NETCONF Transaction ID

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IETF 115

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draft-ieft-netconf-transaction-id-00

Now adopted!

No changes or additions to the protocol extension since IETF 114

- Progress blocked by IPR disclosure. IPR claim now clear, draft adopted

What now? Compare and contrast with other current drafts.

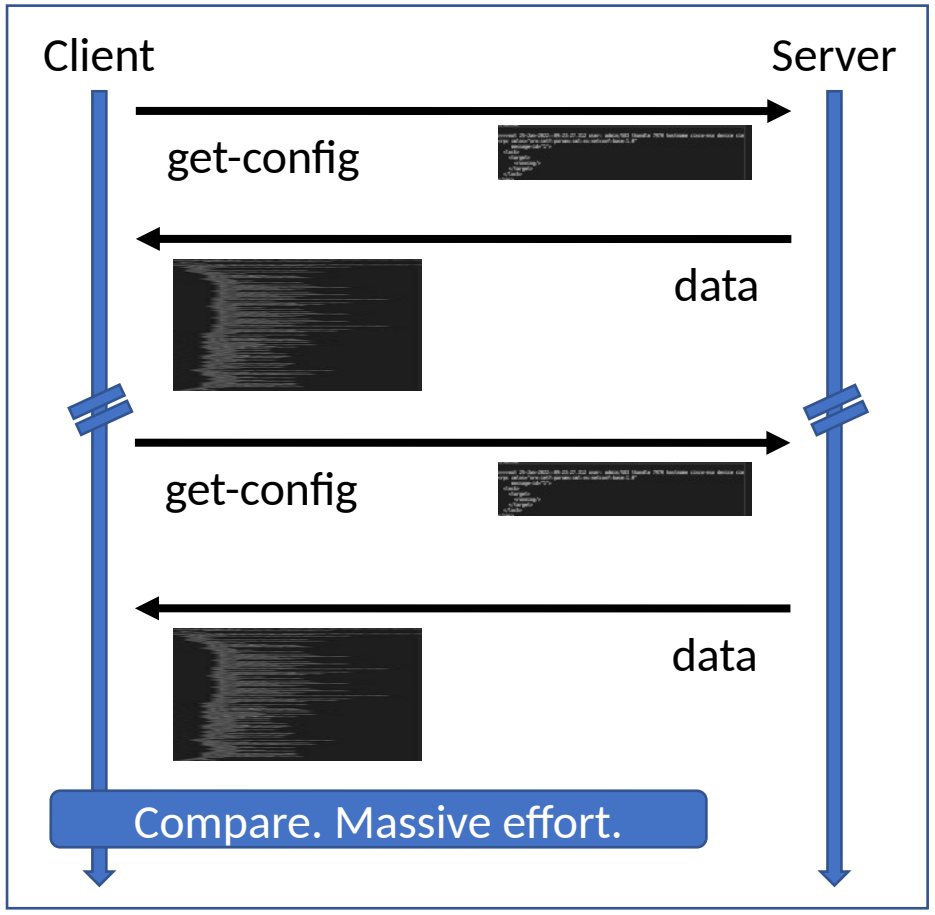
Compare and Contrast with Other Drafts

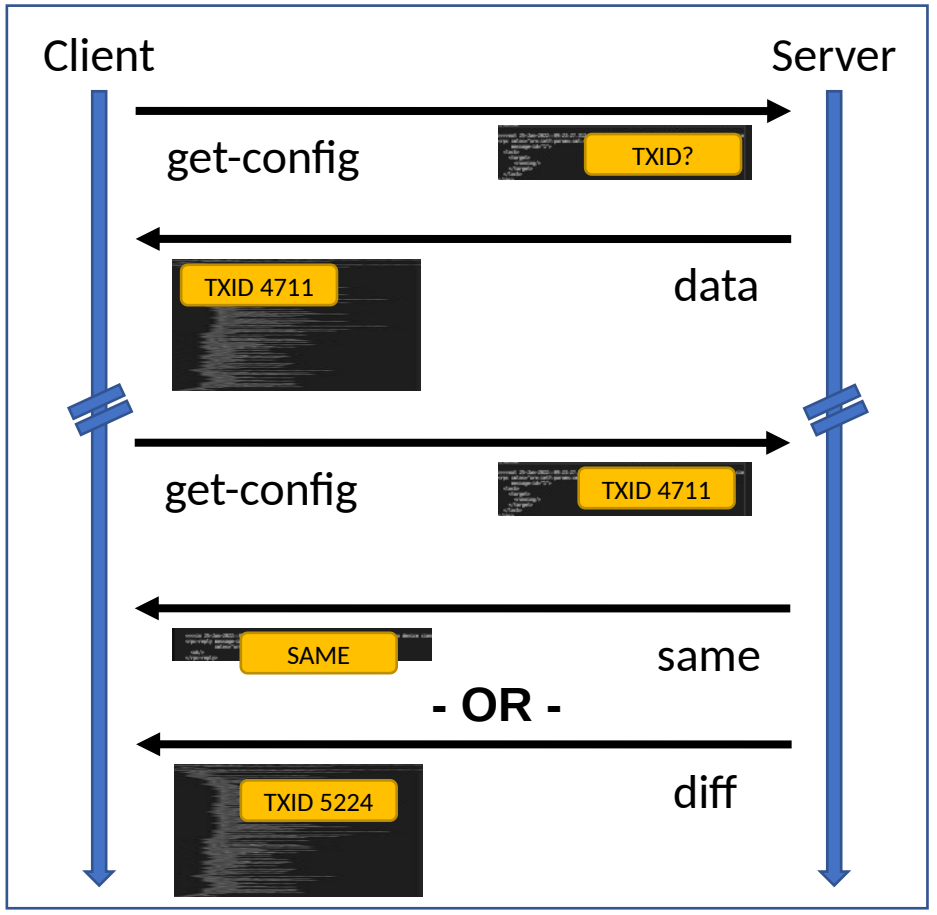
TRANS-ID	draft-ieft-netconf-transaction-id-00
CFG-TRACE	draft-quilbeuf-opsawg-configuration-tracing-00
W3C-TRACE	draft-rogaglia-netconf-trace-ctx-extension-00
PRIV-CAND	draft-jgc-netconf-privcand-00
ETAGS	RFC 8040 (RESTCONF)

