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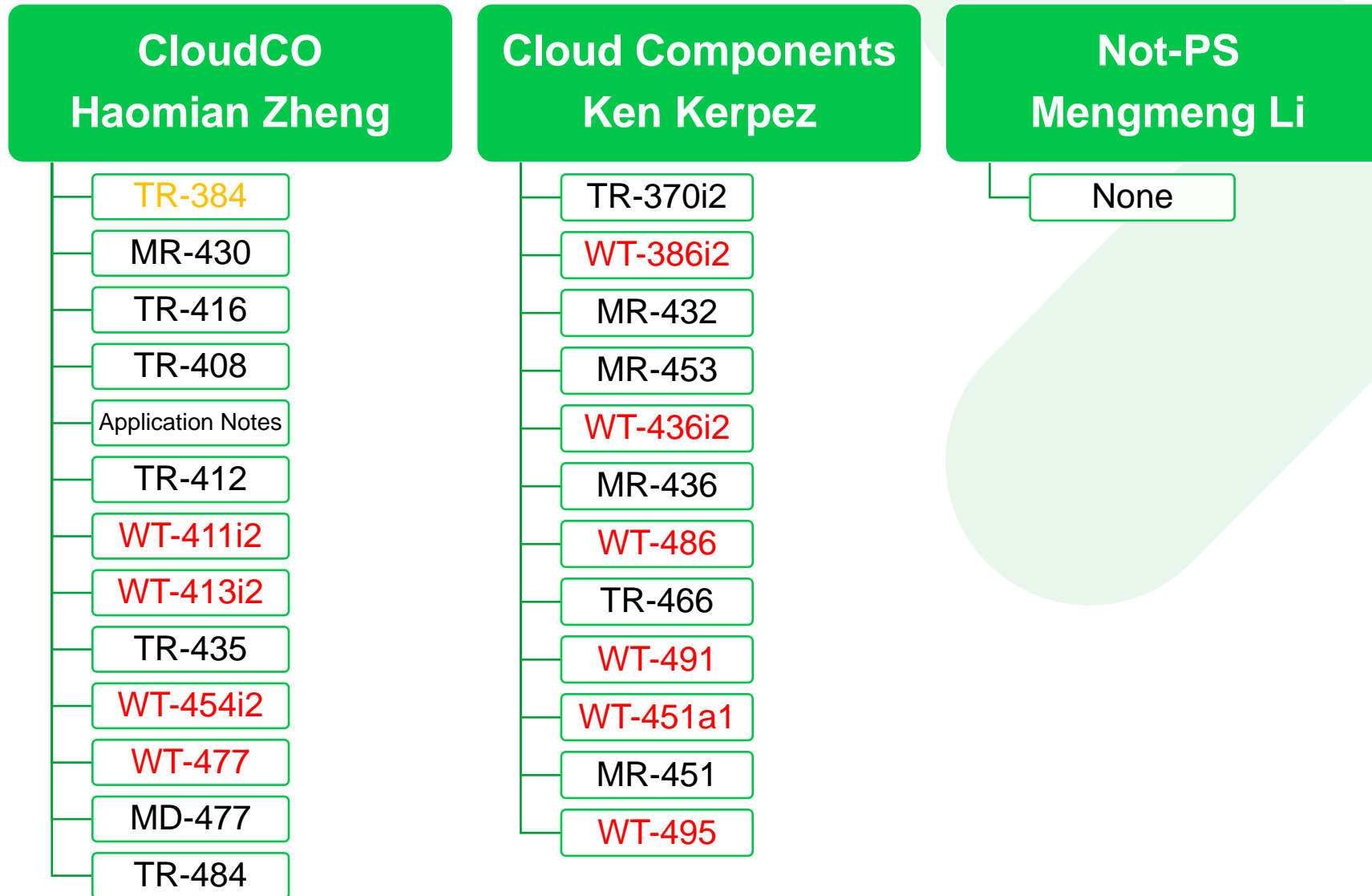
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# SDN/NFV Work Area Status at Q3/23 meeting

# Organization





# Document List

1. TR-384 “CloudCO Reference Architectural Framework”
2. MR-430 “Cloud Central Office (CloudCO)”
3. TR-416 “CloudCO Use Cases and Scenarios”
4. TR-408 “CloudCO Migration and Co-existence”
5. CloudCO Application Notes
6. TR-412 “CloudCO Test Cases”
7. WT-411i2 “Definition of Interfaces between CloudCO Functional Modules”
8. WT-413i2 “SDN M&C Interfaces for CloudCO Network Functions”
9. TR-435 “NETCONF Requirements for ANs and BAA”
10. WT-454i2 “YANG Modules for Access Network Map & Equipment Inventory”
11. WT-477 “Cloud CO Enhancement – AN Hardware Disaggregation”
12. MR-477 “Cloud CO Enhancement - Access Node Hardware Disaggregation”
13. TR-484 “Access Network Abstraction, Softwarisation and Disaggregation
14. OB-BAA-002 “Open Broadband-Broadband Access Abstraction Overview”

