Introduce QoS Status and Corresponding Notification Events

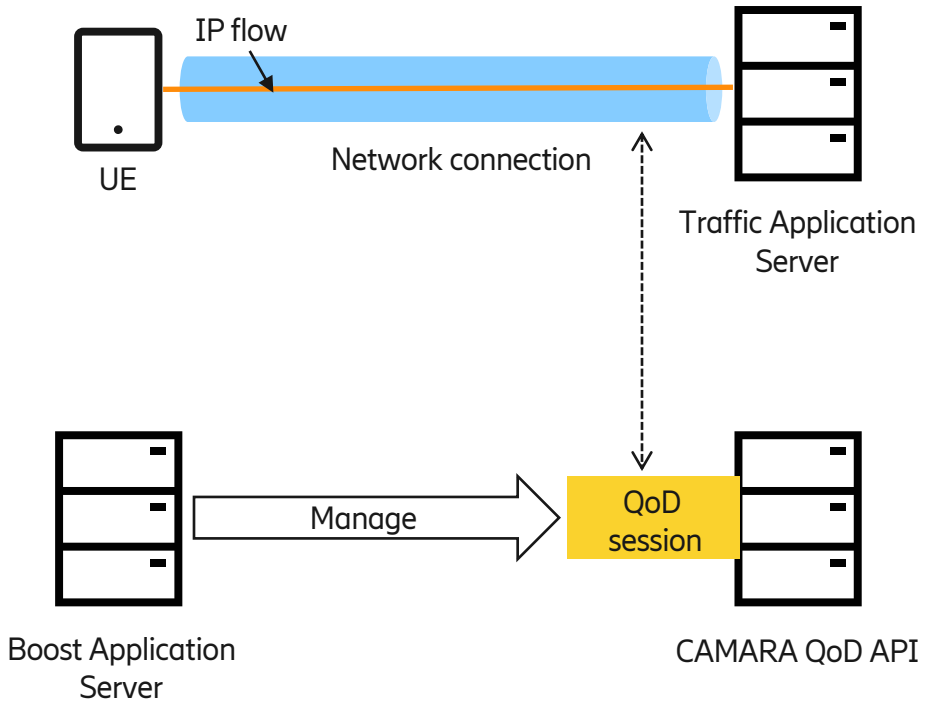
To Camara QoD Working Group

Emil Zhang Ericsson 2022-11-18

Issue

- https://github.com/camaraproject/QualityOnDemand/issues/38
- https://github.com/camaraproject/QualityOnDemand/issues/46
- Currently there is only one notification event in Camara QoD v0.8.0
  - SESSION_TERMINATED
  - No event to indicate the status about the network providing the required QoS
- 3GPP NEF AfSessionWithQos provides events to indicate the status of network providing the required QoS
  - SUCCESSFUL_RESOURCES_ALLOCATION/FAILED_RESOURCES_ALLOCATION/SESSION_TERMINATION
  - but those events/concepts are not simple and not clear enough for non-telecom developers to understand

