

ForCES CE HA update + Demo

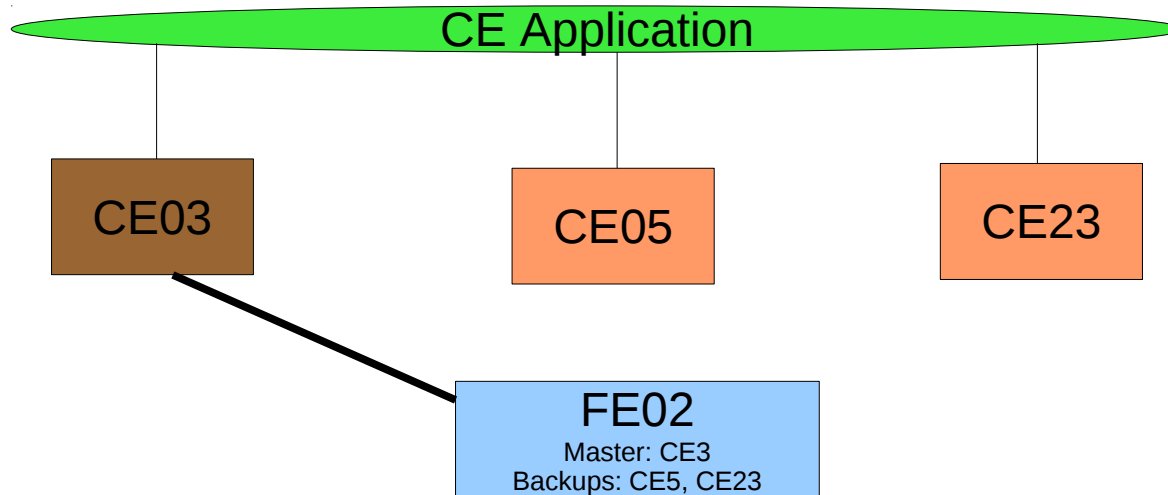
IETF – 83 Paris

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Since last meeting

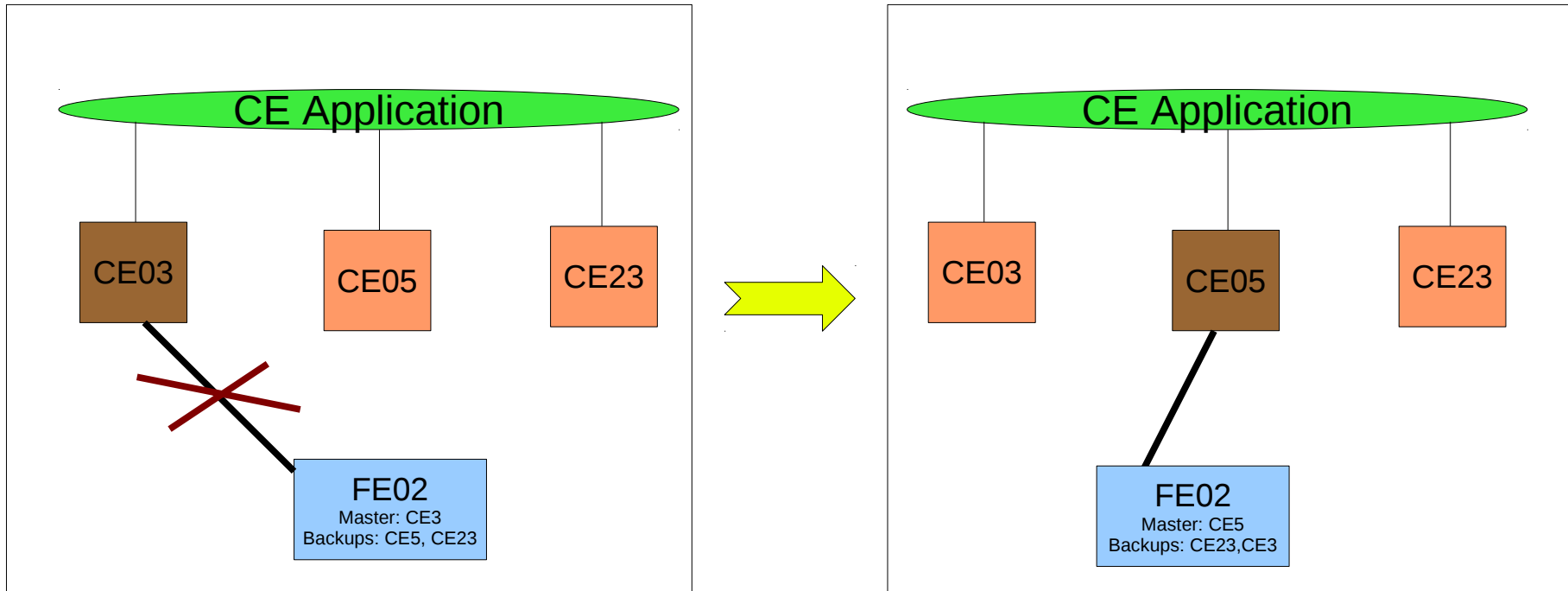
- More implementation experience
- Leave FEPO BackupCEs alone
 - AllCEs table as new read-only component
- Introduce HAMode
 - none/cold-standby/hot-standby
- CEFailoverPolicy is per RFC5810
- Introduce capability for hot-standby
 - Old HA capability is essentially cold-standby

