

Non Queue Building (NQB) Per Hop Behavior

[draft-ietf-tsvwg-nqb-05](#)

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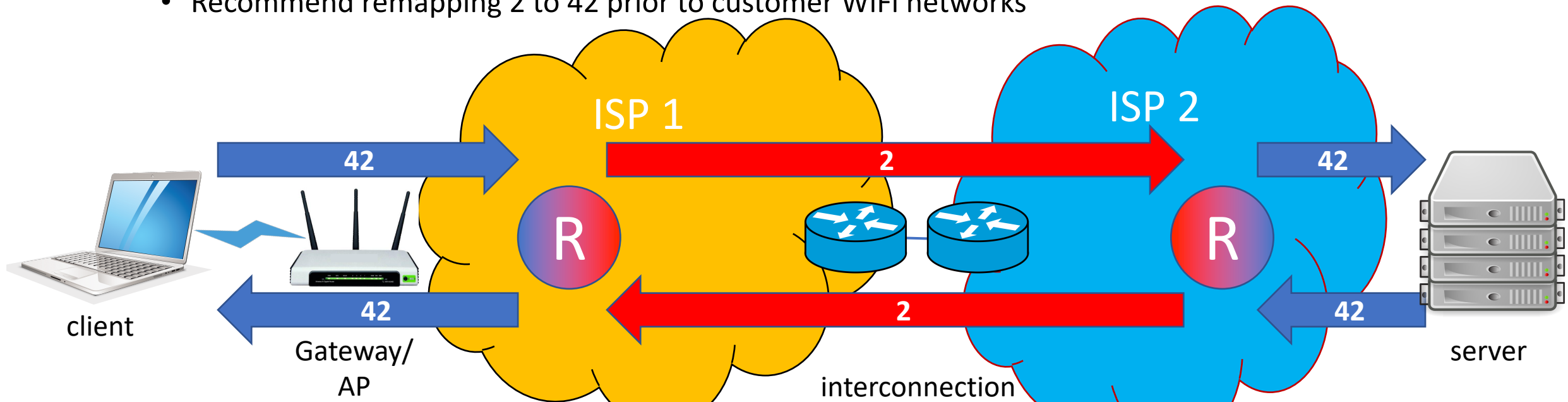
March 8, 2021

Status

- Draft-04 published February 22, 2021
 - Aligned terminology with RFC2474 (“standardized PHBs”, “recommended DSCPs”)
 - Reworked mention that DiffServ was not intended to be used end-to-end
 - Added: Networks that don’t support the PHB SHOULD aggregate NQB with Default, and SHOULD preserve the NQB marking.
 - Added text discussing where aggregation with Default is fine
 - Removed mention of aggregating Network Control with NQB
 - Added new requirements around 2 DSCP assignments and interconnection (see next slide)
- Draft-05 published today
 - Cleaned up WiFi section to recommend PHB compliance more strongly
 - Wordsmithing of DSCP recommendations & re-marking
- Milestone: Submit as Proposed Standard RFC by Feb 2021

DSCP Recommendation – TWO DSCPs

- Rationale for recommending DSCP 42 (101010):
 - The end-host/application chooses DSCP for upstream traffic, no DSCP remapping possible prior to WiFi link. Choosing a value that maps to AC_VI in existing WiFi networks is critical for adoption.
 - Existing Access Network technologies can easily classify/aggregate a lot of “NQB-compatible” traffic (CS7, CS5, EF) with 42 via a masked classifier (i.e. 101xx0)
- Rationale for recommending DSCP 2 (000010):
 - Some existing DSCP interconnections and backbone routers (e.g. MPLS) can easily aggregate NQB(2) with Default, while carrying the DSCP through unbleached
- **Current Proposal (included in draft-04/05):**
 - Recommend DSCP of 42 for end-hosts (senders)
 - Recommend remapping 42 to 2 prior to interconnection
 - Recommend remapping 2 to 42 prior to customer WiFi networks



Remaining Work (from IETF109)

1. ~~Align terminology with RFC2474 (“standardized PHBs”, “recommended DSCPs”)~~ **DONE**
2. ~~Eliminate implication that DiffServ was not intended to be used end-to-end~~ **DONE**
3. ~~Clarify aggregation of NQB traffic with Default & discuss backbone nets~~ **DONE**
 - ~~Networks that don’t support the PHB SHOULD aggregate NQB with Default, and SHOULD preserve the NQB marking.~~
 - ~~Describe in more detail where full NQB support is needed vs. where aggregation with default is likely fine.~~
4. ~~Discuss interworking with practices in place in some interconnects/backbones regarding DSCP aggregation~~ **DONE**
 - ~~Use of a 000xxx DSCP in these locations makes compliance with #3 much easier.~~
5. ~~Fix mention of aggregating Network Control with NQB~~ **DONE**
 - ~~Either remove it, or provide sufficient context and warnings~~
6. ~~Clean up WiFi section to recommend PHB compliance more strongly~~ **DONE**
 - ~~Both for “default mapping” devices and RFC8325 devices~~
7. ~~Do NQB & Default form a PHB Group?~~ **Not recommended**

Next Steps

- WG ok with proposal for two DSCPs?
- Which DSCPs? 42 & 2? (see next talk)
- Start WGLC soon?