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Business intelligence for the global carrier indust

#### Feature

The Climate Question: what are the telecoms and data centre industries doing to help?

#### **Big interview**

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Veon CEO Ursula Burns tells *Capacity* how she is leading a radical new strategy for the company

The Climate Question: Renewable Energy



Cross both carrier and enterprise sectors the proliferation of network virtualisation and automation only continues to rise. Greater visibility, on-demand capabilities and the softwarisation of everything is no longer an added feature but a critical component of next-generation networks.

With that, *Capacity* is pleased to share its annual 20 SDN Market Leaders powerlisting, celebrating 20 of the key players leading in the softwaredefined networking space. With every list there are some names that probably should be included that weren't, so keep an eye out on the Capacity Media website for next year's nominations and have the opportunity to have your say.

Compiled by Natalie Bannerman

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**Mark Middleton** ActivePort CTO As CTO of ActivePort, Middleton has led its team of developers to create a next-gen SDN orchestration platform that extends SDN services across the last mile from data centre to customer offices all of which are telco-neutral, data centre-neutral and hardware-neutral. In addition, using the service orchestration portal, customers have the tremendous agility to self-provision network services and adjust bandwidth to align with capacity demands. Programmability coupled with policy firewalling, network virtualisation with full policy control keys leads to an SDN revolution. Prior to his time at ActivePort Middleton served as CTO of Acurix Networks.



## Alla Goldner

director of technology, strategy & standardisation Recognised as one of the industry's top female tech pioneers and author of multiple patents (including three new network-orchestration patents filed/pending filing), Alla Goldner plays a key industry role in bridging the gap between the standardisation and open-source worlds for global network-orchestration solution ONAP. As well as being chair of ONAP, Goldner is also a member of ONAP's Technical Steering Committee, and has been elected as ONAP's representative to LFN's Strategy Planning Committee. Goldner was most recently named as Best Woman in Network Orchestration at the inaugural Global Women in Telco & Tech Awards.



**Geoff Dorna** CMC Networks Capacity over 25 years' experience in the telecoms industry it was Dorna's vision to leverage CMC's network and offer a first-to-market strategy providing true next-generation SDN capabilities. The vision birthed CMC's rapid adaptive network (C-RAN), allowing network operators to extend their SDN capabilities into the African continent via a single pane of glass or north bound API. C-RAN allows the customer to spool up their own NFV and have its service chained to a CMC 128 technology virtual routing instance, offering full orchestration of the uCPE's VNF instance allowing CMC to take care of all the edge connectivity services for the customer.



Rajiv Datta Colt Technology Services In 2019, Rajiv has further driven his teams focus on software-defined networking (SDN), ensuring the Colt IQ Network has innovation and flexibility at its core. Rajiv fosters a culture within his organisation of innovation because he understands that innovation is a cultural dynamic and without placing value in the notion of innovation in all its forms that it can't extend to the products and the network that Colt delivers. This year has seen the extension of Colt's previous interoperability trials, with Colt and AT&T announcing recently that the businesses had completed the first successful application of MEF's LSO Sonata APIs.

Connee Zhang Cypress Telecom CEO of global SD-WAN and cloud service provider CypressTel, Zhang is described as having led the company over the past 10 years from 10+ staff to around 300 in Asia-Pacific and building out 100+ PoPs globally. Earlier this year Connee led the R&D team to launch the new One2C product, which is a network-cloud integration solution that makes it easy to establish a dedicated network connection from your multiple premises to multiple cloud platforms leveraging NFV and SDN technologies. During her tenure CypressTel was selected as one of 11 national SD-WAN standardisation committee members in 2018, in China.



Jerzy Szlosarek Epsilon co-founder and CEO Since the launch of Infiny in 2017, Jerzy Szlosarek has been focused on building Epsilon's core network and SDN fabric it was the first step in the company's transformation from a telco company to an innovative disruptor. The SDN platform constantly adds new connectivity options for customers as Epsilon grew its global interconnect fabric to over 220 data centres in 39 cities. Szlosarek continues to support initiatives towards greater automation to deliver better service delivery and customer experience within Infiny. New enhancements include allowing customers to dynamically increase bandwidth capacity on Infiny without manual intervention.