Trans-id Overlaps with Other Drafts

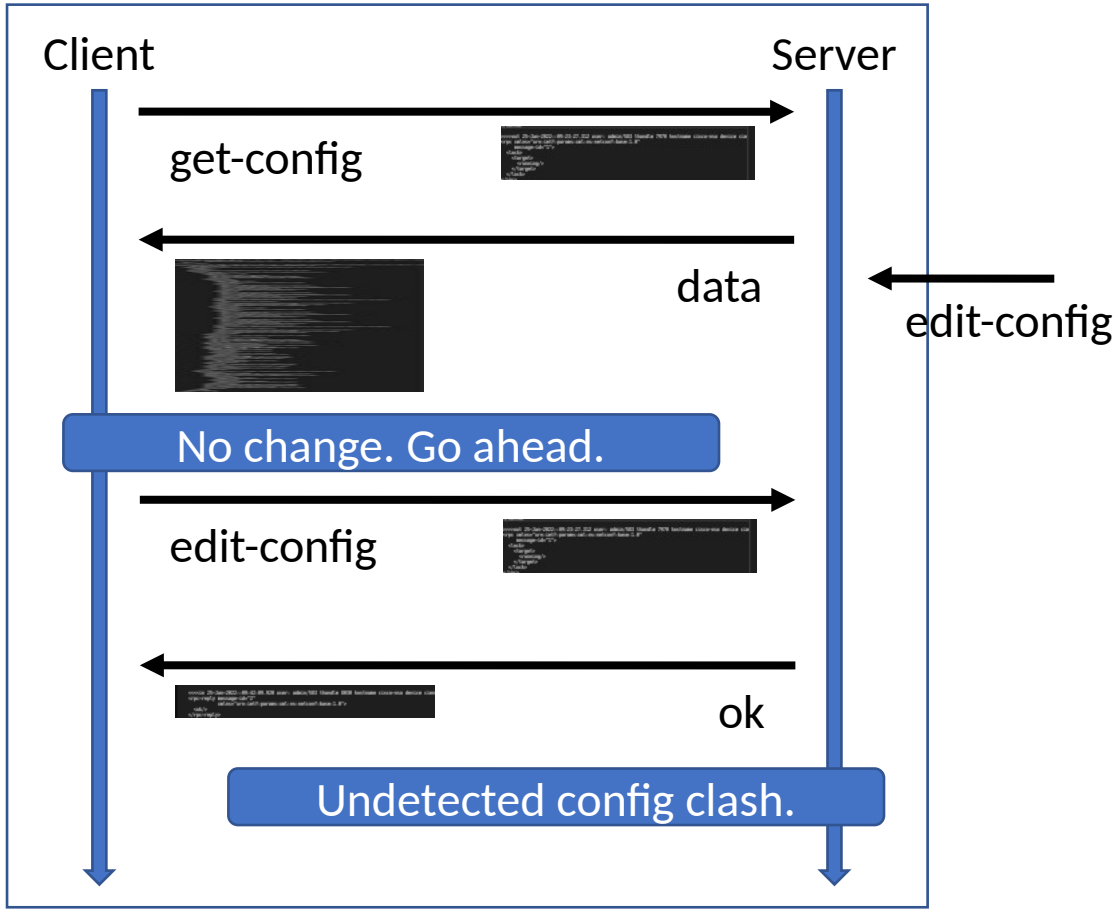
	TRANS-ID	CFG-TRACE	W3C-TRACE	PRIV-CAND	ETAGS
Increase transaction throughput by reducing lock time	✔	-	-	✔	-
Allow clients to get config changes at top level or within subtree ("Sync")	✔	Discussed but not defined	-	-	✔
