

GMPLS Routing and Signaling Framework for Flexible Ethernet (FlexE) draft-izh-ccamp-flex-e-fwk-04

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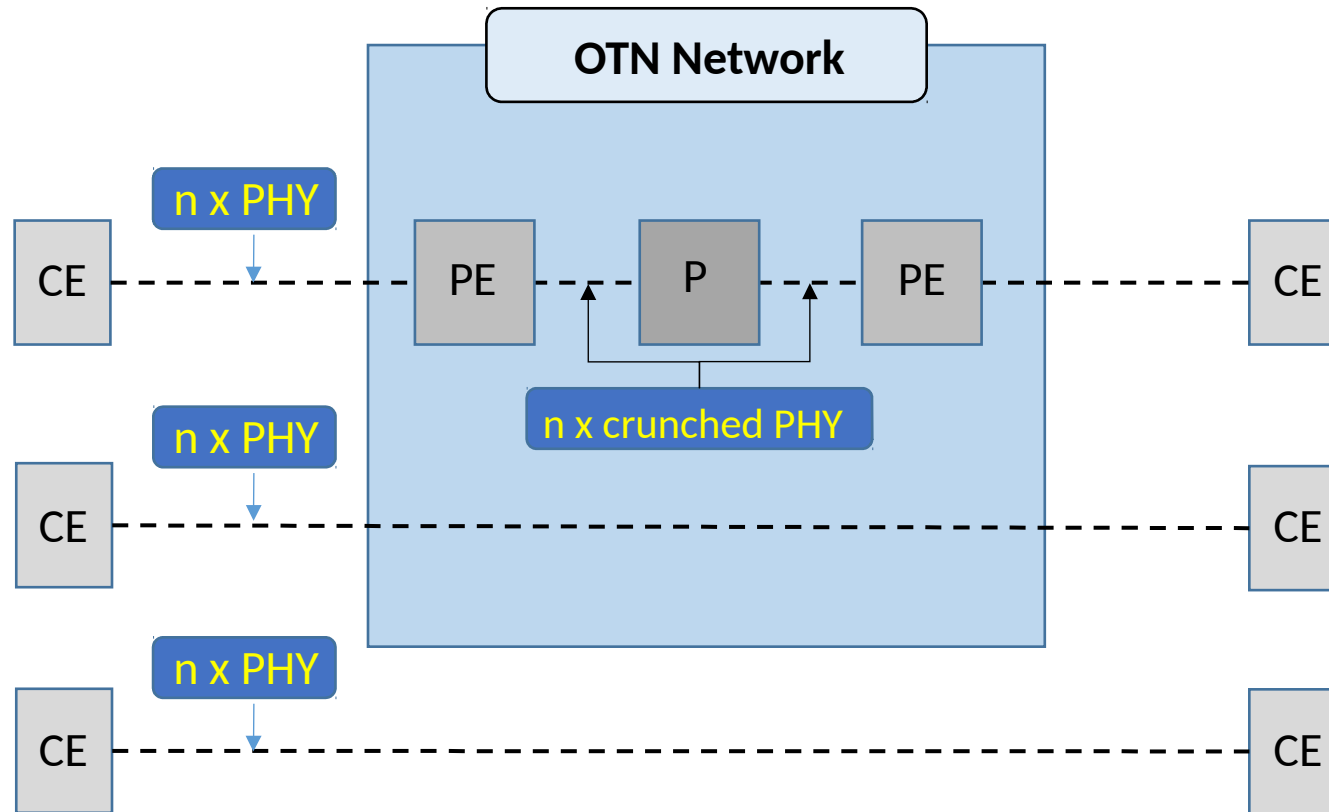
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What has happened since Prague

- Version -04 posted
 - Restructured the document
 - Use Case section removed
 - They were generic FlexE Use Cases rather than Control Pane Use Cases
 - Requirements cleaned up
 - Converged on terminology
 - A lot of smaller editorial changes
 - Remains to be done
 - Final clean up of requirements
 - Sort out if there is anything that needs to go into other documents
 - Added information that will cover “What we want to do”.

