draft-ietf-netconf-privcand-07

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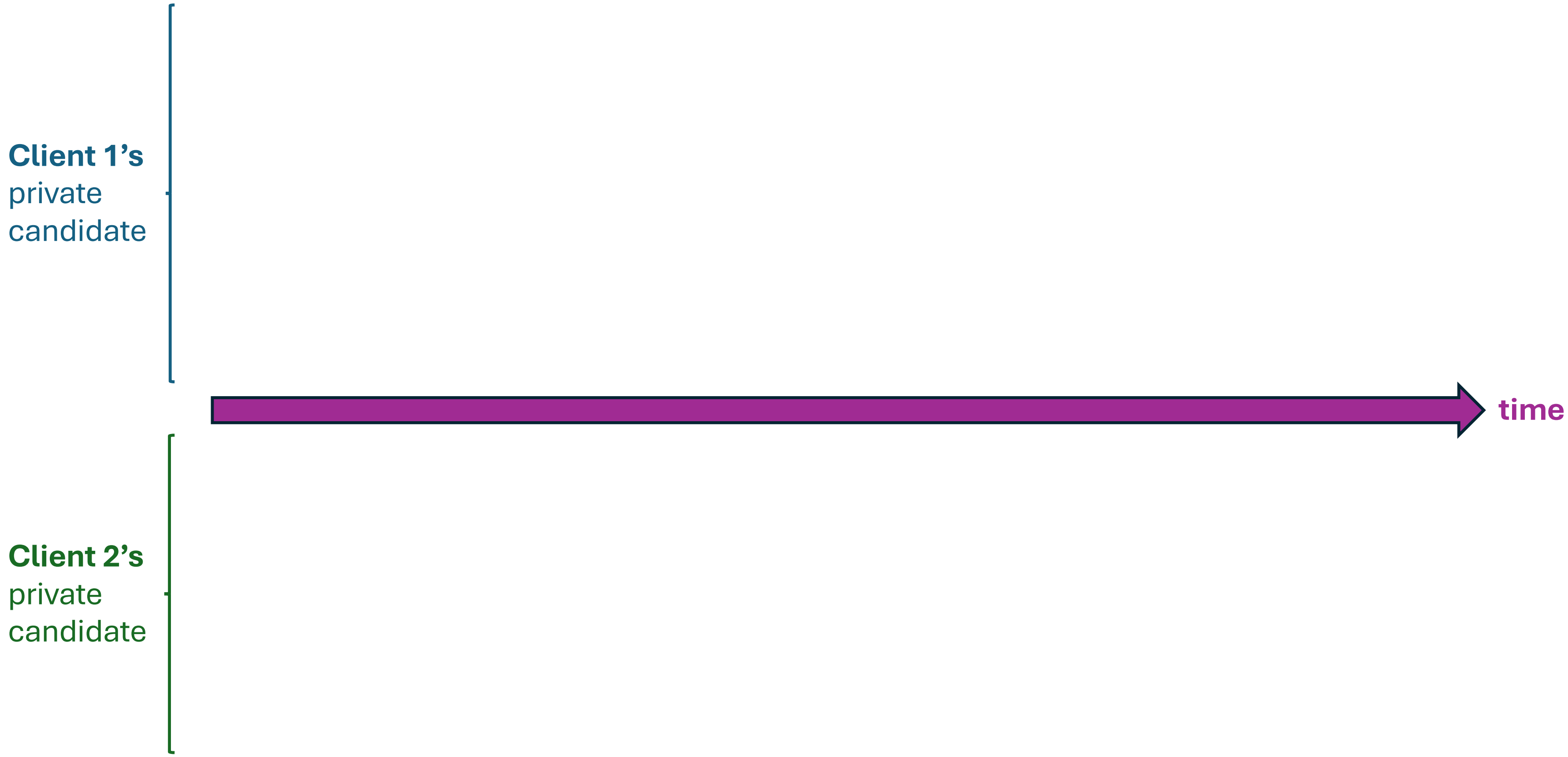
Updates since Dublin (IETF 121)

- We didn’t present at 122, but did publish -06
- Draft is in Last Call
  - Thank you to Rob Wilton, Qiufang Ma and Andy Bierman for comments
  - Yang Doctors and OPSDIR reviews
- Published a -07 that addresses most comments
  - Fixed lots of nits
  - Added technical clarifications
  - Added some missing descriptions in the Yang model
  - New section on when a private candidate is updated (next slide)

