Resilient NNI
D-LAG Portal Control

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Basic Resilient NNI

Portals
Distributed LAG

LACP – Link Aggregation Control Protocol
PCP – Portal Control Protocol

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LACP Coordination

- Configure the same LAG identification on both nodes in a portal
- This supports operation as a single (distributed) LAG via LACP
- Enables interoperation with a single node portal (dual homing)

Same:
- System Priority
- System ID
- Key

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Each portal must have a single active gateway for each service.
Thus each D-LAG gateway has two service sets configured:
- Services for which the gateway is primary
- Services for which the gateway is secondary
Data Plane Configuration

- Frame filtering selects the active gateway for each service
- For example, as in new-farkas-RNI-data-plane-0111.pdf
Gateway Status Exchange

- PCP exchanges LAG identification and gateway status between nodes in portal (e.g., unicast messages between D-LAG peers)
- PCP is carried in local domain (not in boundary network)
• NNI fault causes D-LAG to switch
Service Gateway Selection

- Active gateway serves its primary services and advertises status via PCP
- If a gateway sees its peer gateway status DOWN or no PCP messages (domain partition), it becomes active for its secondary services

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Node Fault Recovery

- Gateway fault causes peer gateway activation of secondary services