QoS-NSLP QSPEC Template
(draft-ietf-nsis-qspec-15.txt)

Jerry Ash -- Editor
gash@att.com

Attila Bader -- Editor
Attila.Bader@ericsson.com

Cornelia Kappler -- Editor
cornelia.kappler@siemens.com

Dave Oran -- Editor
oran@cisco.com
QSPEC Document Update

- **draft-ietf-nsis-qspec-13.txt** changes:
  - replaced QSPEC-1 (‘mandatory’) parameters with QNI settable M-flag to designate parameters that MUST be interpreted
    - only traffic model (TMOD) parameter is mandatory
    - parameters can be ‘ignored’ if M-flag not set
  - eliminated concept of ‘remapping’ QSPEC parameters
  - allow local QSPEC in local domain (encapsulate initiator QSPEC)
    - retains QSPEC ‘stacking’ functionality

- **draft-ietf-nsis-qspec-14.txt** changes
  - added text that signaling functionality is only defined by the QoS NSLP document
  - added text that both mechanisms can be used simultaneously: a) tunneling a QSPEC through a local domain and b) defining a local QSPEC and encapsulating the initiator QSPEC

- **draft-ietf-nsis-qspec-15.txt** changes
  - editorial revisions only
QSPEC Document Update

- draft-ietf-nsis-qspec-16.txt changes (pending from WGLC)
  - QSPEC Types
    - additional QSPEC Types can be defined per IANA Considerations Section (already in place)
    - QSPEC Type = 0 is default
  - Initiator/Local QSPEC bit added
  - various editorial fixes
    - DSCP parameter encoding
    - various edits carry over from QSPEC-1 parameter removal
    - QSPEC version number edits & additional error code

- status
  - completed WGLC
  - draft QSPEC-16 ready to reissue incorporating WGLC comments
  - no current open issues
Y.1541-QOSM Update
<draft-ietf-nsis-y1541-qosm-03.txt>

- went through WGLC about one year ago
  - then held pending stabilization of QSPEC & QoS NSLP
- re-issue shortly
  - update IANA considerations, add QSPEC Type
  - editorial changes
- second WGLC after re-issue
Backup Slides
QSPEC Document Changes

- QSPEC1/QSPEC2 semantics replaced:
  - source traffic description mandatory to include by QNI & mandatory to interpret by downstream QNEs
    - traffic description specified by traffic model (TMOD) parameter consisting of 4 sub-parameters:
      - rate \( r \)
      - bucket size \( b \)
      - peak rate \( p \)
      - minimum policed unit \( m \)
  - all other QSPEC parameters optional to include by QNI & may be either mandatory or optional to interpret by downstream QNEs
    - QNI explicitly specifies whether it wishes admission control to succeed or fail if a constraint cannot be met
    - downstream QNE distinguishes between failure to understand parameter or failure to meet constraint that causes failure
  - additional QSPEC parameters can be defined in separate specification documents
QSPEC Document Changes

- current QSPEC flags modified as follows:
  - QNI sets M flag for each QSPEC parameter it populates that must be interpreted or reservation fails
  - currently M flag is statically set for every QSPEC parameter
  - if M flag set
    - downstream QNE MUST interpret parameter or reservation fails
    - if QNE does not support parameter it sets N flag & rejects reservation
    - if QNE supports parameter but cannot meet parameter, it sets E flag & rejects reservation
  - if M flag not set
    - downstream QNE SHOULD interpret parameter
    - if QNE does not support parameter it sets the N flag & optionally accepts or rejects reservation
    - if QNE supports parameter but cannot meet parameter, it sets E flag & optionally accepts or rejects reservation
  - R (remapped parameter) flag & Q (non QOSM) flag eliminated
QSPEC Document Changes

- summary of QSPEC parameters:
  - source traffic description:
    - TMOD-1 (mandatory to include)
    - TMOD-2 (optional to include)
  - constraints (optional to include):
    - Path Latency
    - Path Jitter
    - Path PLR
    - Path PER
    - Priority (Preemption, Defending, Admission, RPH Priority)
    - Slack Term
  - traffic handling directives (optional to include):
    - Excess Treatment
  - traffic classifiers (optional to include):
    - PHB Class
    - DSTE Class
    - Y.1541 class
- eliminated:
  - Bandwidth
  - Ctot, Dtot, Csum, Dsum
QSPEC Document Changes

- concept of remapping QSPEC parameters eliminated
  - 'interpret' a QSPEC parameter means must conform to RFCs defining parameter & procedures
- concept of local QSPECs retained
  - edge nodes
    - must interpret initiator QSPEC parameters
    - can either
      - initiate parallel session with local QSPEC or
      - send a local QSPEC & encapsulate initiator QSPEC
    - local QSPEC interpreted by local domain QNEs
    - local QSPEC must be consistent with initiator QSPEC
      - e.g. RMD can initiate a local QSPEC
        » that contains TMOD = bandwidth (sets r=p, b/m to large values)
        » allows simple processing but may overprovision bandwidth