Framework and Architecture:



FlexE Reference Model

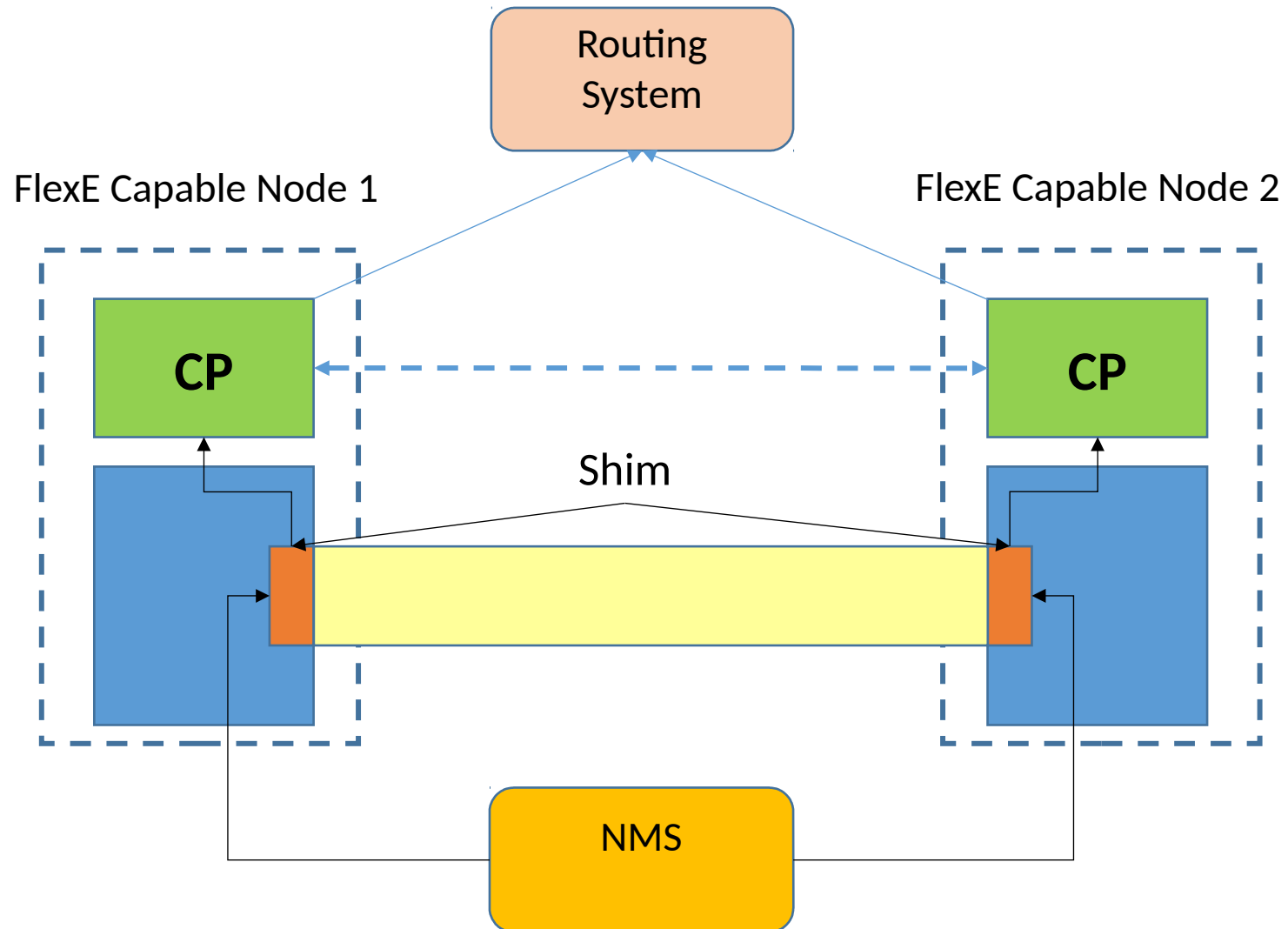
GMPLS may be used to

- Set up a FlexE Group
 - Out of band signalling required
- Set up a FlexE Client
 - As soon as the FlexE Group available the native FlexE signalling channel becomes available
- Advertise FlexE Groups and FlexE Clients (into the Routing System)
- Set up of an MPLS LSP, when a Flex infrastructure is required for this MPLS LSP.

