ForCES Intra-NE High Availability draft 02

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Changes from 01

- Added figure for two scenarios of CE Failover for hot-standby.
- Added figure for State machine for High availability with hot-standby.
- Identified a possible backwards compatibility issue.
CE Failover for hot standby - I

FE  CE#1  CE#2  ...  CE#N

1  Asso Estb, Caps exchg

2  state update

3I  Asso Estb, Caps exchg

3N  Asso Estb, Caps exchg

4  ...

4x  FAILURE

Event Report (CE#2 is new master)
5  Config (Set CEID to CEID of CE#2)
6  ...
7  ...

7x  ...
CE Failover for hot standby - II

```
          FE          CE#1          CE#2  ...  CE#N

1  |------------------------> |
   | Asso Estb, Caps exchg |

2  |------------------------> |
   | state update           |

3I  |------------------------> |
    | Asso Estb, Caps exchg  |

3N  |------------------------> |

4  |------------------------> |

4x  |------------------------> |
    | FAILURE                |

5  |------------------------> |
    | Event Report (CE#2 is new master) |

6  |------------------------> |
    | FEPO Failover Timeout   |
    | Event Report (CE#N is new master) |

7  |------------------------> |
    | Config (Set CEID to CEID of CE#N) |

8a  |------------------------> |

8x  |------------------------> |
```
FE State Machine considering HA with Hot Standby
Backward compatibility issue

- FEPO’s component 9 (Backup CEs) is not backwards compatible with previous version.
  - **New CE, Old FE**
    - Case 1: The new CE supports the old FE and chooses not to use CEHA. Interoperable.
    - Case 2: The new CE supports only v1 FE. No interoperability regarding Component 9 – Association will fail.
  - **Old CE, New FE.**
    - Case 1: CE does not support CEHA, but understands v1 FE. Interoperable but cannot use CEHA functions.
    - Case 2: CE, does not support v1 FE. No interoperability regarding Component 9 – Association will fail.
Backward compatibility issue

- This is a pre-association version mismatch issue.
- It’s up to the Managers to identify and not allow an association that would fail or cause problems.