Cable Backplane for Open Rack **OCP Rack & Power Group Discussion** May 8, 2019

Francis Lam Director, Intelligent Computing Product Management Huawei Technologies



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Enhanced Open Rack for Huawei Cloud















Cabling Topology

Change

Adopt cable connector on TOR and backplane

Recommendation ORv3 to allow flexibility for connections between backplane and TOR

Solution 1: Blind-mate Custom TOR Switch

Solution 2: Octopus cable to standard or custom TOR switch











Cable Connector







Cable Solution1 Example

















Cable Backplane Solution

Cable Backplane to TOR



Connector to Cable Backplane

Cable Backplane









Recommendation ORv3 to Define

- The physical location of the cable backplane with respect to the rack
- The opening dimensions and locations and boundary conditions for the cable backplane connectors
- The physical location and boundary conditions of the Cable Connector with respect to the compute module chassis

Recommendation ORv3 to allow flexibility for

- Supplier and model of connectors to allow innovation
- Cabling topology to TOR e.g. custom switch with single connector vs. standard switch custom switch; octopus cable vs custom cable with single switch side connector





Cable Backplane Design



Change

- 2 data TOR Switch
- 1 management Switch
- 40 Server Nodes

TOR Switch Management Switch **TOR Switch**

Connectors to TOR Switch

- 8 x 40 pairs high speed SERDES, support 25Gb NRZ,56G PAM4 •
- 32 pairs for stack

Connector to Management Switch

- 2 x 40 pairs Gb SERDES;
- 160 IO signals











