

# Graceful Name Change in LACP

Rev. 1

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### References

 This is largely a rehash of new-nfinn-light-nni-0710-v04.ppt

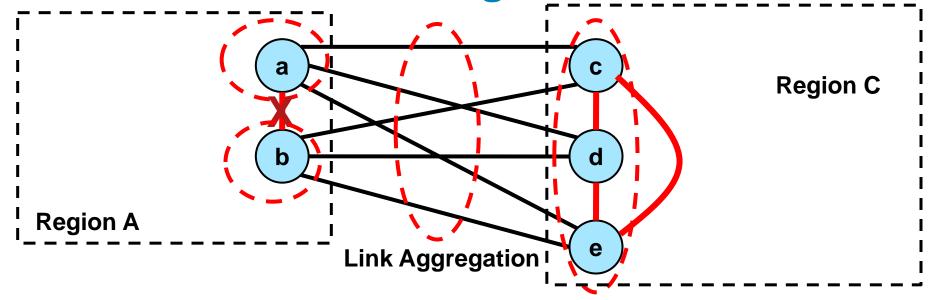
 There are occasions when a system would like to change its LACP system name without dropping and re-establishing an active aggregation.

Bridge brain failures resulting in a hot-standby brain taking over.

Configuration changes.

The "split brain" scenario.

 By transmitting an "Old Actor\_System\_Priority" and "Old Actor\_System" TLV, the name of a system can be changed without bringing down an aggregation.



- Let us suppose that, if the a-b Link fails, then device a continues to use the virtual device name as its Actor\_System field, but device b changes its name to a new Actor\_System field based on its own physical ID.
- If either a or b really failed, then c, d, and e will continue to use the link to the remaining system.
- If only Link a-b failed, then c, d, and e will each pick a.

- All that is needed is:
  - A means for c, d, and e to not disrupt the aggregation while b changes its name.
  - Assurance that c, d, and e will all pick the same Node (a or b) when Link a-b fails.
- The first can be accommodated by adding an "Old Actor\_System\_Priority" and "Old Actor\_System" TLV to LACP. This allows a system to change its name without disrupting an ongoing aggregation.
- The second can be done by requiring c, d, and e to select the link with the lower numerical Actor\_System\_Priority and Actor\_System to continue with the NNI.

### Now, if Node a fails:

- Nodes c, d, and e, all lose their Links to Node a, but continue to use the Links to Node b.
- Node **b** changes its Actor\_System name, but that causes no further disruption.

### If Node **b** fails:

 Nodes c, d, and e, all lose their Links to Node b, but continue to use the Links to Node a.

### If Link a-b fails:

- Node **b** changes its Actor\_System name, and that causes
  Nodes **c**, **d**, and **e** to disaggregate from Node **b**.
- Node b has no one to talk to.

#### If Node a recovers:

- Nodes **c**, **d**, and **e**, all switch over to using Node **a**.
- Node **b** changes its Actor\_System name to match Node **a**'s name, so all Links are back in use.

### If Node **b** recovers:

- Nodes c, d, and e, regain their Links to Node b.
- If Link a-b recovers:
  - Node b changes its Actor\_System name to match that of Node
    a.
  - Nodes c, d, and e, return their Links to Node b to the aggregation.