





# MPLSSD&AINET WORLD23 18/19/20APRIL



























# The Service Edge Challenge

MPLS SD & Al Net World will return to the Palais des Congrès de Paris as in-person event from 18 to 20

king industry is heading to.

#### The 2023 Programme: Focus on IP/Optical Convergence

IP/Optical Convergence is given a special insight. Experts highlight optical evolution and innovations. They explain how to meet the transport needs of modern routing applications and alleviate congestion at

- 800GE routing enabling IP networks
  Purpose-Built Routers for IP/Optical Convergence
  Wavelength Services delivered over IP/MPLS
- Going beyond managing optics

Other main sessions cover SRv6 enhancements and deployments, Network Programming, Security, AI & ML, 5G Architectures, Open RAN, Network Slicing and Automation.

## Two Debates on Disaggregation and Security

The first panel occurs during the plenary session. Experts discuss the disaggregation and software-defined movements (Myths and Truths).

The second debate addresses security: "Who should secure the enterprise network and how?" Options for delivering security services and products and the pros & cons of each are discussed.

## MPLS SDN Interoperability Test 2023

For the 2023 Congress, the EANTC invites all interested vendors to a Multi-Vendor MPLS SDN Interoperability. The testing will take place from March 13-24, 2023 in Berlin, Germany. The results will be published and presented live at the Congress from April 18-20, 2023 in Paris.

and backhaul, end-to-end network slicing, traffic engineering, policing, and packet network synchronization, serving 5G network use cases.

Additionally, participants will test private cloud networking, service assurance, and integrate multiple transport domains such as WAN, data centers, and metro access (microwave).



Interoperability Test Participating Companies

































# TUESDAY 18 APRIL MORNING CONFERENCE DAY ONE

- REGISTRATION AND WELCOME COFFEE FROM 07.45
- EXHIBITION OPEN FROM 09.00 TO 19.00
- LUNCH: 12.20
- **WELCOME RECEPTION: 18.30**



CHAIRMAN Roy Chua, Founder and Principal at AvidThink

# 08.30 **BROADBAND FORUM** SESSION



#### 08.30 Quality of Experience Delivered: Why and How

Usually, the capacity is expressed through the physical bandwidth available to a subscriber. But can it fully characterize an end-user's quality of Experience (QoE)?



Greg Mirsky, Technology Specialist Standardization, Ericsson



Peter Thomson, Predictable Network Solutions

# 09.30 ETSI PERSPECTIVE SESSION



09.30 Recent Advances in the Network Transformation Path



**CHAIRMAN** Diego R. Lopez, Chair of ETSI ZSM ISG, Senior Technology Expert, Telefonica I+D

# Open Sources Initiatives



Silvia Almagia, Technical Expert, Centre for Testing and Interoperability, **ETSI** 

Update on ZSM



Christian Toche, ETSI Board Member, Huawei Technologies

## Update on NFV



Julien Maisonneuve, Nokia

# ETSI NFV Evolution and Ecosystem WG chairman,

# 11.00 **KEYNOTES** SESSION



Steve Alexander. SVP & Chief Technology Officer, Ciena



Michael Beesley, CTO SP Networking, Cisco



Zhenbin Li, Chief IP Standard Representative, Huawei Technologies



Kireeti Kompella, Juniper Networks



Heidi Adams, Head of Global Marketing, IP and Optical Networks, Nokia

12.20 Lunch/Exhibition/Interop Showcase/Networking

10.30 Coffee/Exhibition/Interop Showcase/Networking

# TUESDAY 18 APRIL AFTERNOON CONFERENCE DAY ONE

- **DEBATE FROM 17.30**
- **END OF CONFERENCE DAY ONE 18.00**
- **COCKTAIL RECEPTON 18.30**

## **AUDITORIUM BORDEAUX**

# 14.00 **OPENING** SESSION

## 14.00 Opening Speech



Roy Chua, Founder and Principal at AvidThink

# 14.20 IP/OPTICAL CONVERGENCE SESSION PART I

#### 14.20 Sustainable Capacity Growth with 800GE Routing

Discussing how 800GE routing technology can scale traffic capacity in a more sustainable manner by enabling IP networks to scale in their existing resource footprint. To become faster instead of bigger, in other words.



