#LetsTalkOpenly

A second in a series of three webinars determining
the opportunity around Open Computing
for African Governments, Enterprises
and Service Providers.

Our Speakers

Daniel founded Atlancis with a vision to bridge the technology gap in Africa by combining global expertise with local context. Atlancis believes Technology adoption in Africa can only be driven by Africa. This has entailed developing tech-enabled vertical and horizontal solutions built to world class standards but with an informed understanding of the problems faced by businesses in Africa.

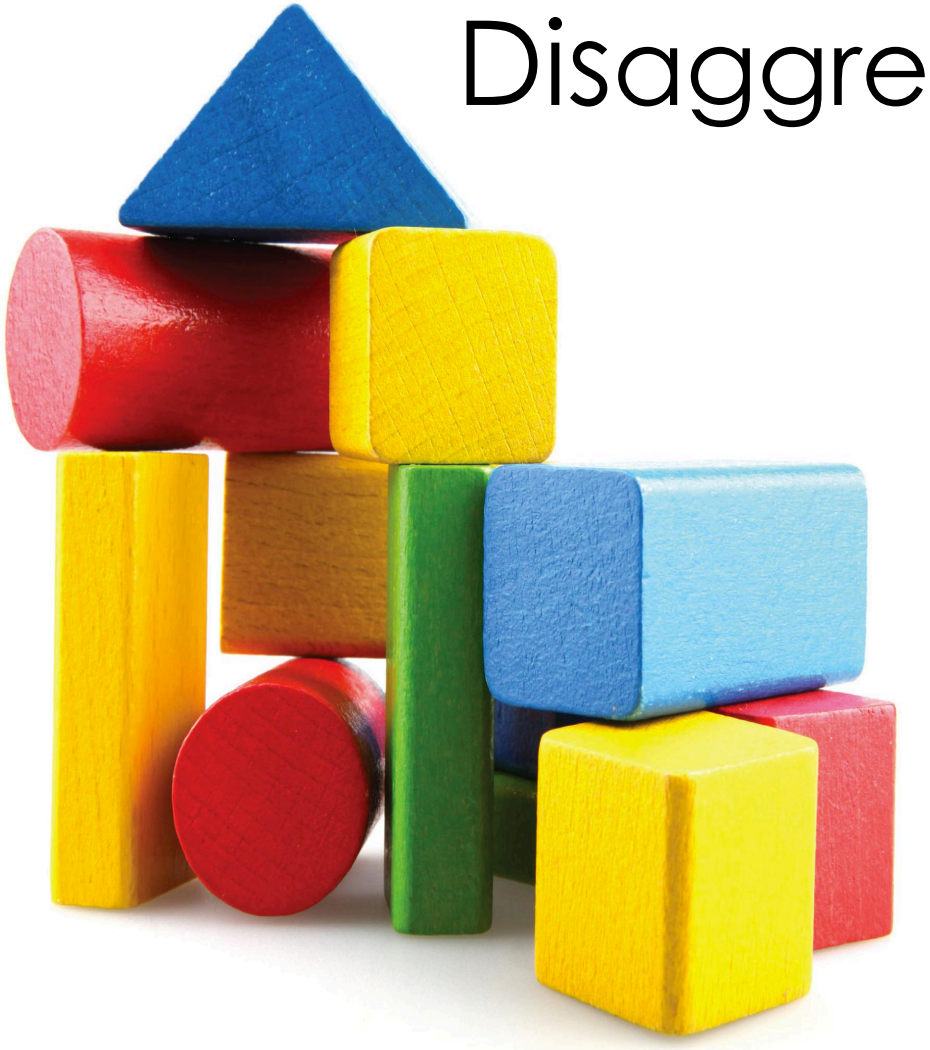
Steve Helvie is currently the VP of Channel for the Open Compute Project (OCP). In this role he helps to educate organisations on the benefits of open hardware designs and the value of “community-driven” engineering for the data centre. He works closely with Solution Providers and Manufacturers to help organisations adopt Open Compute across all regions and segments of the market.

Lukasz Lukowski is one of the first Open Networking evangelist in Europe who has been working closely with open communities and projects like OCP, TIP, ONF (ONF Ambassador), Terragraph or Express Wi-Fi Program.
Active A-Team Ambassador of the Open Networking Foundation and focused Regional Lead Manager of the Open Compute Project making change happen in EMEA region!

Agenda

- Introduction of Open Networking
- Open Networking in Africa
- Telco’s transformation from traditional legacy system to an agile Open Network
- Q&A and Closing Address

Disaggregation



Steve Helvie

VP of Channel Development

Open Compute Project

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OPEN
Compute Project

OPEN
COMMUNITY®

Edge-corE
NETWORKS

Goldman
Sachs
intel
rackspace

150+ companies
190+ contributions
6K engineers

150+ OCP Accepted™ & OCP Inspired™ Products
OCP Ready™ Facilities

OCP ACCEPTED™ OCP INSPIRED™ OCP READY™

Our Projects

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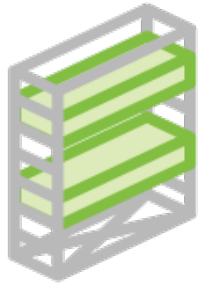
Networking

