

VOLTHA



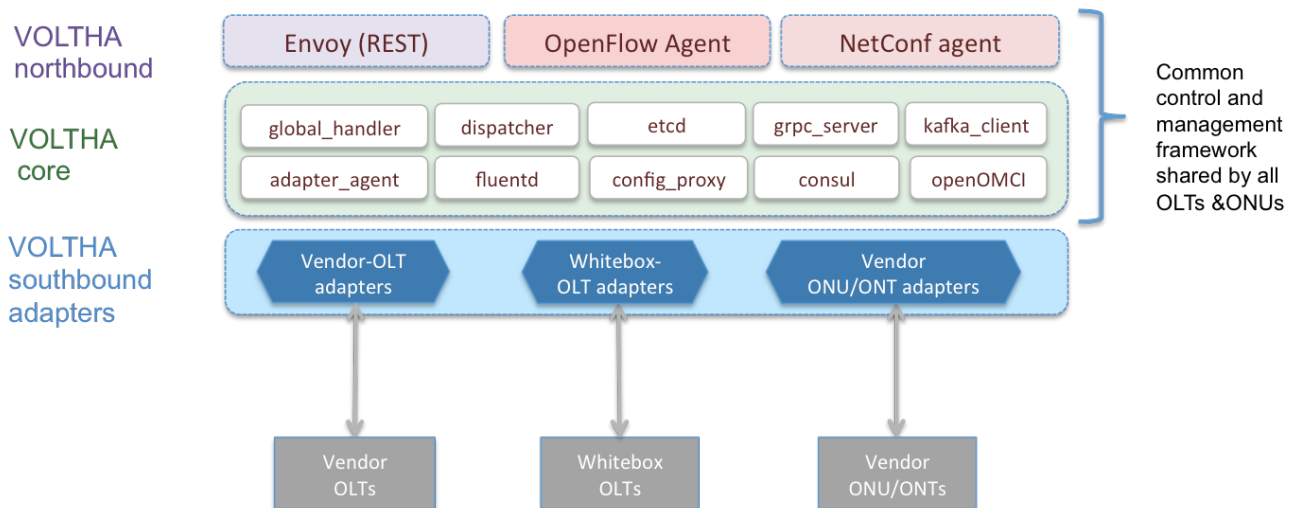
Welcome to the VOLTHA Community wiki space. All information on this wiki is publicly accessible. If you would like to contribute to this space, you will need a CORD account: <https://opencord.org/registration>

Introduction

Flexible and agile service adaptation at the cost of commodity servers and whitebox switches VOLTHA introduces the next-generation optical access system architecture, based on SDN/NFV technologies. Disaggregating PON functions to functional modules with open interfaces supports the CORD vision for open source reference implementations to service "Access-as-a-Service" use cases. VOLTHA is a virtual OLT hardware abstraction component that supports the CORD Project objective of multi-vendor, multi-domain "any broadband access as a service" reference implementation for the Central Office. VOLTHA provides isolation between an abstract (vendor agnostic) PON management system, and a set of vendor-specific and white-box PON hardware devices. On its north-bound interface, VOLTHA provides a set of abstract APIs which north-bound systems can interact with the PON networks. On its south-bound side, VOLTHA communicates with PON hardware devices using vendor-specific protocols and protocol extensions through adapters.

Virtual OLT Hardware Abstraction (VOLTHA)

VOLTHA hides PON-level details (T-CONT, GEM ports, OMCI etc.) from the SDN controller, and abstracts each PON as a pseudo-Ethernet switch easily programmed by the SDN controller



Key People and Communication Channels

Technical Steering Team

The technical steering team is responsible for all technical decisions in the project. They are responsible for the content and structure of the code base and for all technical priorities with respect to the code base.

Current TST Members

Name	Company	Role
Chip Boling	TiBit	TST Member
Saurav Das	ONF	TST Member
Matt Jeanneret	AT&T	TST Member
Shaun Missett	Radisys	TST Member
Khen Nursimulu	Ciena	TST Member

Mailing List

The mailing lists are the preferred way to get in touch with the project members with any questions, suggestions, or concerns.

- VOLTHA Discussions: <https://groups.google.com/a/opencord.org/forum/#!forum/voltha-discuss>
- CORD Discussions: <https://groups.google.com/a/opencord.org/forum/#!forum/cord-discuss>

Slack

The [CORD Slack](#) is the best way to get quick answers to your questions. Our team is distributed globally, so someone should be available at all times. VOLTHA topics are discussed in the [#voltha channel](#).

Register for a CORD Slack account here: <http://slackin.opencord.org>

Project Calls

- Release Planning and Iteration Planning meetings - Tuesdays at 8am PT and Thursdays at 7am PT
- VOLTHA 2.x Stabilization Brigade - Tuesdays at 7am PT
- Pod Management and VOLTHA FCAPS Brigade - Mondays at 8am PT

NOTE: these meetings is PUBLIC and often RECORDED. The recordings can be found on YouTube:

- VOLTHA: <https://www.youtube.com/playlist?list=PLCnPGaNt7C5evyQ-FFwAtbKaUp4cDmINa>
- Brigade: Pod Management and VOLTHA FCAPS: https://www.youtube.com/playlist?list=PLCnPGaNt7C5eX0fQAeVwg_dy6o9aZdArs
- Brigade: VOLTHA Stabilization: <https://www.youtube.com/playlist?list=PLCnPGaNt7C5eQ7XkeeMJ7nDzDUkOmPoRq>

Participate

Interested in contributing to VOLTHA? Some of the tools we use require you to register for the overarching CORD project, so we suggest you [register first](#) and then dig into the rest of the information, starting with the [Contributing to CORD](#) documentation.

