Enterprise and Cloud Infrastructure

AWS Goes On-Premises; Major Ramifications for Infrastructure Universe

What You Need to Know: On Wednesday at its annual re:Invent conference, Amazon Web Services unveiled AWS Outposts, an on-premises set of infrastructure (hardware and software) that will seamlessly connect to the AWS Cloud. More specifically, Outposts is composed of configurable compute and storage racks built with AWS-designed hardware and fully managed by AWS. AWS will deliver the racks, install them, and handle maintenance. Outposts is available in private preview today and is expected to be generally available in the second half of 2019.

From a software perspective, Outposts will be available in two versions: one using the VMware Cloud on AWS stack (basically the full VMware SDDC stack) and the second using the AWS-native stack. We see this as a big win for VMware, and VMware CEO Pat Gelsinger joined AWS CEO Andy Jassy on stage for this announcement.

We believe Outposts is a clear validation by AWS of the hybrid cloud architecture concept and is likely sending shockwaves across the entire infrastructure universe, given AWS’s market influence and customer traction. We also believe this announcement will put pressure on other cloud providers, including Microsoft, Google, IBM, and Oracle, to deliver similar on-premises infrastructure offerings (either organically or inorganically) that link to their respective clouds. Therefore, we believe HCI market-leader Nutanix could be an increasingly attractive acquisition target.

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Our Take: This announcement has the potential to be a game changer for the infrastructure sector—as the dominant cloud player enters the on-premises/hybrid market. While workloads have moved to the largest public cloud vendors, such as Amazon (AMZN $1,677.75; Outperform), Microsoft (MSFT $111.12; Outperform), and Google (GOOG $1,086.23; Outperform), certain customers have been constrained by regulatory, latency, or geographic necessities to keep workloads on-premises. Many customers prefer to run a cloud stack in-house for performance, security, or compliance reasons. AWS Outposts aims to address these customers, whereby users can run AWS compute and storage workloads on-premises and integrate with their other applications in the AWS Cloud.

While this all sounds simple, it is important to point out that Microsoft launched a similar on-premises compute/storage offering called AzureStack in September 2016, and more than two years later the product has failed to gain any traction, likely due to poor product design and performance. The point is that designing reliable, feature-rich, and high-performance on-premises infrastructure is not a trivial undertaking.

However, assuming AWS is successful here, we see broad ramifications across the sector. Specifically, we believe it could accelerate the move to the cloud and put significant pressure on traditional infrastructure players. While some customers will want to avoid the lock-in that AWS is effectively proposing here, we think the appeal of a seamless hybrid experience will resonate with many customers.

Winners and Losers: The obvious winner here (besides AWS itself) is VMware (VMW $159.76; Outperform). While VMware has been investing in bringing its software stack to the AWS cloud (via the VMware Cloud on AWS service), Outposts offers the inverse: bringing AWS to on-premises environments. The VMware Cloud on AWS version of Outposts will appeal to customers already leveraging the VMware control plane and APIs. These customers will not need to learn anything new and can use the full set of VMware software-defined data center technologies (e.g., vSphere, vSAN, vCenter, NSX) to run and manage their hybrid environments. In addition, for the AWS-native version of Outposts, VMware will now offer VMware Cloud Foundation for EC2, which will feature popular VMware technologies and services that will work across VMware and EC2 environments like NSX, AppDefense, and vRealize Automation.

For Microsoft, the launch of AWS Outposts clearly validates Microsoft’s long-held belief in hybrid cloud architectures, but it effectively removes a major differentiation point in the Azure story relative to AWS—the idea of seamless connectivity between on-premises and cloud. Ultimately, this should be a wake-up call to Microsoft that it needs to build a better box with AzureStack.

The potential losers here are likely to be the incumbent on-premises compute/storage players like Dell EMC, HPE (HPE $15.46), NetApp (NTAP $69.48; Outperform), Cisco (CSCO $47.29; Outperform), and Lenovo. We suspect that AWS entering the on-premises infrastructure market could further accelerate hardware commoditization, and drive competitive displacement of legacy infrastructure.

With respect to hyperconverged (HCI) market leader Nutanix (NTNX $43.10; Outperform), we see this as a mixed bag. On the one hand, if AWS is successful here, it will no doubt bring a major new competitor into the fray. On the other hand, as noted above, this move by AWS should cement the concept of hybrid cloud and the need for top-notch on-premises compute/storage infrastructure. We see Nutanix as the clear technology leader in the HCI space, with a broader platform play developing, and a 12,000-strong customer base.

With the other major cloud providers (Microsoft, Google, IBM [IBM $123.00], and Oracle [ORCL $48.19; Market Perform]) likely needing to deliver similar on-premises infrastructure offerings that link to their respective clouds, we believe the spotlight could be on Nutanix as an attractive acquisition target.
Exhibit 1
VMware Cloud Foundation for EC2

VMware vRealize, Cloud Health & Wavefront for Ops & Management
VMware Unified Network and Security
VMware Unified Data Management

VMware Cloud Foundation
Existing infrastructure

AWS EC2 Bare-metal

Customer Datacenter

AWS Cloud

Source: VMware, Inc.
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DOW JONES: 24748.70
S&P 500: 2682.17
NASDAQ: 7082.70

Additional information is available upon request.

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