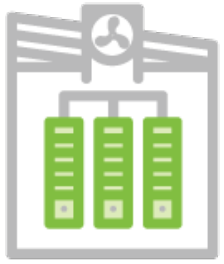
Server

Storage



Rack & Power

Advanced Cooling



Data Center

Telco

HW Mgmt

Open System Firmware

HPC

Security

Modular DC

openEDGE

https://www.opencompute.org/projects

FierceTelecom

AI TELECOM TECH PLATFORMS

Telecom

Open Compute Project switches rule the data center bare metal roost - report

by Mike Robuck | Oct 24, 2019 11:33am

1. CAPEX reduction initiatives
2. Increase in SDN offerings
3. Rise in merchant-based silicon

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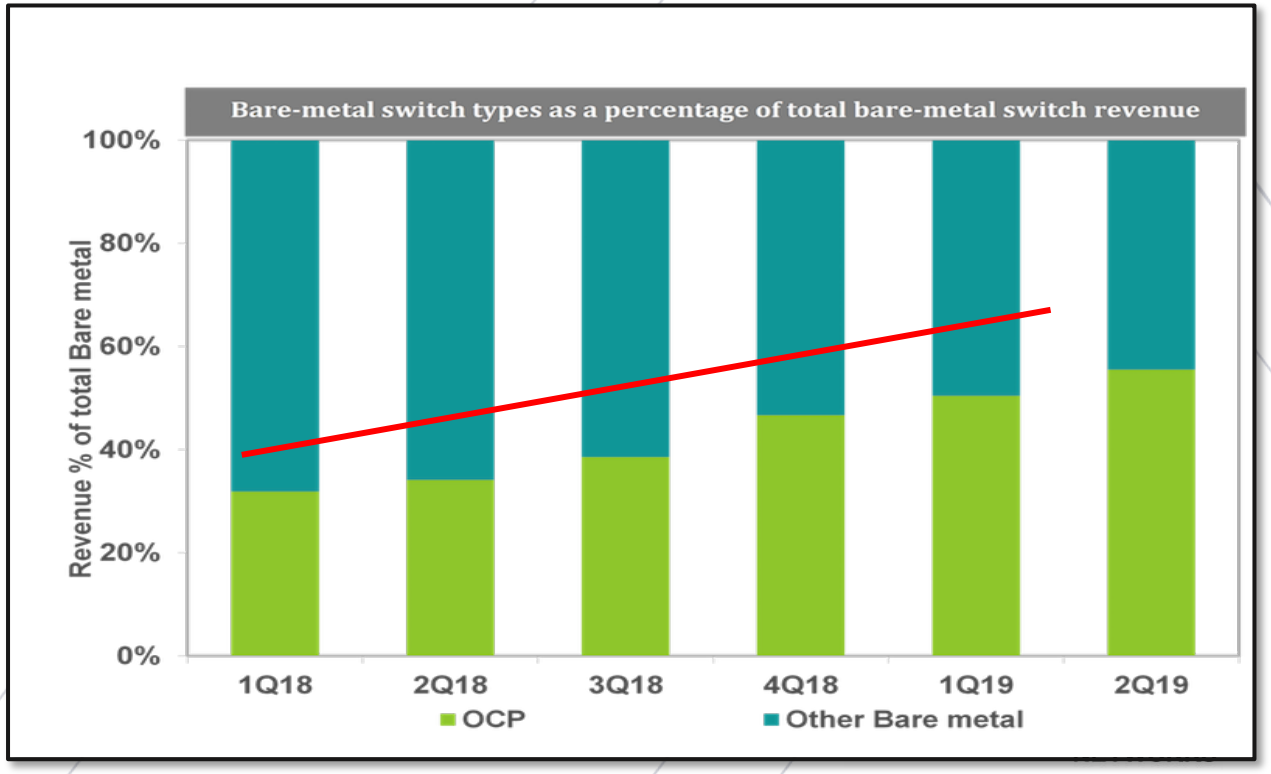
"OCP-certified switches have moved past the trial and wait-and-see phases"

Devan Adams, principal analyst at *Omdia Inc*



https://www.fiercetelecom.com/telecom/open-compute-project-switches-rule-bare-metal-roost-report

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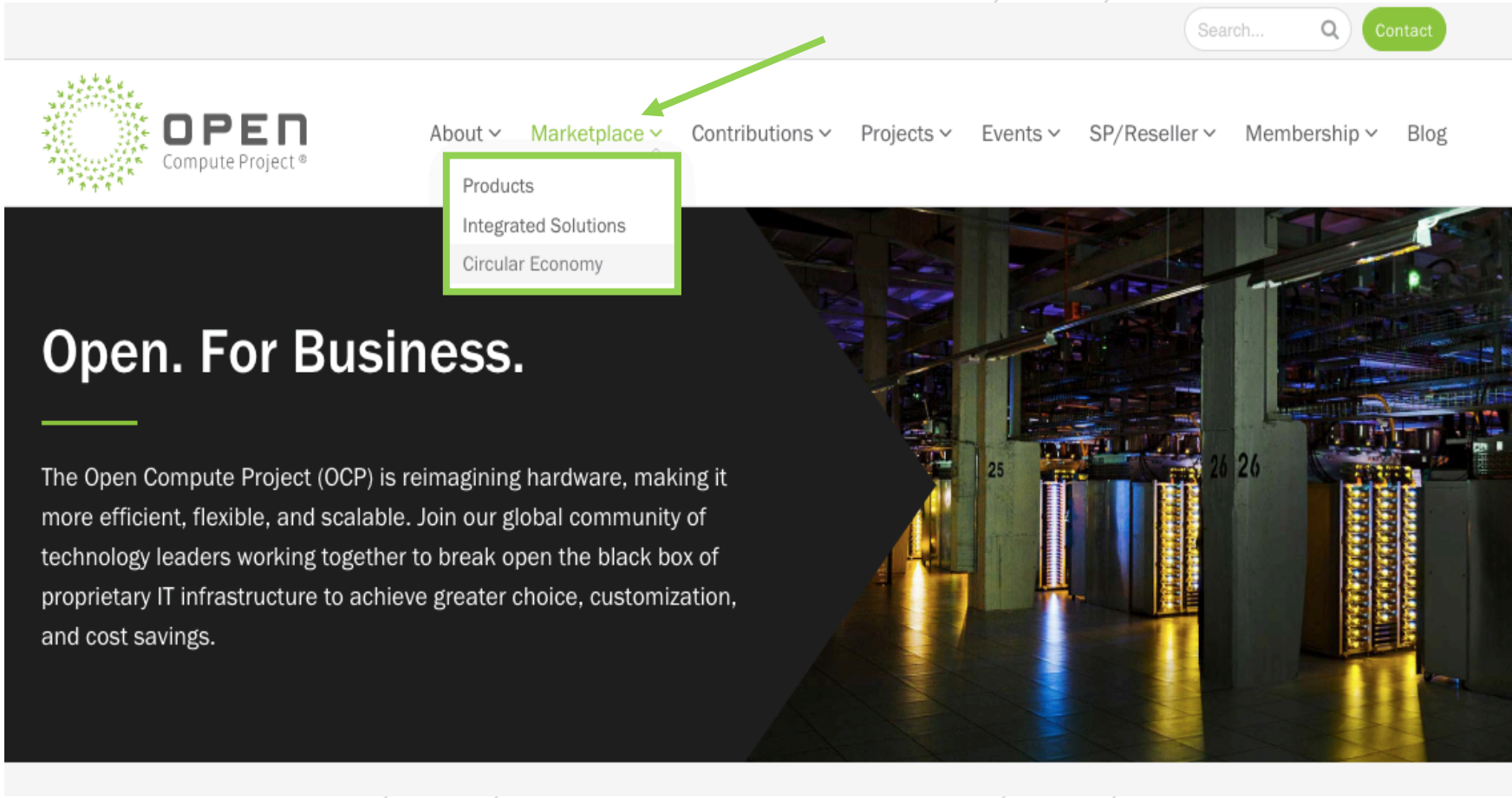

