Reference Designs

Reference Designs (RDs) represent a particular assembly of components that are required to build a deployable platform. They are "blueprints" developed by ONF's operator members to address specific use cases for the emerging edge cloud.

In March 2018 ONF's operator leadership expanded ONF's mission to create a new strategic plan to deploy open source solutions into their production networks. By committing to take open source solutions into production, ONF's operator members are enabling a new supply chain ecosystem to help realize the full potential of SDN, disaggregation, and open source.

RDs are the vehicles to describe how a collection of projects can be assembled into a platform to address specific needs of operators. By defining RDs, ONF's operator members are showing the industry the path forward to solutions they plan to procure and deploy. Each RD is backed by specific operator partner(s) who plan to deploy these designs into their production networks and will include participation from invited supply chain partners sharing the vision and demonstrating active investment in building open source solutions. The RD thus enables a set of committed partners to work on the specification and a related open source platform.

Assembling a set of selected components defined by the RDs into a platform enables a proof-of-concept to allow the test and trial of the design. These platforms are called Exemplar Platforms and each of them will be based on a Reference Design and will serve as reference implementation. These platforms are de signed to make it easy to download, modify, trial, and deploy an operational instantiation and thereby speed up adoption and deployment.

Board Approved Process for Reference Designs

In July 2018 the ONF Board approved the following official processes for reviewing, approving, licensing, and releasing Reference Designs:

ONF Reference Design Process and Procedure Overview FINAL.pdf

This process is driven by the Technical Leadership Team (TLT) and the ONF partners on the Reference Design Teams (RDTs). Once a Draft version is approved, it is released to ONF members for review. This process is outlined visually here:

Reference Design Process
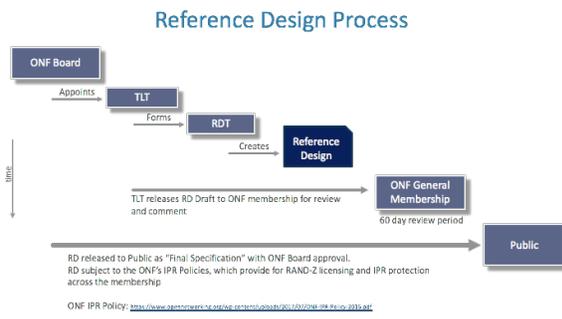
Please refer back to the RD process document for additional details.

Draft Reference Designs Now Available for Member Review

In 2019, ONF operator partners started work on multiple reference designs (RDs) as part of the new ONF strategic plan, with a goal to drive ONF open source solutions into production. Four of these RDs are now available as final Reference Designs, thanks to the work done by the respective reference design teams comprised of the Operator Group and aligned ONF Supply-chain Partners along with constructive community feedback during the member-only review periods.

Virtualized Broadband: SDN-Enabled Broadband Access (SEBA) Reference Design

NFV Fabric: ONOS/Trellis NFV Fabric Reference Design

Disaggregated Optical Networking: Open Disaggregated Transport Network (ODTN) Reference Design

Mobile: Converged Multi-Access and Core (COMAC)

Registered individuals from ONF member companies may access current draft RDs and provide feedback by clicking on the RD of interest. (See note below if you have difficulty getting to these wiki pages.)

How to Gain Member-Only Access to Reference Designs

To access RDs during the member-only review period, you will need to register with a valid member company email address. This process may take up to 24 hours to complete.