Applicability of BIER Multicast Overlay for Adaptive Streaming Services
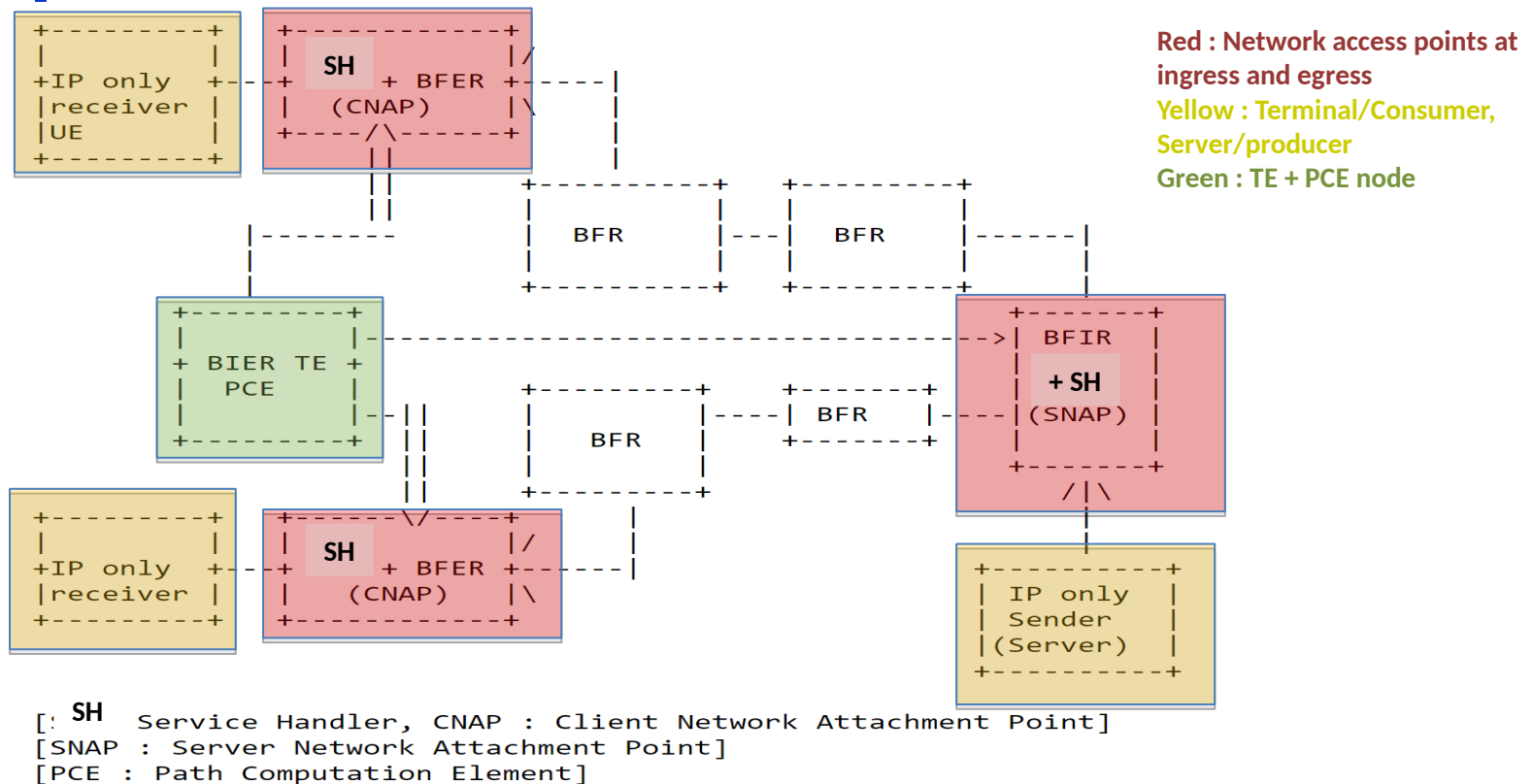
https://tools.ietf.org/html/draft-ietf-bier-multicast-http-response-01

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# Recap : BIER Multicast Overlay for HTTP Response

- Presented this WG Document's v00 in IETF 104

- Example realization of the use case (

  https://tools.ietf.org/html/draft-ietf-bier-use-cases-06#section-3.10 )

- Reference Architecture and Realization of the "multicast overlay" over IPMC and BIER was described

- Pros and Cons for both were considered

- For realization over BIER, operational details including functional elements such as PCE, Service Handler were described

# Recap : Reference Architecture over BIER



```
+---------+      +------------------+                    Red : Network access points at
|         |      |     SH     |/    |                    ingress and egress
|+IP only +--+--+ + BFER +-----|                         Yellow : Terminal/Consumer,
|receiver |  |  |  (CNAP)  |\   |                         Server/producer
|UE       |  |  +-----/\------+   |                       Green : TE + PCE node
+---------+  |          ||        |
             |          ||        +--------+   +--------+
             |---------  |        | BFR    |---| BFR    |------|
                         ||       |        |   |        |
                                  +--------+   +--------+
     +---------+                                           +-------+
     |         |-----------------------------------------> | BFIR  |
     + BIER TE +                                           |       |
     |   PCE   |                                           | + SH  |
     |         |-+  ||           +--------+  +--------+     | (SNAP)|
     +---------+ |  ||           |        |  |---- | BFR |----| |  |
     +---------+ |  ||           | BFR    |  +--------+     +-------+
     |         | |  ||           |        |                  /|\
     |+IP only +--+--+ +------\/----+     +--------+          |
     |receiver |  |  |   SH   |/    |                       +----------+
     +---------+  |  | + BFER +-----|                       | IP only  |
                  |  |  (CNAP) |\   |                       | Sender   |
                  +--+--------+  |                          |(Server)  |
                                                            +----------+
[: SH    Service Handler, CNAP : Client Network Attachment Point]
[SNAP : Server Network Attachment Point]
[PCE : Path Computation Element]
```

- The multicast overlay is formed by the BFIR and BFER of the BIER layer and the additional SH (Service Handler) and PCE (Path Computation Element) elements

# Details Added

- Extended "3. Use Cases" to two categories
  - 3.1. HTTP-based Streaming (from v00)
    - Included description of DASH.
  - 3.2. HTTP-based Software Updates (newly added in v01)


- Enhanced "6. Security Considerations"
  - Added description of HTTPS-based exchanges.

# **Next Steps**

- Request for a WG Last Call