

# Problems with Required Request ID

#1602, #1603  
Also related to #1601, #1612

# REQUEST\_UPDATE

```
REQUEST_UPDATE Message {  
  Type (vi64) = 0x2,  
  Length (16),  
  Request ID (vi64),  
  Required Request ID Delta (vi64),  
  Number of Parameters (vi64),  
  Parameters (...) ...  
}
```

Stated use cases - solves race conditions from breaking up the control stream:

- Joining FETCH
- Make-before-break for fwd changes
- ~~Unsubscribe/Resubscribe~~
- ????

# Problems

- Unsubscribe / “Unrequest” doesn’t have a request ID - this is insufficient to solve synchronization problems
- Endpoints need to store all received request IDs. This is a DoS vector.

# Possible Solutions

- When out of sync, get rid of session errors and just make it a REQUEST\_ERROR. Your luck was bad.
- Use atomic requests (something like SWITCH) when doing dependent operations
- Put Joining FETCH in the SUBSCRIBE stream (#1604)
- Make JOINING\_FETCH a SUBSCRIBE/PUBLISH\_OK parameter

# Coupling Joining FETCH and SUBSCRIBE

- How do we disambiguate REQUEST\_UPDATE?
  - make them have the same parameter space, OR
  - spell REQUEST\_UPDATE a little differently ('required request ID' -> 'updated request ID')
- No easy way to kill the subscription without also killing the FETCH. Aren't these related operations?
- Can easily end the FETCH by killing the FETCH data stream.