Attachment Circuits: Updates & Next Steps

draft-ietf-opsawg-teas-common-ac-05
draft-ietf-opsawg-teas-attachment-circuit-07
draft-ietf-opsawg-ntw-attachment-circuit-05
draft-ietf-opsawg-ac-lxsm-lxnm-glue-06

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Ebben Aries performed the YANG Doctors review
- No major issue was found
- Very few fixes (restrict type, use local prefix, etc.)

Zoom on some latest main changes
- Added a new identity for BGP capabilities
  - "ac-ntw" to customize the set of capabilities (e.g., route refresh [RFC2918], graceful restart [RFC4724], or ADD-PATH [RFC7911])

No pending issue so far
Ebben Aries performed the YANG Doctors review
- No major issue was found
- Very few fixes (use of local prefix)

Donald Eastlake performed RTGDIR review
- No major issue was found
- Edits

• Zoom on some latest main changes
  – bearer-svc
    • Add support for parent bearer to cover LAG, typically
    • Support feasibility check (for cases, where NETCONF is not used)
    • Expose the list of ACs that rely upon a bearer
    • Bearers can expose whether Sync Phy is supported
      – AC service request may filter bearers based on the bearer type, synchronization support, etc. (O-RAN context, for example)
  – ac-svc
    • Expose the list of services that are bound to an AC
    • An AC can inherit another AC (parent AC vs. Child ACs)
    • Expose references to a parent or Child ACs
    • Support feasibility check
    • BFD profiles can be centrally controlled or under a specific routing protocol level

• Although we have a comprehensive list of examples, we are planning to add two more to illustrate:
  – Use of the AC for the interconnection between providers
  – How “parent AC/child ACs” hides the complexity/dynamicity when attaching workloads with network function migration, etc.

• Other than the pending examples, the document is stable
• Martin Björklund performed the YANG Doctors review
  – No major issue found
  – Some few fixes to strengthen how references are exposed

• Zoom on some latest main changes
  – ACs are bound to nodes directly; then referenced under SAPs
  – Added support for contexts where the same AC is terminated by multiple peer SAPs (e.g., an AC with multiple CEs) but a subset of them have specific information
  – Customized BGP capability support

• No pending issue
• Martin Björklund performed the YANG Doctors review
  – No issue

• No pending issue
Next Steps

• Add the two missing examples to the ac-svc spec

• Address any comments that might be received from the RTG directorate reviews
  – Early Reviews were due for 2024-03-08

• Request WGLC on the new versions to be released by then
Appendix
Overall Project Overview

https://github.com/users/boucadair/projects/1/views/1
(Reminder) Scope

- Specify an AC library with reusable types, identities, and groupings: `ac-common`
- Specify a model for managing bearers-as-a-Service: `bearer-svc`
- Specify a model for managing AC-as-a-Service: `ac-svc`
  - Does **not make any assumption about the internal structure** or even the nature or the services that will be delivered over an AC
  - Accommodates both **integrated and separate provisioning models**
    - Inclueds **reusable groupings** for use by other service models
    - Exposes AC/bearer **references** that can be used in other service placement requests
  - Favor the approach of completely relying upon the AC service model **instead of duplicating data nodes into specific modules** of advanced services that are delivered over an AC
- Specify a network model for the AC management: `ac-ntw`
  - Augments the SAP model with required AC data nodes
  - Network-view of ACs
- Specify how to glue LxNMs and LxSMs with AC matters managed via ac-svc/ac-ntw: `ac-glue`
Sample Usage:

Cloud

```json
{
   "ietf-ac-svc:attachment-circuits": {
      "ac": [
         {
            "name": "ac-BXT-DC-customer-VPC-foo",
            "description": "Connection to Cloud Provider",
            "requested-start": "2023-12-12T05:00:00Z",
            "12-connection": {
               "bearer-reference": "1243-56789"
            },
            "ip-connection": {
               "ipv4": {
                  "local-address": "192.0.2.1",
                  "prefix-length": 24,
                  "address": [
                     {
                        "address-id": "1",
                        "customer-address": "192.0.2.2"
                     }
                  ]
               }
            },
            "routing-protocols": {
               "routing-protocol": {
                  "id": "1",
                  "type": "ietf-vpn-common:bgp-routing",
                  "bgp": {
                     "neighbor": [
                        {"id": "1",
                         "peer-as": 65536,
                         "authentication": {
                            "keying-material": {
                               "md5-keychain": "nyxNER_c5sdn608fFQl3331d"
                            }
                         }
                     }
                  ]
               }
            }
         }
      }
   }
}
```