Link Aggregation Groups (LAGs)

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What's a LAG?

A collection of multiple physical links combined into a single, logical link.

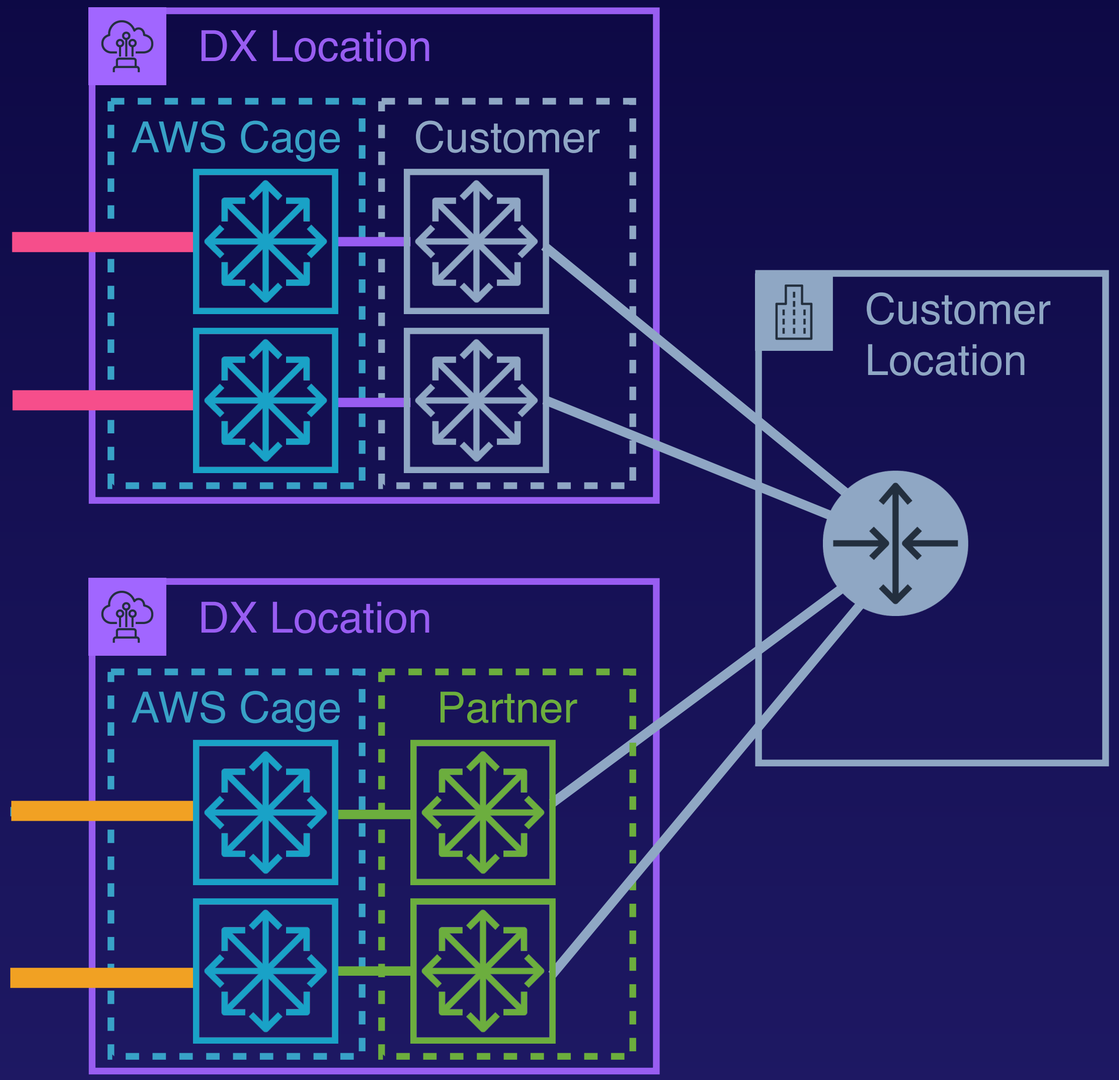
Traffic sent to the LAG is distributed across all member links.

