

# ASPA Progress

Alexander Azimov, Yango  
<a.e.azimov@gmail.com>

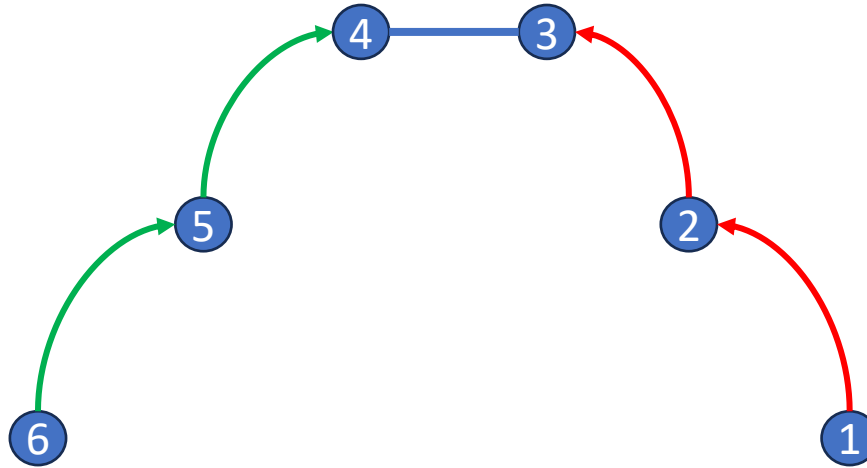
# ASPA Documents

- ASPA profile: draft-ietf-sidrops-aspa-profile-18
- ASPA verification: draft-ietf-sidrops-aspa-verification-18
- RTR support for ASPA: draft-ietf-sidrops-8210bis-13

# ASPA Profile: Precaution

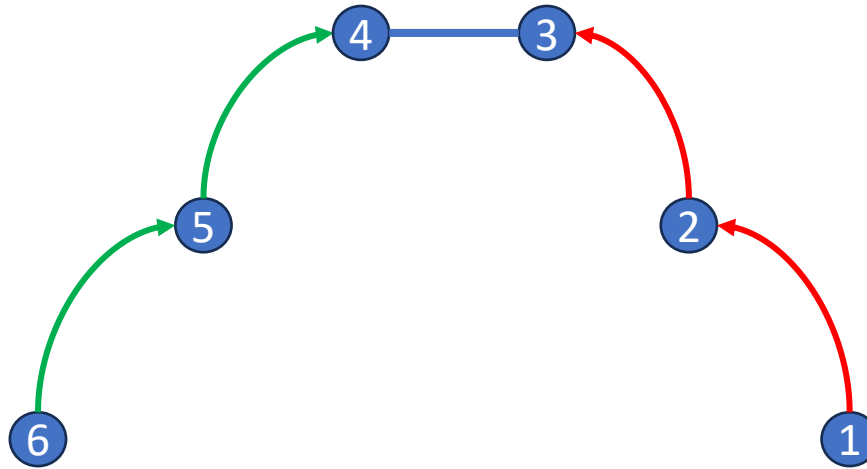
Relying Party implementations are RECOMMENDED to impose an upper bound on the number of Provider ASes for a given Customer ASID. An upper bound value between 4,000 and 10,000 Provider ASes is suggested. If this threshold is exceeded, Relying Party implementations SHOULD treat all ASPA objects related to the Customer ASID invalid; e.g. not emit a partial list of Provider ASes. Additionally, an error SHOULD be logged in the local system, indicating the Customer ASID for which the threshold was exceeded.

# ASPA Verification: Invalid



If the sum of lengths of up-ramp and down-ramp is less than  $N$ , it is **Invalid**

# ASPA Verification: Measuring Ramps

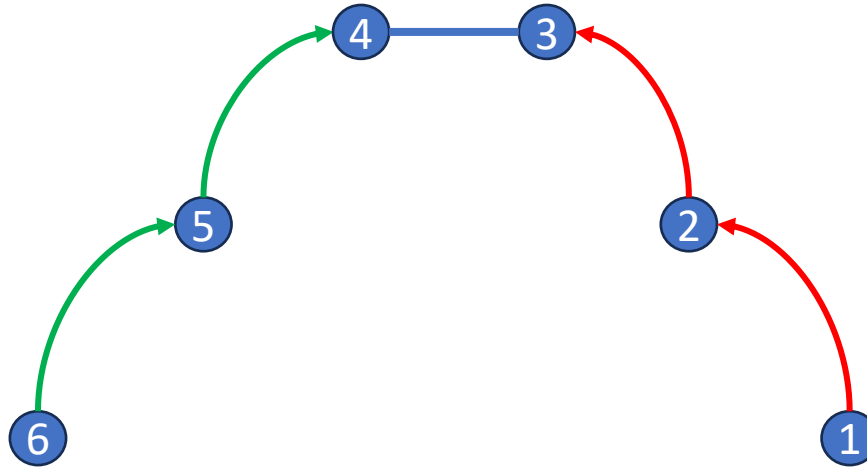


ASPA: (1,2), (2,3), (3,0), (4,0), (5,4), (6,5)