RFC 5810: Cold-standby



- FEM configures the FE with multiple CEs (in this case 3)
 - The FE at any time is only associated to one master CE
- On failure
 - We could keep using the forwarding state if configured (*FEPO::CEFailoverPolicy*)
 - Associate to first CE on the backup CE list (*FEPO::BackupCEs*)

RFC 5810: Cold-standby



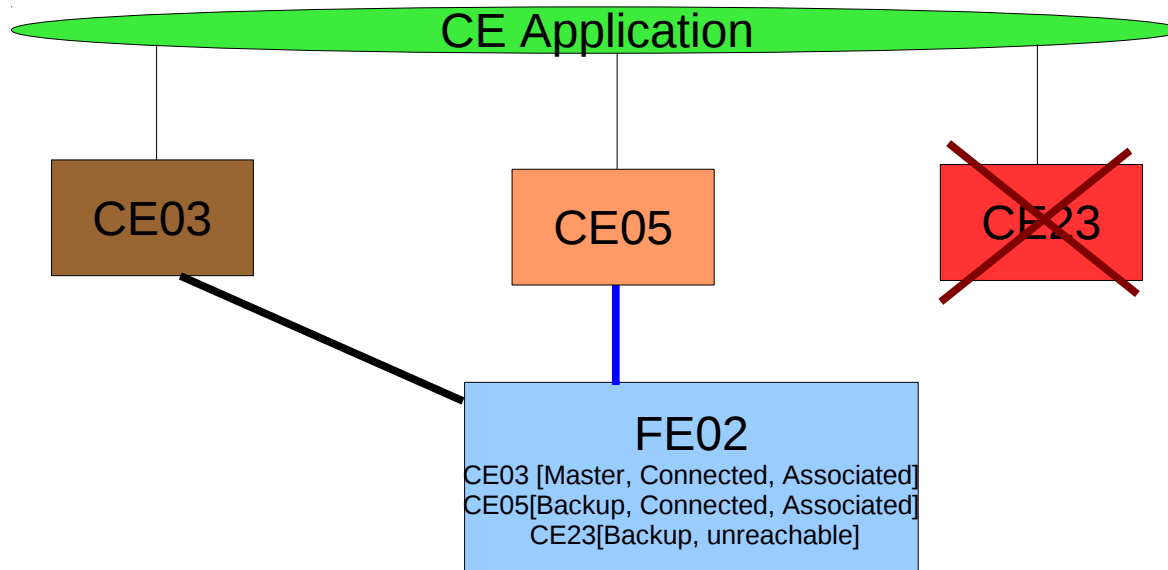
Failover could be induced by:

- Connectivity failure
- Heartbeat dead interval
- CE issuing a failover by setting *FEPO::CEID*

Demonstration

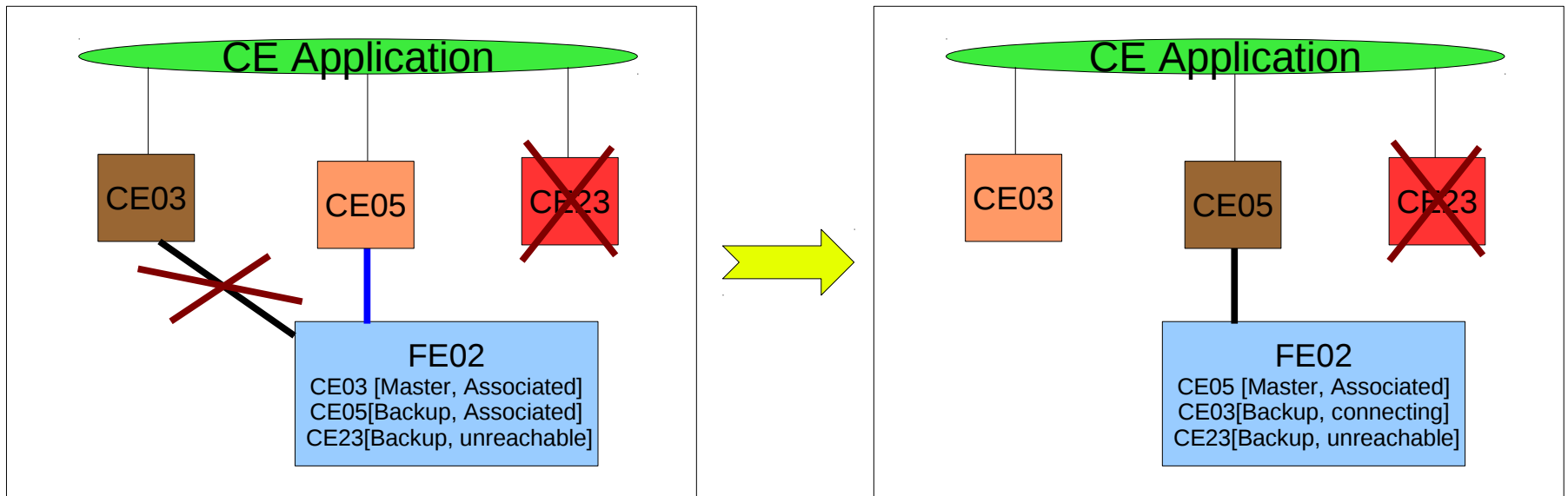
- Show failure of non HA capable FE
- Show Cold standby
 - Failure of CE
 - Forced failover by master CE