Aggregates throughput of member links.

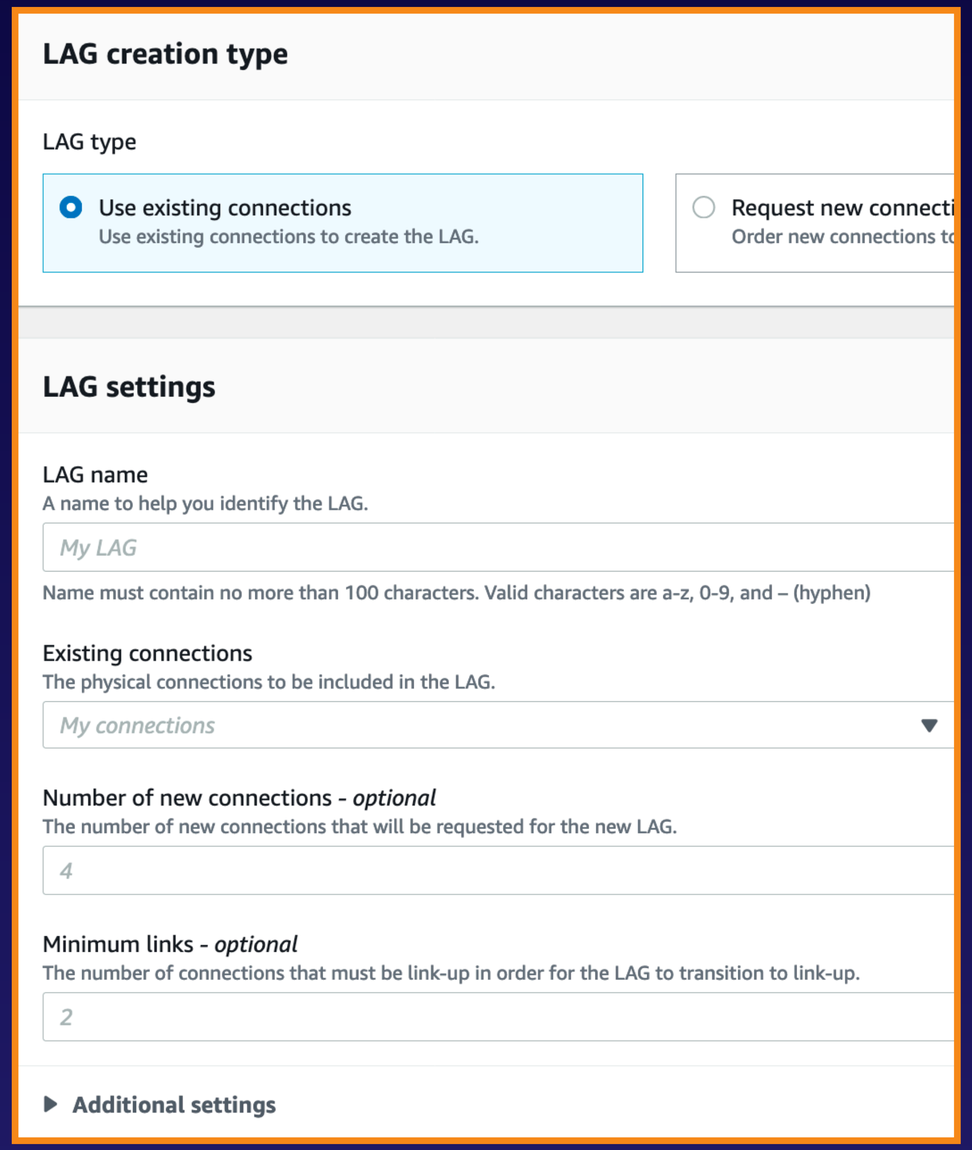
Provides resiliency in the event of member link failure.

LAG requirements in Direct Connect

- All DX connections in a LAG must:
  - Use the same bandwidth.
  - Terminate at the same DX location.
- Maximum of four connections per LAG.
- Maximum of 10 LAGs per Region.