Bruno De Troch, Director of PLM EMEA IP Routing and Automation, Nokia

#### 14.40 Purpose-Built Routers for IP/Optical Convergence

Platform architectures for routing have been evolving from traditional ortho-direct chassis design to today's distributed disaggregated chassis (DDC). As the industry moves towards IP/Optical convergence, examining

what lessons can be learned from conventional design and what alternatives are available for the multi-layer future.



Nick Benvenuti. VP, Product Line Management, Ciena

#### 15.00 IP Optical Convergence New Architectures

Reviewing the evolution of pluggable coherent optics from 400G to 800G and 1.6T, and the impact of this evolution on Metro and Core network architecture. Examining the challenges created by the new architecture and presenting ways to mitigate those challenges, especially in managing the converged IP-Optical network.



Moran Roth, Director Product Management, Juniper Networks



Olivier Eustache, Product Manager Juniper Networks

#### 15.20 Wavelength Services delivered over IP/MPLS ... Why not?

Discussing service SLA attributes and how technology building blocks such as EVPN-VPWS, PLE, OAM, circuit-style SR-TE, PCE, QoS and protection paradigms can work together to deliver mission critical services in a fundamental new and beneficial way for both the

end-customer and the provider.



Christian Schmutzer. Distinguished Engineer, Cisco

# 15.40 **INTEROP SHOWCASE** HIGH-LIGHT

#### 15.40 High-light Talk about the 2023 Interoperability Test and Showcase



Carsten Rossenhoevel, Managing Director, **EANTC** 

16.00 Coffee/Exhibition/Interop Showcase/Networking

# TUESDAY 18 APRIL AFTERNOON CONFERENCE DAY ONE

- DEBATE FROM 17.30
- END OF CONFERENCE DAY ONE 18.00
- COCKTAIL RECEPTON 18.30

## **AUDITORIUM BORDEAUX**

# 16.30 **IP/OPTICAL CONVERGENCE** SESSION PART II

# 16.30 Coherent Routing: Taking IP/Optical Convergence to the next Level

For years we have discussed IP network automation and control with programmable infrastructure. Now operators can realize a new level of extensibility by adding Optical transport awareness, going beyond managing optics, resulting in multi-layer network operations and efficiency.



**James Glover,**Director, Product Line Management, **Ciena** 

#### 16.50 Make Peace with Alien Wavelengths

Discussing the impact of this shift on traditional Network Management Systems, and how a non-alien architecture can provide concrete benefits to operators and allow for successful deployment of this new technology. We will show how a domain controller architecture with open, standardized interfaces brings many operational advantages, including end-to- end wavelength visibility and control.



**Peter Landon,** Product Manager, **Nokia** 

# 17.10 Colt: IP and Optical Convergence/Sustainability

Presenting Colt's IP and Optical innovation story that includes the exploration and rollout of 400G coherent pluggable technology.



Vivek Gaur, Vice President, Engineering, Colt

# 17.30 **DEBATE**

# 17.30 The Myths and Truths Underlying Disaggregation and the Software-Defined Movementl

- What's real?
- What's not?
- How to tell the difference?



MODERATOR **Roy Chua,** Founder and Principal at **AvidThink** 



**Dave Ward,** CEO, PacketFabric



Michael Beesley, CTO SP Networking, Cisco



**Rafael Francis,** Senior Director, Product Line Management, **Ciena** 



**Bruno De Troch,**Director of PLM EMEA IP Routing and Automation, ,Nokia

18.00 End of Conference Day One

18.30



Cocktail Reception

# **WEDNESDAY 19 APRIL MORNING CONFERENCE DAY TWO TRACK 1**

- REGISTRATION AND WELCOME COFFEE FROM 08.00
- EXHIBITION OPEN FROM 09.00 TO 19.00
- LUNCH: 12.00

#### **AUDITORIUM BORDEAUX**



CHAIRMAN **Amir Zmora,** CEO & Co-founder, **flexiWAN** 

# 08.30 **SRV6 ENHANCEMENTS** SESSION

#### 08.30 IPv6 Enhanced Innovations and Practices

Introducing the technical principles of a serial of IPv6 enhanced innovations including SRv6, SRv6 compression, MSR6 (Multicast Source

Routing over IPv6), network slicing, IFIT(In-situ Flow Information Telemetry), APN (Application-aware Networking).