Edge-corE
NETWORKS

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Open Networking in Africa

Dan Njuguna

Co-founder & CEO

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OPEN COMMUNITY®

Edge-corE NETWORKS

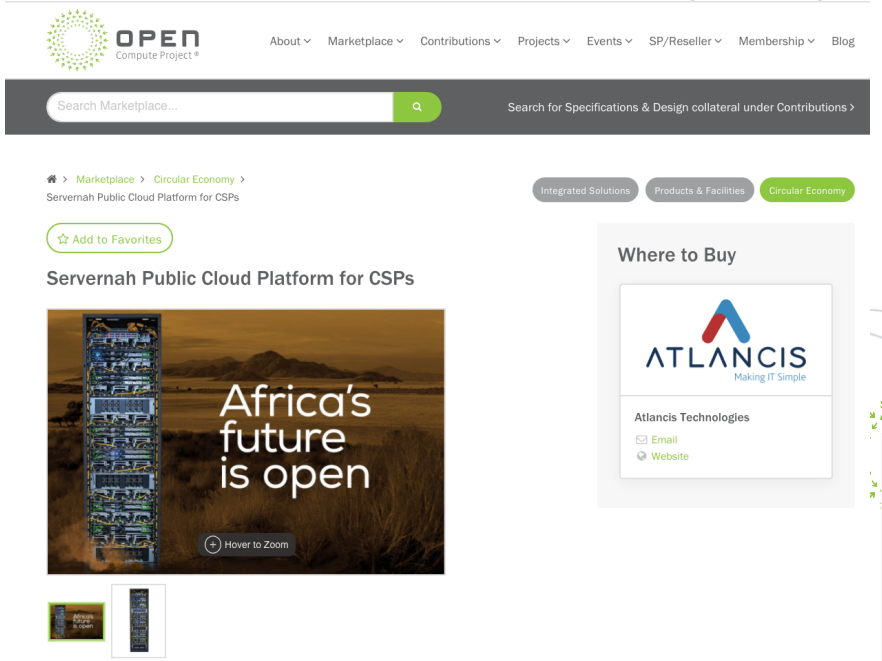
Atlancis' journey

We apply innovation that's been honed in the world's largest data centres to deliver fundamental improvements in performance, administration and efficiency at scale.

It's our belief that a software-centric approach is the future for the data centre. These values run through our corporate ideology determining our alliances and objectives.

Africa is Open

- Business transformation 2018
- POCs executed at multiple levels
  - Hardware
  - Cloud platform
  - Applications
- Solutions listed on OCP website
- Global press coverage
- Compelling results
  - CAPEX
  - OPEX
  - ROI
  - Product development
- Platform for expansion



Atlancis deployments

Edgecore Networks Wedge 100S 100GbE Data Center Switch

A commercial product based on Facebook's Wedge 100 design.
Top-of-Rack switch optimized for web-scale data centers. Compatible wit...

Solution Providers: Edgecore Networks, Hyve Solutions, ITOCHU Techno-Solutions Corporation, Circle B, Vesper Technologies, ECI Networks, Atlancis Technologies

Part #: Wedge100S

OCP ACCEPTED

sai SONiC CUMULUS More

Specifications

Edgecore Networks AS4610-30T 24x1G RJ45 Base-T, 4x10G SFP+, 2x20G QSFP, Access Switch

A high-performance Gigabit Ethernet Layer 3 switch family which is ideal as a data center top-of-rack switch or IPMI (Intelligent Platform Managem...

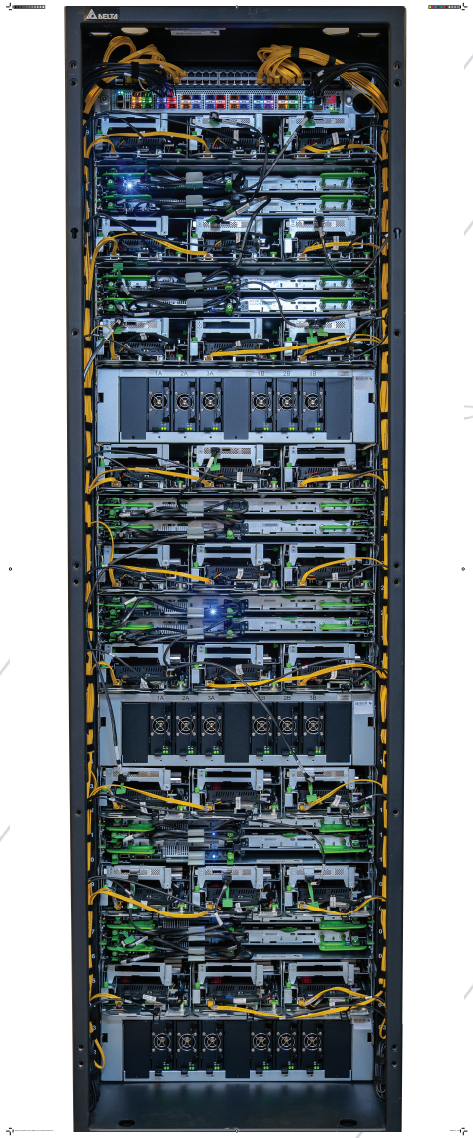
Solution Providers: Edgecore Networks, Hyve Solutions, ITOCHU Techno-Solutions Corporation, Circle B, Vesper Technologies, ECI Networks, Atlancis Technologies

Part #: AS4610 - 30T

OCP ACCEPTED

CUMULUS onie PICOS

Specifications



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Edge-corE NETWORKS

Tangible benefits

- 130 + hardware platforms
- Extensive supported vendor base
- Flexibility to work with best-in-class suppliers

- Automated & accelerated provisioning of network capacity and services

- Reduced network equipment expenses
- Reduced installation and integration costs

- Greater control over the development of enhanced network services

- Flexible open architecture
- Customise your network and scale seamlessly

- Reduce OpEx by using existing teams managing more switches each

Edge-corE NETWORKS

Łukasz Łukowski

Vice President Sales &
Channel EMEA

Edgecore Networks

OPEN Compute Project
SOLUTION PROVIDER

OPEN PLATINUM

OPEN COMMUNITY®

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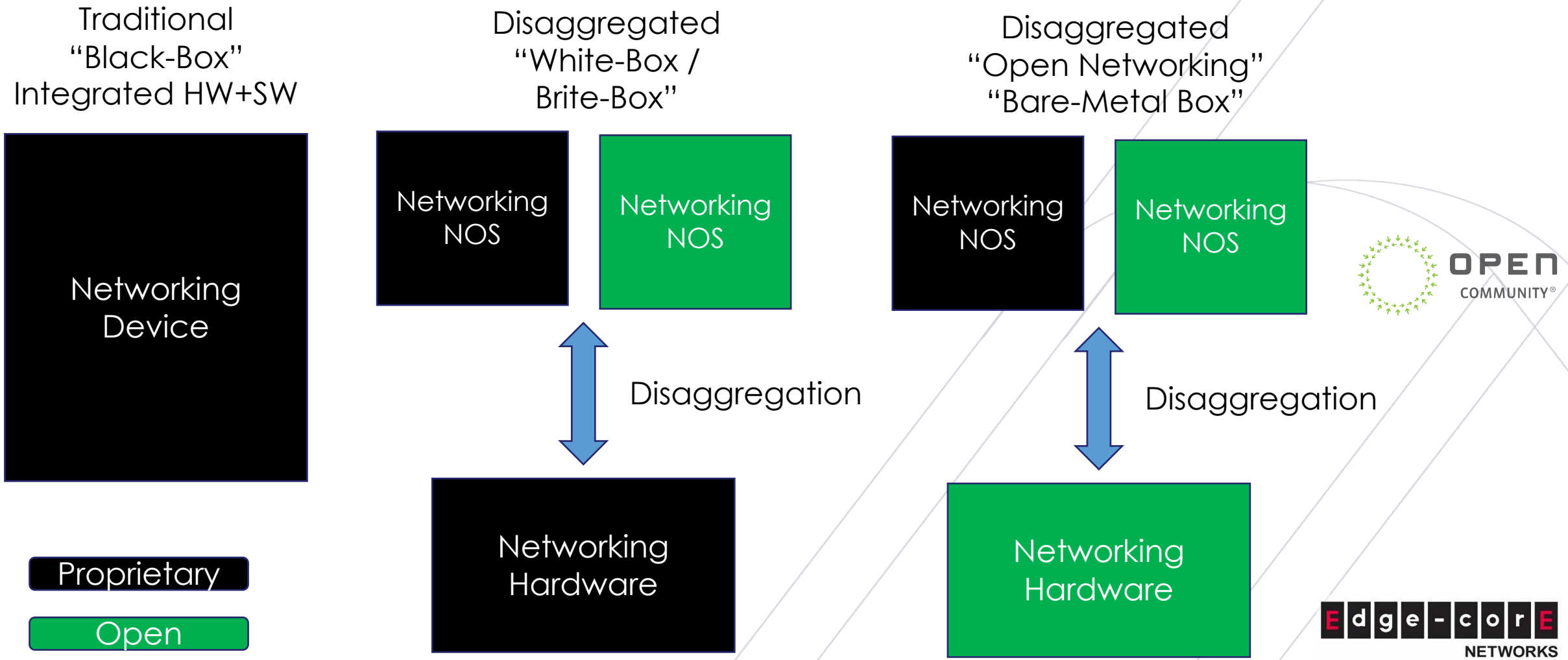
Edge-corE NETWORKS