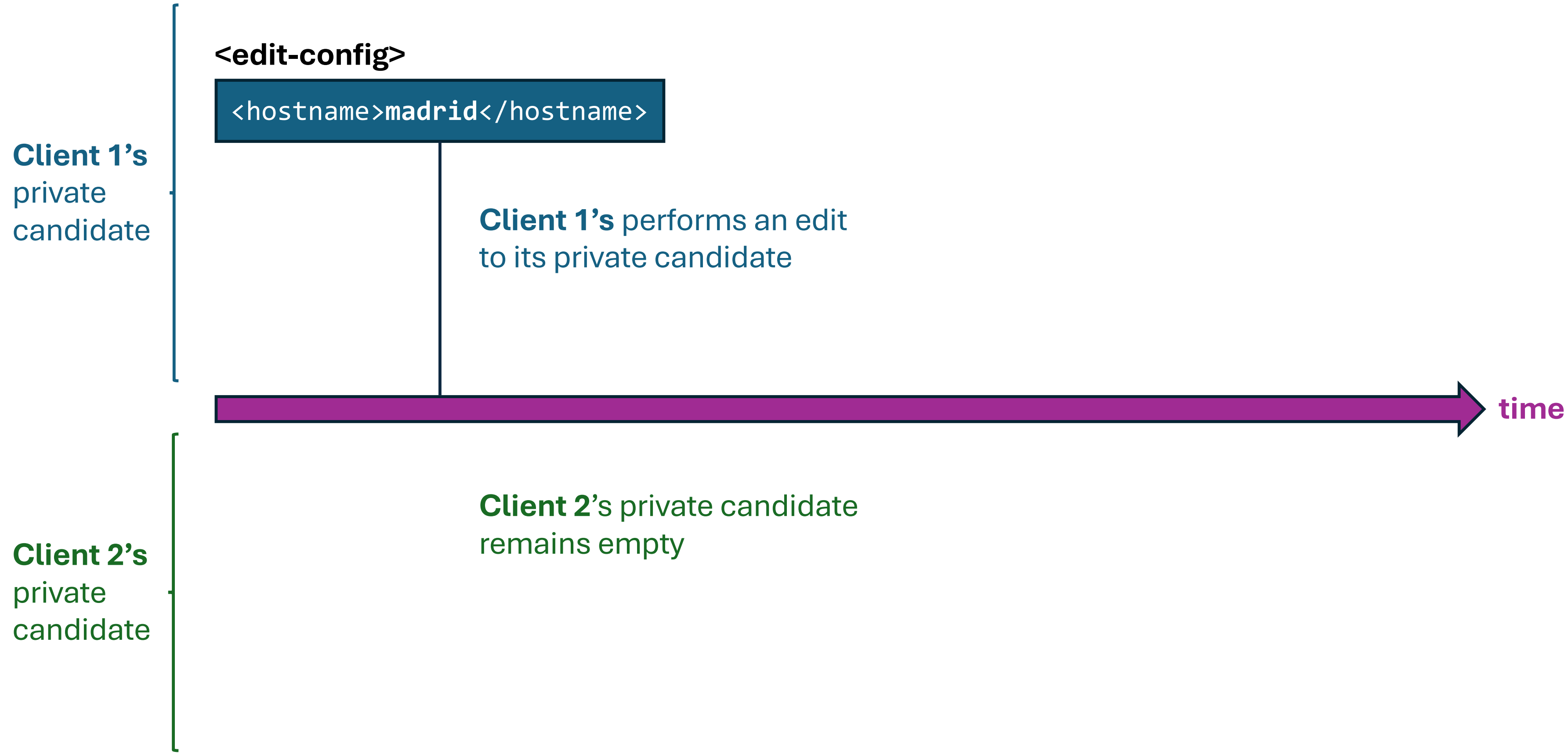
Changes in -07 to clarify <update>

- Comments in Last Call:
  - Original draft had two explicit “triggers” for updates: **manual** and **automatic** [after any commit to <running>]. This was softened following WG feedback.
  - Review comment that automatic updates should be more explicit again.
  - Client should know what mode the server is running in.
- Addressed by:
  - Adding a new **section 4.4** describing when an <update> can occur
  - Adding a new parameter to the private-candidate capability, issued by the server: **trigger=all-updates**
  - Changing **section 4.6** (“Interaction between running and private candidates”) to clarify the implications on the client