Allow clients to make config changes conditional on no conflicts ("No overwrite")	✔	Discussed but not defined	-	Maybe	✔
Allow clients to recognize their own echo in YANG Push updates	✔	-	-	-	-
Map transaction ids from client to server and server controlled children	Removed, could be added back	✔	✔	-	-

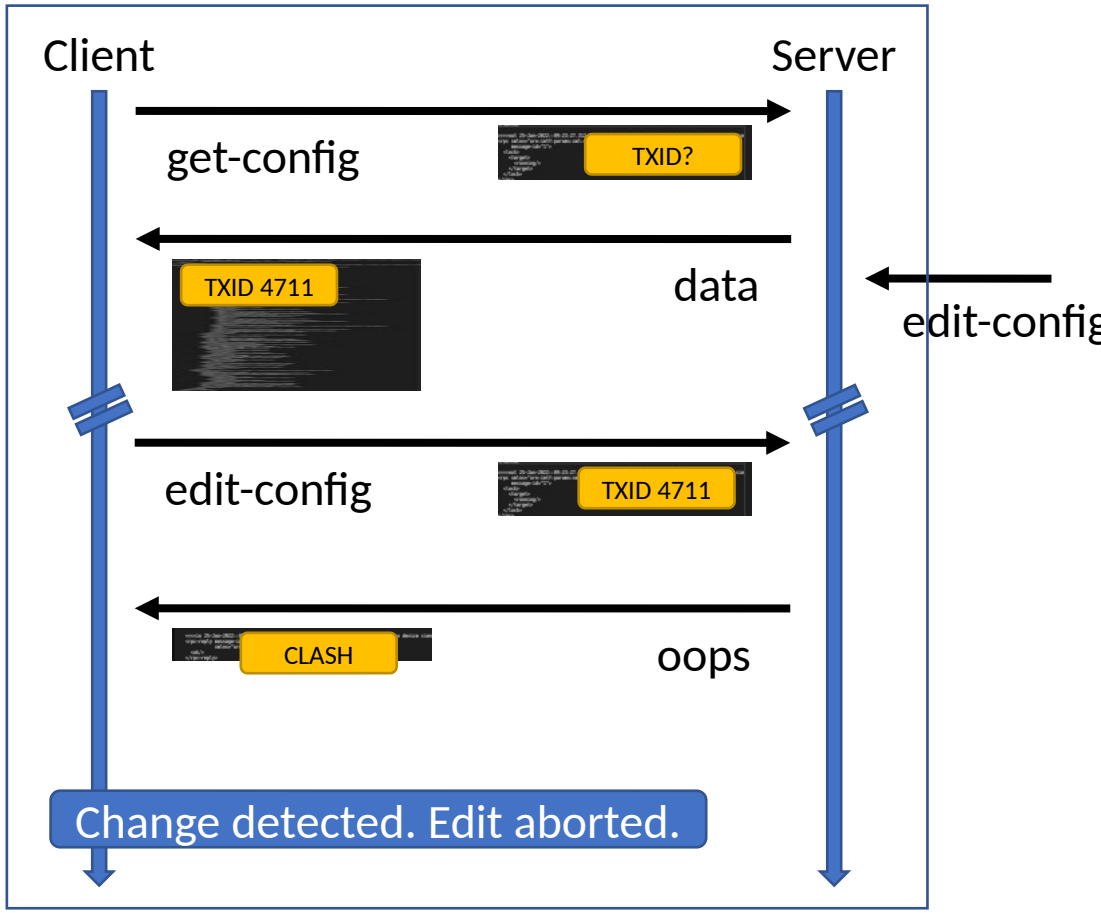
Allow Clients to Get Config Changes (Without Locking)