Here are the key tools we use:

- VOLTHA JIRA Project - Project [here](#)
- VOLTHA GitHub - [here](#)
 - VOLTHA CORE in GO ([In progress](#))
- Olf test suite for OLT functionality: <https://gerrit.onosproject.org/#/admin/projects/olt-oftest>
- VOLTHA 2.x Roadmap and Release Planning - [under development](#)

Release and Project Management

Working as an open source community team

- The intended host of this project is the CORD project (opencord.org).
- All source code to be developed via the gerrit system of opencord.
- All parts of VOLTHA will be managed as one git repository (any proprietary plugin code by vendors will be kept in separate repos/places).
- All project documentation must be kept with the git repository (preferably as markdown (*.md) files, with drawings created with preferably Inkscape (has to be editable and PNGs can be redesigned).
- All major changes, decisions, etc., must be done with VOLTHA TST approvals, and pursuant of the CORD project governance rules.

VOLTHA Release Acceleration

- Agile + Continuous Integration - Mandatory Test Driven Development
- Single source code repo with automated build
- Transparency - Everyone should know what is going on
- Design Specs for all major new features - get the team engaged for cross functional support on features (dev, test, doc etc)
- WIKI is the main source of true for documentation, not google docs
- All contributions upstream tracked in JIRA and linked to Gerrit
- Keep JIRA up-to-date to avoid duplication of efforts or gaps in sprint deliverables

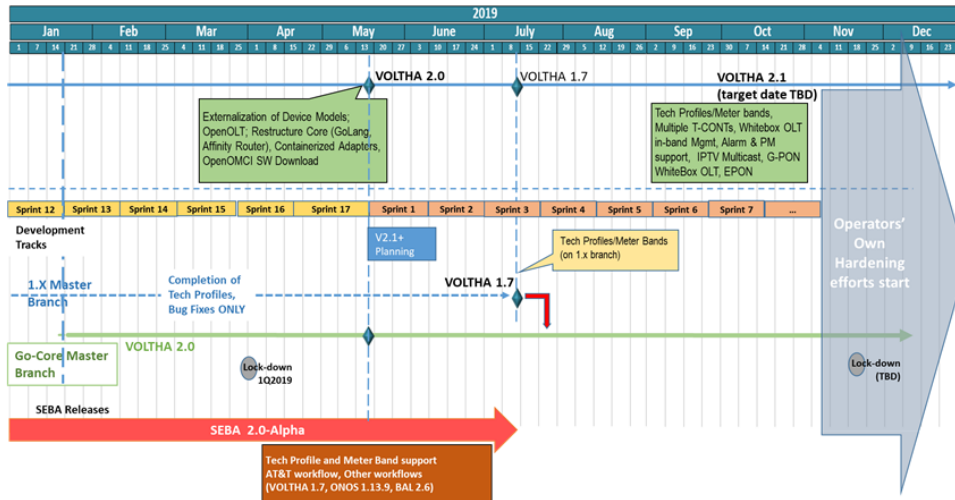
Release Model and Cadence

VOLTHA will follow the CORD release model, branching, versioning and tagging best practices found here: [Release Management](#)

VOLTHA Release Plans and Release Notes

Component / Feature	Release Date	Release Notes	Comments
VOLTHA v1.0.0	Sep 12, 2017	VOLTHA v1.0.0 Release Notes	Major release focuses new features and feature enhancements for AT&T POC III requirements building on previous POC I/II features functionality.
VOLTHA v1.1.0	Oct 6, 2017	N/A	Minor release focuses on inclusion of Edge-core ASFvOLT16 XGS-PON OLT Adapter. ASFvOLT16 design based on Broadcom Maple PON MAC silicon supporting 16x XFP ports of XGS-PON or NG-PON2 (10Gb/10Gb) and four QSFP28 Ethernet uplink ports.
VOLTHA v1.1.1	Nov 16, 2017	N/A	Maintenance release focuses on bug fixes in preparation for AT&T POC IV / Field Trial
VOLTHA v1.2.0	Dec 21, 2017	VOLTHA v1.2.0 Release Notes	Minor release focuses on enhancements to ASFvOLT16 Adapter and support for T&W ONU
VOLTHA v1.2.1	March 16, 2018	VOLTHA v1.2.1 Release Notes	Patch release for CORD 5.0 integration, REGID support for ONU Registration and bug fixes.
VOLTHA v1.3	April 30, 2018	VOLTHA v1.3 Release Notes	Minor release: migration to Kubernetes, OpenOMCI
VOLTHA v1.4	July 22, 2018	To Be Released	Incorporate Celestica OLT adapter; Integration to CORD 6.0; OpenOLT introduction software package
VOLTHA v1.5	October 02, 2018	To Be Released	Open_LT: ONU Reboot, Limited Performance Monitoring Stats and Event/Alarm support. brcm_openOMCI_onu adapter
VOLTHA v2.0	May 21, 2019	To Be Released	Major release focuses on Containerized Adapters, restructure of VOLTHA Core, OpenOMCI
VOLTHA v2.1	In planning		Technology Profiles (port functionality from 1.x), multiple T-CONTS, whitebox OLT in-band management

VOLTHA 2.x Release Roadmap (Target)



Election Process

The 2019 [election process](#) has two main steps for all positions. Nomination, and voting.

When there is only one nomination for a position, there does not need to be a vote.

Voting Community

The voting community is composed of the following people:

- Steering team members and leads
- Contributors (those who have submitted code which has been reviewed and accepted in the last year)

VOLTHA [Voting Community List](#)

Voting Process

Results can be found [here](#).