Client performs explicit <update>



Client performs explicit <update>



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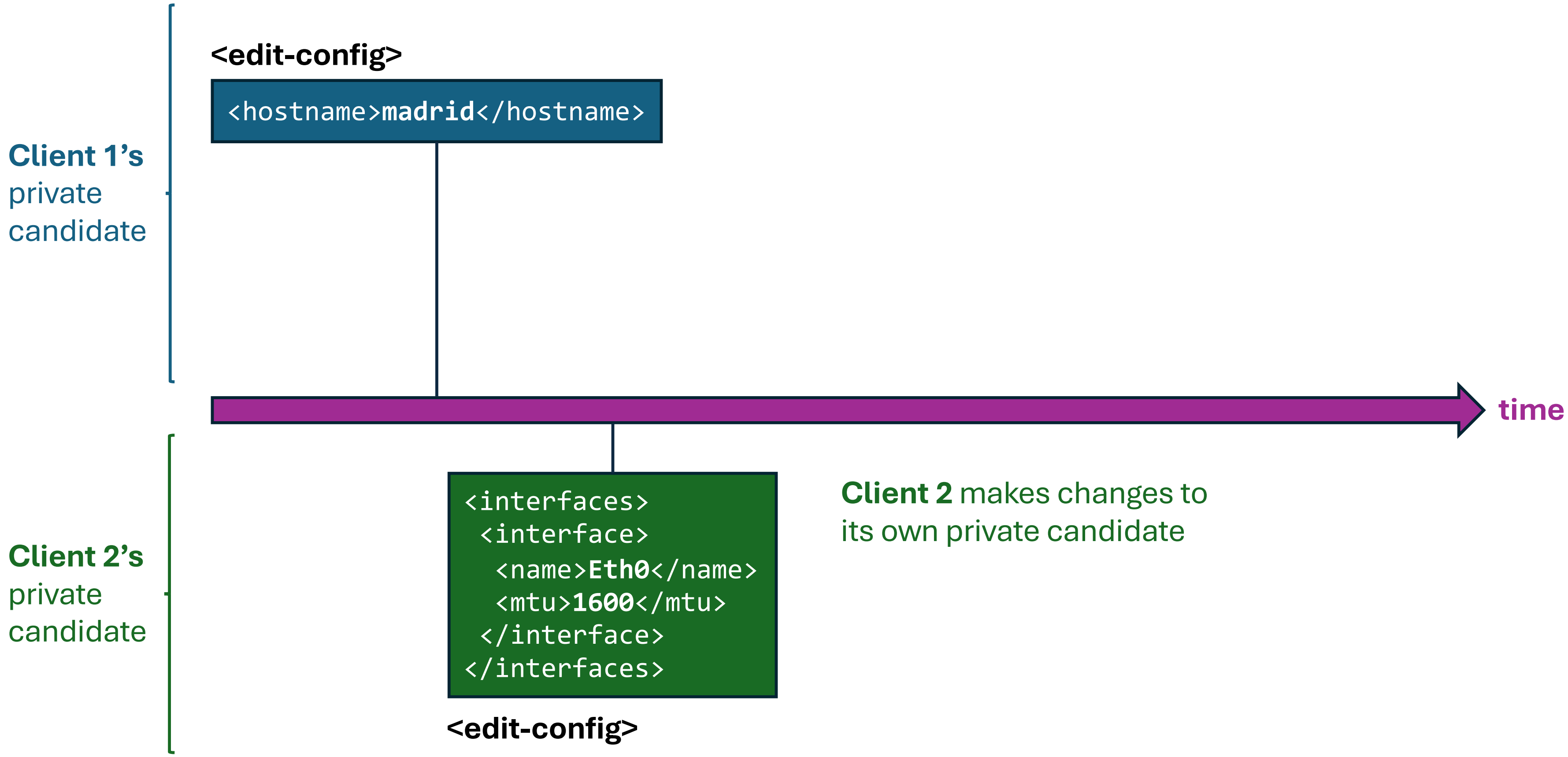
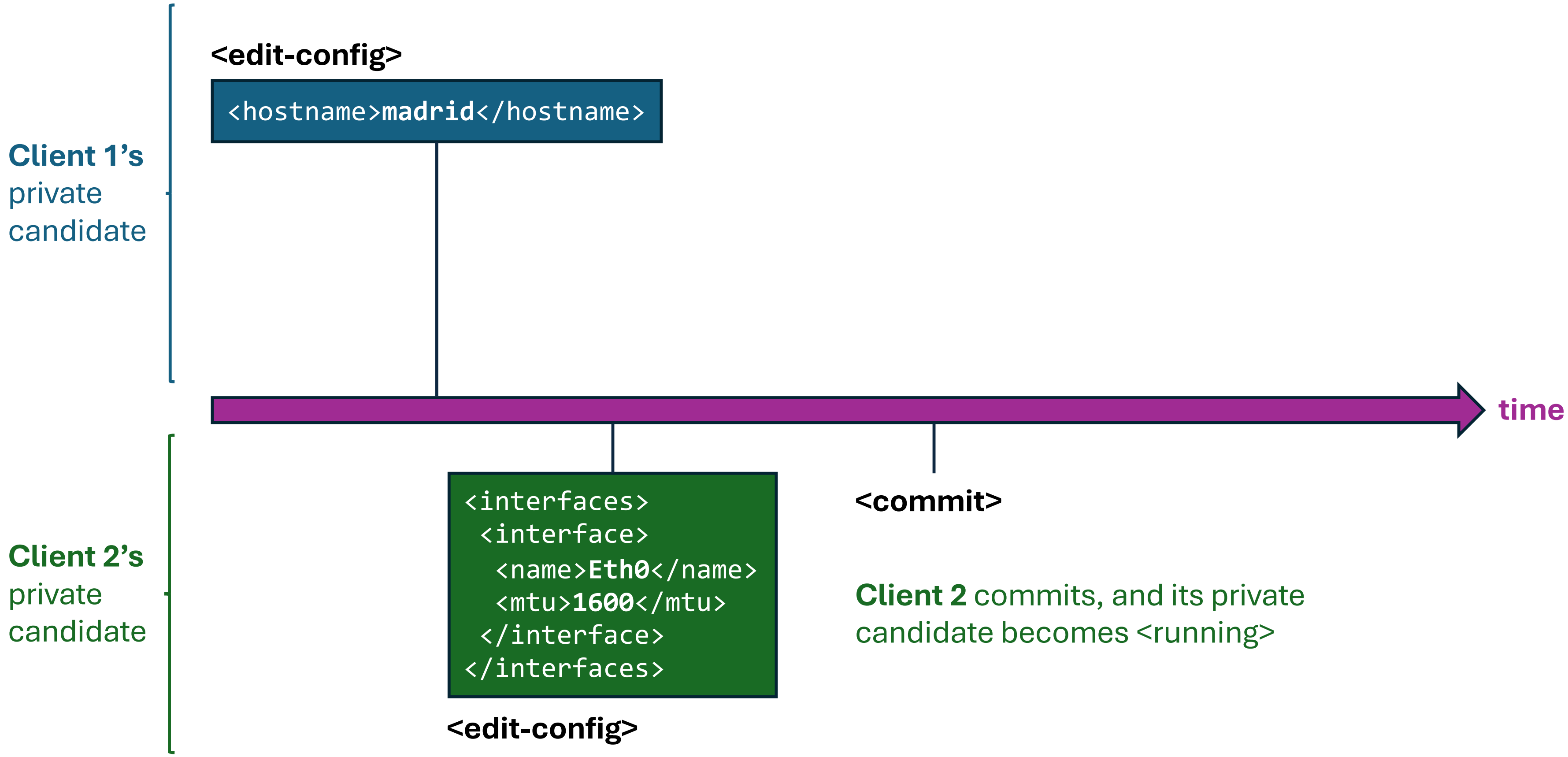


