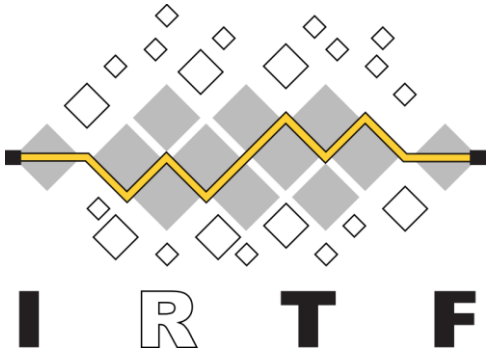

Cooperating Layered Architecture for SDN (CLAS)

draft-irtf-sdnrg-layered-sdn-01

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Seoul, SDN RG, November 2016

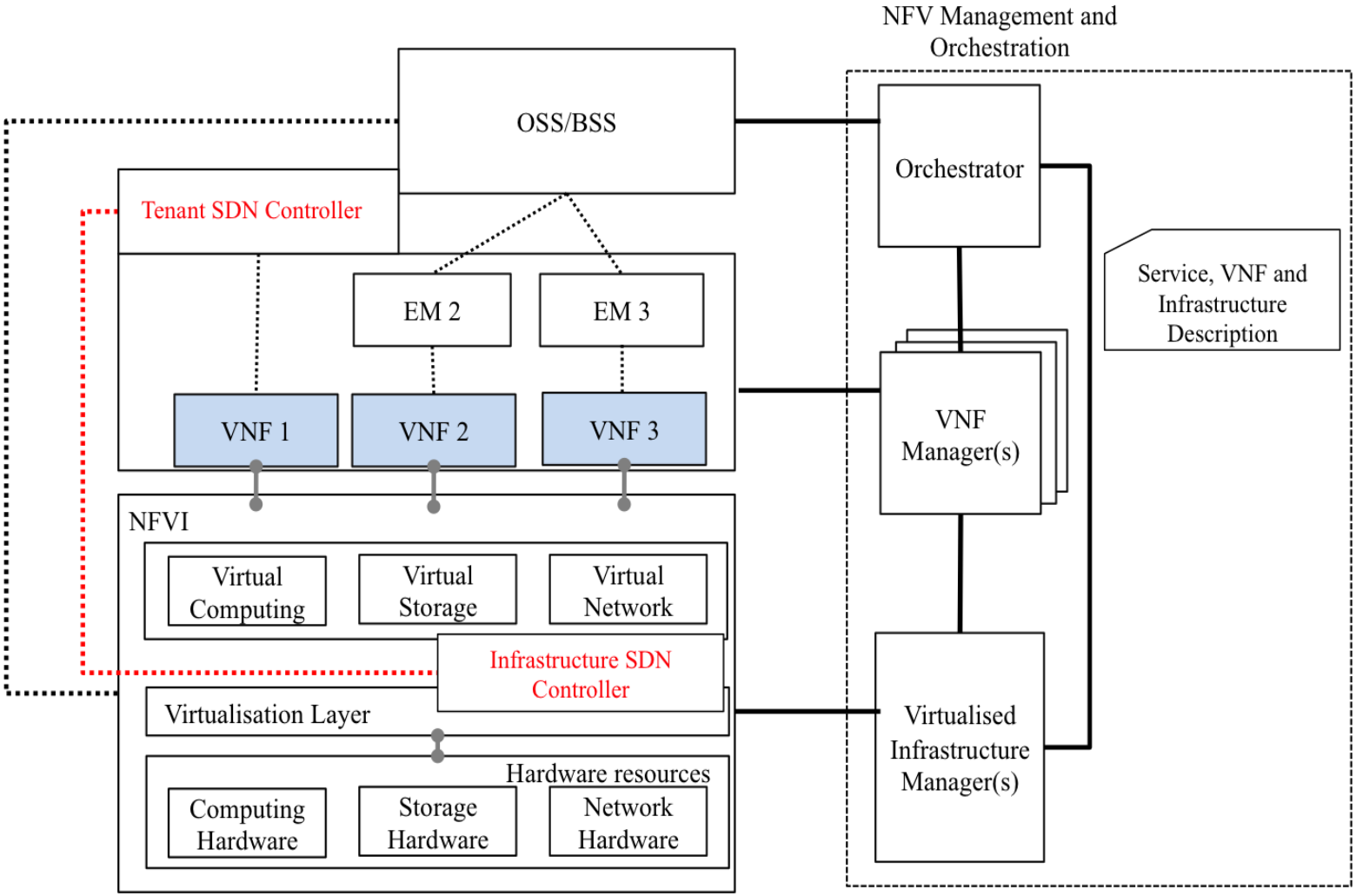
Rationale

- Existing proposals for SDN centralize control capabilities with very different objectives and purposes
- No separation between services and transport control
  - No clear responsibility for service provision and delivery
  - Complicated reutilization of components for delivering different services
  - Monolithic control architectures, driving to lock-in
  - Difficult interoperability, then difficult interchange of some modules by others
  - No clear business boundaries
  - Complex service/network diagnosis and troubleshooting

History and Next Steps

- History
  - As draft-contreras-sdnrg-layered-sdn
    - -00 presented in Toronto (IETF#90), -02 presented in Dallas (IETF#92), and -04 presented in Yokohama (IETF#94)
  - As draft-irtf-sdnrg-layered-sdn
    - -00 presented in Buenos Aires (IETF#95), -01 presented now in Seoul (IETF#97)
- Changelog
  - Change of the term Transport by the term Connectivity
  - Reference to ETSI NFV EVE005 "Report on SDN Usage in NFV Architectural Framework“ for the NFV use case (see next slide)
- Next steps
  - Address comments received during adoption call (yet pending)
    - To generate a new version after Seoul meeting and before Eo2017
  - Incorporate forthcoming comments that could be raised from the presentation today
  - Add new use cases

Applicability to NFV case



Section 5.7 of ETSI NFV EVE005

Pending comments / work to be done

- Gabriel López
  - Editorial comments and some clarifications requested
- Gert Grammel
  - Consider also related work done in draft-ietf-ccamp-interconnected-te-info-exchange
- Gino Carrozzo