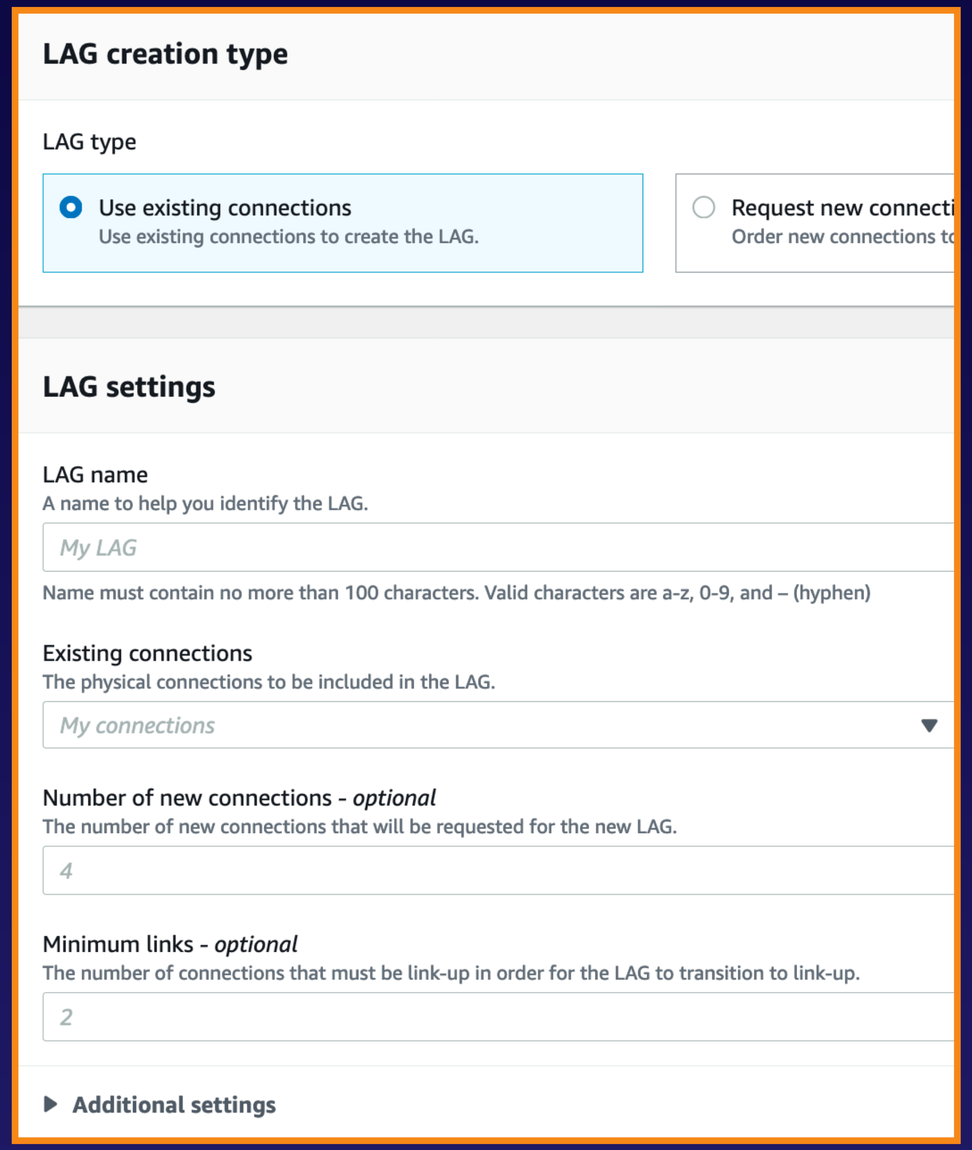


LAG Creation



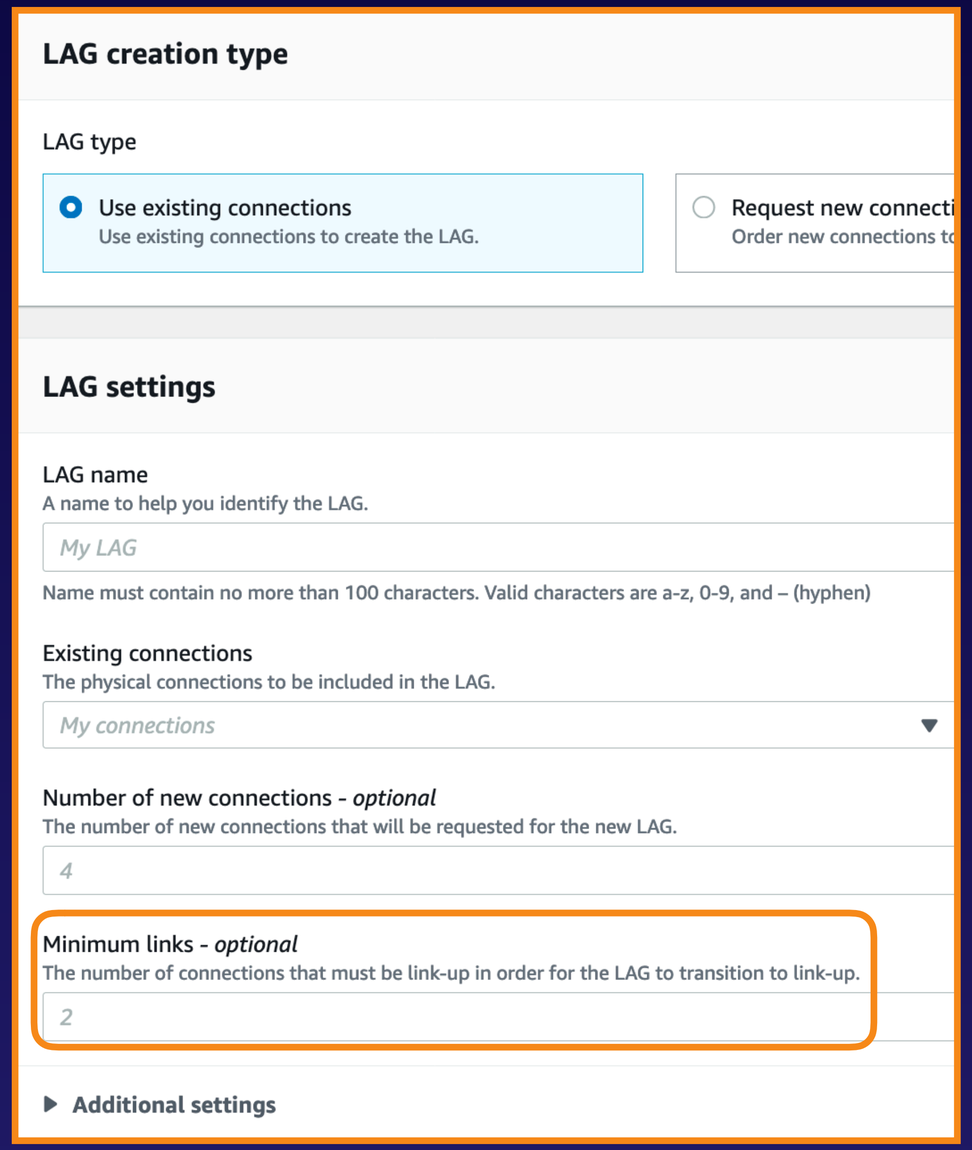
- Use existing connections, request new connections, or a mix of both.
- You cannot create a LAG with new connections if you would exceed the overall connection limit for the Region.
- Adding existing connections to a LAG will temporarily interrupt connectivity.

