Press Release

Open Networking Foundation Formed to Speed Network Innovation

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Oregon – March 22, 2011 – Six companies that own and operate some of the largest networks in the world – Deutsche Telekom, Facebook, Google, Microsoft, Verizon, and Yahoo! – announced today the formation of the Open Networking Foundation (ONF), a nonprofit organization dedicated to promoting a new approach to networking called Software-Defined Networking (SDN). Joining these six founding companies in creating ONF are 17 member companies, including major equipment vendors, networking and virtualization software suppliers, and chip technology providers.

In the past two decades, enormous innovation has taken place on top of the Internet architecture. Email, e-commerce, search, social

networks, cloud computing, and the web as we know it are all good examples. While networking technologies have also evolved in this time, the ONF believes that more rapid innovation is needed. SDN fulfills this need by enabling innovation in all kinds of networks – including data centers, wide area telecommunication networks, wireless networks, enterprises and in homes – through relatively simple software changes. SDN thus gives owners and operators of networks better control over their networks, allowing them to optimize network behavior to best serve their and their customers' needs. For instance, in data centers SDN can be used to reduce energy usage by allowing some routers to be powered down during off-peak periods.

The SDN approach arose out of a six-year research collaboration between Stanford University and the University of California at Berkeley. Essential to SDN are two basic components: a software interface (called OpenFlow) for controlling how packets are forwarded through network switches, and a set of global management interfaces upon which more advanced management tools can be built. The first task of ONF will be to adopt and then lead the ongoing development of the OpenFlow standard (www.openflow.org) and encourage its adoption by freely licensing it to all member companies. ONF will then begin the process of defining global management interfaces.

"Software-Defined Networking will allow networks to evolve and improve more quickly than they can today," said Urs Hoelzle, ONF President and Chairman of the Board, and Senior Vice President of Engineering at Google. "Over time, we expect SDN will help networks become both more secure and more reliable."

"With broad industry support from technology leaders and networking experts, the ONF brings new opportunities and flexibility to the future of networking," added Jonathan Heiliger, ONF Founding Board Member and Vice President of Technical Operations at Facebook. "We're actively encouraging new members to join us in this endeavor."

The initial members (including founding companies) of ONF are: Broadcom, Brocade, Ciena, Cisco, Citrix, Dell, Deutsche Telekom, Ericsson, Facebook, Force10, Google, HP, IBM, Juniper Networks,

Marvell, Microsoft, NEC, Netgear, NTT, Riverbed Technology, Verizon, VMware, and Yahoo!.

A veteran of the networking industry and networking standards bodies, Dan Pitt will serve as Executive Director of the ONF starting on April 1, 2011.

ONF Founding Board Members Support Open Networking Technologies

"Industry-wide open application programming interface (API) efforts like ONF are promising for the next generation of network-based offerings," said Bruno Orth, Senior Vice President of Network Strategy and Architecture at Deutsche Telekom. "SDN principles advance Deutsche Telekom's vision of 'connected life and work' and are expected to accelerate innovation for a seamless customer experience."

"As the owner and operator of one of the largest networks of data centers, Microsoft recognizes the potential of highly programmable network management systems to boost the capabilities of our cloud computing platform in a profound way," said Arne Josefsberg, General Manager of Windows Azure Infrastructure at Microsoft.

"We believe the ONF effort will accelerate the development of key network capabilities, which will help evolve our networks to be more responsive to our customers' needs," said Stu Elby, Vice President, Network Architecture & Technology at Verizon.

"It is no surprise that the Internet audience continues to grow rapidly and the networks are the foundation of this expansion," said Adam Bechtel, Vice President of Yahoo! Infrastructure. "Through the ONF, we're excited to work towards improving the agility of massive networks and drive the evolution of SDN."

"Stronger definition of network behavior in software is a growing trend, and open interfaces are going to lead to faster innovation," said Nick McKeown, ONF Board member and professor at Stanford University. "We're excited to see the industry building upon university research," added Scott Shenker, ONF Board member and professor at the University of California, Berkeley.

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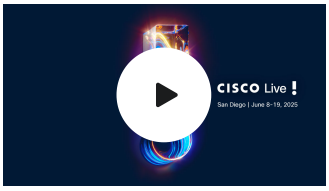

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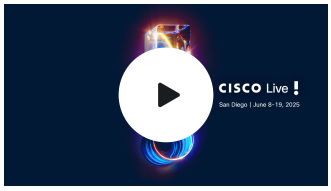

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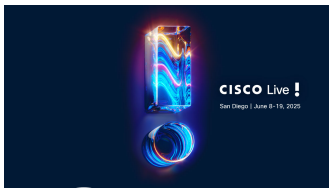

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