  - Address specific challenges for implementing different control actions/scope between Transport & Service layer
  - Address relationships with other WG/RG, in particular ACTN for Transport stratum
  - Explore options for using the same architecture pattern recursively across the various layers

Pending comments / work to be done

- Ramon Casellas
  - Develop the multi-domain aspects, with multiple 1:1, 1:N, N:1 and N:M relationships between service stratum and transport stratum
  - Align with similar initiatives (ONF arch, ACTN within TEAS, etc.)
- Christian Esteve Rothenberg
  - Section 3.1.3 (on Recursiveness) should point (relate/compare) to related work at NFVRG (draft-unify-nfvrg-recursive-programming-02)
  - Use Case section should be completed in the next revision
    - partially covered with NFV, to be improved
- Ali Haider
  - Improve motivation for the layer separation

Pending comments / work to be done

- Bartosz Belter
  - Improve motivation
  - Complete use cases section
    - partially covered with NFV, to be improved
  - Include strong links towards other WG/RGs
- Maria Rita Palatella
  - Provide a motivation, and some potential use cases which show the need of a modular architecture:
- Zheng Haomian
  - Improve sections 6 and 7 (deployment and use cases)

Pending comments / work to be done

- Jacek Wytrębowicz
  - Proposes splitting the architecture into three stratums: Service, Transport and Resource
    - Resource Stratum should contain Control and Management Planes as well: comments?
  - Better motivation and convincing use cases (with some working code as a proof of concept)
- Evangelos Haleplidis
  - Consider juxtaposing Fig. 1 from the draft with Fig. 1 from RFC7426
  - Showcase in Fig. 1 that the communication is happening between respective planes in the strata while describing it in text
  - Explicitly discuss the difference from the draft to ITU Y.2011