

# Flow Control Principles for HTTP 2.0

<http://tools.ietf.org/html/draft-montenegro-httpbis-http2-flow-control-principles>

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# Flow Control in HTTP/2.0

- Multiplexing interleaved Request/Response pairs on different streams compete for underlying TCP connection
- One of the issues is how to deal with flow control
  - Much discussion and experimentation
- **Goal: Explicitly decouple flow control principles from the many possible algorithms**
  - Allow further experimentation and refinement of algorithms without affecting the base protocol.
- Example: Similar to how in TCP, the complex issue of congestion control has been improved upon throughout the years without having to change the base protocol.

# Principles for Flow Control (FC)

1. FC is hop by hop ("hop" == HTTP 2.0 hop), not end-to-end
2. FC is based on window update messages (credit-based scheme)
3. FC is directional.
  - client and server independently advertise their preference as receivers.
  - FC MAY be declared by the receiver and MUST be heeded by the sender
4. FC can be OFF or ON. OFF if not advertised by receiver (or if “infinite” credit given to sender)
5. HTTP/2.0 spec: Only the format of the window update message and its semantics.
  - Also some illustrative example of a simple algorithm
  - Better algorithms to be published separately as they are developed

TBD: Flow Control is per-stream, per-session (TCP connection), or both