LAG Creation



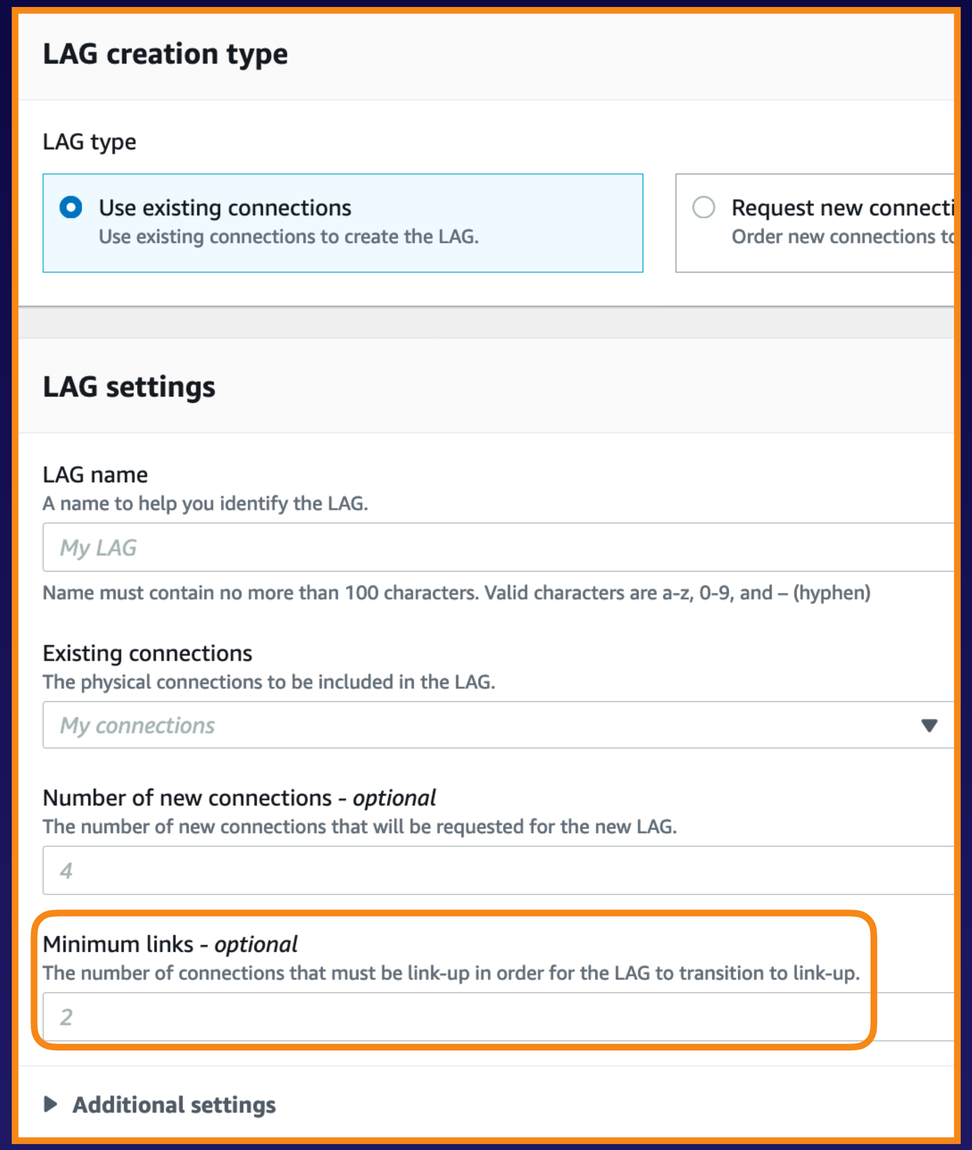
- Properties
  - LAG name
  - Existing connections to use
  - Number of new connections to request
  - Minimum links
  - Optional tags.

LAG Creation



- Minimum links identifies the minimum number of functional connections necessary for the entire link to be functional.
  - If the number of active links drops below the minimum, the entire LAG connection will become non-operational.
  - Default value is 0 (no minimum).

