

Open Broadband-Broadband Access Abstraction (OB-BAA)

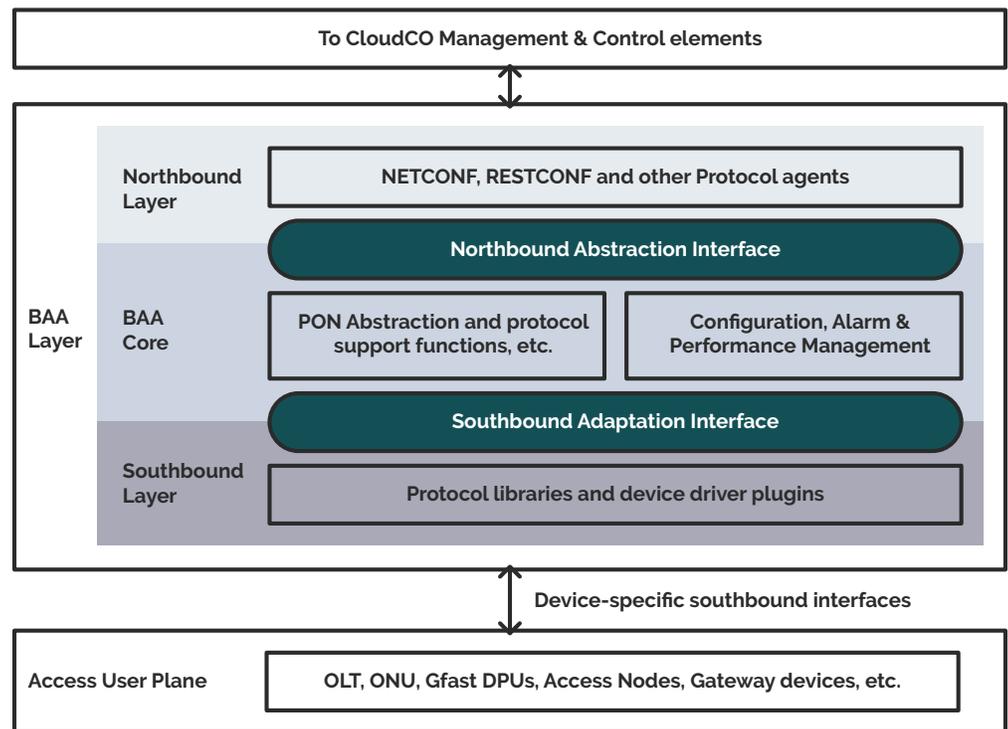
Providing a standardized, automated deployment for Cloud-based Access Services

Broadband Access Abstraction project is an open source project within the Broadband Forum's "Open Broadband" initiative providing standardized, automated deployment for Cloud-based Access Services.

OB-BAA addresses business, operational and technical challenges and opportunities at a time of rapid change when confidence in decision-making is paramount.

OB-BAA will impact service and access network operations related to changes taking place across the network ecosystem.

OB-BAA facilitates co-existence and seamless migration bringing the agility to adapt to a wide variety of software defined access models being defined by vendors and providers in a potentially vast market.



Introducing OB-BAA

The Forum's Open Broadband - Broadband Access Abstraction (OB-BAA) Project can be summarized as:

- An open source project delivered as source code, and associated documentation
- OB-BAA is a reference implementation of the Forum's CloudCO BAA layer
- Pulling together both new access node designs and already-deployed access device types to be provisioned, controlled and maintained by SDN Management and Control systems
- Reducing the risk of introducing new technologies or individual products and allowing investment in new systems and services to be incremental

The BAA Layer and Abstraction

This diagram above introduces the principal elements of the BAA layer. Abstraction has been a fundamental concept of layered telecommunications architectures for decades. It fosters independent solutions for devices, compute and network elements, security and software to coexist. The layered architecture shows how the BAA layer enables independence of the north and southbound implementations avoiding deployment planning.

Why OB-BAA is important – what is the potential impact?

The general benefits from deploying BAA are reduction in:

- **Time to deploy services** by providing always-available management and control for access devices, even when the access device is off-line
- **Cost of operations** removing the need for many proprietary device management systems
- **Risk of introducing new technologies or individual products** by incorporating management and control of existing devices and use of standardized northbound data models
- **Cost of validation, engineering and operations** by providing standardized management interfaces

BAA helps operators to:

- **Optimize their decision-making process** on the introduction of infrastructure based on demand and successful incremental deployment instead of being forced to a total replacement approach.
- **Deploy services more rapidly** as BAA enables interworking with all types and makes of Access Nodes
- Use the BAA layer to **migrate their existing access devices** into their new programmable network environments and manage these access devices using the same data model
- Equipment vendors and service providers can use and extend the software platform for their own service offerings, allowing them to **differentiate themselves and reduce the cost of development**

Why is this an Open Broadband Project?

This project is categorized as a BBF Open Broadband project since it combines Open Source practices with the Forum's goal of developing specifications that enable large-scale, revenue-generating, standardized solutions for the industry. OB-BAA project is being developed under a simple collaborative agreement and it is open to both BBF members and representatives of other industry associations and industry parties.

Using BAA layer in SDN and NFV Ecosystems

Inherent in the OB-BAA project is the ability to pull differing access device types, including legacy implementations, together under a single network and service management and control umbrella to be exposed to management elements such as the SDN Manager and/or Controller.

BAA Release

The first release (August 2018) may be found at <https://obbaa.broadband-forum.org>

OB-BAA participants

The following companies have joined, as participants providing a balanced mix of service providers, equipment vendors and testing organizations necessary to ensure a successful project:



Further information covering the market dynamics and technical details

Please visit www.broadband-forum.org/standards-and-software/informative/white-papers and download the BAA white paper covering Movement from Telco to Data Center Practices and from Network Management to Network Automation, Access Network Migration, Implementation Challenges.

The Technical Overview covers description of the BAA Architecture Layers and Interfaces: BAA Core, north and southbound layer, Southbound Adaptation Interface, Northbound (NB) layer and Abstraction Interface (NAI) and Access User Plane. The paper covers how OB-BAA can be deployed within the BBF's CloudCO environment as one or more virtualized network functions (VNFs).

OB-BAA at the Broadband World Forum – October 2018

The OB-BAA project team have worked together to provide the industry's first-ever live OB-BAA demonstration, delivered over hardware provided by Huawei and Nokia and a user interface by UNH-IOL, in the Broadband Forum Interop Pavilion at the 2018 Broadband World Forum. This demonstration highlights the progress made within the Broadband Forum in embracing open source initiatives. OB-BAA enables standardized, automated and accelerated deployment of new cloud-based access infrastructure and services, and this demo shows how the OB-BAA open source project pulls together access devices that are multi-vendor and multi-technology. The first code release and documentation from the initiative was published in August 2018.