



Broadband Forum and ONF ease the path to automated and open virtualized access networks

October 2019: A new agreement between [Broadband Forum](#) (BBF) and the [Open Networking Foundation \(ONF\)](#) sets forth how operators seeking to effectively use virtualization and open source to increase agility can leverage open source and standardization projects side-by-side to ease their migrations to automated access networks and enable seamless co-existence.

As the broadband industry embarks on the next phase of broadband deployment, numerous new business opportunities are emerging that require rapid service instantiation, often across disparate, software-defined networks, and leveraging third-party applications. To take advantage of this untapped potential, operators are looking to interconnect different parts of their network with open source solutions and systems from various suppliers.

BBF's OB-BAA

[Open Broadband-Broadband Access Abstraction \(OB-BAA\)](#) is a BBF open source project that enables SDN-based management and control of multi-vendor, multi-technology access networks via a standard abstraction northbound interface. It facilitates co-existence and seamless migration, bringing the agility to adapt to a wide variety of software defined access models. This abstraction simplifies and reduces development upstream in management and control software for Physical and Virtual Network Functions (PNFs and VNFs). Inherent in the OB-BAA project is the ability to pull differing access device types, including legacy implementations, together under a single standardized network and service management & control umbrella to be exposed to management elements such as the SDN Management and Control and Element Management Systems.

ONF's SEBA / VOLTHA

ONF's SDN Enabled Broadband Access ([SEBA](#)) platform takes a disaggregated white-box approach to building next generation access networks leveraging open source. Functionality traditionally run on chassis-based OLTs and on BNG routers, is run in the cloud, and the hardware is minimized to a collection of simple white-box OLTs, switches and servers. SEBA wraps together this collection of open source hardware and software into a comprehensive platform that exposes northbound FCAPS interfaces, making it straight forward to integrate a SEBA POD with an operator's OSS/BSS system.

ONF's Virtual OLT Hardware Abstraction ([VOLTHA](#)) open source software project abstracts a PON network to make it manageable as if it were a standard OpenFlow switch. Functionality like DHCP and user authentication is run as open source in the cloud, giving operators control over functions that have traditionally been embedded in vendor tightly integrated chassis solutions. VOLTHA is used as a component of the SEBA platform and can also be used standalone by operators wanting to leverage just the specific capabilities of access network abstraction and SDN control.

Summary

BAA and SEBA/VOLTHA are complementary because they solve different carrier problems, while addressing operators' increasing desire to move to agile, software-defined access networks via open source development with open and standardized interfaces. The agreement between Broadband Forum and ONF further builds on this by focusing on the most important aspects of migration and coexistence to interconnect existing parts of the access network with new technologies.

Broadband Forum and ONF believe that many types of carrier deployments would benefit from the capabilities offered by OB-BAA and SEBA/VOLTHA. The cooperation between the two organizations takes their work to the next level, providing an effective and efficient path for operators to leverage the innovations and benefits of both initiatives while ensuring interoperability, high performance, scalability and maximum reliability. A whitepaper providing more detail on the relationship between OB-BAA and SEBA/VOLTHA open source projects can be found [here](#).

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About the Open Networking Foundation:

The Open Networking Foundation (ONF) is an operator led consortium spearheading disruptive network transformation. Now the recognized leader for open source solutions for operators, the ONF first launched in 2011 as the standard bearer for Software Defined Networking (SDN). Led by its operator partners AT&T, China Unicom, Comcast, Deutsche Telekom, Google, NTT Group and Turk Telekom, the ONF is driving vast transformation across the operator space. For further information visit <http://www.opennetworking.org>

About Broadband Forum

Broadband Forum is the communications industry's leading 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.

A non-profit industry organization composed of the industry's leading broadband operators, vendors, and thought leaders, our 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 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.

Our free technical reports and white papers can be found at <https://www.broadband-forum.org/>.

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