



Nasdaq and AWS Partner to Transform Capital Markets

Nov 30, 2021

Nasdaq Will Begin Migrating Markets to AWS Starting in 2022

Co-Designed Edge Computing Solution Offers On-Ramp for Global Capital Markets to Migrate to AWS

Nasdaq's Primary Data Center Becomes First-Ever Private AWS Local Zone for Capital Markets

LAS VEGAS, Nov. 30, 2021 (GLOBE NEWSWIRE) -- Today, at AWS re:Invent, Nasdaq (Nasdaq: NDAQ) and Amazon Web Services, Inc. (AWS), an Amazon.com Inc. company (Nasdaq: AMZN), announced a multi-year partnership to build the next generation of cloud-enabled infrastructure for the world's capital markets.

Beginning in 2022, Nasdaq plans to migrate its North American markets to AWS in a phased approach, starting with Nasdaq MRX, a U.S. options market. Nasdaq will use a new edge computing solution that is co-designed by Nasdaq and AWS and specifically developed for market infrastructure. This solution may also be used by other market infrastructure operators and market participants to move their trading systems to the cloud. In addition, the partnership will include opportunities to explore new ways to leverage AWS's cloud capabilities across Nasdaq's anti-financial crime, data and analytics, and market infrastructure software solutions.

"This landmark partnership with AWS seeks to power a truly cloud-based market infrastructure that is more resilient, scalable, and accessible for all market participants," said **Adena Friedman, President and CEO, Nasdaq**. "For over a decade, Nasdaq has used the elasticity and high security of AWS to deliver client-driven solutions. Our innovative, new collaboration with AWS creates a bridge to the future for our markets and represents the next major step forward in Nasdaq's cloud journey."

"Together, Nasdaq and AWS will change what's possible for capital markets organizations, helping them to speed up innovation and improve business processes," said **Adam Selipsky, CEO of Amazon Web Services, Inc.** "Combining Nasdaq's 50 years of expertise in pioneering technology for capital markets with the proven security, reliability, and resilience of the world's leading cloud will help our joint customers and Nasdaq to continue to grow their businesses and seamlessly transact billions of dollars in trades per day. Our partnership will give Nasdaq a way to more easily move their core infrastructure to the cloud and innovate new services as they continue their second decade of cloud adoption."

Building the Capital Markets Infrastructure of the Future

Core to Nasdaq's move to AWS will be [AWS Outposts](#), which extend AWS infrastructure, services, APIs, and tools to virtually any datacenter, co-location space, or on-premises facility. Nasdaq plans to incorporate AWS Outposts directly into its core network to deliver ultra-low-latency edge compute capabilities from its primary data center in Carteret, New Jersey. This co-designed edge computing solution would effectively establish Nasdaq's data center as the first-ever private AWS Local Zone for the capital markets industry.

Over time, Nasdaq plans to move additional North American markets to the cloud with AWS. This hybrid infrastructure would provide Nasdaq with low-latency access to its on-premises systems to deliver high-frequency trading capabilities, as well as give its clients access to cloud-based capabilities, including virtual connectivity services, market analytics and machine learning, at a lower cost. Nasdaq expects this migration to the cloud to enable the adoption of new services and products in a manner that unlocks value and provides its clients with added flexibility.

Advancing Cloud-enabled Market Technology Solutions for the Global Economy

For the 130+ market infrastructure clients – spanning exchanges, banks, clearing houses, central securities depositories and regulators – that rely upon Nasdaq for their core trading, clearing, settlement, and surveillance technology today, Nasdaq plans to partner with AWS to develop viable cloud choices that include public-cloud and hybrid models.

Nasdaq also intends to leverage its cloud journey for its own markets, coupled with the growing number of AWS Local Zones around the world, and the collective technology portfolios of the partnership, to create a migration blueprint for its market technology clients using a combination of public cloud and edge compute options.

Nasdaq expects that migrating to the cloud will give its market infrastructure clients added agility and help them rapidly adjust to ever-changing industry dynamics in their countries and regions.

Nasdaq's Cloud Strategy: A Decades-long Journey for an Interconnected Future

For 50 years, Nasdaq has reimagined markets to realize the potential of tomorrow. After pioneering electronic markets half a century ago, Nasdaq developed the highest performance messaging protocols in the early 2000s, which now serve as the de-facto industry standard for ultra-low latency trading. In addition, Nasdaq was one of the first exchange operators to commercialize its technology, and started using AWS technology in 2008. Today, Nasdaq's technology solutions drive high performance, transparency, efficiency, and integrity across the transaction lifecycle at market infrastructure operators—exchanges, central counterparty clearing houses, central securities depositories, and regulators—in over 50 countries.

As Nasdaq looks to redefine the market technology of the future and tackle the transformation of its core infrastructure for the decades ahead, it is

committed to creating an interconnected future – one that is safer and stronger for everyone, in the cloud.

To learn more, visit www.nasdaq.com/cloud.

NOTE TO EDITORS

Carteret Data Center: Nasdaq's primary data center for its U.S. Equities and Options Markets is located in the Equinix NY11 facility in Carteret, NJ.