Client performs explicit <update>



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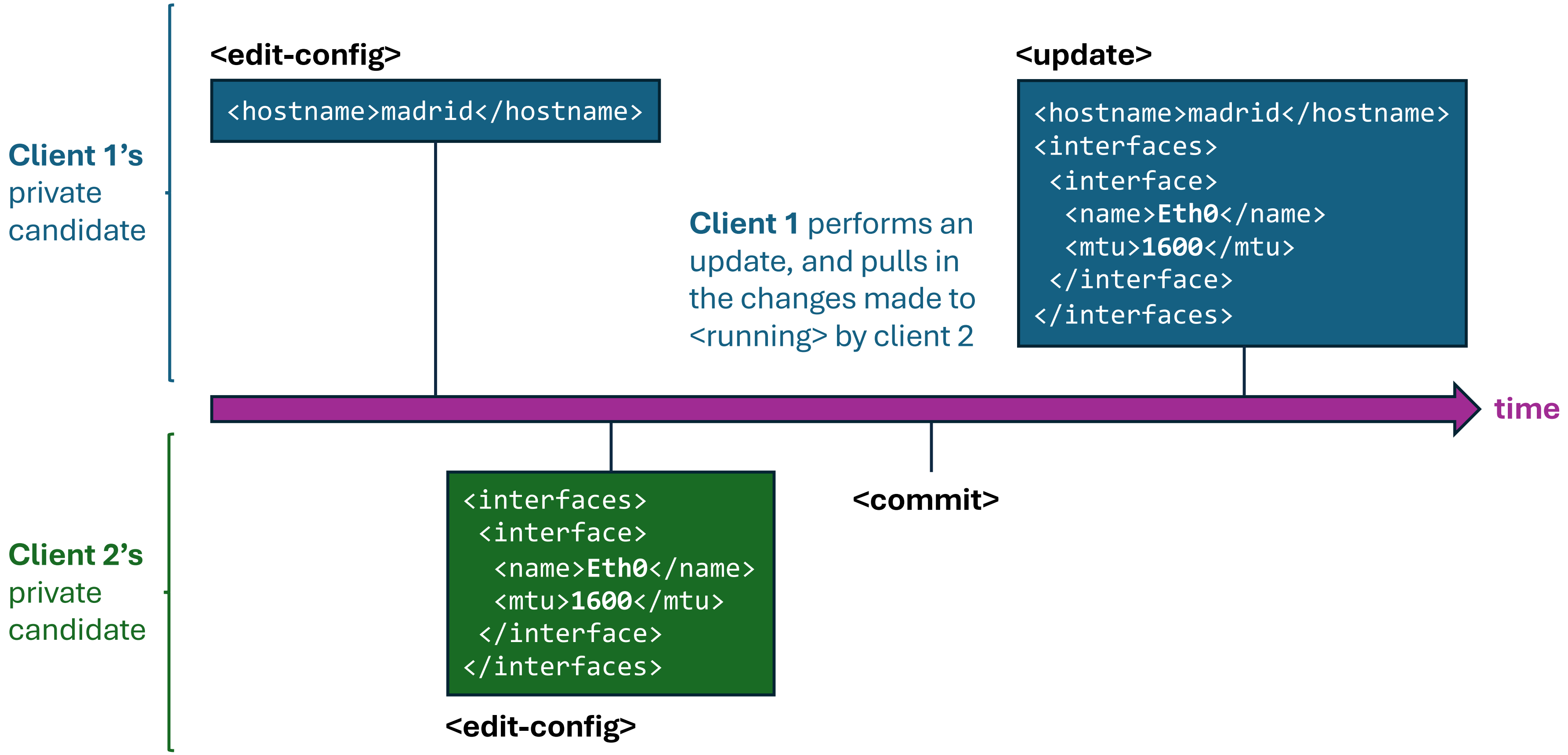
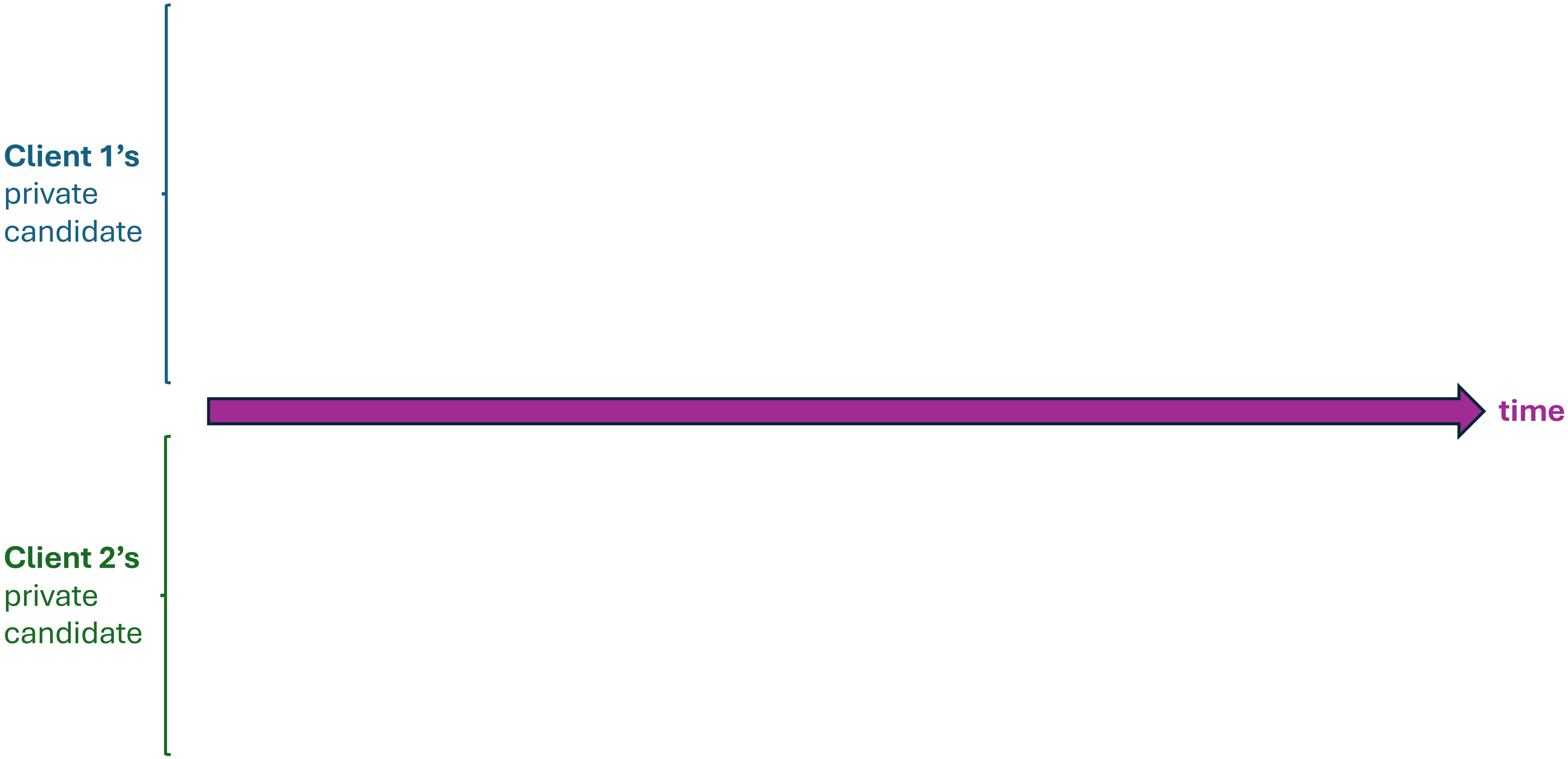


