SDN/NFV Work Area

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SDN/NFV Work Area

- TR-384 Cloud-based Central Office Architectural Framework (Cloud-CO) applies Software Defined Networking (SDN) to management & control plane, Network Function Virtualization (NFV) to selected BNG user plane functions for Access and Edge Nodes, and open source to redefine the traditional Central Office for next generation network infrastructure.

- Following projects build on TR-384 are new proposals under consideration enhancing CloudCO Architectural Framework as we have learned from the development of other deliverables.

- WT-436 Access & Home Network O&M Automation/Intelligence a.k.a. Automated Intelligent Management (AIM) Project Stream. Virtualization is not enough, automation is essential to economics.

- OB-BAA (Open Broadband – Broadband Access Abstraction) is open source activity instantiating CloudCO, including demos of Cloud CO applied to access node addressing the need for Open Access Abstraction to support both legacy and new generation Access Nodes. The Access SDN Manager & Controller and BAA layer controls the interaction to the Access Nodes.

- Fixed Access Network Sharing (FANS), defined in TR-370 enables network sharing model where core infrastructure operators can improve return on investment of FTTx technologies, and with virtualization, enables Virtual Network Operators (VNO). TR-386 defines FANS Access Network Sharing Interfaces requirements.
Deliverables Building on TR-384 Cloud-based Central Office Architectural Framework (Cloud CO)

- WT-408 Cloud CO Migration and Co-existence Started Straw Ballot Comment Resolution (SB CM)
- WT-411 Interfaces between Cloud CO Functional Modules. See wiki for list of items remaining for resolution before SB CM decision
- WT-412 Test Cases for Cloud CO Applications. Dependent on other WTs and APPNs
- TR/WT-413i2 SDN Management and Control Interfaces for Cloud CO Network Functions and NBI for DO
- WT-435 NETCONF Req for Access Nodes and Broadband Access Abstraction (SB CR)
- WT-451 vOMCI Interface Specification (SB CR continues)
- WT-454 YANG Models for Access Network Map & Equipment Inventory (YANG open source). SB decision

- WT-466 Metro Computing Network - new work on the edge computing impacts on multi-service broadband network
- WT-474 Subscriber Session Steering, starting
- Application Notes: Service provider led – Use case with enough information to built an instantiation/implementation (e.g. in Open Broadband Labs). Used to derive interface definitions, create test cases with help from Open Source and vendor community. Application Notes are used to ensure all the interfaces that need to be standardized are defined (WT-408, WT-411 and WT-413,) and to drive the development of Test Cases (WT-412) To validate the CloudCO infrastructure

- Open Source Coordination with OB-BAA
  - Broadband Access Abstraction (BAA) - Status Update and Feedback
  - BBWF 2020 Cloud CO Demonstration status: objective, timeline, probably will be virtual
Cloud CO project

Architectural Framework

- **TR-384** Generic Framework
- **TR-370** FANS
- **WT-436** AIM
- **WT-466** MCN

Interface and Function Specification

- **Interfaces**
  - **TR-413** P/VNFs-BAA
  - **WT-451** vOMCI
  - **WT-435** NETCONF specs for ANs
- **BBF YANG Data Models**
  - **TR-355** VDSL2 & G.fast
  - **TR-385** PON
  - **TR-383** AN common modules
  - **TR-386** FANS
  - **WT-454** AN Map & Equipment Inventory
  - **WT-460** BNG
  - **WT-474** SSS
  - *IETF, IEEE YANG Data Models*
- **WT-411** SDN Elements & Orchestrator Interfaces

Migration & Coexistence

- **WT-408** Migration & Coexistence

Application Notes and Testing

- **Application Notes**
  - **WT-412** CloudCO AppNotes Test Cases
  - **Application Notes** *(CloudCO extensions for specific UCs)*

Software Implementation

- **Access Abstraction**
- **OB-BAA** Code and Deliverables