

12 Companies Join Stanford and Berkeley to launch new Open Networking Research Center

The new networking research center includes two research groups at Berkeley and Stanford as well as a new nonprofit networking lab. The Center focuses on creating a solid scientific foundation for software-defined networking (SDN) and a practical open source SDN infrastructure that will reinvent networking.

A consortium of eleven of the world's foremost networking companies today became founding sponsors of the Open Networking Research Center (ONRC), a collaborative research effort to explore software-defined networking (SDN) as the new networking paradigm and provide open-source networking tools and platforms. The founding sponsors include: CableLabs, Cisco, Ericsson, Google, Hewlett-Packard, Huawei, Intel, Juniper, NEC, NTT DOCOMO, Texas Instruments and VMware.

The faculty directors of the ONRC are Nick McKeown (Stanford) and Scott Shenker (Berkeley), who are both professors of electrical engineering and computer science at their respective institutions.

“SDN is a complete reimagining of networking,” said McKeown. “We’re lifting it out of the proprietary, black-box paradigm that has dominated networking for decades and looking at a future characterized by open interfaces and open-source software.”

Shenker adds that “For two decades, networking has remained essentially stagnant and networks are far too expensive, complex, and difficult to manage. This is about to change thanks to SDN, which will enable network engineers to innovate freely and make networks simpler and less expensive while becoming vastly more capable.”

SDN arose out of the graduate work of Martín Casado at Stanford, in collaboration with McKeown and Shenker. SDN has been rapidly adopted by industry, with standardization efforts underway and hardware already on the market, but there is a critical need for the fundamental science necessary to exploit SDN's full potential. Martín Casado, now CTO at a startup building SDN solutions, said: “While industry is making great progress in commercializing SDN, we are still in the very early stages of SDN and we need to secure SDN's intellectual foundations if this is to truly revolutionize networking.”

The Open Networking Research Center is charged with developing a comprehensive intellectual framework for this new era of networking. ONRC includes three components: The networking research groups located at Stanford University and UC Berkeley headed by McKeown and Shenker, respectively; and an independent, non-profit Open Networking Laboratory led by Guru Parulkar (who will serve as executive director of the ONRC and is currently consulting professor of electrical engineering at Stanford) that will develop an open-source SDN infrastructure.

“The Open Networking Research Center is a big bet on the future of software-defined networking, said Parulkar. “The research center will become the factory of ideas that turns the concept of open-source networking into the reality of practical tools and applications that will soon transform networking.”

Learn more about the Open Networking Research Center at: <http://onrc.net/>