First broadband vendors successfully pass vOMCI interoperability testing

The first three broadband network vendors have completed interoperability testing for the Broadband Forum's vOMCI standard (TR-451) at a plugfest held at the University of New Hampshire's InterOperability Lab (UNH-IOL) between June and September 2023.

Altice Labs, MT2, Nokia and Radisys Corporation took part in the Virtualized ONU Management and Control Interface (vOMCI) Plugfest and remotely tested the interoperability of their products. It was confirmed that eight products, along with the Broadband Forum's Open Broadband BAA project, participated in the interoperability test with the standard. This lays the foundations for network operators to more easily deliver new services inside customer homes and have more freedom to work with vendors with products that have been certified and tested.

Located near the end-user, an Optical Network Unit (ONU) is the device or piece of equipment for fiber deployments that convert an optical connection into a more conventional Ethernet connection that customers' routers typically support. Service providers provision services such as data, video, and voice onto the ONU using the OMCI protocol. The Optical Line Terminal (OLT) is the operator's equipment that connects with the ONUs and helps to manage the end-user connections.

"We are delighted to see broadband vendors come together for the industry's first vOMCI Plugfest and provide feedback to help the Broadband Forum's work areas and OB-BAA project improve vOMCI software to enable faster and flexible network deployments for network operators," said Broadband Forum Technical Chair Lincoln Lavoie. "The interoperability between the combinations of the vOMCI stack, OLT equipment, and ONU devices demonstrate the flexibility and promise of vOMCI based systems."

The TR-451 standard de-couples the ONU and OLT by virtualizing the OMCI software and allows operators to more easily deploy new services or ONU devices.

The UNH-IOL hosted the vendors' physical equipment as well as vOMCI software in an on-premises cloud, and provided an anonymous report of the plugfest to the Broadband Forum

to help the industry assess the state of vOMCI interoperability and plan for future work and testing.

"The vOMCI specification allows operators to increase flexibility and interoperability in green-field and brown-field deployments. This specification allows for co-existence between different vendors and different generations of devices," said Altice Labs Senior Engineer and TR-451 editor André Domingos Brízido. "For example, vOMCI can be deployed with whiteboxes and chassis-based OLTs, as demonstrated during the plugfest and Network X. This is key for safeguarding operators' investments."

"Nokia is a long-standing supporter of plugfest activities organized by the Broadband Forum as a practical way to validate interoperation of new technology and support the development of an industry ecosystem for standards activity," said Tom van Caenegem, Lead Technologist for Access Architectures - Fixed Networks at Nokia. "As we have demonstrated through this testing and during previous Broadband Forum activities, a flexible, software-centric and containerized OMCI implementation offers benefits to simplify and increase the velocity of onboarding new ONT devices for operators. We are glad to see this concept being applied to facilitate interoperability across multiple vendor implementations and architectures in conjunction with TR-451."

"Operators often opt to partner with the same vendor for both the ONU and OLT packages for convenience and to ensure no compatibility problem, but this can limit supply chain flexibility when tailoring service offerings to customers," said Rajesh Chundury, Vice President – Customer Solutions (Broadband) at Radisys. "Industry-wide adoption of vOMCI can enable operators to reduce the time, cost, and complexity associated with onboarding new ONU and OLT vendors and roll-out future upgrades and services quickly."

Following a successful demonstration of vOMCI interoperability at this year's [Network X](#), Broadband Forum is calling for future contributions to the work to help enhance network operators' service offerings.

 For more information about Broadband Forum, visit: https://www.broadband-forum.org/.

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About the Broadband Forum

Broadband Forum is the communications industry's leading open standards development organization focused on accelerating broadband innovation, standards, and ecosystem development. Our members' passion – delivering on the promise of broadband by enabling smarter and faster broadband networks and a thriving broadband ecosystem.

Broadband Forum is an open, non-profit industry organization composed of the industry's leading broadband operators, vendors, thought leaders who are shaping the future of broadband, and observers who closely track our progress. Its work to date has been the foundation for broadband's global proliferation and innovation. For example, the Forum's flagship TR-069 CPE WAN Management Protocol has nearly 1 billion installations worldwide.

Broadband Forum's projects span across 5G, Connected Home, Cloud, and Access. Its working groups collaborate to define best practices for global networks, enable new revenue-generating service and content delivery, establish technology migration strategies, and engineer critical device, service & development management tools in the home and business IP networking infrastructure. We develop multi-service broadband packet networking specifications addressing architecture, device and service management, software data models, interoperability and certification in the broadband market.

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