Measured up-ramp: 1-2-3

Measured down-ramp: 6-5-4

# ASPA Verification: Measuring Ramps



ASPA: (1,2), (2,3), ~~(3,0)~~, (4,0), ~~(5,4)~~, (6,5)

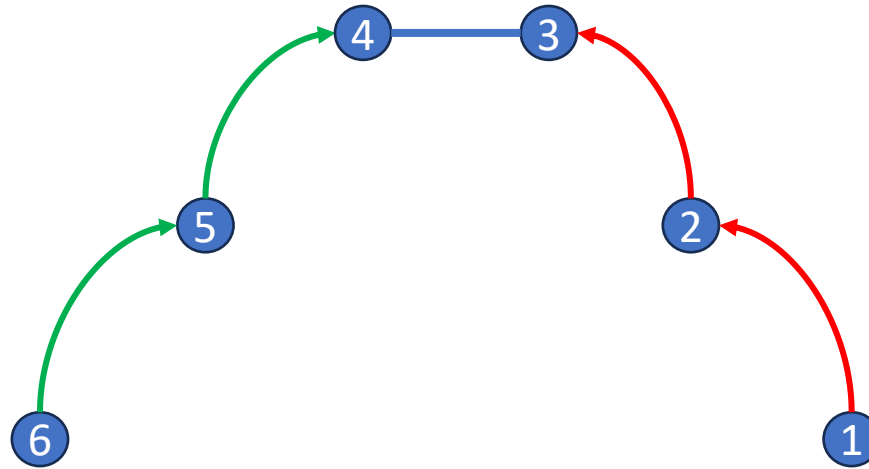
Measured min up-ramp: 1-2-3

Measured max up-ramp: 1-2-3-4

Measured min down-ramp: 6-5

Measured max down-ramp: 6-5-4