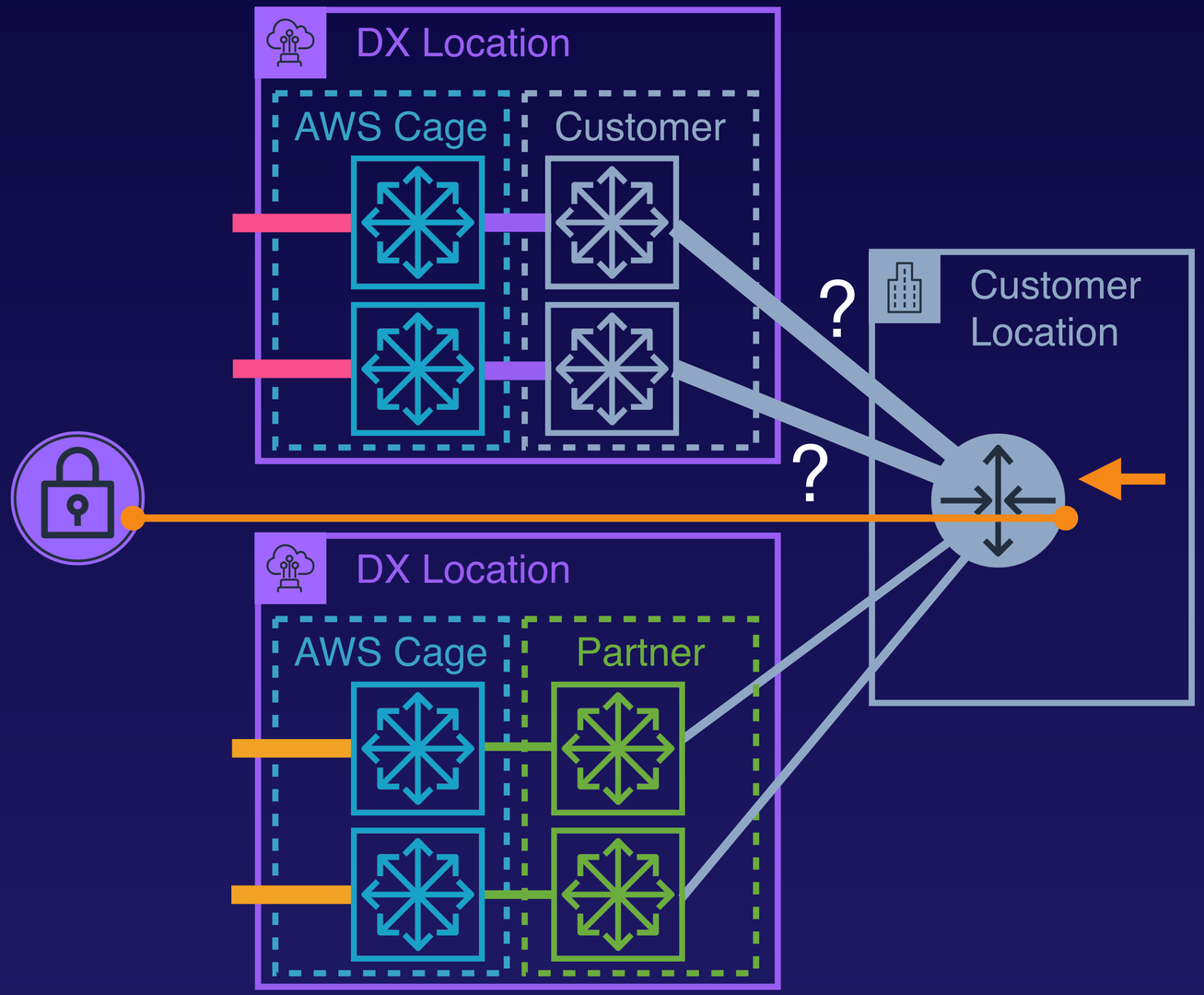
LAG Creation



- New or existing connections may be added to existing LAGs.
- Connections may not be removed from LAGs if it crosses the minimum links threshold.

