Amazon Web Services Announces Amazon Cluster GPU Instances, a New Amazon EC2 Instance Type Delivering High-Powered Graphics Processing Unit ("GPU") Computing in the AWS Cloud

GPU processing is now less expensive and more accessible to a wide variety of graphics rendering and High Performance Computing (HPC) workloads

SEATTLE, Nov 15, 2010 (BUSINESS WIRE) –

Amazon Web Services LLC, an Amazon.com company (NASDAQ:AMZN), today announced Amazon Cluster GPU Instances, a new instance type designed to deliver the power of GPU processing in the cloud. GPUs are increasingly being used to accelerate the performance of many general purpose computing problems. However, for many organizations, GPU processing has been out of reach due to the unique infrastructural challenges and high cost of the technology. Amazon Cluster GPU Instances remove this barrier by providing developers and businesses immediate access to the highly tuned compute performance of GPUs with no upfront investment or long-term commitment. To get started using Amazon EC2 GPU Instances, visit: http://aws.amazon.com/ec2/hpc-applications/.

Amazon Cluster GPU Instances provide 22 GB of memory, 33.5 EC2 Compute Units, and utilize the Amazon EC2 Cluster network, which provides high throughput and low latency for HPC and data intensive applications. Each GPU instance features two NVIDIA Tesla(R) M2050 GPUs, delivering peak performance of more than one trillion double-precision FLOPS. Many workloads can be greatly accelerated by taking advantage of the parallel processing power of hundreds of cores in the new GPU instances. Numerous industries – including oil and gas exploration, graphics rendering and engineering design – are using GPU processors to improve the performance of their critical applications.

Amazon Cluster GPU Instances extend the options for running HPC workloads in the AWS cloud. Cluster Compute Instances, launched earlier this year, provide the ability to create clusters of instances connected by a low latency, high throughput network. Cluster GPU Instances give customers with HPC workloads an additional option to further customize their high performance clusters in the cloud. For those customers who have applications that can benefit from the parallel computing power of GPUs, Amazon Cluster GPU Instances can often lead to even further efficiency gains over what can be achieved with traditional processors. By leveraging both instance types, HPC customers can tailor their compute cluster to best meet the performance needs of their workloads. For more information on HPC capabilities provided by Amazon EC2, visit http://aws.amazon.com/ec2/hpc-applications.

"We were pleased to introduce Cluster Compute Instances earlier this year for our customers who needed additional network and CPU performance for their large and complex HPC workloads," said Peter De Santis, General Manager of Amazon EC2. "With Amazon Cluster GPU Instances, we are increasing the options available to our HPC customers by allowing them to choose between using high performance clusters with high performance CPUs or taking advantage of the unique processing abilities of GPU processors for applications that can benefit from the massive parallel processing power they provide. We're looking forward to seeing the innovation this will enable."

Calgary Scientific provides advanced medical imaging visualization software and application web enablement technology. The company's technology reduces time to treatment, which can drastically improve an acute care patient's outcome. "For patients in critical care scenarios, every second cut from diagnosis to treatment can lead to a more positive outcome," said Pierre Lemire, President and Chief Technology Officer, Calgary Scientific. "Calgary Scientific's technology instantly connects all of the necessary specialists, images and patient data required when making a treatment decision. Providing this critical timesaving capability across broad geographies requires the power and affordability offered by Amazon Cluster GPU Instances. GPU instances will help Calgary Scientific bring imagery from patients in need to the required medical professional with minimum infrastructure expense to the medical enterprise."

BrightScope, Inc., a company that provides financial data and analytics, sees tremendous value in the ability to rapidly deploy Amazon Cluster GPU Instances. "Our 401k portfolio simulations and analytics are a great fit for cloud computing and we anticipate significant cost and time savings by using Amazon Cluster GPU Instances in the cloud," said David Allison, Head of Engineering & Development, BrightScope, Inc. "The ability to leverage GPU computing without a large upfront capital investment is a big win for our organization, and we believe many other companies will see the same benefit."

mental images is an international provider of rendering and 3D Web services component software for entertainment, computer-aided design, scientific visualization, architecture and other industries that require sophisticated computer-generated images. "For the first time ever, AWS is putting the industry's most powerful photo-realistic rendering technology within reach of anyone connected to the Internet," said Rolf Herken, CEO and CTO of mental images. "The availability of NVIDIA Tesla(R) GPUs in the AWS cloud in the form of Amazon Cluster GPU Instances running the RealityServer(R) platform with the iray(R) renderer will provide architects, product designers, engineers, scientists and others with extraordinarily powerful tools that they can remotely access on mobile devices,

PCs and other devices. Our tests have shown more than 90 percent scaling efficiency on clusters of up to 128 GPUs each."

Elemental Technologies is a leading provider of massively parallel video processing solutions for broadcast and online video customers. "Online media companies are challenged by the ever-increasing need to provide adaptive video streams to a growing array of viewing devices beyond the PC platform," said Sam Blackman, CEO and co-founder of Elemental Technologies. "Harnessing Amazon EC2 allows Elemental customers to realize the full benefits of our soon-to-be released Accelerated Cloud Transcoding family of services. Our video processing software running on Amazon Cluster GPU Instances will help us keep up with demand in the expanding multi-screen video universe."