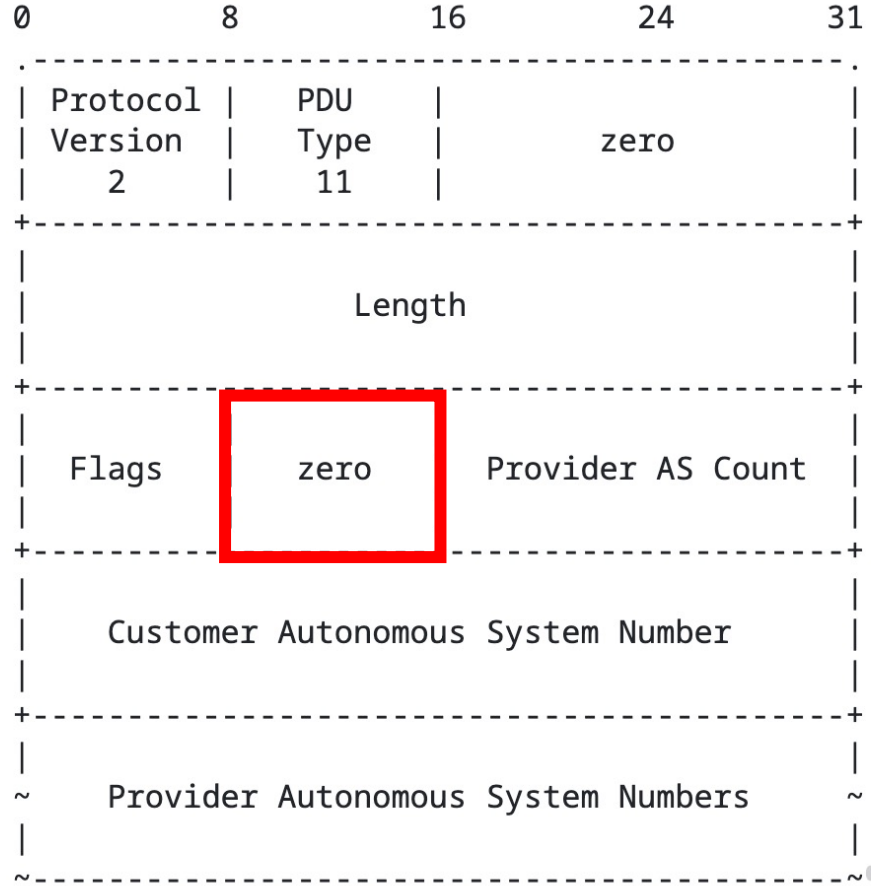
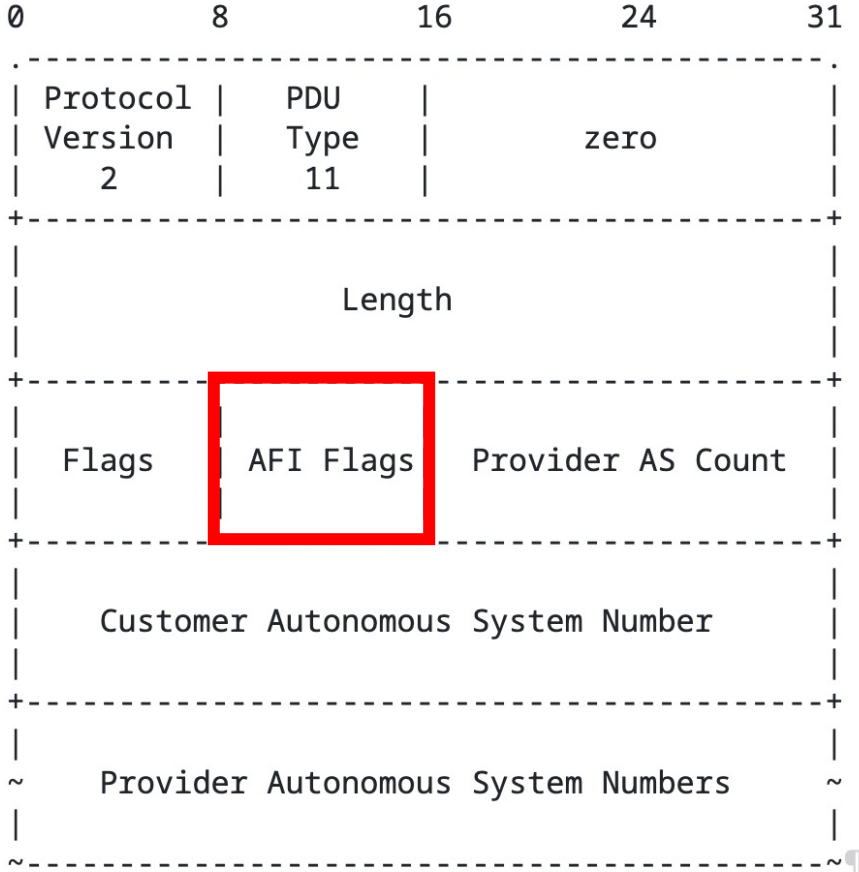
# ASPA Verification



If the sum of lengths of max\_up\_ramp and max\_down\_ramp is less than  $N$ , it is **Invalid**

If the sum of lengths of min\_up\_ramp and min\_down\_ramp is less than  $N$ , it is **Unknown**

