



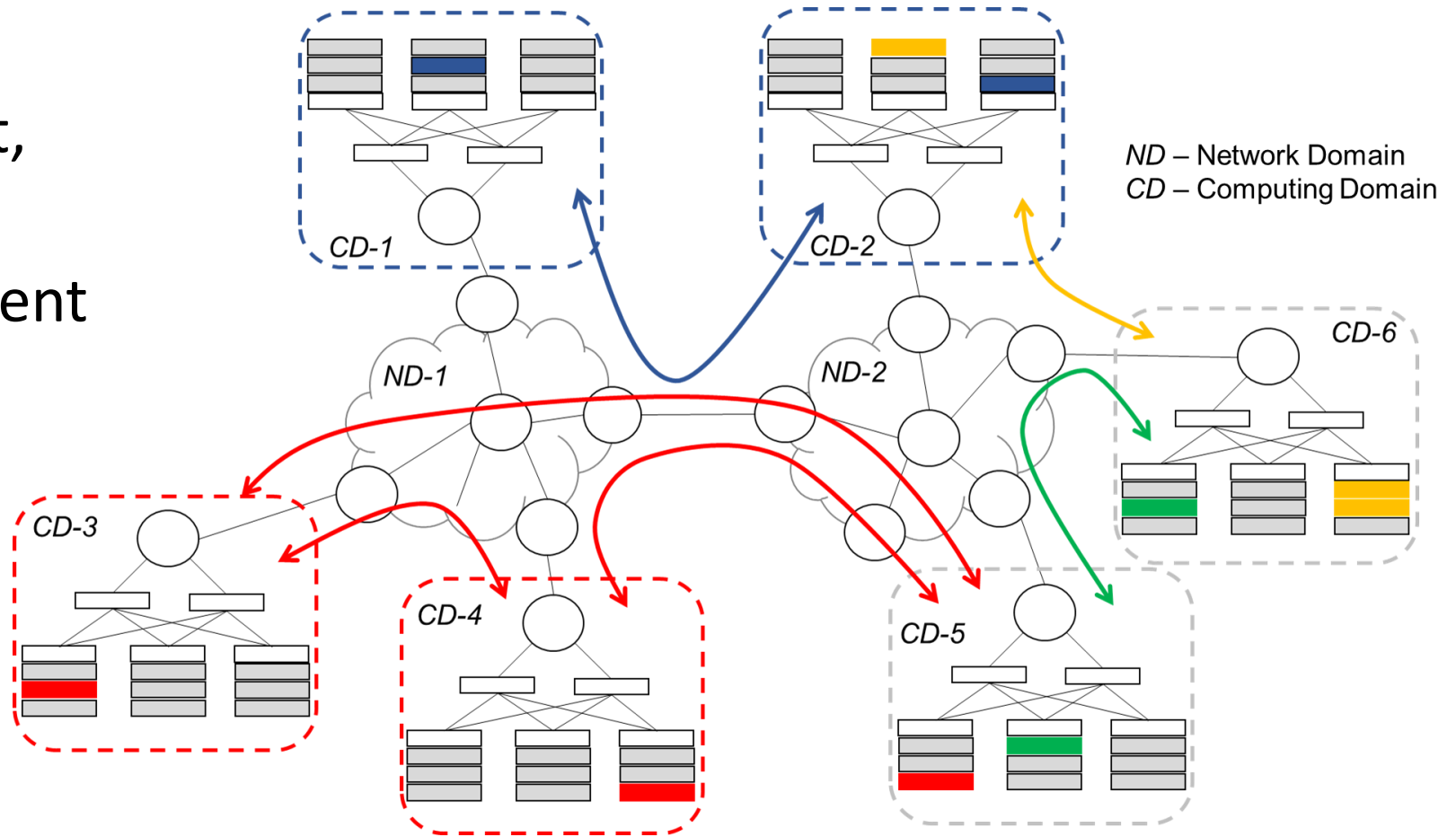
Fast Notification for Traffic Engineering and Load Balancing at the Network Boundaries

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Scenarios in scope

- Classical interconnection scenarios (peering, transit, internet exchanges)
- Connection of CDN / content caches internal to the network
- Interconnection of data centers (DC Gateway)
- Cloud-edge continuum



Problem statement

- Network interconnection is increasingly becoming sensible to sudden changes in traffic volume reception
- Both sides of the boundaries managed by different administrative entities, taking uncoordinated decisions most of the time
 - Reasons for that come from unplanned situations in each of the domains
- The interconnection of domains is typically characterized by either large number of links or links of high capacity or Both
 - Transition from 100 GE (or multiples of it) to 400 Ge to 800 GE to 1,6 TE ...
- Sudden changes can have serious impact on the network receiving the excess of traffic (tsunami effect)

How FANTEL could help?

- Depending on where the sudden changes happen (i.e., in the interco or an internal part of the network), the effect could be or not immediately reflected on the interconnection
- Routing protocol timers could represent a guard period where fast notification (and derived actions) could help to prevent traffic flooding
- Pre-established policies or dynamic reconfigurations could avoid global effects on the traffic being carried out by an interconnection
- Having mechanisms for fast notification and reaction across boundaries and also at both sides of an interconnection can help to mitigate or prevent an uncontrolled massive injection of traffic