What is Open Networking?



Why Open Networking?

Freedom Control Innovation

- Open Networking
- Open Software
- Open Hardware

} Disaggregation & Open

Benefits:

- Disaggregation provides **FREEDOM** of choice and removes vendor lock-in
- Greater **CONTROL** over Network Infrastructure through open software platforms
- Rapid **INNOVATION** through a community & develops approach
- Reduced **CAPEX** and **OPEX**

Attributes:

- **Open Hardware:** Standard Configurations, White-Box, Bare-Metal, Brite-Box Open Designs
- **Open Software:** Open Source and Commercial Software with Open Interfaces and Agents
- **Software Controlled Infrastructure:** SDN, NFV, Automation, Analytics, and Orchestration

Leading the Open Network Revolution

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- Leading Member since conception / OCP Taiwan Representative
- 1st Contributor to Network Group - 17+ Accepted Design Contributions
- Designs for new use cases in Telco Project

- Member since 2014, Partner since 2018
- Contributing to all four Exemplar Reference Designs
- Board of Directors Membership

- Member since conception
- Cassini Optical Transponder Contribution
- 1st Contributor to Cell Site Gateway Project

OPEN COMMUNITY®

- Platinum Member since Conception
- Board of Directors Membership
- Contributor to Edge – Enterprise Solutions

- Top 5 Contributor
- Most platforms Contributed to SONiC Community

Edge-corE NETWORKS

Accton Technology and Edgecore Networks

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Accton
Making Partnership Work

Accton Technology

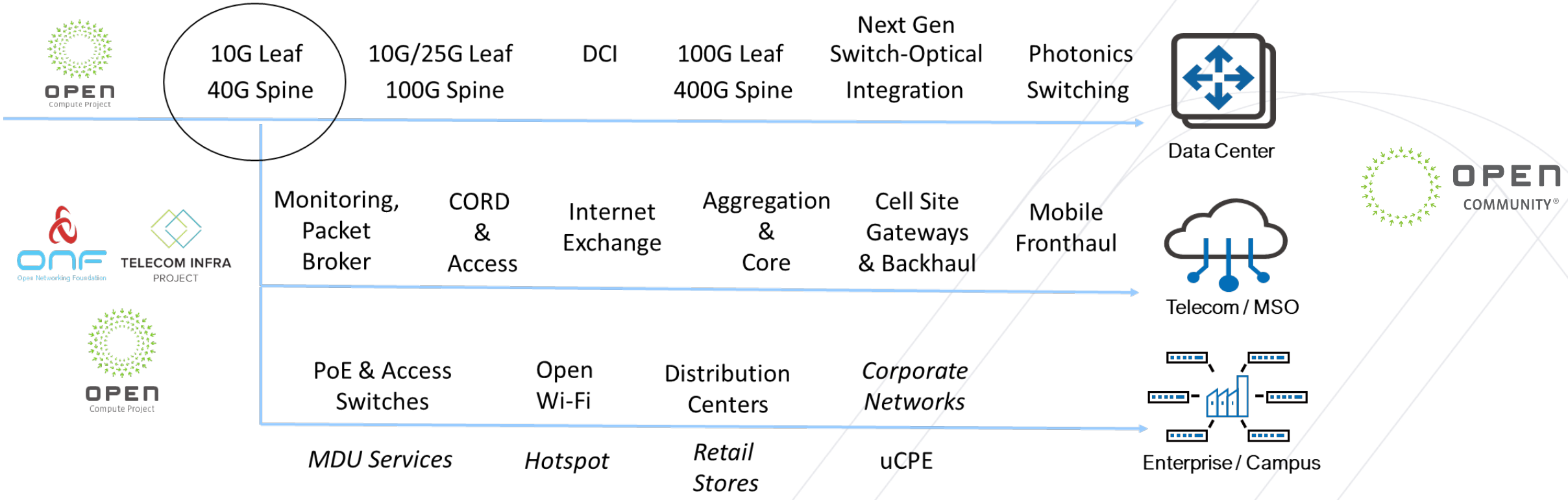
- The Leading Network ODM - Servicing Tier-1 Customers
- Founded 1988, IPO Taiwan 1995 (TWSE: 2345)
- $1.8B USD Revenue 2019, 5,145 Employees Worldwide
- 9 R&D Locations with more than 1,000 Engineers
- State-Of-The-Art High-Volume Manufacturing in Taiwan and China
- One Stop Shop!

Edgecore Networks

- Brand launched in 2004, wholly owned subsidiary of Accton
- Go-to-market business to network operators - DC, Telecom, and Enterprise
- Manages customer, partner and open community relationships
- Leading contributor of network designs to OCP, TIP participant, ONF – Charter Partner
- **More than 10M Ethernet Ports shipped in 2019!**