Server indicates it’s using **trigger=all-updates**



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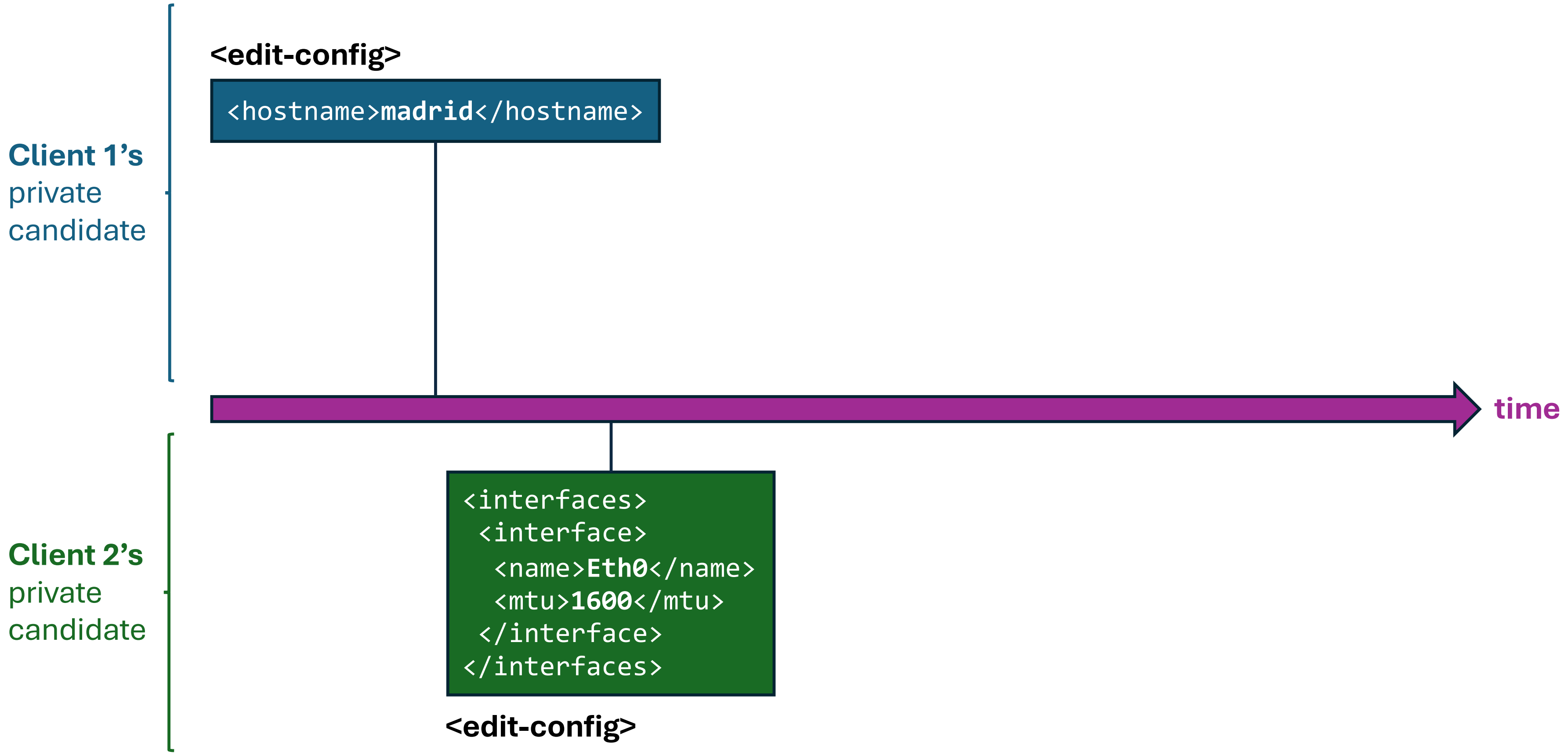