# RTR Protocol: Diff



All ASPA documents are now AFI agnostic



# Open Questions: Security Section

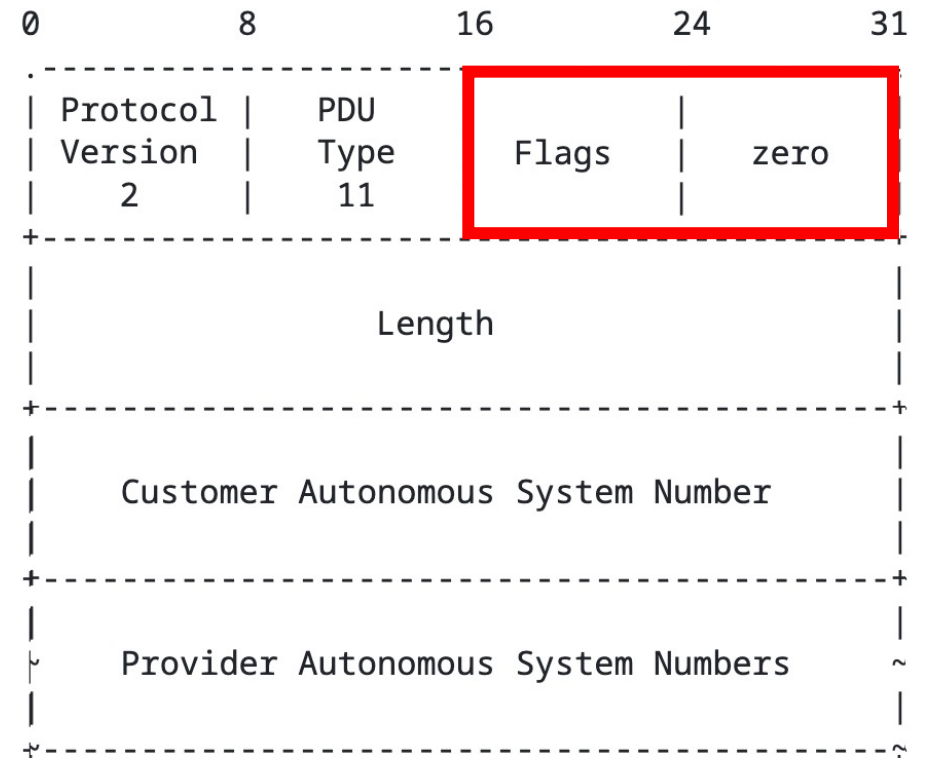
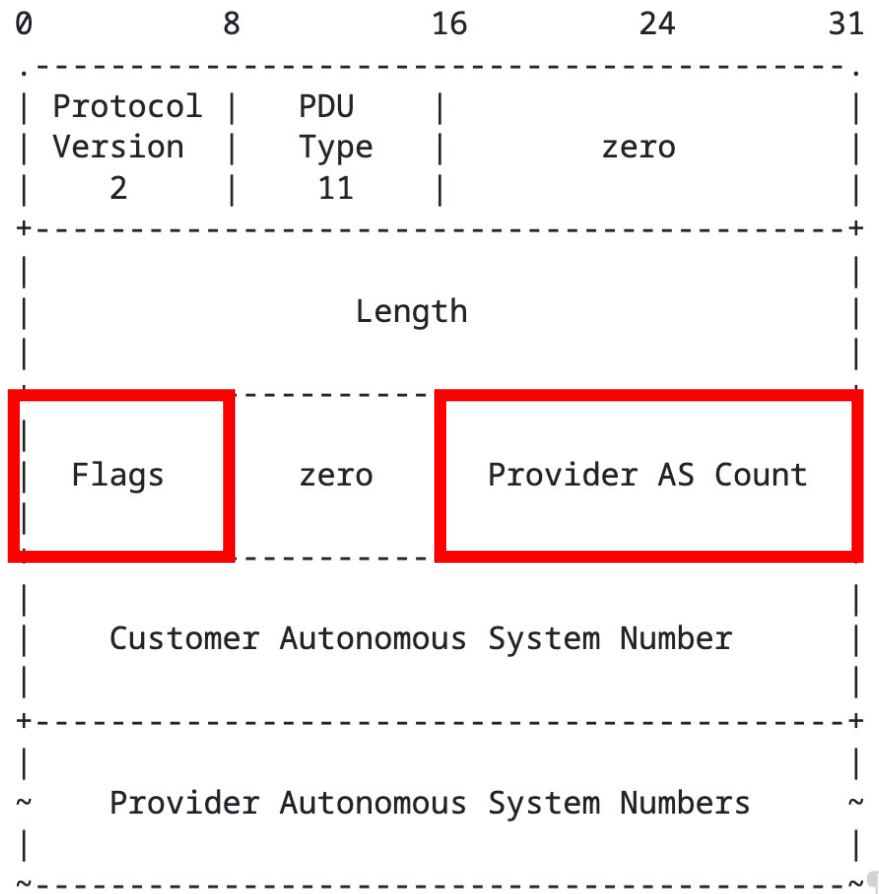
## 9.1. Difference in IPv4 and IPv6 Connectivity

The U-SPAS is supposed to contain the union of Providers for a CAS for both IPv4 and IPv6 connectivity. This design solution may have side effects if a customer-to-provider relationship exists only in one address family, resulting in a relaxed AS\_PATH verification in the other one.

The authors of this document believe that this is a reasonable compromise, as it will simplify both the ASPA registration process and the verification process. There is also an expectation that the difference between IPv4 and IPv6 topologies will reduce as the volume of IPv6 traffic grows.

Removed

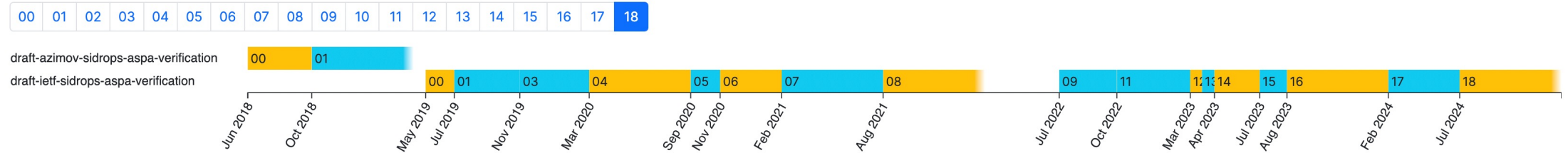
# Open Questions: RTR ASPA PDU



Are there any disadvantages?

# Long Story Long

## Versions:



Are we ready to move on?