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15. TR-370i2 “FANS - Architecture and Nodal Requirements”
16. WT-386i2 “FANS - Access Network Sharing Interfaces”
17. MR-432 “Fixed Access Network Sharing (FANS)”
18. MR-453 “Fixed Access Network Sharing (FANS) – Technical Overview”
19. WT-436i2 “Access & Home Network O&M Automation/Intelligence”
20. WT-486 “Interfaces for AIM”
21. MR-436 “Automated Intelligent Management”
22. TR-466 “Metro Computing Network”
23. WT-491 “Metro Compute Networking Architecture, Functional Modules and Interface Definitions”
24. WT-451a1 “vOMCI Interface Specification”
25. MR-451 “ONU Management using Virtualized OMCI (vOMCI)”
26. WT-495 “Smart SD-WAN Architecture and Node Requirements”

CloudCO

Cloud  
Component

# Work Area Description

## ▪ **Mission Statement**

- This Work Area focuses on the introduction of Software Defined Networking (SDN) and Network Functions Virtualization (NFV) in conjunction with general purpose hardware to create the basis for cloud-based, edge and access networks. Building on this framework, projects address migration and coexistence of physical and virtual elements, into the broadband network, define interfaces, test cases Use Cases and scenarios, reference implementations and automation. Activities work with and coordinate with Open Broadband (OB) program regarding open source, like Open Broadband-Broadband Access Abstraction (OB-BAA) and testing Open Broadband Laboratories (OBLs).

## ▪ **Business Impact**

- The migration to SDN and NFV in the broadband network facilitates agile deployment of new customized distributed broadband services and applications. This enables new revenues and provider differentiation while managing Capex and OpEx both in the access network and in single and multi-tenant residential and business locations by implementing an agile network and enabling autonomous and automated operations.

## ▪ **Scope**

- The scope includes migration to and deployment of SDN/NFV-enabled implementations across all aspects of the broadband network. The scopes are:
  - the definition of a new cloud-based environment with its related requirements, called Cloud-based Central Office (CloudCO)
  - the architectural requirements, the interface specification among all the components with their related data models including the control-user plane separation interface for disaggregated access nodes
  - the specification of virtual network functions and interface with their related data models
  - the definition of requirements, interfaces and data models for autonomous and automated networks

# CloudCO: Activities ongoing

- Architecture
  - Discussion ongoing to review the architectural framework (TR-384)
  - Need to take a decision how to proceed
- Disaggregation
  - Disaggregated OLT (WT-477)
  - SB of the document completed
  - SB of data models ongoing
- Interfaces
  - Issue 2 of SDN Controller interfaces (WT-413i2)
    - Focus on Access Node PNF and Disaggregated OLT only
    - IP Edge PNF and Disaggregated BNG to be added in the next release
    - Complete revision of the tables finalized
    - Complete the missing parts
  - Issue 2 of CloudCO interfaces (WT-411i2/WT-454i2)
    - Activity started and proceed via Tiger Team
    - Focus on intent interfaces for network topology (infrastructure, L1)
    - Proposals for revision not yet received

# Cloud Components: status

- FANS (Fixed Access Network Sharing)
  - Baseline text updated
  - To decide if to proceed with SB
- vOMCI (Virtual ONU Management Control Interface)
  - Discussion on opening an issue 2 by adding telemetry is ongoing
  - WT-451a1 started with Annex A revision and new Appendix XI
  - Waiting for WT-477 and WT-383a7 finalization to proceed with next steps
- AIM (Automated Intelligence Management)
  - SB of WT-486 completed, decision to be taken if to go to FB
  - WT-436i2/WT-486i2
    - Tiger Team created
    - New use cases defined
    - Cross-domain DE needs a new interface
  - Collaboration with TM Forum started for reusing what already defined
- MCN (Metro Compute Networking)
  - Liaison received from IETF on "Computing-Aware Traffic Steering" (CATS) protocol
  - Call for contributions on architecture proposal
- SD-WAN (Software Defined Wide Area Network)
  - Reply liaison (LIAISE-571) to MEF issued
  - Contribution on architecture proposal
  - Baseline text