NNI protection
LACP alternative

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NNI protection using LACP

- In the last two virtual meetings a proposal for protecting NNI using LACP with enhancements was introduced.
  - The idea and the LACP functionality over external links were described in: http://www.ieee802.org/1/files/public/docs2010/new-nfinn-light-nni-0710-v01.pdf
  - Options for internal links functionality and network functionality to support the protection mechanism was described in: http://www.ieee802.org/1/files/public/docs2010/new-enni-nbragg-Light-ENNI-0810-v01.ppt
- Additional requirements are described in the following slides.

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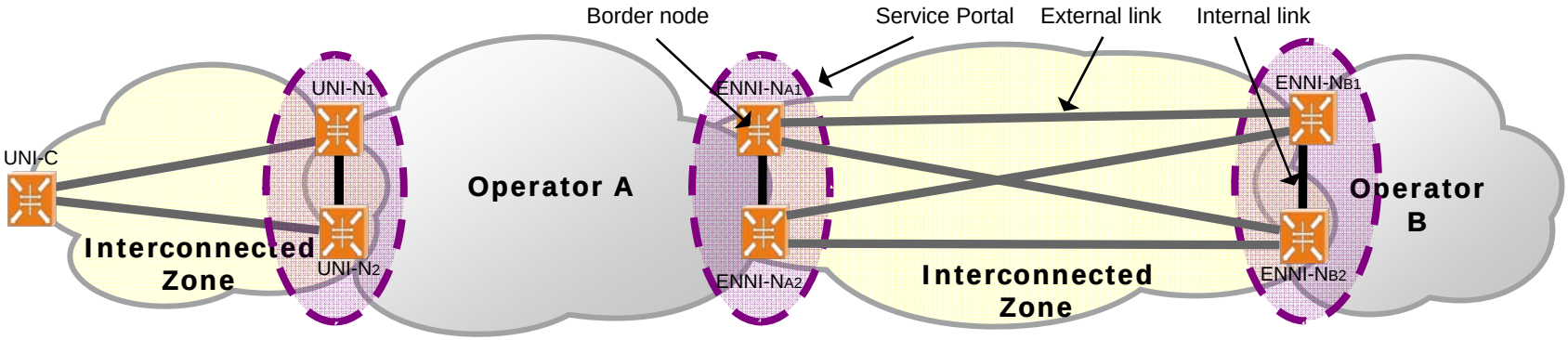
Requirement 1

- All elements participating in the mechanism must be standardized, including the protocol running over the internal links (between border nodes in a single portal) as it is unreasonable to mandate that a portal will consist of border nodes from a single vendor



- In the proposed mechanism, the means by which the border nodes communicate and overcome failures are not defined as it is assumed that all border nodes in a specific network are from a single vendor

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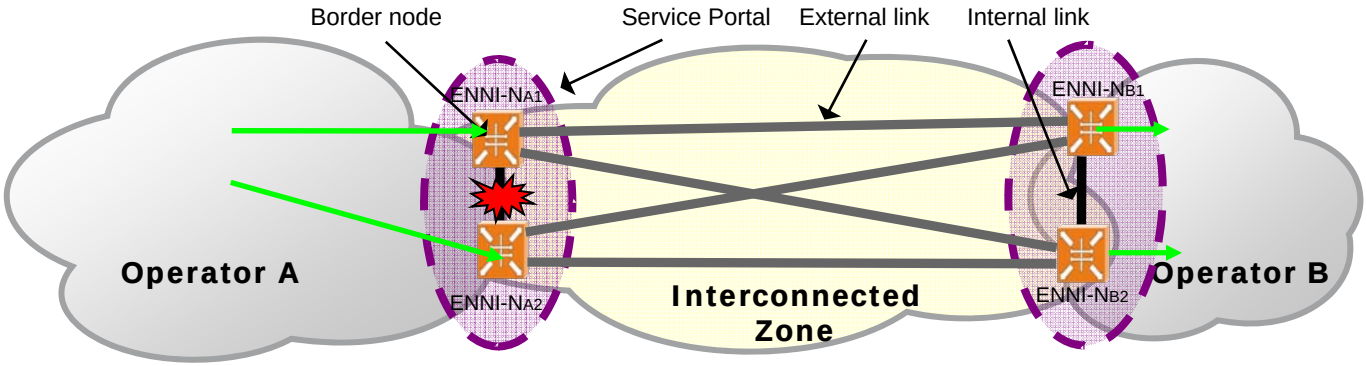
Requirement 2