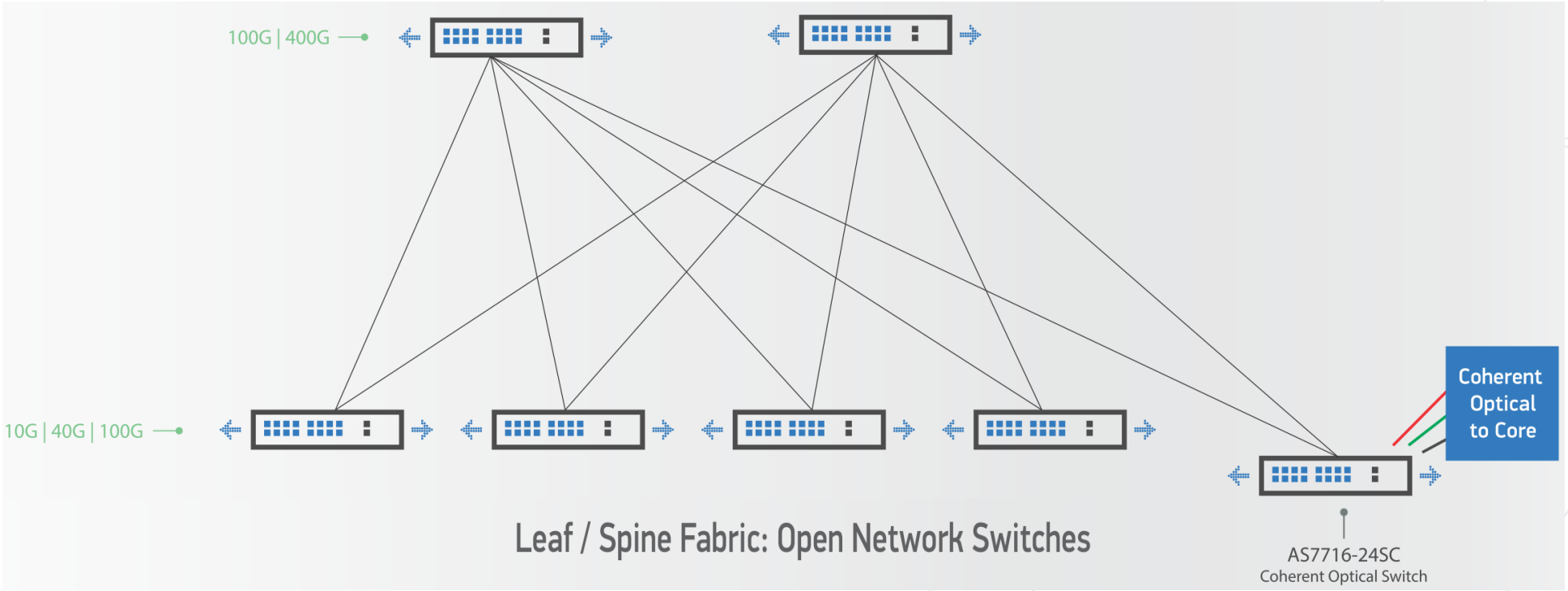
OPEN PLATINUM
OPEN Compute Project SOLUTION PROVIDER
ONF Open Networking Foundation
TELECOM INFRA PROJECT
Edge-corE NETWORKS

Open Networking Evolution



Data center

Evolution



Data center

Edgecore cooperation with Hyperscale Datacenter (40G / 100G)

Wedge-16X

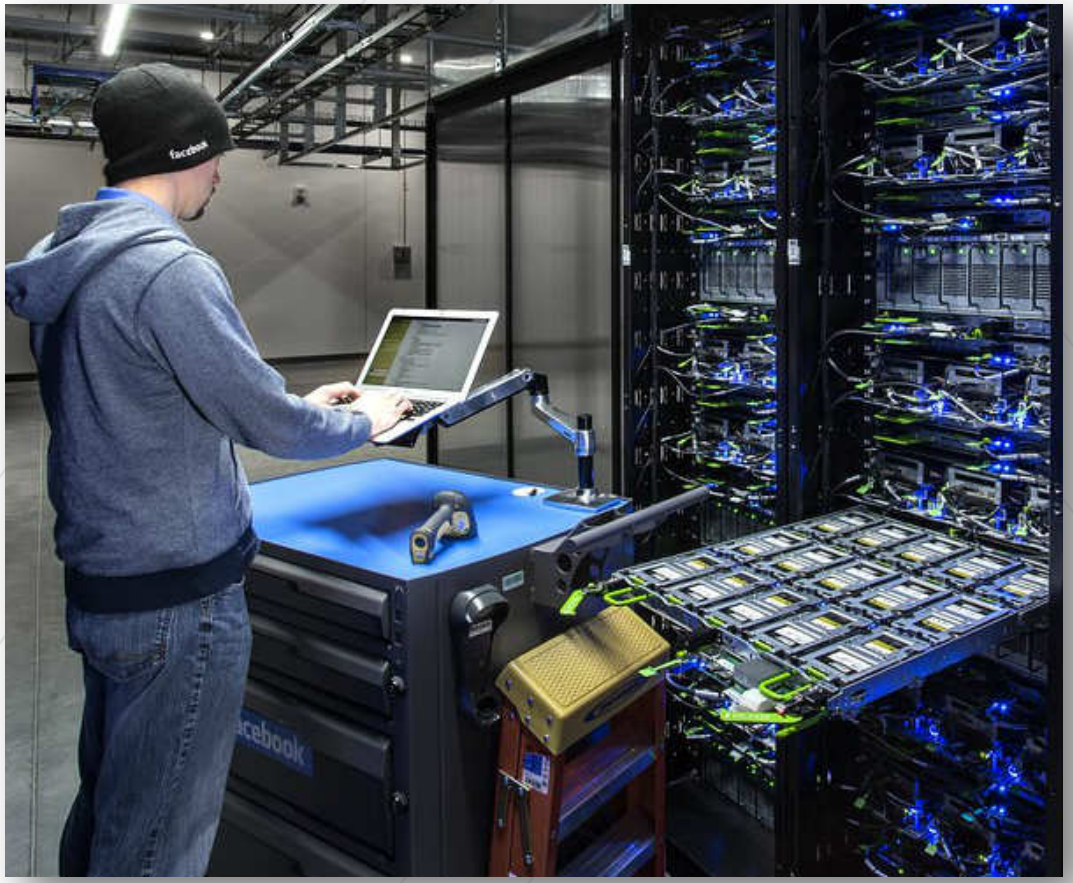
16x40G, Broadcom Trident II

Wedge100S-32X

32x100G, Broadcom Tomahawk+

Facebook Design

OCP ACCEPTED



Data center

Edgecore cooperation with Hyperscale Datacenter (100G / 400G)

