

## Red Hat and NVIDIA Team to Bring High-Performance, Software-Defined 5G RAN to Telecom Industry

Mobile World Congress -- NVIDIA and Red Hat, the world's leading provider of open source solutions, today announced they are expanding their alliance to deliver high-performance, software-defined 5G wireless infrastructure, running on Red Hat OpenShift, to the telecom industry.

The collaboration, unveiled by NVIDIA founder and CEO Jensen Huang during his keynote at MWC Los Angeles, can help telcos transition to 5G networks capable of running a range of software-defined edge workloads. Work will initially focus on 5G radio access networks (RAN), aimed at making AI-enabled applications more accessible at the telco edge.

Red Hat and NVIDIA are building on their announcement earlier this year that they are [accelerating adoption of Kubernetes](#) in enterprise data centers. Their expanding collaboration lets customers use the [NVIDIA EGX platform](#) and [Red Hat OpenShift](#) to more easily deploy NVIDIA GPUs to accelerate AI, data science and machine learning at the edge.

The critical element enabling 5G providers to move to cloud-native infrastructure is [NVIDIA Aerial](#). This software developer kit, also announced today, allows providers to build and deliver high-performance, software-defined 5G wireless RAN by delivering two essential advancements. They are a low-latency data path directly from Mellanox network interface cards to GPU memory, and a 5G physical layer signal-processing engine that keeps all data within the GPU's high-performance memory.

"The industry is ramping 5G and the 'smart everything' revolution is beginning. Billions of sensors and devices will be sprinkled all over the world enabling new applications and services," said Huang. "We're working with Red Hat to build a cloud-native, massively scalable, high-performance GPU computing infrastructure for this new 5G world. Powered by the NVIDIA EGX Edge Supercomputing Platform, a new wave of applications will emerge, just as with the smartphone revolution."

Red Hat OpenShift provides enterprise-grade, production-ready Kubernetes to manage and automate the Aerial 5G RAN, container network functions and other new edge services. This helps telcos deploy and manage modernized infrastructure at scale.

"The next generation of mobile networks won't be defined by inflexible, proprietary solutions -- it will be founded in open cloud-native technologies," said Jim Whitehurst, president and CEO of Red Hat. "As a leader in building open, innovative telecommunications infrastructure, we see a tremendous advantage to running standardized software at the telco edge, helping to enable a range of new workloads via dynamically scalable services."

By running 5G RAN on a cloud-native platform, telcos can make full use of their network investments and bring new services, such as AI, AR, VR and gaming, to the market widely.

### About Red Hat, Inc.

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

### About NVIDIA

[NVIDIA's](#) (NASDAQ: NVDA) invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined modern computer graphics and revolutionized parallel computing. More recently, GPU deep learning ignited modern AI — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world. More information at <http://nvidianews.nvidia.com/>.

Certain statements contained in this press release may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: risks related to the ability of the Company to compete effectively; the ability to deliver and stimulate demand for new products and technological innovations on a timely basis; delays or reductions in information technology spending; the integration of acquisitions and the ability to market successfully acquired technologies and products; risks related to errors or defects in our offerings and third-party products upon which our offerings depend; risks related to the security of our offerings and other data security vulnerabilities; fluctuations in exchange rates; changes in and a dependence on key personnel; the effects of industry consolidation; uncertainty and adverse results in litigation and related settlements; the inability to adequately protect Company intellectual property and the potential for infringement or breach of license claims of or relating to third party intellectual property; the ability to meet financial and operational challenges encountered in our international operations; and ineffective management of, and control over, the Company's growth and international operations, as well as other factors. In addition to these factors, actual future performance, outcomes, and results may differ materially because of more general factors including (without limitation) general industry and market conditions and growth rates, economic and political conditions, governmental and public policy changes and the impact of natural disasters such as earthquakes and floods. The forward-looking statements included in this press release represent the Company's views as of the date of this press release and these views could change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this press release.

Certain statements in this press release including, but not limited to, statements as to: NVIDIA and Red Hat expanding their alliance and delivering 5G infrastructure to the telecom industry; the benefits and impact of the collaboration between NVIDIA and Red Hat, including its ability to help telcos transition to 5G networks running software-defined edge workloads and its initial focus being on RAN making AI-enabled applications more accessible at the telco edge; the benefits, impact, abilities and performance of NVIDIA Aerial and Red Hat OpenShift; the industry ramping and the smart everything revolution beginning; billions of sensors and devices being sprinkled all over the world and enabling new applications and services; a new wave of applications emerging; the next generation of mobile networks being founded in open cloud-native technologies; the advantages to running standardized software at the telco edge and it enabling a range of

workloads via dynamically scalable services; and telcos being able to make full use of their network investments and bring new services by running 5G RAN on a cloud-native platform are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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