- The mechanism must provide a standard mean to guarantee that traffic will be received only once by a network



- In the proposed mechanism it is assumed that each network sends a packet only once. This functionality is not standardized and not guaranteed. If one network sends packets more than once (from more than one border node), the attached network will receive the same packet more than once.
- In the case where the connectivity between the border nodes is lost, packets may be sent to the attached network by more than one border node until the brain dead situation is identified and handled.

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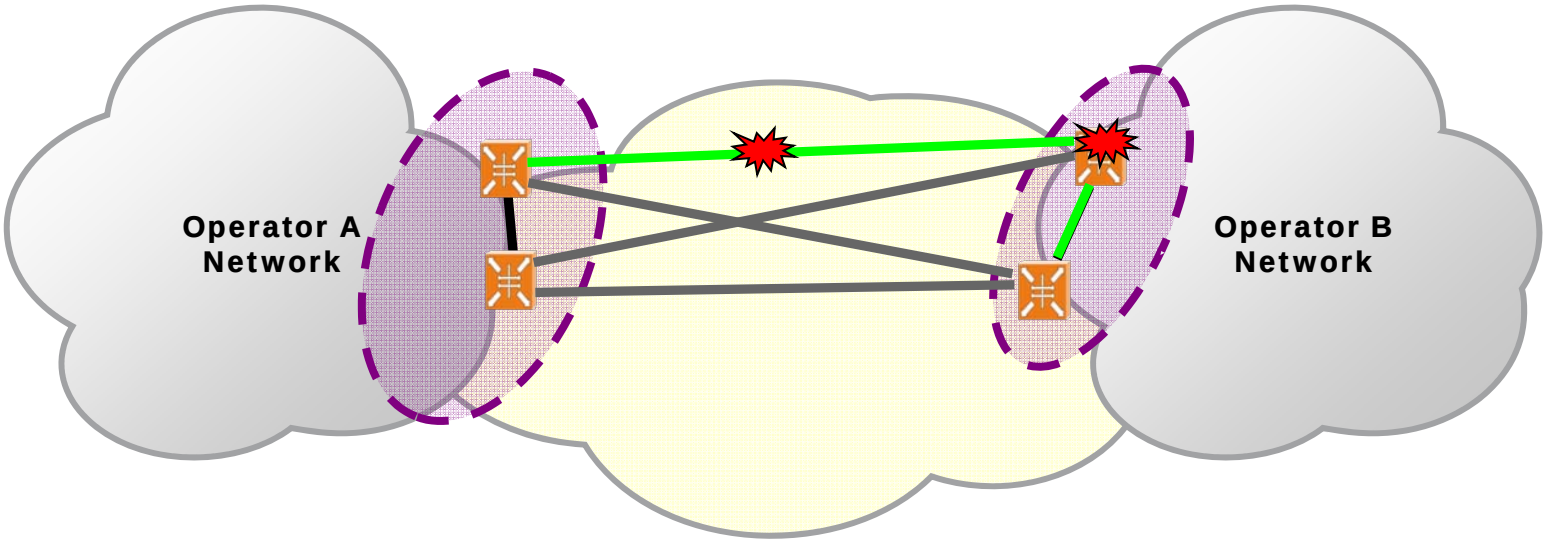
Requirement 3

- The mechanism must function without internal links.



- Internal links are mainly used for data transfer when the service gateway can be preserved.
- The service gateway preservation is not mandatory as there are cases when such preservation is unachievable (node failure)
- Overcoming brain dead situations by shutting down a node will interfere with other traffic the border node handles, which is not influenced by the brain dead situation.

Thank You

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