

Attachment Circuits: Updates & Next Steps

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Mohamed Boucadair (Orange), Richard Roberts (Juniper), Oscar Gonzalez de Dios (Telefonica), Samier Barguil Giraldo (Nokia), Bo Wu (Huawei), Victor Lopez (Nokia), Ivan Bykov (Ribbon Communications), Qin Wu (Huawei), Ogaki Kenichi (KDDI), ...

draft-ietf-opsawg-teas-common-ac-05

- 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*

draft-ietf-opsawg-teas-attachment-circuit-07

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*

draft-ietf-opsawg-ntw-attachment-circuit-05

- Martin Björklund performed the YANG Doctors review
 - No major issue found
 - Some few fixes to strenghten 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*

draft-ietf-opsawg-ac-lxsm-lxnm-glue-06

- 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>

Attachment Circuits Data Models Add status

Dashboard + New view

Filter by keyword or by field

In Progress 3

This is actively being worked on

- attachment-circuit-model #178
add an example of interconnecting two networks (not vpn specific)
- attachment-circuit-model #111
Add parent AC example
- attachment-circuit-model #115
Add example to illustrate the use of the model with multiple IP subnets (merging, case)

More Dig Is Needed 0

Candidate Features 1

- attachment-circuit-model #67
Use case for MPLS/SRv6 as an AC

Done 104

This has been completed

- attachment-circuit-model #18
One CE, Multiple Bearers (Comment from Bo)
- network-attachment-circuits #2
Sample: Request An AC over An Existing Bearer
- attachment-circuit-model #42
Add "comment" leaf to include free-text instructions (from Moti)
- attachment-circuit-model #55
Adding some words to improve readability
- attachment-circuit-model #57
Review of Section 3

(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***
 - Includes ***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

```

{
  "ietf-ac-svc:attachment-circuits": {
    "ac": [
      {
        "name": "ac--BXT-DC-customer-VPC-foo",
        "description": "Connection to Cloud Provider",
        "requested-start": "2023-12-12T05:00:00.00Z",
        "l2-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_c5sdn608fFQ13331d"
                      }
                    }
                  }
                ]
              }
            }
          ]
        }
      }
    ]
  }
}

```