Zhenbin Li,

Chief IP Standard Representative, Huawei Technologies

# 08.50 **Update on SRv6 for NG EVPN Data Center Design and uSID Readiness**

Talking about an EVPN data center using Segment Routing over IPv6 data plane (SRv6) and how it can be used to provide differential traffic treatment within the data center. Discussing different options to interconnect EVPN data centers that are running over SRv6 and micro-SID readiness.



**Peter Chung,** Product Manager, Juniper Networks



**Wen Lin,** Distinguished Engineer, Juniper Networks

# 09.10 SLA-based Service Assurance for SRv6 and SR-MPLS Architectures

Segment Routing (SR) for 5G enables operators to offer service delivery with strict SLA guarantees in a scalable manner. Exploring real-world examples of

SR Traffic Engineering, SR policy, and SR Flex-Algo. Discussing centralized and distributed network architectures.



**Jahanzeb Baqai,** Director, Product Line Management, **Ciena** 

# 09.30 SRv6 Compression Technology and Standard Progress Update

Introducing the latest progress of SRv6 compression in IETF and the latest

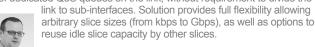


progress of interop test and deployment. The key message is that the industry has reached a consensus and operators have been deploying SRv6 compression in a rapid speed.

**Cheng Li,** Senior IP Standard Representative, Huawei Technologies

# 09.50 Flexible Link Resource Slicing in MPLS or SRv6 Networks

Discussing implementation of data plane slicing in MPLS or SRv6 networks based on enhancements to classical hierarchical QoS model. Each slice gets a set of dedicated QoS queues on the link, without requirement to divide the



**Krzysztof Szarkowicz,** Technical Marketing Engineer, **Juniper Networks** 

10.10 Coffee/Exhibition/Interop Showcase/Networking

# 10.40 **SRV6 DEPLOYMENTS** SESSION

#### 10.40 Introduction

Reviewing the IETF status and the latest deployments.



Clarence Filsfils, Cisco Fellow

## 11.00 Colt: Building an Hyper-scale PCE

New requirements, HS-PCE technology, use case experience.



**Bart Janssens,** Senior Specialist Packet Architecture, **Colt** 

# 11.10 Bell Canada: Implementing Services in the Cloud (Google, AWS)



**Daniel Bernier,** Technical Director, **Bell Canada** 

#### 11.20 Softbank: MUP Use-case



Discussing the actual PoC and understanding how to resolve the problem at scale.

#### Satoru Matsushita, Technical Meister, Softbank

## 11.30 Interoperability Initiative

Reporting the SRv6 interop currently conducted.



# Jahanzeb Baqai,

Director, Product Line Management, Ciena



Daniel Voyer, Technical Director, Bell Canada

#### 11.40 Rakuten: Using SRv6 Traffic Accounting

Covering the development of the industry prototype on Demand Matrix (DM) using the SRv6 traffic accounting feature.



**Amit Dhamija,** Principal Architect, **Rakuten** 

#### 11.50 Verizon: SRv6 DC Use Case Studu

Presenting a DC uSID design use case, a new state of the art innovation.



Gyan Mishra,

IT Technologist & Innovations Specialist, Verizon

12.00 Lunch/Exhibition/Interop Showcase/Networking

**DEBATE FROM 16.30** 

## **AUDITORIUM BORDEAUX**

# 14.00 **SECURITY** SESSION

## 14.00 IP Network Security in the Post Pandemic Era

A fundamental shift in how we view IP networks security is required. DDoS defence and network encryption must become universal, line-rate capabilities that are designed into, and delivered by, the IP transport itself - just like packet forwarding is today.



