Alibaba Group 阿里巴巴集团

Applications of MM Technology in Alibaba DC Networks

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IEEE P802.3db Short Reach Fiber TF Interim

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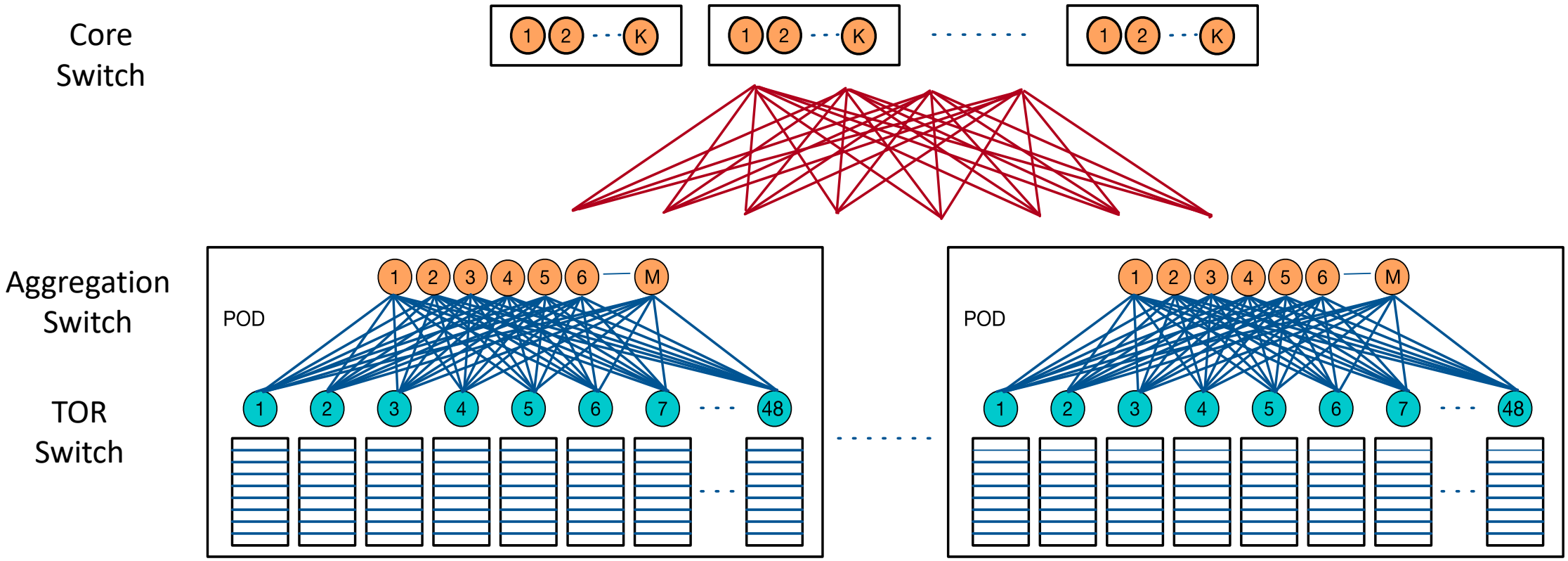
Alibaba DC Networks



- Typical data center has 5 buildings, with link distance between buildings < 1km
- Each building has 4-5 stories, with link distance within a building <= 80m

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100G (4 x 25G) Networks

- Server – TOR
  - AOC: MM (<= 30m)
  - DAC (<= 5m)
- TOR – Aggregation
  - 100G SR4
- Aggregation – Core
  - Mixed 100G SR4 / 100G CWDM4
  - Use 100G SR4 if link length <= 100m

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200G (4 x 50G) & 400G (8 x 50G) Networks

- Server – TOR
  - AOC: MM (<= 30m)
  - DAC (<= 5m)
- TOR – Aggregation
  - 200G SR4 (200G networks)
  - 400G SR8 (400G networks)
- Aggregation – Core
  - Mixed 200G SR4 / 200G FR4 (200G networks)
  - Mixed 400G SR8 / 400G DR4 (400G networks)

400G (4 x 100G) Networks

- If MM reaches 30 m
  - Can be used as AOC (server – TOR)
- If MM reaches 50 m
  - Can be used TOR – Aggregation
- If reaches 80 m
  - Can be used within a building
- If reaches 100 m
  - Can be used the same way as 100G networks

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THANKS

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