**David Boswarthick** ETSI director of new technologies Part of standards organisation ETSI, Boswarthick joined the group in 1999 as technical officer. In this role he was responsible for supporting 3GPP, TISPAN, M2M, and IoT activities in ETSI. In 2012, he then became director of the committee support centre. Most recently he was named director of new technologies, responsible for tracking and capturing ICT developments. As well as forming links to R&D and academia, EU research projects, EU ICT rolling plan and creation of new groups in ETSI. He is also acting director of SDC team, where he led 18 standards experts in supporting ETSI's technical organisation.



Johanne Mayer MayerConsult NaaS and network transformation consultan C With over 20 years' international telecommunications experience, Mayer was recognised by TM Forum executive management peers and earned the 2010 TMF Distinguished Fellow award. She has helped drive growth and successful product and services differentiation in the OSS market, raising the company profile to a leadership position. Mayer possesses in-depth knowledge and experience in the network as well as operational and business support system (OSS/BSS) processes, applications and services. She is described as a creative thinker with ability to build relationships and work with worldwide cross-functional teams at all levels including business development and sales.



**Pascal Menezes** MEF cto A veteran in his field, Menezes has held the position of MEF's firstever CTO since 2016. In this role, Menezes works in the areas of cloud scale architectures, real-time media networks, software-defined networks, network function virtualisation and lifecycle service orchestration. Since his appointment, he has been instrumental in the development of numerous new standards and frameworks. Most recently the organisation celebrated the publication of the first global standard for SD-WAN that defines SD-WAN service and its service attributes. The SD-WAN service standardisation was carried out within the MEF 3.0 Global Services Framework.



**Dan Pitt** president of Palo Alto Innovation Advisors SVP of MEF Dan Pitt is senior vice president of the MEF Forum and as president of Palo Alto Innovation Advisors, his private consultancy, he advises startup companies on three continents as well as established companies such as Layer123. He has been a pioneer of the open-networking movement, serving as executive director of the Open Networking Foundation from its public launch in 2011 for almost six years before joining MEF. He has served as vice president of Nortel Networks and Bay Networks and managed advanced technology and research at IBM Research Zurich and Hewlett Packard Laboratories.



Aloke Tusnial Netcracker CTO of SDN/NFV

Aloke Tusnial is the chief technology officer for NetCracker's SDN/ NFV business, where he is responsible for leading the sales and product strategy for the SDN and network function virtualisation (NFV) initiatives of the company. Prior to this role, he served as is vice president global sales for the SDN/NFV business unit at NetCracker where he is responsible for leading the sales strategy and customer engagement. Before joining Netcracker, he held a variety of pre-sales, architecture, strategy and account management positions serving several customers in North America focused on real-time B/OSS for video and the Internet of Things, the drivers for SDN and NFV.



Luciano Salata Neutrona Networks co-founder & president

As co-founder and president of Neutrona Networks, Salata led the company in the launch of the multi-country SD-WAN network across Latin America. With over 20-years' experience in the region, Salata boosts a company that has the only Latin American network to provide multiple subsea cable systems and terrestrial fibre rings that are monitored and managed with a home-grown SDN solutions. The multi-vendor platform contributes towards a hybrid network that combines the right underlay solutions with overlay advantages of SDN and cloud connectivity. Salata champions the mantra that world-class performance and quality is possible in Latin America.



### Raymond Zhang Nuage Networks <sup>head of SDN</sup>

head of SDN solutions engineering and operationalisation Capacity previously worked for such organisations as AT&T, BT and Alcatel-Lucent, Zhang entered his current position as head of solutions engineering and operationalisation in 2015. In this role, he leads SDN solutions engineering for telco cloud/NFV, software-defined data centre, SD-Security, SD-WAN and NG DCFabrics. In addition, he also develops cloud-native SDN solutions as well as DevOps with automation in continuous platform and services deployments; software development programme delivery for SDN platforms and engineering operations. He also served chief technical officer and director of IP product management at Alcatel-Lucent.