Hooman Bidgoli, Product Line Manager, Nokia

#### 14.20 Source Address Validation Architecture for Intra & Inter-Domain Network

Source address validation architecture for Intra & Inter-domain network (SAVNET) aims to address spoofing challenges. By collaboration between network elements, SAVNET generates accurate accessing interface information for specific source prefixes, for all traffic



Mingqing Huang, Vice Chief Technical Expert of Internet Security, Huawei

#### 14.40 Zero -Trust Device Security

Alok Pandey,

Highlighting the secure ZTP solution for secure 'Zero-day' configuration and then establishing chain of trust with Juniper's latest IETF contribution

to 'remote device' attestation solution. Providing a complete end-to-end device security solution with filesystem encryption, OpenSSH and IMA solutions



Sr. Product Manager, Juniper Networks

#### 15.00 DDoS Protection at the Network Edge

The rapid expansion of 5G has led to a diverse threat surface threatening the availability of low latency outcomes. One of the newer threats is the



attack from rogue IoT and mobile devices. Describing a specific 5G mobility use case for GTP flows and showing how it can be extended for other DDoS deployment use cases

Rakesh Kandula, Technical Marketing Engineer, Cisco

#### 15.20 Edge-Embedded Threat Prevention



How CSPs can enhance their value-add security services with real time access control functionality built into their network edge

Eyal Aloni, Head of Line of Businesses, RAD

## 15.40 Software Defined Internet Services



Introducing concepts around SD-Internet and showing how it expands the use of SD-WAN to create a new set of secured and intelligent business Internet services.

Sherif Awad, Chief Solutions Architect, Nuage Networks from Nokia

16.00 Coffee/Exhibition/Interop Showcase/Networking

# 16.30 **DEBATE**

#### 16.30 Who Should Secure the Enterprise Network and How?

Discussing the options for delivering security services & products and the pros & cons of each.



**MODERATOR** Amir Zmora, CEO & Co-founder, flexiWAN



Javier Benitez, Senior Network Architect, Colt Technology Services



Nishant Jangale, Rakuten



Thierry Guenoun, Business Development, BBT.live



Eli Karpilovski, Founder, CEO, InsidePacket

# **AUDITORIUM BORDEAUX**

# 17.00 EDGE SERVICE SESSION

## 17.00 Going Beyond Broadband – Extending the Service Edge

Evolving Service Edge networks with new disruptive networking technologies, including virtualization and disaggregation of PON and BNG, to sustainably deliver affordable and ubiquitous broadband.



**Jan Straznicky,**Senior Director, Product Line Management, **Ciena** 

# 17.20 True Network As a Service for the Edge to Everywhere

SDN, MPLS and even the introduction of AI are building blocks in the current communications services industry. But "services" also need new accounting/BSS capabilities that match the capabilities of both instantly programmable infrastructure and on-demand consumption models. Sharing a vision for NaaS going beyond L1, L2 and L3 connectivity. Integrating storage services into our fabric and taking a first step toward our object routing data fabric vision.



Dave Ward, CEO, PacketFabric

# 17.40 Edge Cloud: The New Frontier for Low Latency Services

Describing an Edge Cloud architecture (both public and private), integrated into a Service provider's IP/MPLS network, thus offering a pathway for designing the network to meet Low Latency and edge processing requirements.

Co-authors: Michael Marshall, Principal Architect, Cisco & Syed Hassan, Principal Telco Architect, Red Hat



Kashif Islam, Principal Telco Architect, Red Hat



Syed Hassan, Principal Telco Architect, Red Hat

# 18.00 Greening the Colors: The Path to Open and Efficient Optical Transport Networks

Explaining the advantages of a flexible optical layer and describing how adding best-of-breed amplification and ROADM technologies can give your open network a clear path to green operation.