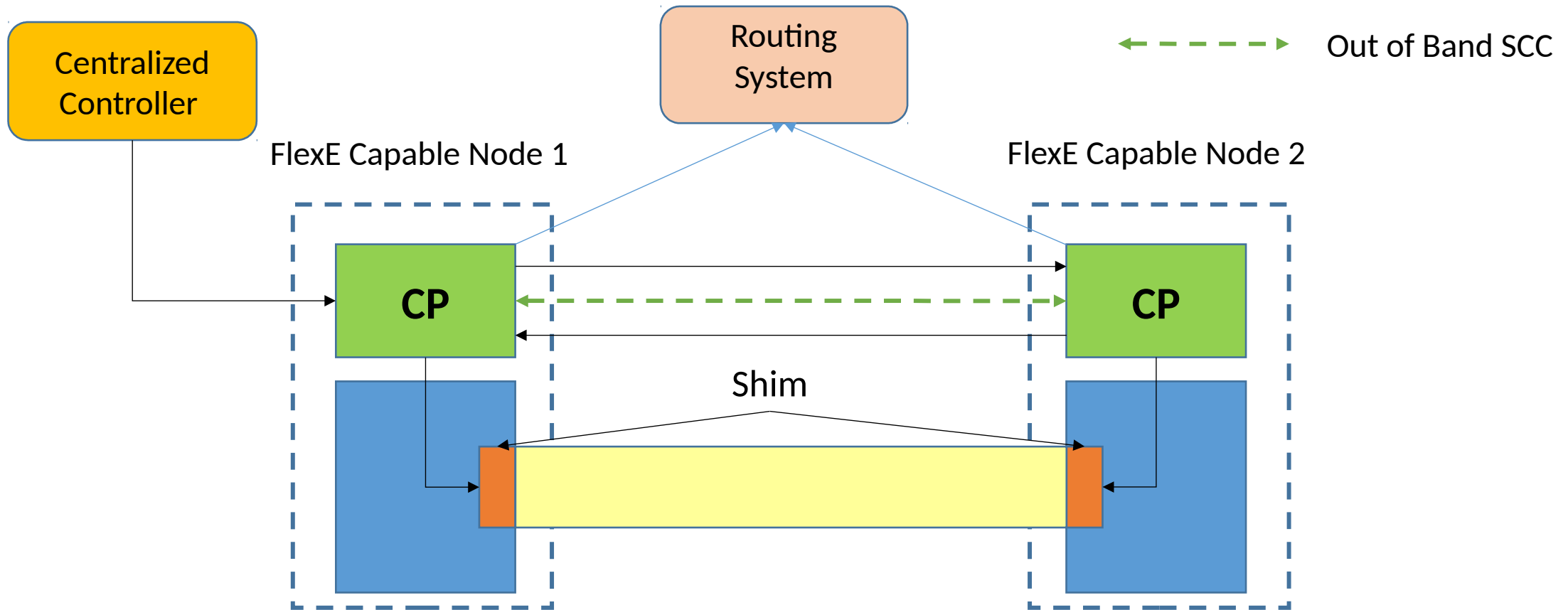
FlexE Configuration

- FlexE Groups will be established from an NMS
 - To set up FlexE Groups by the control plane, a out of band signalling channel is required
- FlexE Clients and MPLS LSPs may be established an NMS or a GMPLS control plane
- Establishment of MPLS LSP will be done by the GMPLS control plane
- Signalling Channel
 - There is a native signalling/section management channel available as soon as FlexE Group is established
 - This channel may be used by both the NMS and the control plane
- Routing System
 - The FlexE configuration needs to be exported to routing system