Paul Gampe PCCW Global

Under Paul's leadership PCCW Global has become a true pioneer in the implementation of SDN, one of the first carriers to automate their extensive global network and integrate with open APIs to many service providers, cloud providers and software businesses. He has been hugely influential in the evolution from traditional carrier to an agile software-led business. The organisation has been restructured and all processes aligned to enable innovation and rapid service development. The team have successfully implemented SDN across the IP network and are building on this foundation with an extended digital platform of automated network services and communications applications.



# Daniele Mancuso

Sparkle chief marketing solutions & business development officer In 2019, Mancuso was appointed chief marketing solutions & business development officer at Sparkle and elected as member of MEF board of directors. He is in charge of the strategic guidelines of Sparkle's products and services portfolio, global partnership and consulting programs. Daniele led the company's evolution towards network automation, through the programmability and virtualisation, designing and production of Sparkle's Genome platform.

One aspect of this offering is Genome.SDN, a network automation solution that automates complex procedures and operations as well as repetitive tasks, through a single interface.



#### Marc Cohn Spirent director marketing & technical strategy

Marc has been a thought-leader for the open SDN/NFV movement, holding senior leadership roles in the Open Networking Foundation, ETSI NFV ISG, and open source networking projects including OPEN-O, OpenDaylight, and PNDA. He is also the co-chair of the MEF Certification Committee, and a member of the MEF leadership team. Marc has been privileged to serve as Editor for some of the industry's most important SDN/NFV publications including the original ONF SDN whitepaper, NFV Insider Blog (SDxCentral) on behalf of the ETSI NFV ISG leadership, and the Linux Foundation Harmonisation whitepaper.



#### **Diego R Lopez** Telefónica

senior technology expert and chair of ETSI NFV ISG Diego R. López joined Telefonica I+D in 2011 as a senior technology expert on network middleware and services. He is currently in charge of the technology exploration activities within the GCTO Unit of Telefónica I+D. Before joining Telefónica he spent some years in the academic sector, dedicated to research on network service abstractions and the development of APIs based on them. Diego chairs the ETSI ISG on network function virtualisation, actively participating in the ONF, and the IETF WGs connected to these activities, acting as cochair of the NFVRG within the IRTF.



## Viraj Parekh

Ver120N global managing director SDN/NFV, managed services, PaaS and resale CHaving previously worked at such companies as IBM, AT&T and NTT, Parekh now serves as global managing director SDN/NFV, managed services, PaaS and resale at Verizon, leading the strategy and technical leadership for the enterprise networking business globally, covering enterprise, small-medium business, public sector and wholesale/channel segments. He also leads a team that drives P&L, innovation and lifecycle responsibilities for SD-WAN, SD-WLAN, VNS, uCPE, hosted network services, LAN, WOS, security, application assurance, intelligent cloud control, secure cloud gateway, and resale business including CPE, software and site services.



#### **Vanessa Little** VMware

director of global telco

A repeat entry in our annual 20 Market Leaders listing, Little leads the team that creates the innovative NFV solutions and go-to-market strategies that use VMware technologies and the vast ecosystem of partners. In addition, she is also responsible for developing the standard for NFV solutions with VMware NFV ecosystem laboratories, creating carrier-grade architectures. A member of Women of Openstack and Women in Comms, Little is active in showcasing and championing women in tech fields. She is also LFN Board member and ETSI Open Source Mano Technical Steering Committee chair.



## **Rabi Abdel** Vodafone

SDN/NFV lead architect

Rabi Abdel is the lead SDN & NFV architect at the Vodafone Group. His knowledge and experience in the field goes beyond the technology itself and cover various aspects of NFV transformational impacts on operations, business and eco-systems. Rabi held many leading roles in standards and open source organisations such as ETSI NFV, GSMA, OPNFV, ONAP, CNCF, and DPDK. He is currently the lead for IFA002 and IFA003 within ETSI NFV, the vice-chair of LFN compliance and verification committee, and the technical lead and technology steering chair of the newly-formed common NFVI telco task force.