MINIPACK

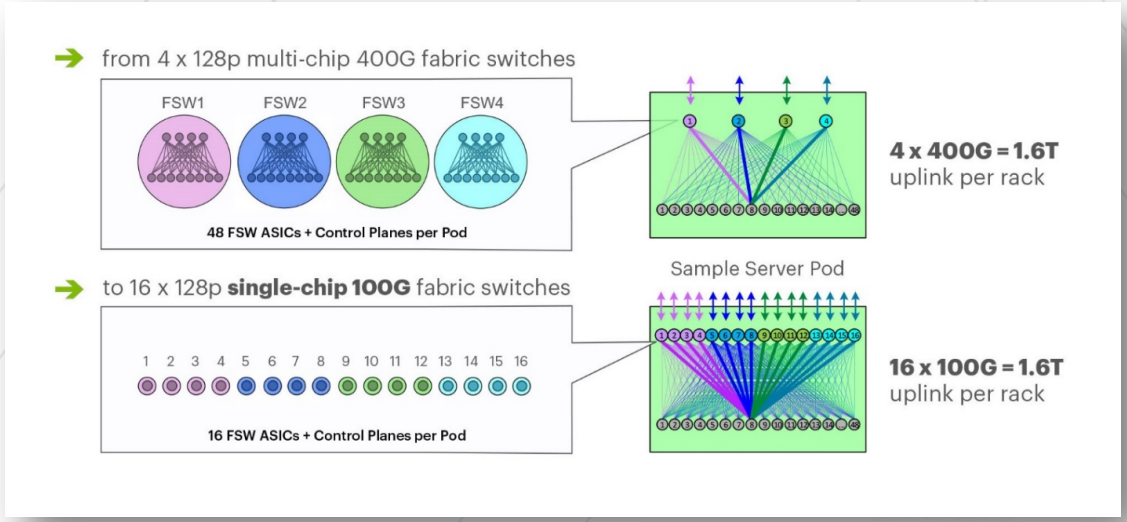
Facebook Design

OCP ACCEPTED

MINIPACK AS8000

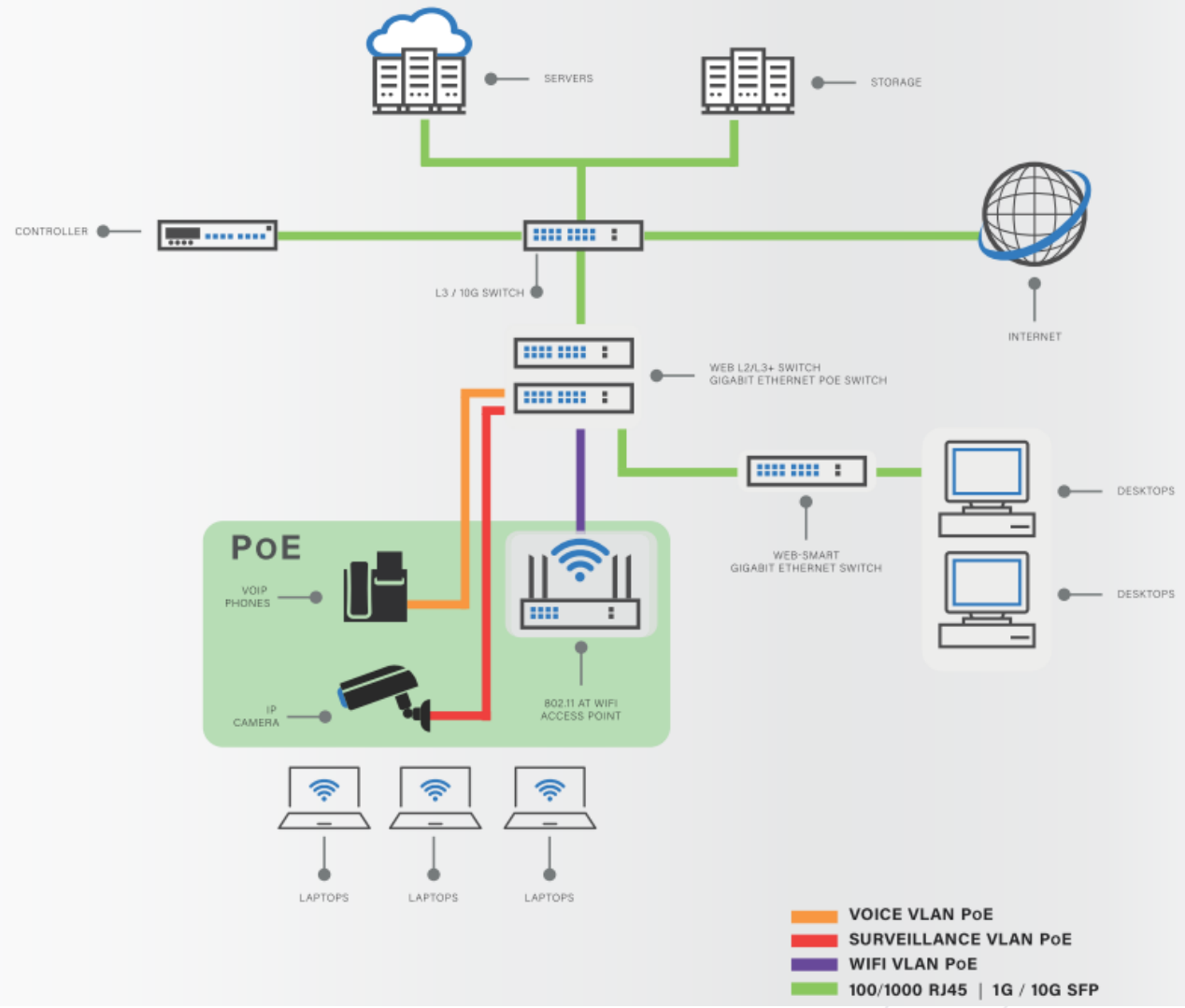
- Broadcom Tomahawk 3, Intel® Xeon® D-1527 CPU
- 8 Line Card Options (PIMs)
  - 16 x 100G QSFP28 / up to 128 x 100G
  - 4 x 400G QSFP-DD / up to 32 x 400G

OPEN COMMUNITY®



Enterprise / Campus

Evolution



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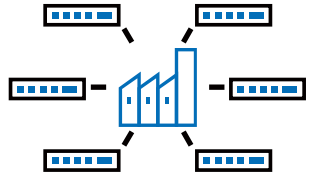


AS4610 SERIES

Access switch
24 or 48 Port 1G, 4x10G, 2x20G Stack Ports
Broadcom® XGS Helix 4
Embedded ARM CPU
POE and non-POE Options