Prayson Pate,

SVP Solutions Marketing and CTO Edge Cloud,  ${\bf Adtran}$ 

18.20 End of Conference Day Two - Track 1

# **WEDNESDAY 19 APRIL MORNING CONFERENCE DAY TWO TRACK 2**

- REGISTRATION AND WELCOME COFFEE FROM 08.00
- EXHIBITION OPEN FROM 09.00 TO 19.00
- LUNCH: 12.40

## **AUDITORIUM HAVANE**



MORNING CHAIRMAN Carsten Rossenhoevel, Managing Director, EANTC

# 08.50 **5G** SESSION

# 08.50 Efficient and Resilient Synchronization Delivery Options for 5G Networks and Beyond



Exploring the FTS, PTS and APTS timing profiles and describing the applicability, use cases and network design considerations and tradeoffs of each. Test results are

Paul Meyers, Product Line Manager, Nokia

#### 09.10 Enabling 5G transport with Flex Ethernet

MPLS plus FlexE performing better than pure MPLS in terms SLA has important implications. Covering the latest in OIF Physical and link layer



working group (protocol) and ITU-T SG15 Q11 (G.fgMTN). From this presentation, the audience can get an overview of the best current practices about using FlexE in advanced network scenarios.

Rixin Li, Senior Research Engineer, Huawei Technologies

#### 09.30 Rearchitecting the Fixed Broadband Service edge for Universal Access

Discussing a framework to achieve control and user-plane separation (aka CUPS) on BNG leveraging current 3GPP standards for CUPS in Evolved

> Packet Core gateways and the 5G standalone core, and thus providing a path to deliver a unified fixed broadband experience across wireline and wireless access.

Suresh Leroy, Product Manager IP networks, Nokia

#### 09.50 Synchronizing 5G Mobile Networks



Covering "Timing and Synchronization" requirements to address various 5G RAN use cases. Discussing timing and synchronisation performance requirements and how it impacts 5G services and spectrum efficiency

Shahid Ajmeri, Sr. Product Manager, Cisco

10.10 Coffee/Exhibition/Interop Showcase/Networking

#### 10.40 Practice on 5G Backhaul based on SR-MPLS

China Mobile and ZTE has built large-scale 5G backhaul network based



on SR-MPLS, which satisfies the differentiated OoS brought to transport network by 5G backhaul and simplifies O&M with the new technologies of SR-TP, Inband OAM and MTN.

Liu Aihua, Senior System Architect, ZTE

#### 11.00 New use-cases for Cloud RAN in Mobile

Describing the new requirements placed upon the Ethernet transport network by low-latency inter-DU coordination communications, and



dynamic load-balancing of radios across virtualised DU clouds, and discussing how both of these can be met efficiently using technologies such as L2 and L3 EVPN.

#### Robert Friskney,

Mobile Solution Architecture, Product Line Manager, Ciena

## 11.20 **OPEN RAN** SESSION

#### 11.20 Open RAN Critical Measurement Parameters

Discussing 5G Xhaul architecture and its requirements. The importance of end-to-end segment routing to simplify 5G Xhaul transport architecture, and use of SRv6 microSID programmability. Sharing some of critical measurement parameters of an ORAN implementation based on above.



Avik Bhattacharya, Sr. Product Manager, Network Infrastructure Test, Keysight



Shahid Ajmeri, Sr. Product Manager, Cisco

## 11.40 5G Hybrid Cloud Journey of CSP

DISH is the 1st O-RAN-based Greenfield network in the US, a cloud-native service provider focused on container-based applications and mobility network functions in AWS.



Ash Khamas, Service Provider CTO, Dish Wireless



Waris Sagheer, Service Provider CTO, Cisco

# 12.00 **NETWORK SLICING** SESSION

#### 12.00 IPv6 Network Slicing

Introducing the overall architecture of IPv6 network slicing, and the key technologies and extensions in resource partitioning, data packet encapsulation, control plane protocols and the managment interfaces and

data models. Providing the experiences on IPv6 network slice deployment, and the latest progress in standards.



