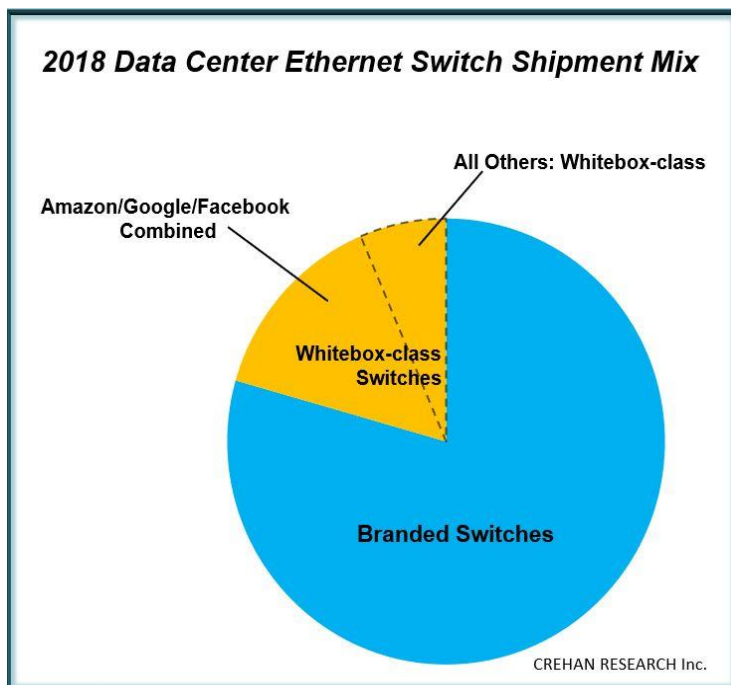# Three Customers Account for the Majority of Whitebox-class Data Center Ethernet Switch Deployments, Reports Crehan Research

Amazon, Google and Facebook Made Up Over Two-Thirds of Total 2018 Annual Volumes

SAN FRANCISCO, CA, July 22, 2019 — Three of the largest hyperscale cloud service providers account for most of the whitebox-class data center Ethernet switch shipments, according to recent reports from Crehan Research Inc.   Amazon, Google and Facebook combined to exceed two-thirds of total 2018 annual volumes – see accompanying chart. Whitebox-class data center Ethernet switch shipments as a whole had a robust annual increase, to exceed 20% of the total annual volumes; but without Amazon, Google and Facebook, whitebox-class switching accounted for 7%.

2018 Data Center Ethernet Switch Shipment Mix

 "Although there seems to be a fair amount of tire-kicking, pilot projects and evaluations of whitebox-class data center switching, its overall adoption outside of three of the largest hyperscale cloud service providers has, so far, remained a relatively modest portion of overall data center switching," said Seamus Crehan, president of Crehan Research. "Furthermore, the branded Ethernet switch vendors now offer customers what once was generally attainable only from whitebox switch deployments, including disaggregated open networking, programmability and significant price reductions."

The boundary between branded and whitebox-class data center switching continues to blur, as evidenced by the following examples:

- The hyperscale internet service provider Tencent is deploying Cisco's merchant silicon-based Nexus 34180YC Ethernet switch with the SONiC operating system in its data centers.
- Arista has jointly developed its most recent data center switch (the 7368X4) with Facebook which had historically worked with whitebox-class vendors such as Accton/Edgecore and Celestica, where the data center switch design was solely by Facebook.

- Branded Ethernet switch vendors such as Dell EMC, Juniper and Mellanox offer disaggregated hardware/software solutions to deliver more flexibility and openness to data center networking customers.

Crehan's reports further indicate that, while the overall market adoption of whitebox-class data center switching is in the twenty percent range it is higher than this for the newer and faster networking speeds. This is largely because Amazon, Google and Facebook tend to be earlier adopters of these newer and faster speeds. For example, almost all of the early volume in 400GbE data center switching is driven by whitebox-class switches, due to Google's dominance of these early deployments. "We expect that, similar to other Ethernet speeds, the portion of whitebox-class data center switch volumes will decline as a broader customer base starts to deploy 400GbE switches," Crehan said.

About Crehan Research Inc.
Crehan Research Inc. produces reports with very detailed statistics and information on the data center switch and server-class adapter & LOM/controller markets. The company's reports are supported with rich insights and context to deliver increased value. For more information about Crehan Research Inc. email info@CrehanResearch.com, phone 650-273-8400, or visit www.CrehanResearch.com.

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