AS4630 SERIES

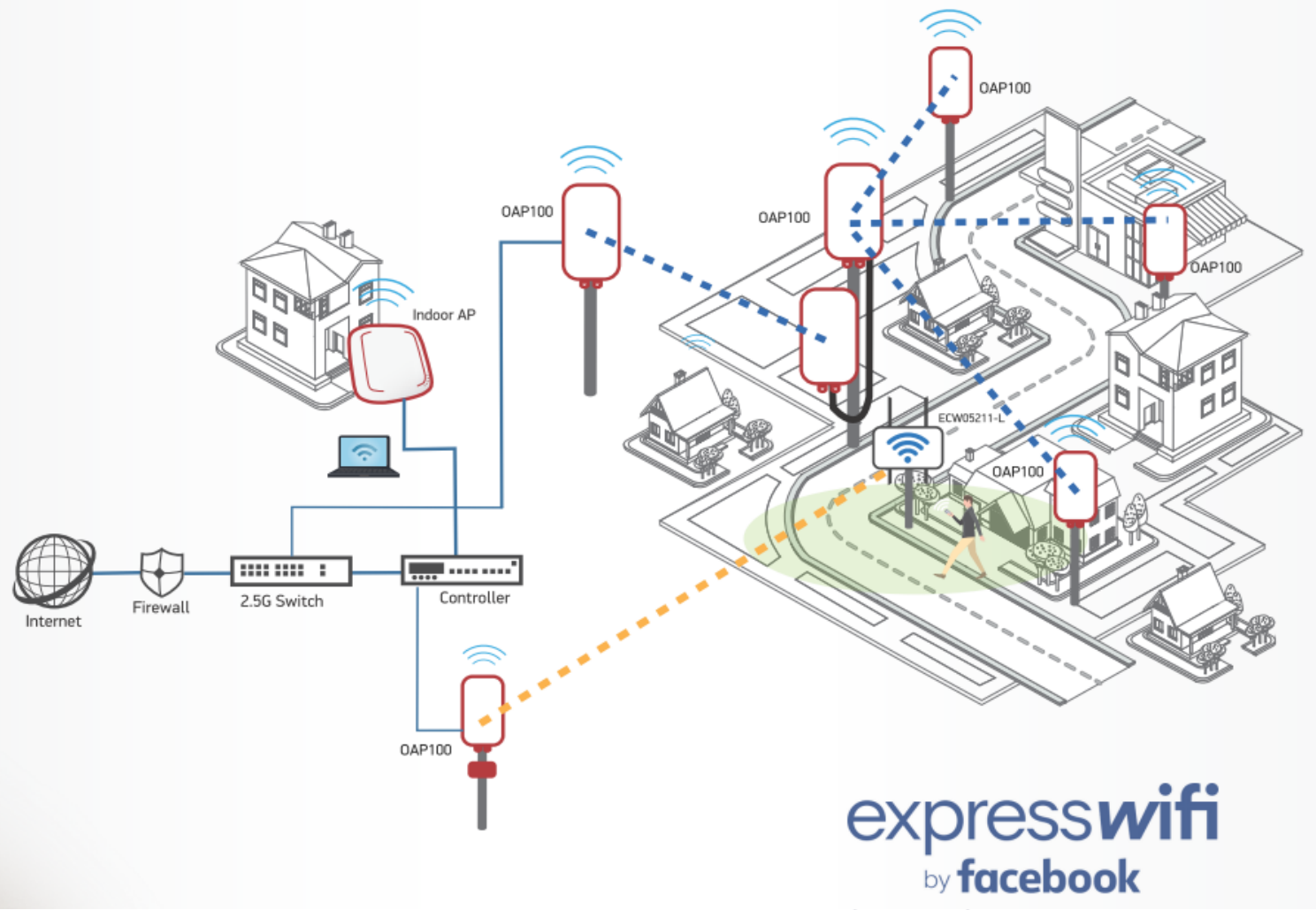
Access Switch
48x 1G or Multi-Rate, 4x25G, 2x100G
Broadcom® XGS Helix 4
Intel Xeon Denverton CPU
Optional MACSEC
IEEE 802.3bt (90W) POE Support

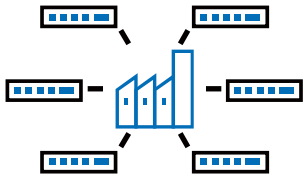
SAF51001I, SAF51003I, SAF51015I
SAF4100I, SAF4101I

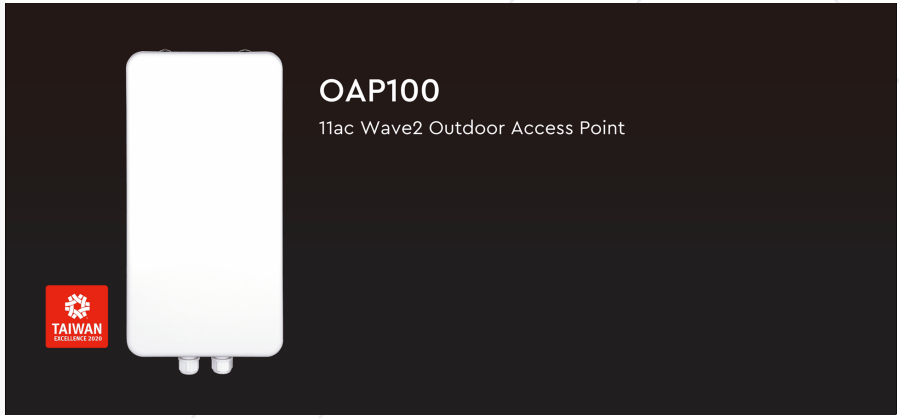
Universal CPE (uCPE) Platform
Integrates WAN, LAN, and VNFs
Intel Atom Intel Processor
DDR4 Memory
HDD / SSD options
1G RJ45, 1G SFP / 10G SFP+

Enterprise / Campus

Evolution

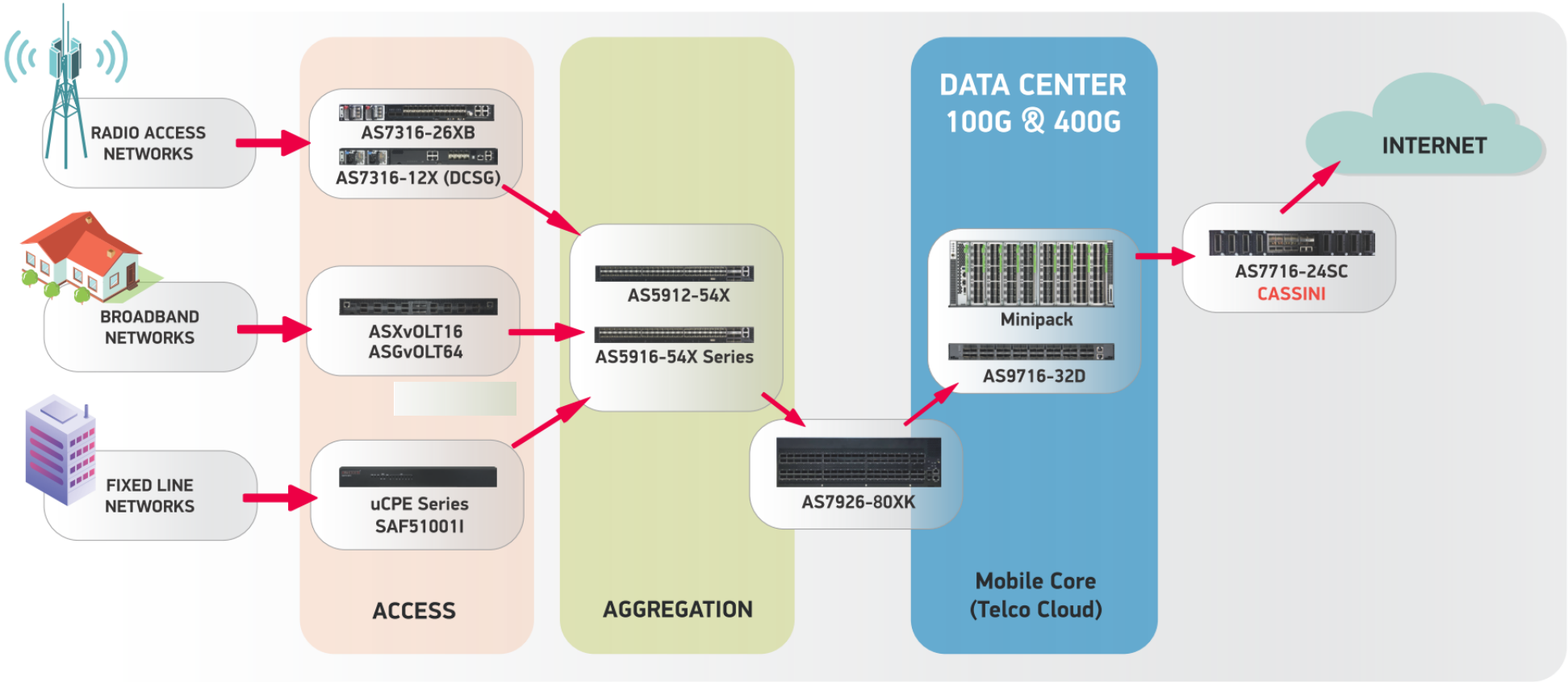






Telecom / MSO

The Logical Architecture for Edgecore Open Networking CSP Portfolio



Telecom / MSO

Edgecore cooperation with Telecoms (DCSG)