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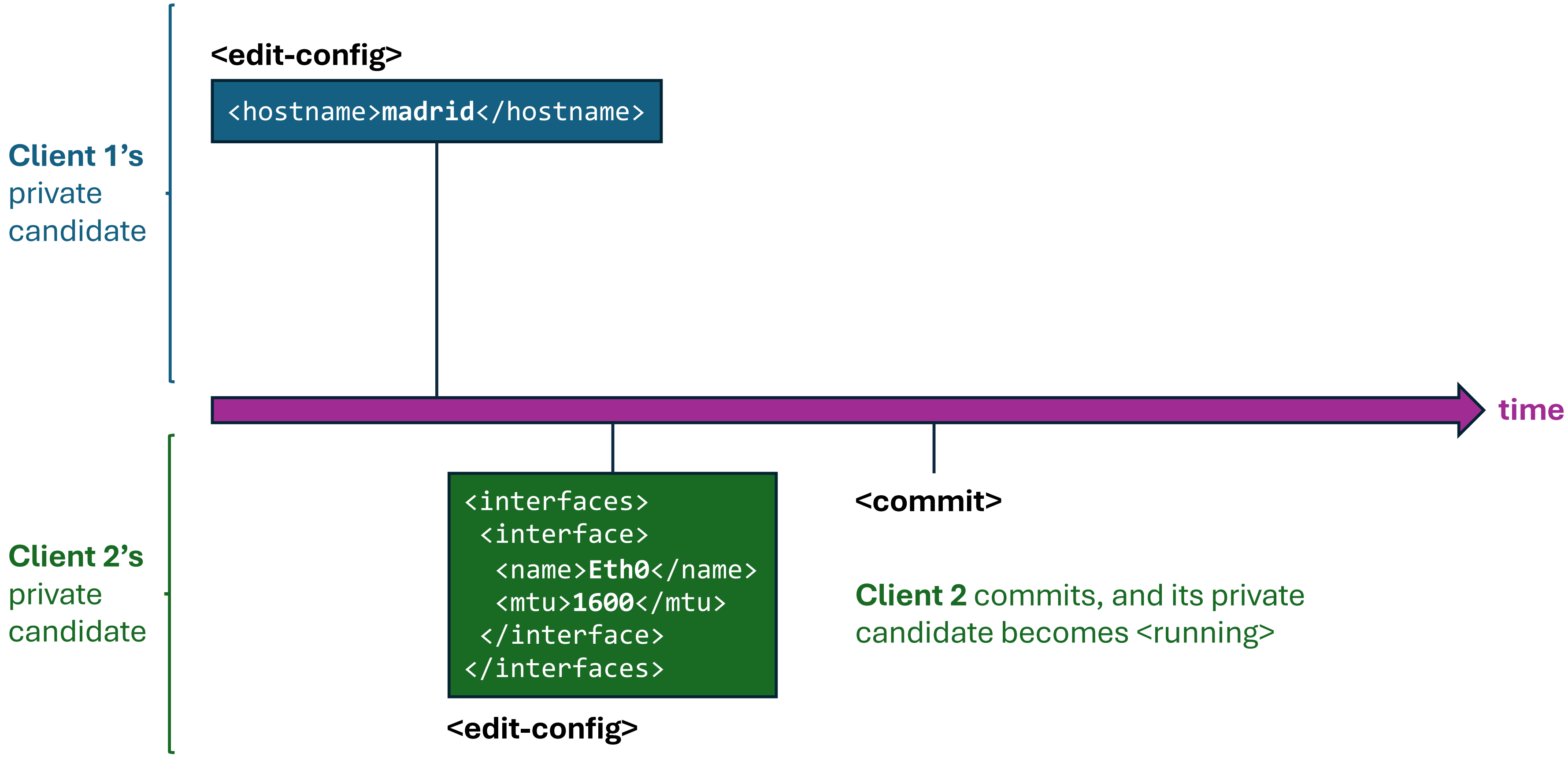

