An Evolution of Cooperating Layered Architecture for SDN (CLAS) for Compute and Data Awareness

draft-contreras-coinrg-clas-evolution-01

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Background

• Cooperating Layered Architecture for Software-Defined Networking (CLAS) [RFC8597] proposes a layered control architecture where control functions associated with transport are differentiated from those related to services
  • It defines Service and Connectivity strata with associated Control, Management and Resource planes
  • Service and Connectivity strata can be provided and maintained independently and can follow their own evolution path

• This draft proposes to augment CLAS by adding:
  • A new stratum for Compute, considering distributed computing capabilities attached to different points in the network
  • A new plane in all the strata, conceived to deal with stratum-related data that could permit the implementation of control-loop automation per stratum
Evolved CLAS Architecture – 1. Addition of Compute Stratum

Note: Not hierarchical relationship between Connectivity and Compute, both are at the same level.
Evolved CLAS Architecture – 2. Addition of Telemetry Plane

Note: Not hierarchical relationship between Connectivity and Compute, both are at the same level.
Evolved CLAS Architecture
(simple representation)
Changes from -00

• Renaming of the plane devoted to data processing and analysis, changing from “Learning Plane” to “Telemetry Plane”
• Improvement of the section devoted to discussing the potential research aspects of the Telemetry Plane
• Description of applicability scenarios
  • Cloud-edge continuum
  • Network-application integration
Next steps

- Set the scope of the draft aligned with the scope of COINRG
- Collect feedback / interest from the RG on any of the aspects commented
- Keep working on the draft and prepare a new (more detailed version) for IETF 118