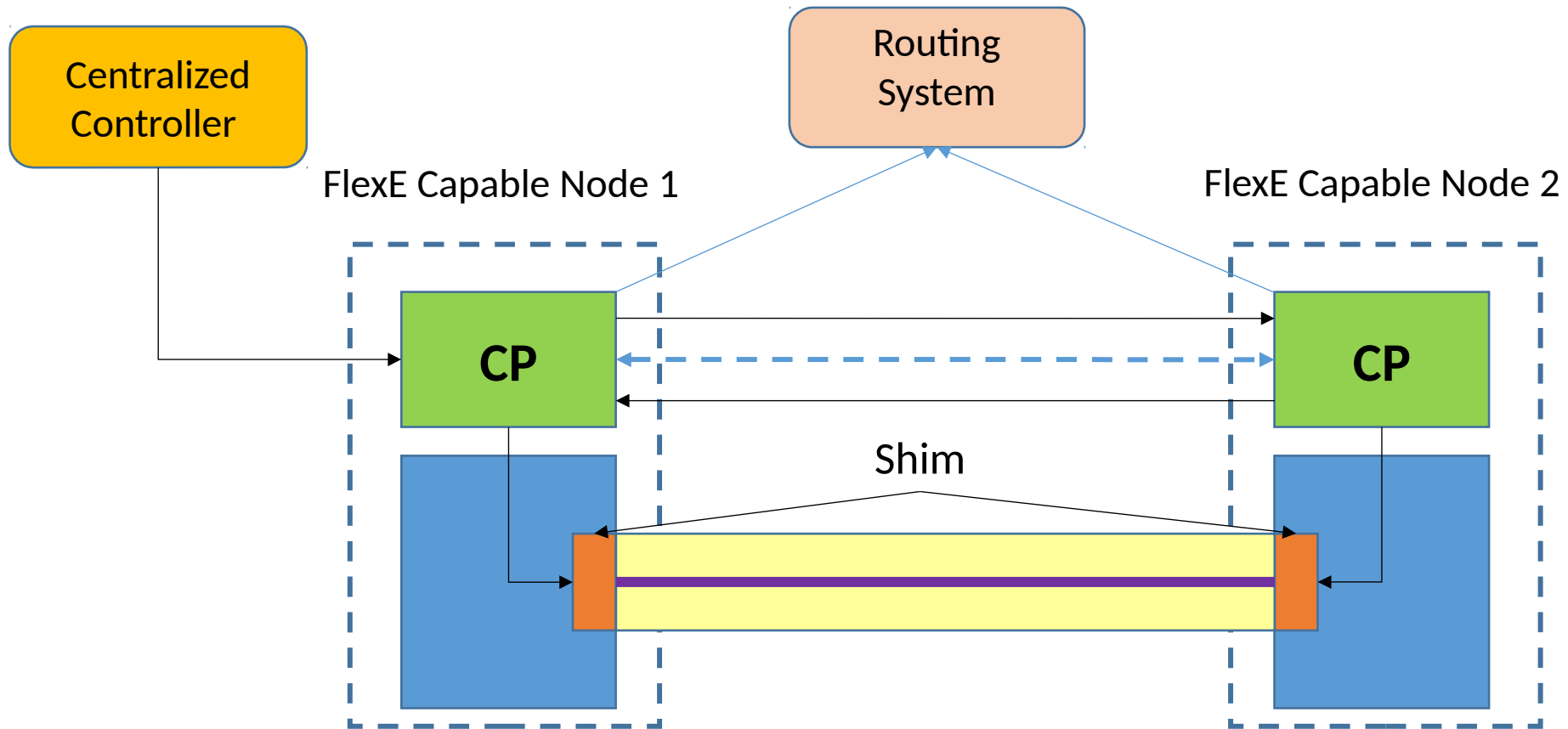
Establishing a FlexE Group



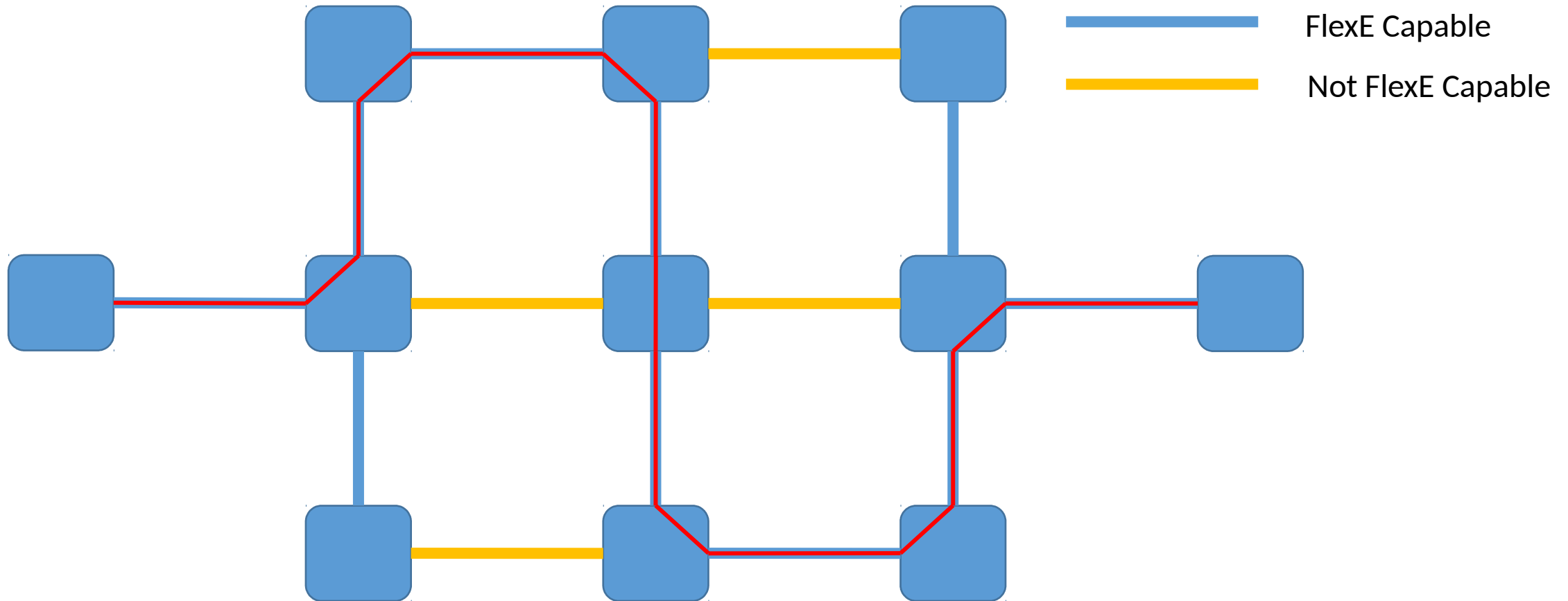
Establishing a FlexE Group



Establishing a FlexE Client



FlexE Capable Links - Finding a LSP path



Operator approaches

- Control the entire infrastructure, only allow LSP establishment by CP
 - FlexE Clients on a first come first served basis
 - FlexE Clients for a specific user by configuration
- Control the establishment of FlexE Groups, but let the FlexE Client setup to be triggered by the request for an LSP setup
 - FlexE Client set up triggered by request for MPLS LSP set up
 - FlexE Clients for specific user by signalling
 - Signalled FlexE Clients on first come first serve basis
- Allow establishment of FlexE Group + FlexE Client by signalling
 - Triggered by request for MPLS LSP set up
 - FlexE Clients for specific user by signalling
 - Signalled FlexE Clients on first come first serve basis
 - An out of band signalling channel required

Next steps

- WG review
- Involve more authors/contributors, more review and comments
- Adopt as WG document

Thanks!