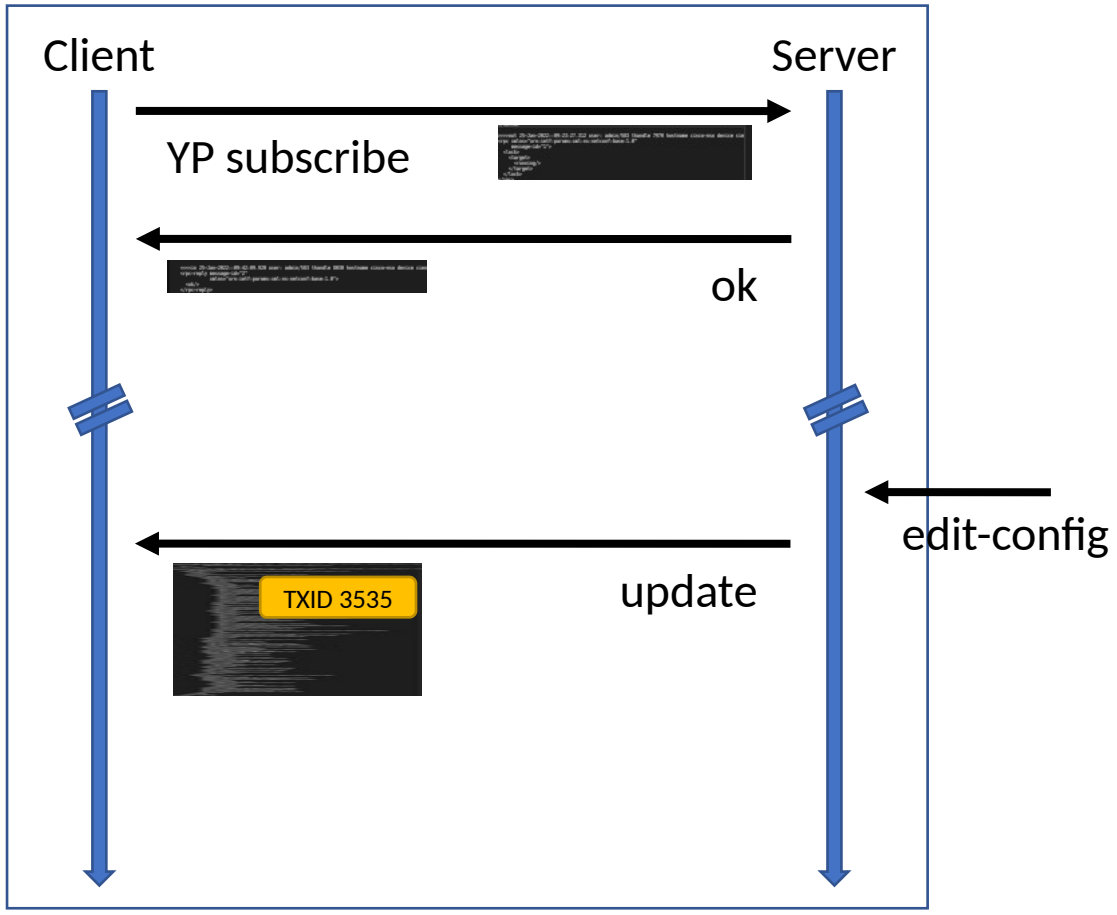


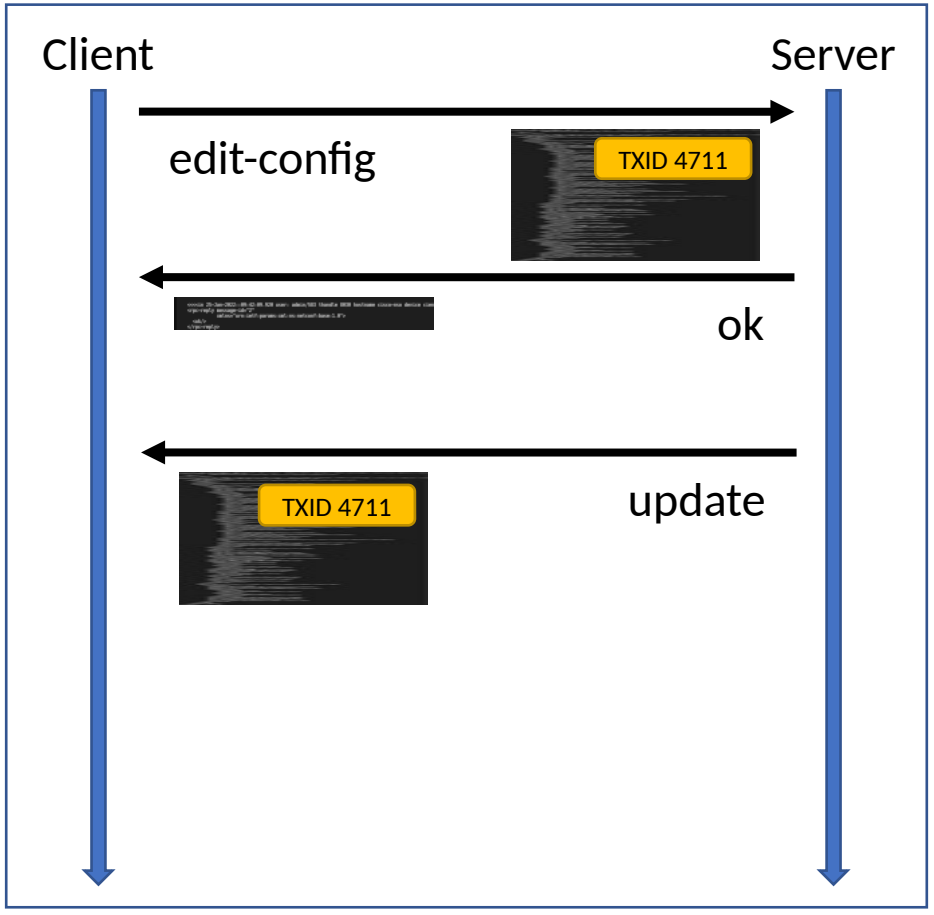
Allow Clients to Make Config Changes (Without Locking)





Allow Clients to Recognize their own Echo (Without Locking)





Simulated Results

- Real world management application running 1h in lab:
  - 569 => 378 roundtrips, down 34% (network load, delay)
  - 1002 kB => 547 kB, down 45% (network load, processing)
- No datastore locking outside <edit-config> until <commit>
- No window of vulnerability to clashing configurations

Thank you