draft-francois-spring-resiliency-use-case-00

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Objectives

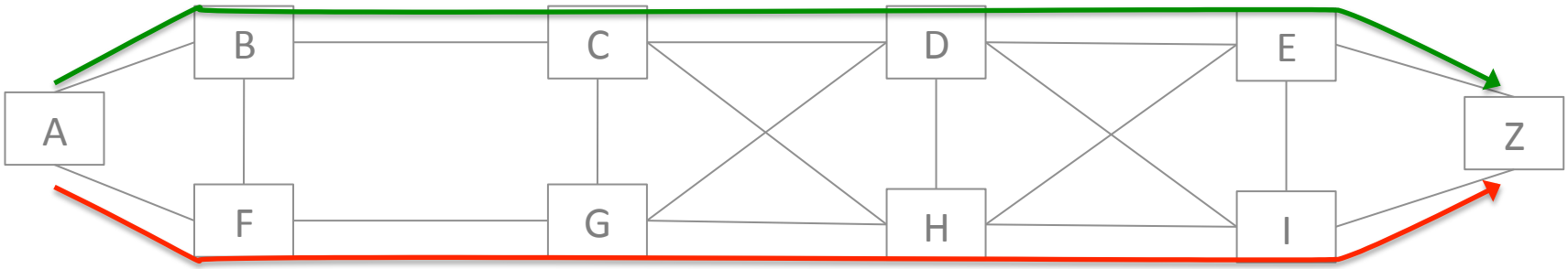
- Analyze how resiliency can be achieved in SPRING-like networks
  - Illustrate various approaches stemming from discussion with operators
  - Discuss co-existence of approaches in a network

Current cases

- Path protection
- Management-free local protection
- Managed local protection

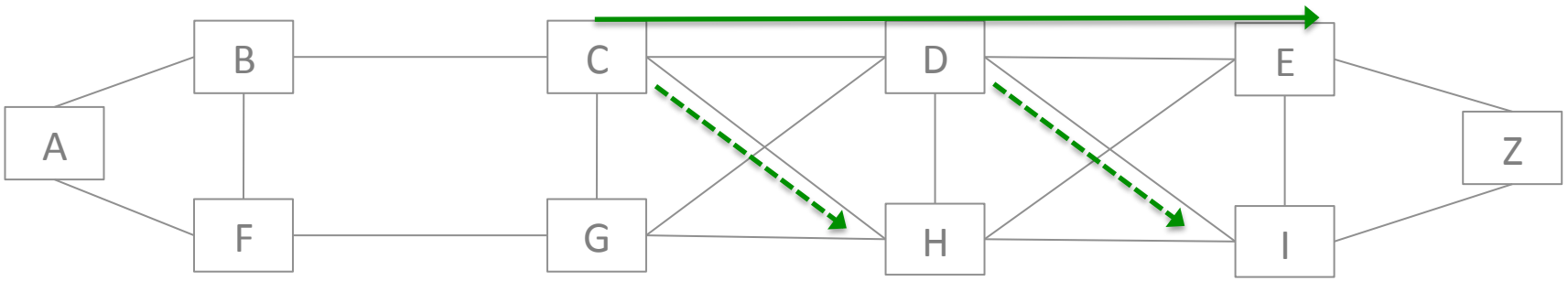
Path protection

- *A* fully controls a path with AdjSIDs
  [BC, CD, DE, EZ], oif B
- *A* protects that path
  - In charge of detecting path failure (e.g., BFD)
  - Pre-installs failover path, [FG, GH, HI, IZ], oif F



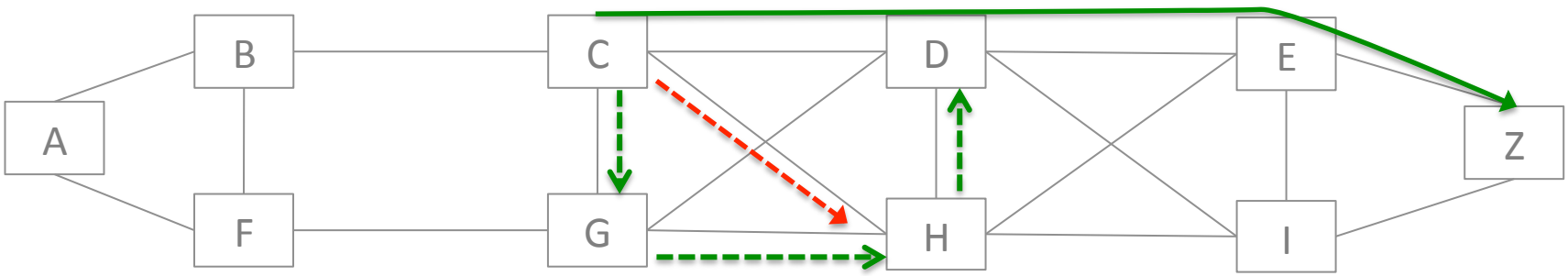
Management free local protection

- *C* uses a NodeSID based tunnel to E
  - Nodes on the path locally protect E
- Solution SHOULD provide
  - 100% link, node, srlg
  - Automated computation by the node
  - Minimization of service transients



Managed local protection

- Bypass of by-default local protection provided by *C*'s IGP for Z
  - C installs backup [H], oif G for destination Z, in order to avoid CH
- Managed backup paths could stem from
  - Explicit configuration, or
  - high-level constraints defined on the path



Co-existence

- Need to support different protection schemes in one network
- For example, using SR:
  - Configure Multiple AdjSID for a link X-Y
    XY1, XY2
    - XY1 is enabled for local protection
    - XY2 is not enabled for local protection
  - Use XY1 for services where local FRR is fine
  - Use XY2 for services requiring path protection

Thank you!

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