Interconnection Intents

<draft-contreras-nmrg-interconnection-intents-02>

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Motivation and objectives

- Interconnection today is conceived only as pure IP traffic interchange
- BGP as base protocol for this (seasons advertising reachibility of IP prefixes)

- New models for interconnecting SDN/NFV/Edge enabled networks are required (E.g., for deploying or requesting specific VNFs and service graphs, i.e. SFCs)
- Apart from IP prefixes can be required advertisement of Service Functions and/or DATA Center capabilities
Summary of the draft

• Target: to leverage on IBN technologies to handle enriched interconnection requests (i.e., traffic interchange and beyond)

• Scenarios of applicability:
  • Interconnection of non-public to public Networks in 5G
  • Multi-domain Network-as-a-Service requests (see e.g. sec.4.4 in RFC8568)
  • Multi-domain Network Virtualization (draft-bernardos-nmrg-multidomain-01)

• Modes of usage for interconnection intents
  • only IP traffic interconnection (i.e., traditional peering / transit)
  • service (e.g., CDNi as defined e.g. by IETF CDNI or Streaming Video Alliance)
  • VNFaaS (e.g., packet core capabilities for MVNOs), for instance leveraging on draft-ietf-teas-sf-aware-topo-model
  • Computing capabilities (for instantiating functions/containers on top), for instance leveraging on draft-llc-teas-dc-aware-topo-model
  • Any combination of the ones before

• Benefits:
  • Establish a common, normalized method among service providers for automated interconnection
  • Simple way of expressing enriched interconnection request further than pure IP traffic interchange
Interconnection Intent lifecycle
- Fulfillment phase
Moving forward the draft ideas

• Define the structure of the intent (template, data model, etc)
• Identify protocols / APIs (or lack of them) for accomplishing the different kind of interconnection types considered
  • This will help to compose the workflow of configuration / provision (i.e., order of actions, dependencies on parameters/data for each set of actions, etc)
• Complete the lifecycle with the assurance part (with similar need of identification of protocols / APIs)

• Feedback is more than welcomed!!