LAGs and VIFs

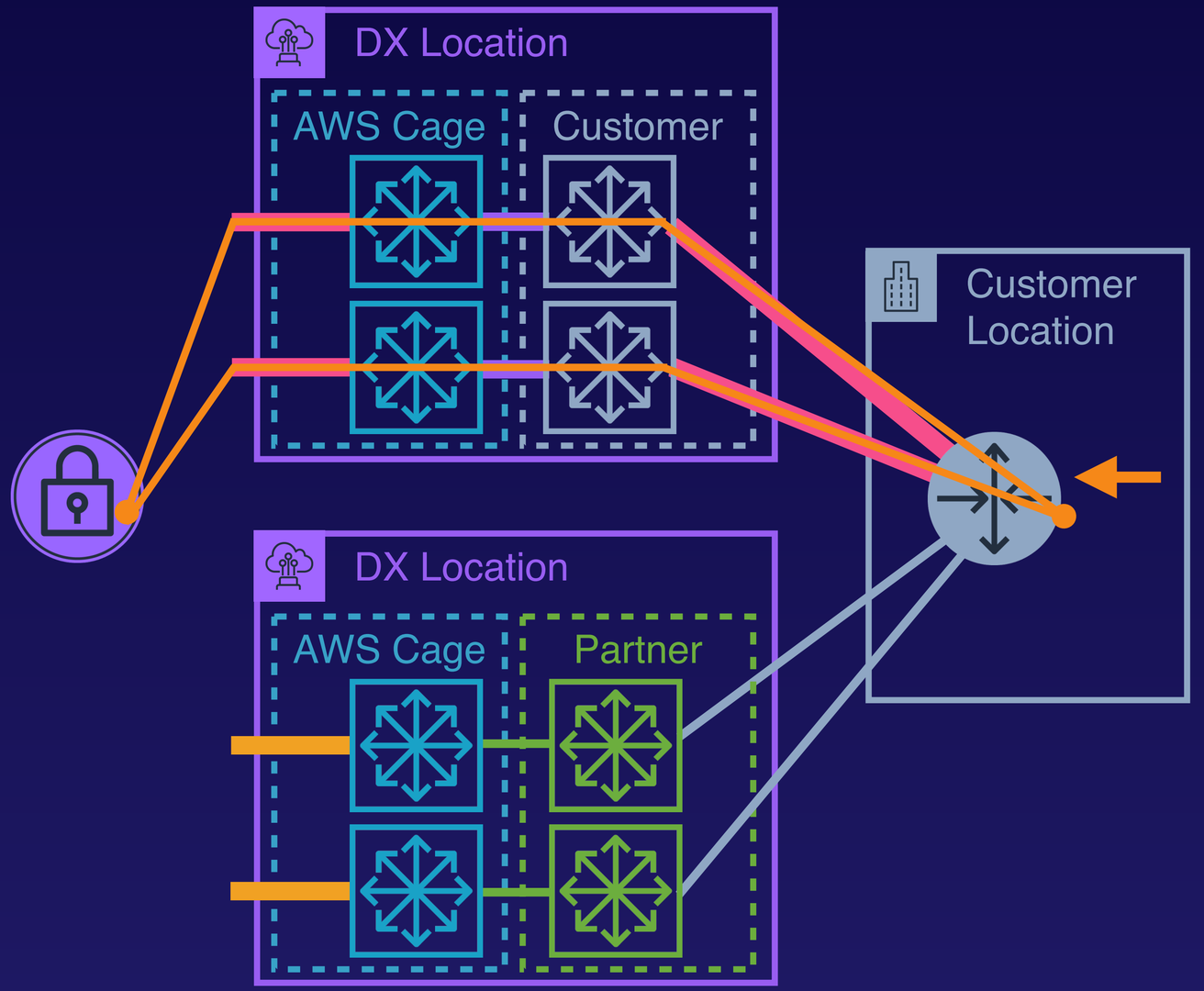
- VIFs may be attached to a LAG instead of a single DX connection.



LAGs and VIFs

- VIFs may be attached to a LAG instead of a single DX connection.

- A corresponding customer LAG must be created at the on-prem hardware.
- Add LAG primary port to VIF VLAN.



Fast Takeaways

LAGs improve throughput performance and connection availability.

All DX LAG members must be connections through the same DX Location.

Customer-side LAGs must be created to support VIF traffic.