AS7316-26XB Cell Site Gateway

16 x 10G SFP+, 8 x 25G SFP28 + 2 x 100G QSFP28

AS5915-18X TIP DCSG Disaggregated Cell Site Router

4 x 1G RJ45, 8 x 1G/2.5G SFP + 6 x 10G SFP+

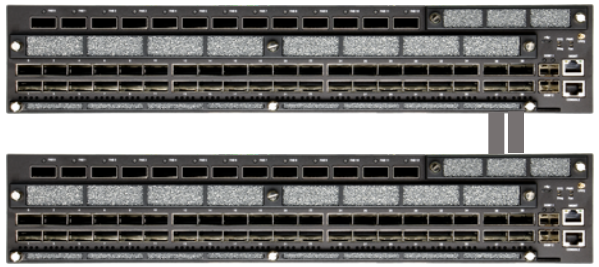
AS7315-27X Cell Site Gateway

16 x 10G SFP+, 8 x 25G SFP28 + 1 x 100G QSFP28 + 2 x 100G Stacking Ports

Telecom / MSO

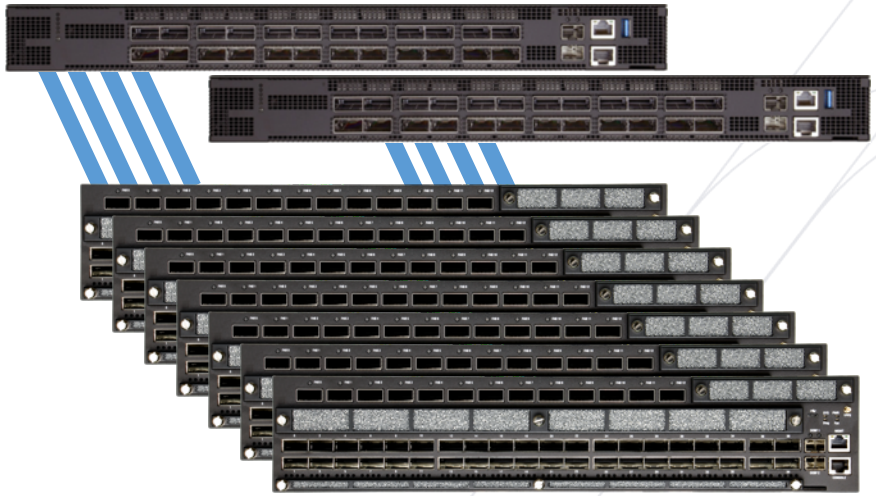
Edgecore cooperation with Telecoms (Aggregation and Core Routers or 10G OLT)

Stacked/Clustered



- Multiple CPU
- Single Control/Management Plane
- Redundant

Distributed Virtual Chassis



- Multiple CPU
- Single Control/Management Plane
- Redundant
- Scales to 1000s of Ports

10G PON ASXvOLT16

16 x 10G XGS-PON XFP + 4 x 100G QSFP28

Strong Software Ecosystem

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COMMERCIAL SOFTWARE

Data Center

- BIG SWITCH NETWORKS
- CUMULUS NETWORKS
- IP INFUSION
- PLURIBUS NETWORKS
- BROADCOM ICOS

CSP

- RTBRICK
- DRIVENETS
- IP INFUSION
- ARRCUS
- RADISYS
- VOLTA NETWORKS

Enterprise

- PICA8
- PLURIBUS NETWORKS
- CUMULUS NETWORKS

Disaggregated

- APSTRA
- NETRIS (FORMALLY XCLOUD)

OPEN SOURCE SOFTWARE

- SONiC from Microsoft
- Open Networking Linux (ONL) from OCP
- OpenSwitch from the Linux Foundation
- Stratum from ONF
- ONOS from ONF
- Broadcom's ICOS
- DANOS from the Linux Foundation

Edge-corE NETWORKS

Where can you try Open Networking?

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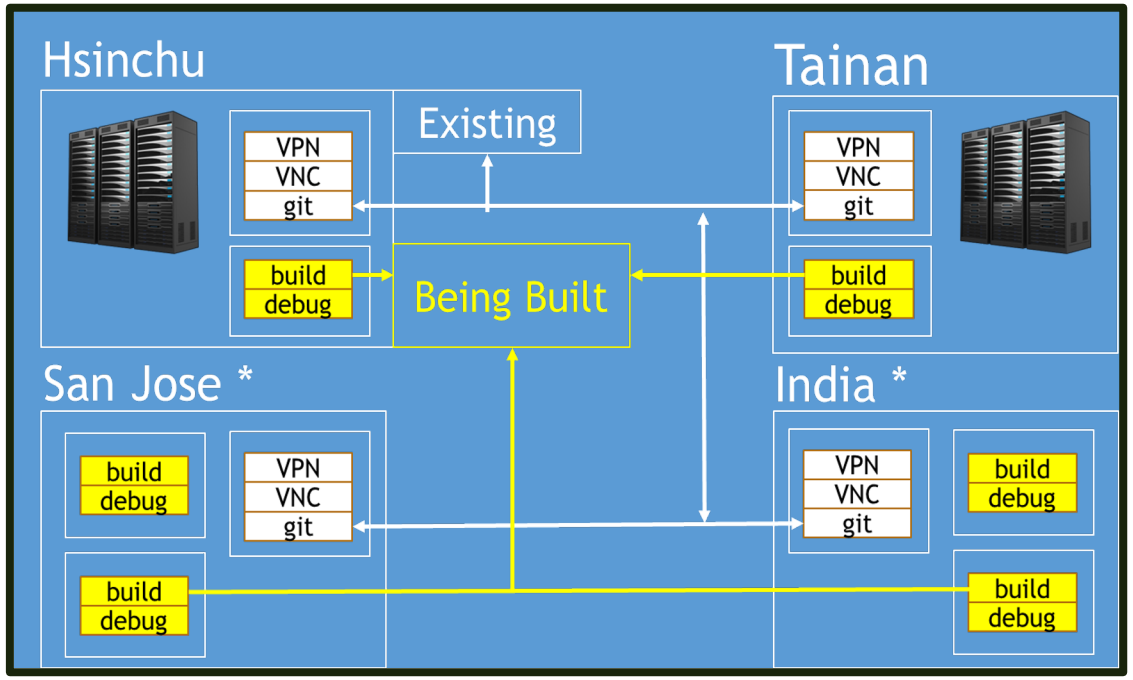
Edgecore Global LAB (LAAS)



Mobile Labs available across EMEA

OPEN COMMUNITY®

Leaf & Spine

Central Office – 10G PON

Edge-corE NETWORKS

THANK YOU