Vendor Update: Kontron
Simon Čimžar, CTO Business Unit Broadband
October 2023
Agenda

Why?
The global challenges of broadband

How?
Addressing the challenges

What?
Status of solutions
Global Internet Traffic

Netflix Is Responsible for 15% of Global Internet Traffic

Distribution of worldwide downstream internet traffic in 2022, by application

- Netflix: 14.9%
- YouTube: 11.6%
- Disney: 4.5%
- TikTok: 3.9%
- Xbox Live: 2.9%
- Facebook: 2.9%
- Prime Video: 2.8%
- Generic QUIC*: 5.9%
- HTTP media stream: 3.7%
- PS downloads: 3.0%
- Others: 43.9%

* Network protocol designed to speed up online web applications

Source: Cisco VNI Global IP Traffic Forecast, 2017-2022
Source: Sandvine | The Global Internet Phenomena Report
Investments in Telco Network

Cost of integration
SLA, testing

Cost of BRAS/BNG HW expansion
Capacity increase, licenses, SLA

Cost of OLT and CPE upgrade
XGS-PON, Wi-Fi 6/7

Cost of link/capacity upgrade
Interfaces, wavelengths

30% capacity (and cost) increase each year
Operator Challenges

- **EFFICIENT FIBRE EXPANSION**
- **SUPPLY-CHAIN DISRUPTION**
- **VENDOR LOCK-IN**

**Lack of personnel**

- Different look & feel between vendors, different apps, features
- Interoperability challenges between various systems
- Constant technology upgrade, permanent investment
Open Broadband Solution and Its Components

Virtualised BNG

Telco cloud with vBNG in data centre

OSS/BSS

Internet

Transport and aggregation

Software-defined access (SDA)

OLT with integrated vBNG

Open CPE

Field-proven technology and business model
Iskratel SDA Solution

- Alarm Management
- Inventory Management
- OSS/BSS Systems
- SDA Control Center
- SDA Edge Manager
- GPON/XGS-PON/Combo OLT*
- ONTs/OLTs from various vendors

1 Defined by ONF SEBA
2 Defined by BBF
3 Defined by operator
4 Defined by vendor
OLT: Programmability is Key

Flexible network infrastructure with support for traditional and SDN networks
Iskratel Lumia: World's First Dual-Nature OLT

Verified in **conventional** and **virtualised** setups

**Cost-effective evolution** to disaggregated fibre network

Lumia as **an integrated platform**

Lumia as **a white box**
vBNG: A Distributed, Virtualised BNG

Border Network Gateway manages subscriber services and performs **accounting** – a base for **billing** and **revenues**

**Virtualised BNG** is SW-based and runs on **x86 servers** or **cloud** platforms

vBNG also **extends BNG** with central management, address allocation, real time telemetry, EVPN, etc.

**Distributed vBNG** runs at edge locations, including **Iskratel Lumia Edge OLT** or x86 COTS server

Virtualising BNG significantly **reduces CAPEX and OPEX**
CPE Challenges

Constant need to upgrade CPE due to Wi-Fi saturation, interferences, coverage issues

Interoperability challenges between various systems (OLTs, VoIP, management)

Different look & feel between vendors, different apps, features (each vendor develops its own solution)

Significant operational effort to select, test and approve various vendors, SW releases; add costs of customisation and helpdesk support
Solution: Future-Proof Design of Open CPE

Separate **HW** from **SW**
- Select chipset platforms
- Reduce CAPEX: Engage directly with ODMs
- Local HW manufacturing

Open and future SW platform: **OpenWRT**
- Use of open-source applications
- **Open interfaces** for integration
- Same look & feel, same application
- Full interoperability (single protocol stacks)
- Select reliable partner for SW platform (drivers, apps)
- Focus on operator applications, services, user experience
- **Reduced OPEX**: single protocol, interop, app testing

Proven with Orange, Telefonica and others
Thank You for Attention

www.kontron-slovenia.com
marketing@kontron.si
linkedin.com/company/kontronslovenia
@kontron_slovenia

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