Dong Jie, Senior IP Standards Representative, Huawei Technologies

#### 12.20 Optimal Baseband-to-service-to-transport Mapping for a Target Slice SLA

For slicing, a key question is how to map a slice from radios to service to transport to maintain a given target SLA. Describing options for radio-toservice mapping, and service-to-transport comparing Flex



Algo, SR policy and FlexE - differentiators (including protection) and limitations.

## Robert Friskney,

Mobile Solution Architecture, Product Line Manager, Ciena

12.40 Lunch/Exhibition/Interop Showcase/Networking

END OF CONFERENCE DAY TWO - TRACK 2 17.30

## **AUDITORIUM HAVANE**



AFTERNOON CHAIRMAN **Jean-Marc Uzé,** VP Sales Engineering, **Augtera Networks** 

# 14.00 AI/ML SESSION

# 14.00 How Al-powered Algorithms Can Help in Network Field Operations?

- · Field activities within network operations
- Introducing automatic dispatcher for schedule optimization
- Continuous Schedule Optimization (CSO) based on Al-powered algorithms to find optimal solution of assigning tasks to technicians



Valentín Mejías Ferri, Business Solution Manager, Comarch

#### 14.20 Evolution of B/W Management in Modern TE Networks

Although, MPLS Automatic Bandwidth has evolved over the years, it can be limited in its capabilities in part due to its reactive nature. Presenting a light weight, modular Machine Learning (ML) Driven Bandwidth Forecasting Framework that can proactively forecast bandwidth values based on historical patterns in the data.



Colby Barth, Distinguished Engineer, Juniper Networks

# 14.40 What is the Actual Role of AI/ML in Different Stages of SDN Evolution?

Focusing on the role of AI (in particular different ML - Machine Learning - techniques) in the evolution of SDN and its impact in all its development

stages. Showing how the combination of SDN and Al paves the road to move towards realizing the dream of achieving self-driving networks.

# Ali Tizghadam,

Technology Fellow, **Telus Communications Inc** 

#### 15.00 Explainable Network AI

Reviewing the need for explainable AI models, especially in light of upcoming regulation (European AI Act) and comparing explainable AI methods on concrete network-related use-cases pertaining to traffic management.

**Dario Rossi,** Research Lab Director, Huawei Technologies

#### 15.20 Using AI/ML for Network-optimized DDoS Mitigation

Advanced Al/ML and big data analytics can help detect DDoS attacks with greater efficiency and speed and be applied to mitigation, too. Outlining an innovative approach to DDoS mitigation, which employs a real-time DDoS

mitigation compiler that utilizes big data analytics and Al/ML to optimize mitigative actions tailored for a particular network.

#### Jérôme Meyer,

Deepfield Security Researcher, Network Infrastructure, **Nokia** 

#### 15.40 Al Driven Automation of Network Operations

While production networks have made significant advances on configuration automation in the last few years, automation of network operations is an



Rahul Aggarwal, CEO & Founder, Augtera Networks

16.00 Coffee/Exhibition/Interop Showcase/Networking

# 16.30 INTENT BASED & SELF HEALING NETWORKS SESSION

# 16.30 Intent-based Self-Healing Networks with Paragon Automation

To achieve self-healing, one must do more. Showing how service motion works in theory and in practice.

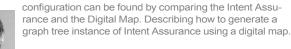


Explaining how AIOps drives Self-healing networks across the full WAN lifecycle to drive Experience first networking beyond service motion.

Kireeti Kompella, Juniper Networks

#### 16.50 Digital Network Map for Intent Conflict Resolution

The Intent Assurance contains the customer's intention information, and the digital map contains the actual network information and indicators. In this way, the differences between the customer's intention and the actual



**Benoit Claise,** Intelligent Operations & Management CTO, Huawei Technologies

# 17.10 Self-Healing Circuit-Style Transport Service with Segment Routing

Many access and aggregation networks use TDM circuits with explicit bandwidth and resiliency requirements. Evolution to Segment Routing introduces management challenges which are not addressed by current IETF work or Flex-algo. Outlining a multi-layer PCE approach to holistically manage

circuit-style services over SR with DWDM underlay, increasing operational flexibility and resiliency.