CE HA draft: Hot-standby



- FEM configures the FE with multiple CEs
 - The FE attempts to associate to all CEs
- On failure
 - We could keep using the forwarding state if configured (*FEPO::CEFailoverPolicy*)
 - Declare the first Associated CE as master (*FEPO::AllCEs*)

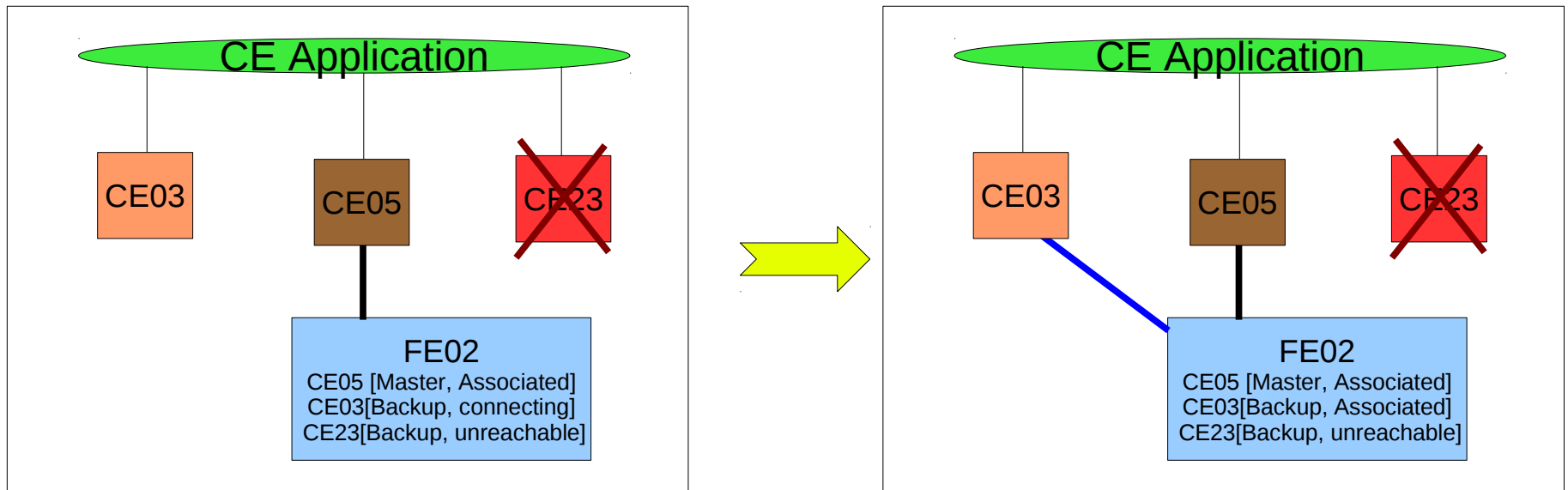
CE HA draft: Hot-standby



Failover could be induced by:

- Connectivity failure
- Heartbeat dead interval
- CE issuing a failover by setting *FEPO::CEID*

CE HA draft: Hot-standby



- FE attempts to re-associate to any failed CEs
- FE sends HBs to all associated CEs
- FE sends events to all associated CEs
- Only master CE can send messages to the FE

Demonstration

- Show Hot standby
 - Failure of CE
 - Forced failover by master CE

Extending Backup CE interaction

- Found it very useful to have backup CEs to query the FEs for discovery purposes
 - Recommend we allow all CEs to do GET ops
 - Only master to do SET ops