SOFTWARE APPS / NEXT GEN TELCO

18th January 2023, Honolulu

0900-1000
Panel description

• One of the key identifications of a “Next Gen Telco” is the continuous shift from hardware to software (sometimes referred to as softwarization). In this new world, almost everything has become “as a Service” and is accessed mostly via an App. Open source is supposed to avoid vendor-lock-in. Internet has become the universal connectivity. Is the Internet resilient enough to deliver and support evolving WAN services such as SD-WAN and SASE? What are the challenges and how can we solve them? Let’s discuss.
Wednesday, 18 January 2023
09:00–10:00
MPCC, South Pacific 1

One of the key identifications of a “Next Gen Telco” is the continuous shift from hardware to software (sometimes referred to as softwarization). In this new world, almost everything has become “as a Service” and is accessed mostly via an App. Open source is supposed to avoid vendor-lock-in. Internet has become the universal connectivity. Is the Internet resilient enough to deliver and support evolving WAN services such as SD-WAN and SASE? What are the challenges and how can we solve them? Let’s discuss.

PANELIST
Toru Maruta
Executive Officer, Head of Product Management, KDDI / TELEHOUSE, Japan

PANELIST
Marijana Novakovic
Head of Network Architecture, Syntropy, USA

MODERATOR AND PANELIST
Anuradha Udunuwara
Senior Engineer, Sri Lanka Telecom PLC, Sri Lanka
Avoiding vendor-lock-in in Telco Softwarization

18th January 2023, Honolulu

Anuradha Udunuwara | @AnuradhaU
• Avoiding vendor-lock-in in Telco Softwarization

• Telco Digital Transformation and Telco Softwarization (SDN., NFV, and Cloud) are not new. Although the classical/conventional ideas of SDN and NFV have changed over the years (now we talk about IBN, automation, lean NFV, etc.), the key ideas of openness, modularity, and disaggregation together with virtualization, automation, DevOps (now devsecops/devseconps), flexibility and agility have helped Telcos their transformation from CSP to DSPs or Telcos to Techcos.

• The highly disaggregated network environments/platforms with different components and functionalities supplied by different vendors require complex interoperability requirements both at hardware and software levels. These include, but are not limited to, cross-domain SDN controllers (aka Network Orchestrators), Service Orchestrators, open APIs, etc.

• While the cost (capex, opex and TCO) benefits and flexibility/agility for service/product innovation are highly dependent on the openness, modularity, and disaggregation, where the operator has the flexibility of using the best (and cost-effective) components/functionals from different vendors, due to the operator's lack of required skills, education and knowledge for the required integration work, some vendors try to make use of the opportunity to push vendor-lock-in solutions.

• Operators need to avoid these situations, but it's not easy, especially for the operators in developing economies due to the skills and cost concerns. Different operators follow different strategies to tackle the situation.

• In my talk/presentation (or in a relevant panel), I would like to share our experience so far and how we are addressing some of these challenges.
Telco Softwarization (Telco X.0)

CoSP

- Networks
  - OGN
    - Legacy / TDM
  - IP / Ethernet

DSP

- Platforms
  - NGN
    - SGN
      - SGN (vNGN)
  - Softwarization
  - Cloudification

- Software
  - Cloud Native

- Hardware
Getting into innovation again

Focus: Hardware

Focus: Software

1876

Operator innovation

Vendor innovation

Today

Co-innovation?
SDN Standard definitions

OpenFlow

OIF

SOFT TRANSPORT AIR

IETF SDNRG

ITU

IETF NFVRG

World Class Standards

NFV Standard definitions

NFV implementations

TNOVA

Network Infrastructure as a Service Over Virtualised Infrastructure

OPNFV

Cloud/Container Orchestration / Management tools

EUCALYPTUS

openstack

Tracker NFV Orchestration

Orchestrator implementations

OPEN BATON

CLOUDIFY

Orchestration Definitions

MEF LSO

TM Forum Zoom

Open Source MANO

Japanese Softwarization Projects

Grafana

pnda

SNAS.io

Other Open Source Projects

CORD

kata containers

Open Switch

Open vSwitch

Tracker NFV Orchestration

Softwarization standards and Open Source Projects (NOT UPDATED)
$20.3T market cap & $56.5B funding

Source: https://landscape.cncf.io/
Change of vendor business models

Industry overall Changes
- Closed HW
- Closed SW
- Open SW
- Open HW
- Open APIs

Traditional Vendor Business Models
- Selling Closed HW and/or SW
- Selling Partially Open/open SW
- System Integration (HW)
- System Integration (SW)
- Telco Cloud

New Vendor Business Models
- Telco Cloud
- Selling Open SW and/or HW

Cloud Player Business Models
- Telco Cloud
- Public Cloud
The full stack (Hardware: software split)

Service Orchestration

Network Orchestration

Control Plane

Data plane

Software

Hardware

OSS

SDN

PTC Council

PTC’23

15-18 JANUARY 2023 | HONOLULU, HAWAII

@PTCouncil #PTC23
An approach for financially constrained economies and for uncertain times

• Bottom up
  • Build the forwarding plane (i.e. Network infrastructure: capacity and footprint) with essential control
  • Follow open architecture, open APIs
  • Add capabilities (additional control, orchestration, automation, AI/ML,...) as and when required
Thank you.