Webscale Playbook: Amazon

World's biggest R&D spender continues to invest heavily in networks as it disrupts new markets

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Date published:	09/27/2018
Report ID:	GNI-27092018-1

Introduction

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About this report

This report is the first in MTN Consulting's Webscale Playbook series, which analyze the "Super 8" webscale network operators, i.e. Alibaba, Alphabet, Amazon, Apple, Baidu, Facebook, Microsoft, and Tencent. The objective of this report is to assess Amazon's:

- latest quarterly key performance indicators including revenues, capex, opex, R&D, etc.
- network vendor relationships, M&A, and partnerships across different network product categories
- network-related strategy
- disruptive impact on the network infrastructure market

Abstract

Amazon has evolved leaps and bounds since its creation. From an online bookstore more than two decades ago, it has become a global internet giant that relies heavily on scale and network infrastructure for its diverse businesses. At present, the company's businesses beyond e-commerce include physical stores, cloud computing, audio/video streaming, advertising, and devices – all of which have millions of customers/users serviced by a strong network infrastructure. The sheer growth across its businesses in the recent years has primed Amazon as one of the leading operators in the network space. Naturally, to cope up with its ever increasing network-related demand, the company is not just spending massively.to shore up its infrastructure through vendor partnerships but could be mulling to build some on its own, especially on the hardware side. Below are a few key highlights from the report:

- As a percentage of revenues, Amazon spends more on R&D than capex, which is typical of WNOs. The gap between the two spending, however, is somewhat shrinking which goes to show Amazon's greater efforts in building datacenters and warehouses in the recent years. Amazon also emerged as the top R&D spender among WNOs over the past two years, due to Prime Video.
- Amazon currently manufactures some of the network components such as routers, chips, network interface cards, and network gears to meet the growing needs of its cloud business (AWS). The internet giant, known for disruption, could foray into the enterprise networking market and sell its own custom-made hardware by 2020, taking the incumbent network vendors head-on.
- However, Amazon is also creating a host of new opportunities for network vendors, as it looks to disrupt different industries such as automotive (driverless cars) and healthcare (online pharmacy and heart-rate detection device), both requiring a strong network infrastructure to enable data transfers and communication between sensors and components.

Amazon's Key Technology Relationships* in Networks

IoT solutions has been the core focus area for M&A; Optical components & systems witnessed most supplier deals

	3Q17	4Q17	1Q18	2Q18
Servers & Server Processors	AMD	NVIDIA Intel		Cavium Xilinx
Cloud Software & Services	IBM VMWare	Symantec Nokia	VMWare	Acacia Cloud CA Technologies
IoT Solutions	Graphiq Cirrus Logic	Blink NXP Semiconductors	Ring	Microsemi Corp. Texas Instruments
IP Infra	Arista Networks			Cisco Systems F5 Networks
Optical Components & Systems	Fabrinet MACOM Tech.	Applied Optoelectronics TE Connectivity	ADVA Optical Ciena Corp.	Finisar Corp. Neophotonics Oclaro

Relationship Type: Supplier | Tech. Partner | Customer | Mgmt. Poach | M&A

*For a detailed analysis of Amazon's technology relationships over a longer time series, refer to the latest edition of our *WNO Technology Relationship Database*

Source: MTN Consulting analysis