Concepts



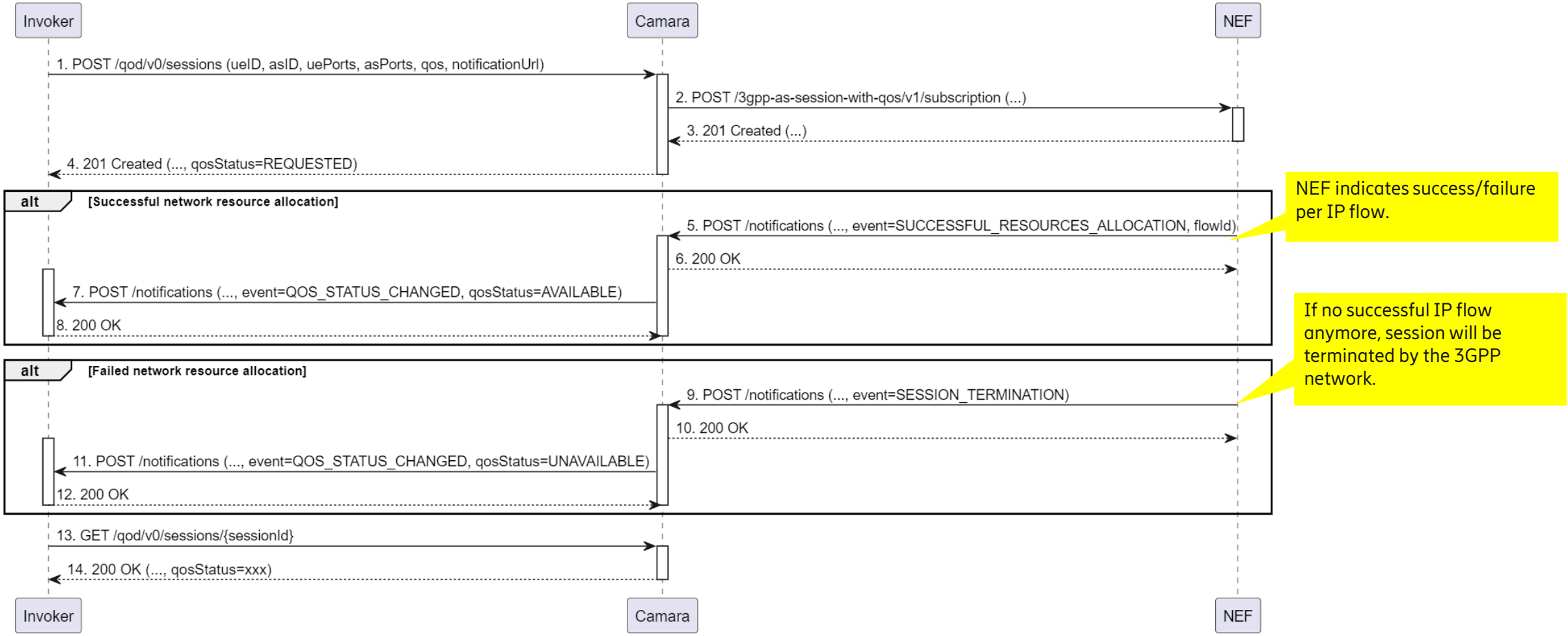
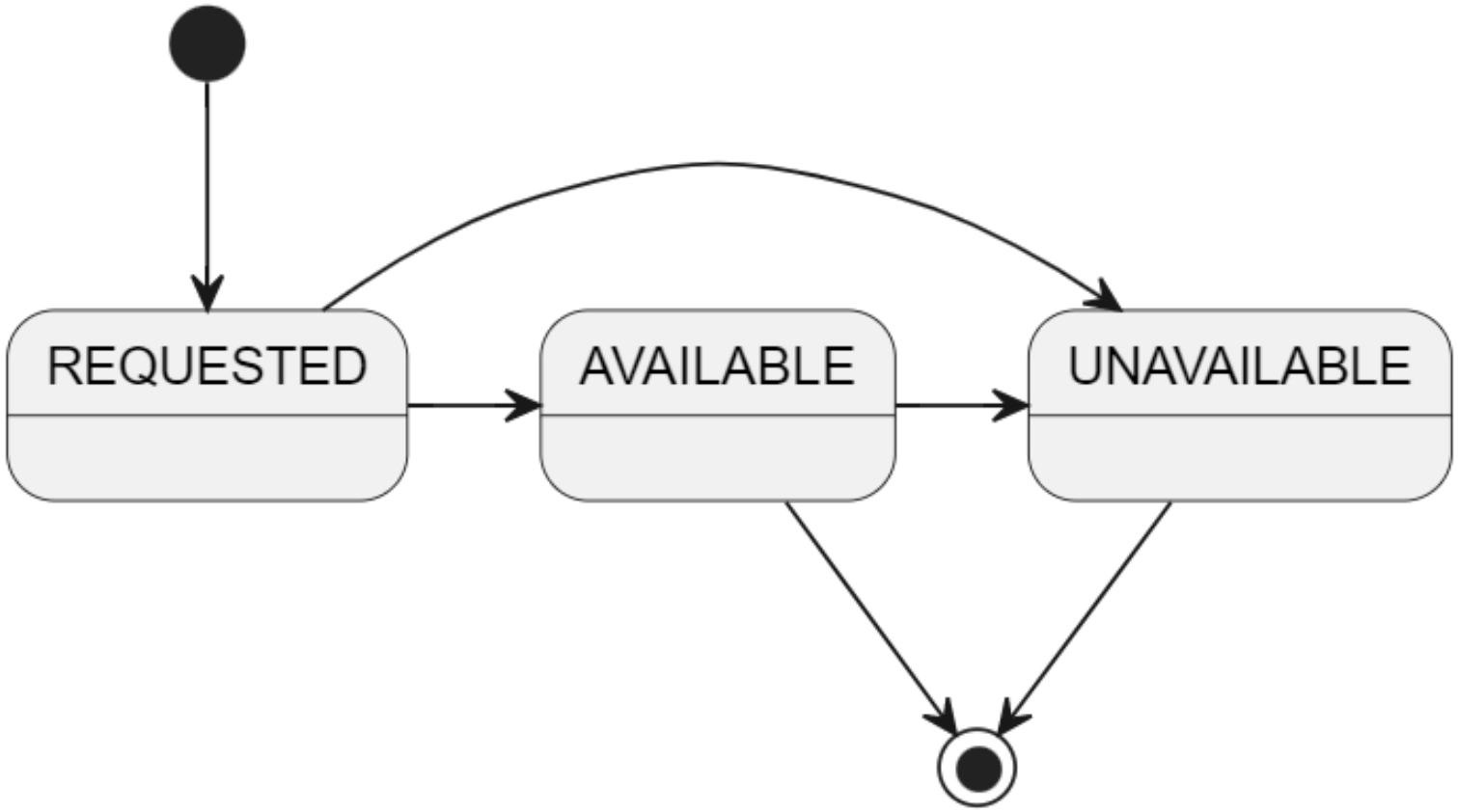
- QoD Session is a REST resource representing a **Boost Application Server** requests QoS boost for one (or more) IP flow(s) in a network connection between **UE** and **Traffic Application Server**

- There are two kind of status in the model
  - **Session status**: reflecting the status of a QoD session
    - CREATED/MODIFIED/EXPIRED/TERMINATED/DELETED
  - **QoS status**: reflecting the status about the network fulfilment for the QoS boost
    - REQUESTED/AVAILABLE/UNAVAILABLE

Proposal

- Introduce a ‘qosStatus’ attribute to QoD session data model ‘SessionInfo’
- The enumeration of ‘qosStatus’
  - REQUESTED
  - AVAILABLE
  - UNAVAILABLE
- Introduce a ‘QOS_STATUS_CHANGED’ notification event

Camara layer logic (only one IP flow)



State Machine of qosStatus