

SPRING Rogers User Cases

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Network Strategy and Technology Development

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Problem Statement

- Multiple networks built individually for own requirements and services.
- New services span across networks with specific requirements.
- For carry traffic cost effectively, need a way to convert to one network.

- Most traffic only requires ECMP.
- Some traffic flows require explicit paths.

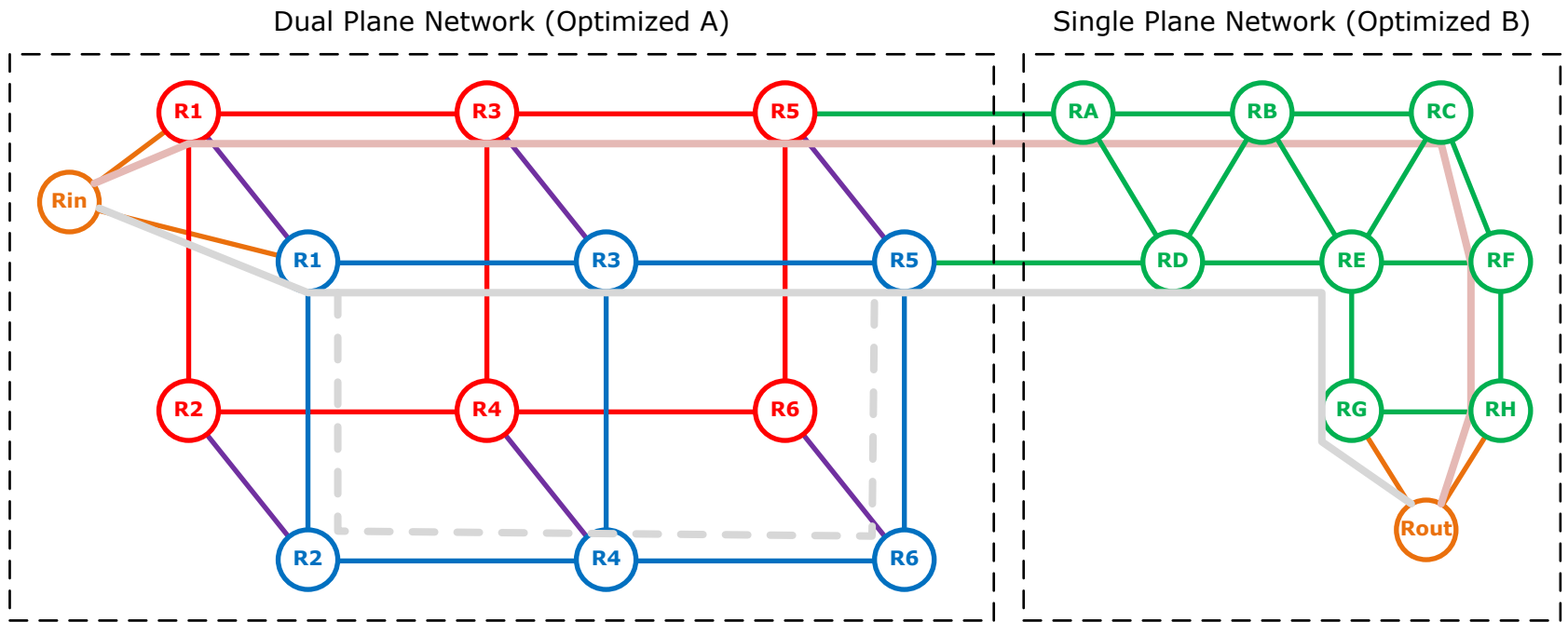
- Current choice is to combine multiple protocols.
 - Too much work, too much state in network.
 - Too complicated to build.
 - Too complicated to operate.



Requirements

- Single protocol suite across different network topologies to support diverse services
- Reduced network state
- Support for:
 - explicit path
 - diverse paths in single plane network and dual plane network
 - across multiple AS
- Simple and programmable
- Simple traffic engineering logic

Example: Diverse path across dual plane/single plane Network Further Evolution





Example: Explicit path coexist with ECMP

