-7 Application Delivery Controller (ADC) Load Balancer, Content Switch and... Software plans start at \$0.29/hour. "Test Drive" button.
  - Palo Alto Networks VM-Series:** By Palo Alto Networks, VM-Series Next Generation Firewall. Price varies. "Test Drive" button.
  - Barracuda NextGen Firewall F-Series:** By Barracuda Networks, Next Generation Firewall for Distributed enterprises. Software plans start at \$0.60/hour. "Free software trial" button.
  - F5 BIG-IP ADC: Hourly:** By F5 Networks, F5 BIG-IP Virtual Editions-Application and security services for Microsoft Azure-... Software plans start at \$0.33/hour. "Free software trial" button.
- What's new:** A grid of new products:
  - FortiMail Secure Cloud Email:** By Fortinet, Stop Email Threats and Protect Sensitive Information. Price varies. "Get it now" button.
  - F5 BIG-IP ADC: Hourly:** By F5 Networks, F5 BIG-IP Virtual Editions-Application and security services for Microsoft Azure-... Software plans start at \$0.33/hour. "Free software trial" button.
  - Riverbed SteelHead 9.5.0:** By Riverbed Technology, Optimizes the performance of applications in cloud. Bring your own license. "Get it now" button.
  - POD Firewall:** By Paladion Networks, Implement robust security swiftly with Paladion OnDemand. Bring your own license. "Get it now" button.
  - Application Gateway:** By Microsoft, Cloud Managed Network. Bring your own license. "Get it now" button.

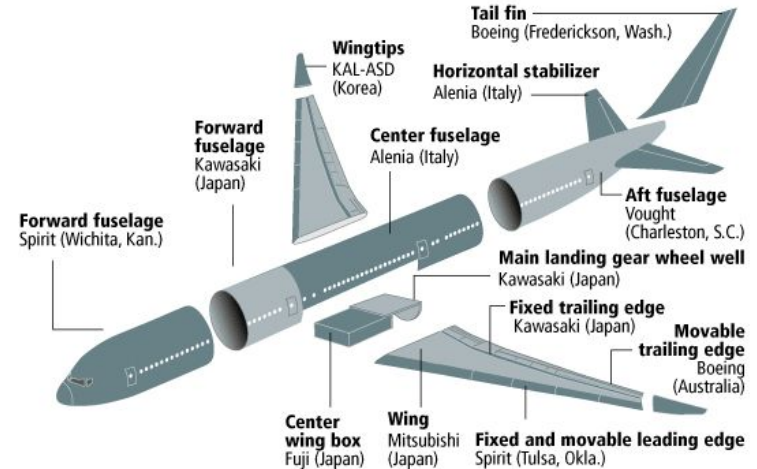
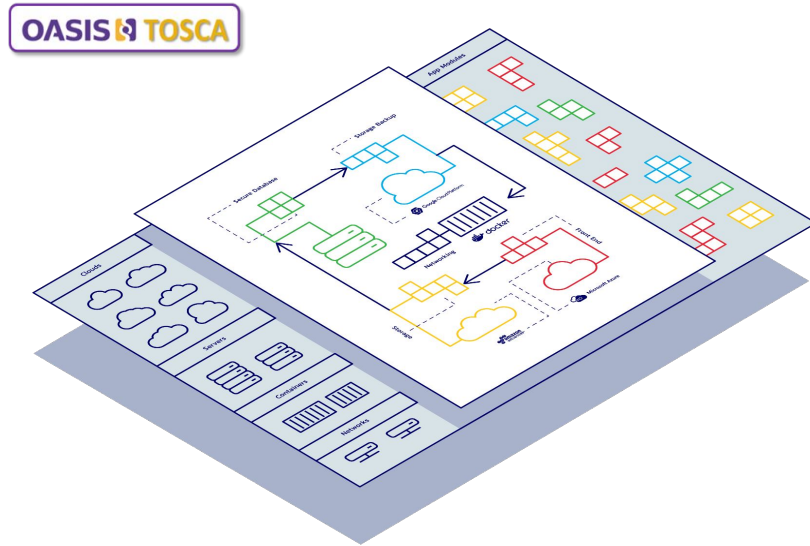


# Interoperability between ONAP/Azure



# Standard Modeling = Automation at Scale

## Example from the Manufacturing Industry



The Boeing 787 could not be produced  
without standard modeling



With a diverse team, you ***WILL*** have conflict.

And conflict is ***GOOD***.



# Summary



Open Source & Standards are better together



Orchestration is key for breaking the silos



Interop doesn't require to compromise on the least common denominator



ONAP and the Linux Foundation is a great platform for driving standard through Open Source

**Thank You**