Edge Computing: Edge computing moves data storage, processing, and analysis closer to endpoints where data is generated to deliver near-real-time responsiveness for high-performance applications. [AWS's managed edge hardware and services](#) extend secure edge computing capabilities to customer endpoints, allowing them to deploy APIs and tools outside of AWS data centers in metro areas, 5G networks, on-premises locations, and on ruggedized devices.

Financial Terms: Nasdaq expects expenses and investments associated with this partnership to be consistent with our existing capital allocation framework and non-GAAP operating expense guidance, while supporting growth opportunities over the long-term.

Nasdaq MRX: [Nasdaq MRX](#) is one of six U.S. options markets operated by Nasdaq. Nasdaq MRX offers both a simple customer priority, pro-rata allocation market and a price-time complex market, complete with a full suite of auction and crossing orders.

Options Markets: Nasdaq operates six options markets in the U.S., including Nasdaq MRX, to buy and sell options on equity and ETF securities with unique market models that cater to different segments of the options market.

AWS Local Zones: AWS Local Zones are a type of AWS infrastructure deployment that places compute, storage, database, and other select AWS services close to large population and industry centers. They allow AWS customers to use select AWS services, like compute and storage services, closer to more end-users, providing them very low latency access to applications running locally. Nasdaq and AWS plan to establish a private AWS Local Zone within the Equinix NY11 data center in Carteret that is available for Nasdaq's use only.

About Nasdaq

Nasdaq (Nasdaq: NDAQ) is a global technology company serving the capital markets and other industries. Our diverse offering of data, analytics, software, and services enables clients to optimize and execute their business vision with confidence. To learn more about the company, technology solutions and career opportunities, visit us on LinkedIn, on Twitter @Nasdaq, or at www.nasdaq.com.

About Amazon Web Services

For over 15 years, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud offering. AWS has been continually expanding its services to support virtually any cloud workload, and it now has more than 200 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management from 81 Availability Zones within 25 geographic regions, with announced plans for 27 more Availability Zones and nine more AWS Regions in Australia, Canada, India, Indonesia, Israel, New Zealand, Spain, Switzerland, and the United Arab Emirates. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs. To learn more about AWS, visit aws.amazon.com.

About Amazon

Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. Amazon strives to be Earth's Most Customer-Centric Company, Earth's Best Employer, and Earth's Safest Place to Work. Customer reviews, 1-Click shopping, personalized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Career Choice, Fire tablets, Fire TV, Amazon Echo, Alexa, Just Walk Out technology, Amazon Studios, and The Climate Pledge are some of the things pioneered by Amazon. For more information, visit amazon.com/about and follow @AmazonNews.

Forward-Looking Statements

This communication contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, including statements with respect to the formation of a partnership between Nasdaq and AWS and the benefits of the partnership, and statements about Nasdaq and AWS and their respective plans, objectives, expectations, intentions, products and offerings. When used in this communication, words such as "intends", "plans", "will", "believes", "expected", "projected" and similar expressions and any other statements that are not historical facts are intended to identify forward-looking statements. We caution that these statements are not guarantees of future performance. Actual results may differ materially from those expressed or implied in the forward-looking statements. Forward-looking statements involve a number of risks, uncertainties or other factors beyond the control of Nasdaq and AWS. These factors include, but are not limited to, factors detailed in each of Nasdaq's and Amazon's respective annual report on Form 10-K and other periodic reports filed with the U.S. Securities and Exchange Commission. The forward-looking statements included in this communication are made only as of the date hereof. Nasdaq and AWS disclaim any obligation to update these forward-looking statements, except as required by law.

Nasdaq Non-GAAP Information

In addition to disclosing financial information determined in accordance with U.S. GAAP, Nasdaq also discloses certain non-GAAP results of operations, including, but not limited to, non-GAAP operating expenses, that include certain adjustments or exclude certain charges and gains that are described in the reconciliation table of U.S. GAAP to non-GAAP information provided at ir.nasdaq.com/Income-Statement-Trend-Summary-and-GAAP-to-Non-GAAP-Reconciliation. U.S. GAAP operating expense guidance is not provided by Nasdaq due to the inherent difficulty in quantifying certain amounts due to a variety of factors including the unpredictability in the movement in foreign currency rates, as well as future charges or reversals outside of the normal course of business. Nasdaq's management uses non-GAAP information internally, along with U.S. GAAP information, in evaluating Nasdaq's performance and in making financial and operational decisions. Nasdaq believes its presentation of these measures provides investors with greater transparency and supplemental data relating to Nasdaq's financial condition and results of operations. These measures are not in accordance with, or an alternative to, U.S. GAAP, and may be different from non-GAAP measures used by other companies.

Nasdaq Media Contacts:

Marleen Geerlof
+1 (347) 380-3520
marleen.geerlof@nasdaq.com

Will Briganti
+1 (646) 964-8169
william.briganti@nasdaq.com

Bianca Fata
+1 (646) 895-5851
bianca.fata@nasdaq.com

Yan-yan Tong
+1 (240) 721-8066
yan-yan.tong@nasdaq.com

Nasdaq Investor Contact:

Ed Ditmire, CFA
+1 (212) 401-8737
ed.ditmire@nasdaq.com

Amazon/AWS Media Contacts:

Amazon.com, Inc. Media Hotline
Amazon-pr@amazon.com
www.amazon.com/pr

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A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/e9dd3dda-36f4-4ef4-a21d-b8121287d277>



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