## Cengiz Alaettinoglu,

Leader, Architecture and Strategy, Network Control and Planning, **Ciena** 

17.30 End of Conference Day Two - Track 2

# THURSDAY 20 APRIL MORNING CONFERENCE DAY THREE TRACK 1

- REGISTRATION AND WELCOME COFFEE FROM 08.00
- EXHIBITION OPEN FROM 09.00 TO 16.00
- **LUNCH: 12.10**

## AUDITORIUM **BORDEAUX**



CHAIRMAN Roland Thienpont, Director IP Division Product Marketing, Nokia

# 09.00 MANAGEMENT & ORCHESTRATION **SESSION**

#### 09.00 Open Network Manageability for Multi-Vendor Deployments

With the advent of Open Network solutions with Openconfig as the vendor-neutral data model and gNXI (gNMI, gNOI, gNSI) as the



gRPC-based services landscape, customers can overcome the complexity of managing the multi-vendor solution. Showing how the open network management solutions are evolving and solving real-world use cases.

Alok Pandey, Sr. Product Manager, Juniper Networks

#### 09.20 Digital Twin Networking for Network Management **Automation Transformation**

Exploring several key challenges to build digital twin network and discussing how digital twin networks can facilitate data driven network management.

Introducing a digital twin network management architecture design which has been adopted by many standards developing organizations such as IETF.



# 09.40 Operations Efficiency Across IP and Optical Layers

Exploring the main multilayer coordination use cases and highlighting their benefits. Those use cases are grouped into three categories: discovery, correlation, and optimization.



Hans Naert, Product Manager, Nokia

#### 10.00 Color-Based Transport: Technology and Applications

Describing the use of the color attribute to provide differentiated services across the network. Showing how colors can be invoked by Yang network models for L3VPN, L2VPN and network slicing in order to translate user intent to actual transport mappings at the network layer.



Julian Lucek, Senior Distinguished Systems Engineer, Juniper Networks

#### 10.20 Is Disaggregation Getting Real?

Disaggregated solutions for management, IP and Optical infrastructure are moving beyond the concept and definition phases to live deployments. Showcasing examples and benefits of these solutions.



David Stokes, Head of IP Solutions & Portfolio Marketing, Ribbon Communications

10.40 Coffee/Exhibition/Interop Showcase/Networking

# 11.10 **Network Programming** SESSION

## 11.10 Practical Approach for Programmability

Describing the programmability and automation features supported on Cisco IOS XR platforms (but not limited to) with the recommendation where to start programmability journey with the maximum outcome. Discussing industry trends, major activities in the area including YANG-based API, RIB APIs and the tooling available right now to get started.



Mike Korshunov, Manager Technical Marketing, Cisco

# 11.30 Implementing Custom Network Apps Rapidly with an Enhanced NOS Development Kit

Covering a few examples of how custom network apps can be built rapidly for data center networking platforms along with key building blocks and architectural aspects related to their underlying NOS.



Sergio Santos, Product Line Manager, Nokia

#### 11.50 Multicast Source Routing over IPv6

Multicast could provide efficient P2MP service without bandwidth waste. Multicast source routing is able to reduce the state of intermediate nodes and indicate multicast forwarding in the ingress nodes, which could simplify multicast deployment.



Geng Xuesong, Senior IP Standards Representative, Huawei Technologies

12.10 Lunch/Exhibition/Interop Showcase/Networking

16.00 End of the Exhibition

# THURSDAY 20 APRIL MORNING CONFERENCE DAY THREE TRACK 2

- REGISTRATION AND WELCOME COFFEE FROM 08.00
- EXHIBITION OPEN FROM 09.00 TO 16.00
- LUNCH: 12.40

# **AUDITORIUM HAVANE**



CHAIRMAN **Amir Zmora,** CEO & Co-founder, **flexiWAN** 

# 08.50 MPLS/BGP ENHANCEMENTS SESSION

#### 08.50 MPLS Network Action at IETF

Describing the Next-Gen MPLS termed "MPLS Network Actions (MNA)" enabling MPLS/SR (Segment Routing)/EVPN networks with new



applications such as network slicing, time-sensitive networks (TSN), advanced IOAM, Service Assurance (SA), and Performance Measurement (PM), advanced telemetry, etc.