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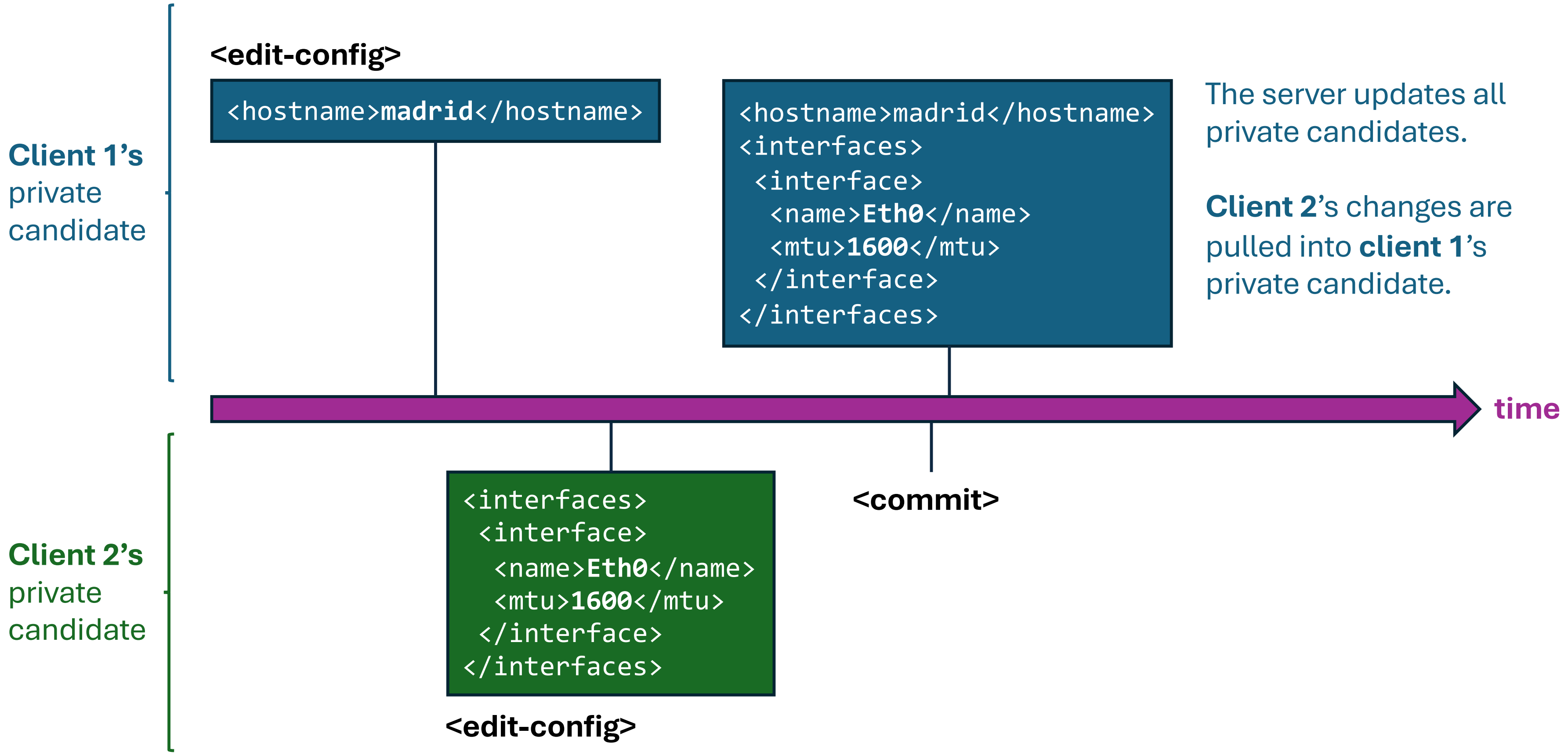

Implicitly deleted nodes

In NETCONF / RESTCONF, nodes are deleted when a **when** condition is not satisified, or when another **case** of a **choice** is configured.

1. A private candidate changes a node **X** that has a **when** condition
2. The <running> changes such that the **when** would now fail
3. An <update> occurs
4. Is **X** now in conflict?

=> **Yes**, if this implicit deletion happens straight away.

System changes to running

Question: Do system changes to <running> count when comparing a private candidate to <running> ?

Does this mean:

- Changes to <system>
- Other changes to <running>, eg from another private candidate or the device's CLI
- Something else?

A private candidate is its own datastore, and comparing it to running is a diff between those two datastores (the <compare> doesn't care where the changes came from)

Determining changes

"Determining which config changes are already applied vs. being attributed to a specific private candidate is important. It should be consistent across servers."

Agreed. One of the main goals of Private Candidates is to give clients better awareness and control of the changes they're making to <running> at commit time.

The contents of a Private Candidate is well-specified by the draft, with some variation in when a server performs an <update>. This variation is exposed to the client through the **trigger** parameter on the capability.

The <compare> operation helps here:

- **Against last update point**: Shows changes the client has made to its private cand.
- **Against initial creation point**: Shows changes that have been brought in via <update>, as well as the client's changes to its candidate

Next steps

- Publish -08 version
  - Change introduction section to improve clarity
    - Reflects feedback from several reviewers
  - Clarifying text on nodes that are implicitly deleted by evaluating choice/case and when
- Conclude Last Call
- Authors would like to move to publication prior to IETF 124

Recap: <update> operation

- An <update> operation brings changes made to the running configuration into the private candidate
- Always implicitly issued before processing a <commit>
  - Ensures the private candidate is “in sync” with the running
- Can be performed manually by the client
- An implementation *may choose* to automatically perform an <update> whenever the running configuration changes