# The Ethernet Of Everything

www.ethernetalliance.org

ethernet alliance

## DEMO OVERVIEW

The Ethernet Alliance booth at OFC 2014 showcases many of the latest advances in Ethernet technology. From 10GBASE-T to 100GbE CFP4 modules, our interoperability demonstration shows how Ethernet's physical layer is getting faster all the time. The unique aspect of this demo is that it shows interoperability across multiple vendors and generations of products. This demonstration shows three generations of 100GbE modules in the CFP, CFP2 and CFP4 as well as the compact CXP.

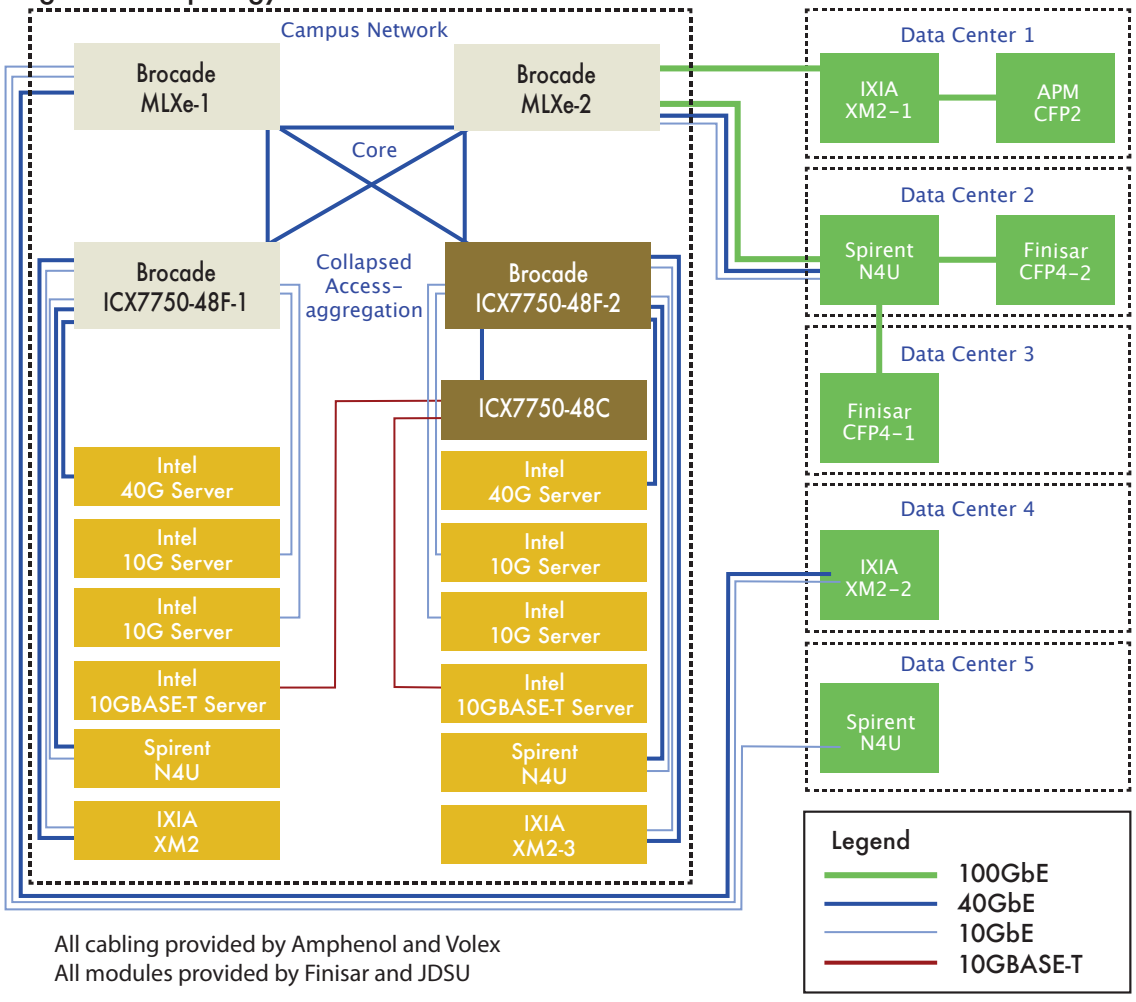
Showing multiple generations of 100GbE is an important step towards widespread adoption of 100GbE. The first generation of 100GbE was standardized in 2010 and is based on the CAUI-10 electrical interface that has 10 lanes of 10 Gb/s and fits in the CFP and CXP form factors. The second generation of 100GbE is based on CAUI-4 with 4 lanes of 25Gb/s and should complete standardization early next year. The CFP2, which was demonstrated last year in the Ethernet Alliance booth, bridges both of these standards by supporting CAUI-10 and CAUI-4. The newest 100GbE form factor is the CFP4 and it only supports CAUI-4 in a much smaller form factor that can support 16 100GbE ports in a single row of a 1U switch. Our demonstration includes CFP4 modules that support 100GBASE-SR4 and 100GBASE-LR4 up to 10km. With the smaller CFP4 form factors, more 100GbE ports can be placed in a switch and the cost of the ports can be reduced.

While 100GbE is the fastest currently deployed Ethernet speed, the new workhorse in the data center is 40GbE. While 100GbE is used outside of data centers right now, 40GbE is used within the data center because of its low cost. 40GbE is often less expensive than 4 ports of 10GbE, so applications like the core of the network are switching from 10GbE to 40GbE. The core network of the demo is running 40GbE and 40GbE NICs are also showing 40GbE connectivity.

Low cost 10GbE servers is another aspect to this demonstration. In addition to 10GbE NICs that support up to 300 meters, the demo displays 10GBASE-T that runs over CAT7 cabling to 100 meters. The 10GBASE-T links will help lower the cost of high speed server connectivity.

## THE OPTICS OF ETHERNET

### High Level Topology




All cabling provided by Amphenol and Volex
All modules provided by Finisar and JDSU

# The Ethernet Of Everything

www.ethernetalliance.org

ethernet alliance

## PARTICIPANTS IN THE OFC14 DEMONSTRATION

Amphenol®

applied micro®

BROCADE

Finisar®

intel®

ixia
Deliver On

JDSU

SPIRENT® Communications

Volex

## ETHERNET ALLIANCE

A global community of end users, system vendors, component suppliers and academia.

## MISSION

- Promote existing and emerging IEEE 802 Ethernet standards
- Accelerate industry adoption
- Demonstrate multi-vendor interoperability

## WHY JOIN?

- Influence standards
- Drive product adoption in the market
- Prove Interoperability of your product with market leaders
- Network with Industry Leaders
- Increase Market awareness & knowledge of your products
- Industry collaboration and consensus building