Rakesh Gandhi, Principal Engineer, Cisco

#### 09.10 Enhancing the Programmability of MPLS Networks

Providing an overview of the requirements and architectural foundations of MPLS network actions, currently being standardised in the IETF. Looking at



the new emerging applications driving this work, and how solutions can be found that enable the MPLS toolset to evolve, while maintaining backwards compatibility with currently deployed networks.

Matthew Bocci, Director, Technology and Standards, Nokia

#### 09.30 RPKI Policy w/o Route refresh

Memory constraints in early BGP speakers caused classic BGP implementations to not keep a full Adj-RIB-In. When doing RPKI-based Route Origin Validation (ROV), and similar RPKI-base policy, if such a BGP speaker



receives new RPKI data, it might not have kept paths previously marked as Invalid etc. Describing how implementations can keep and mark paths affected by RPKI-based policy, so Route Refresh is no longer needed.

Keyur Patel, Founder & CTO, Arrcus

# 09.50 AUTOMATION SESSION

# 09.50 Service Assurance for Intent Networks – Extensible Automated Service Assurance



Describing a method using the Intent described in configuration model to automatically build a service assurance model and to get service specific health metrics for use by operators to view the service specific health.

Krishnan Thirukonda, Principal Engineer, Cisco

## 10.10 Delivering the Self Driving Network

By combining capabilities in transport network and RAN automation, machine learning, service assurance, analytics and monitoring, demonstrating progress towards a self-driving network for communications service



providers. Transforming todays OSS into the CSP operating system of tomorrow. Discussing select automation use cases to establish proof points on the journey to self-driving networks.

Gerhard Wieser, VP Automation, Elisa Polystar

10.30 Coffee/Exhibition/Interop Showcase/Networking

#### 11.00 IP/Optical Design in a Convergence Era

Network convergence is more than just plugs in routers. Operational simplification and improved network reliability have been highlighted as primary drivers for moving towards tighter coupling of the IP and optical layers.

Examining how IP and optical network design practices can also benefit from a more converged approach.



Senior Director, Network Planning and Analysis, Ciena

#### 11.20 Auto Fabric Describing Day-zero Configuration

Auto-fabric defines a set of procedures, and protocols that enable nodes, within a Clos topology-based scale-out WAN fabric to self-discover their roles within the fabric (leaf, spine, super-spine), subsequently

self-configure their "day-0" configurations and publish a model describing the fabric consumable by other applications and systems.

Colby Barth,

Distinguished Engineer, Juniper Networks

# 11.40 EVPN TELEMETRY SESSION

# 11.40 EVPN Advancements in Security, Performance, Resilience, and Efficiency

Highlighting a set of capabilities within the EVPN architecture, that contribute to security, performance, resilience, and cost efficiency in the delivery of overlay virtual private network services.



**Siegfried Droogmans,** IP Consulting System Engineer, **Nokia** 

#### 12.00 In-situ Flow Information Telemetry for EVPN

In-situ Flow Information Telemetry (IFIT) is a family of passive and hybrid data-plane telemetry technologies defined by IETF, including Alternate Marking (RFC9341), In-situ OAM (RFC9197), and IOAM Direct Exporting (RFC9326).

Discussing deployment experiences on EVPN scenario, and how IFIT can facilitate OAM and operational automation.



Tianran Zhou,

Senior Principal Researcher, Huawei Technologies

#### 12.20 Into the Wild of Service Overlays (Powered by EVPN)

Providing a strong cookbook overview of solutions delivered recently. Subjects being covered include Fast convergence, Flexible CE connectivity, DC applicability, Dynamic IP tunnels and future looking services.



Patrice Brissette, Distinguished Engineer, Cisco

12.40 Lunch/Exhibition/Interop Showcase/Networking

16.00 End of the Exhibition



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