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AMD Demonstrates First Network Function Virtualization Solution on 64-Bit AMD and ARM Technology

The AMD Embedded R-Series SoC ("Hierofalcon"), Sampling to Customers, Transforms Telecommunications Infrastructure With Software Partners

SANTA CLARA, CA -- (Marketwired) -- 10/01/14 -- *ARM® TechCon* -- AMD (NYSE: AMD) today demonstrated the first network function virtualization (NFV) solution on AMD's 64-bit ARM-based SoC and announced that it is now sampling to AMD's embedded customers. The NFV demonstration is powered by a 64-bit ARM-based AMD Embedded R-Series SoC, codenamed "Hierofalcon," supported with technology from two key ecosystem partners -- Aricent for the networking software stack and Mentor Graphics for embedded Linux® and tools. NFV is an innovative solution that simplifies deployment and management for network and telecommunications service providers with a fully virtualized communications infrastructure that helps maximize performance, while working to reduce costs.

At ARM TechCon, AMD specifically showcased the capabilities of an ARM-based NFV solution, virtualizing the functionality of a packet data network gateway, serving gateway, and a mobility management entity. In addition to virtualizing hardware components, AMD showcased a live traffic migration between the ARM-based AMD Embedded R-Series SoC and the x86-based second generation AMD R-Series APU. AMD's ARM-based NFV solution will be especially valuable for telecommunications network infrastructure providers interested in a flexible software-defined networking (SDN) implementation to manage networking services with configurable hardware to help reduce complexity and cost. NFV is the abstraction of numerous network devices such as routers and gateways, to enable relocation of network functions from dedicated hardware appliances to generic servers. With NFV, much of the intelligence currently built into proprietary, specialized hardware is accomplished with software running on general purpose hardware. The resulting solution is a fully virtualized communications infrastructure -- including virtual servers, storage and networks -- that simplifies deployment and management for network and telecommunications service providers. AMD is paving the way for both new and established service providers to design and deploy either x86 or ARM-based NFV infrastructure which meets their performance, cost and complexity requirements.

"NFV and SDN will revolutionize the next generation of networks. Together, they add flexibility, scalability, intelligence and reuse to almost every aspect of the network," said Adrian Neal, Technology Leader, Vodafone Group Services Ltd. "By leveraging ARM and x86 architectures and NFV, AMD is moving beyond just enabling enterprise and data center solutions, to the communications backbone where service providers need cost reduction and increased bandwidth."

"From the networks to the data center, the telecommunications landscape is rapidly changing as an explosion of devices and new methods of communication spanning videos, images and data drive the need for more efficient networking infrastructure," said Scott Aylor, corporate vice president and general manager, AMD Embedded Solutions. "Demonstrated by our first NFV demo on a 64-bit ARM-based SoC, AMD is moving forward with new ARM and x86 solutions that offer OEMS and telecommunications providers with innovative ways to more cost-effectively design, deploy and manage networking services."

"In collaboration with AMD and Aricent, we are enabling a flexible, efficient, open approach to addressing the needs of telecommunications subscribers and meeting performance requirements for rapidly-evolving infrastructure for deployment by telecommunications operators," said Charlene Marini, vice president of marketing, embedded segment, ARM. "The NFV solution on AMD's 64-bit ARM-based 'Hierofalcon' SoC delivers efficient platforms to accommodate the growing demands of subscribers and operators alike."

About the AMD NFV Demonstration
AMD showcased their first 64-bit ARM-based processor running virtualized Wireless Evolved Packet Core (vEPC) applications. Through a special technology collaboration with ecosystem partners ARM, Aricent, and Mentor Graphics, AMD demonstrated an embedded Linux®-based virtual NFV solution that showed a mobile packet core network running subscriber calls from simulated Evolved Node B (eNodeB) user equipment such as a cell phone or tablet with Serving Gateway (SGW), Packet Data Network Gateway (PGW), and Mobility Management Entity (MME) control and data plane functions hosted on the AMD Embedded R-Series platform. The demo also included a prototype version of the Mentor Embedded Linux development platform and Sourcery CodeBench tools. As part of this solution, AMD has also enabled the industry's first OpenDataPlane (ODP) demonstration with Evolved Packet Core applications on a 64-bit ARM processor in addition to Data Plane Development Kit (DPDK) on the AMD x86 processor and OpenStack to create the basis for an AMD NFV reference solution. The AMD NFV reference solution is performance optimized and can be utilized for service provider production deployments.

For a live demonstration, visit booth 613 at ARM TechCon from Oct. 1 - 3, 2014.

About the AMD Embedded R-Series SoC (Codenamed: "Hierofalcon")
The AMD Embedded R-Series SoC is the first 64-bit ARM Cortex™-A57-based platform from AMD targeting embedded data center applications, communications infrastructure and industrial solutions. It includes up to eight ARM Cortex-A57 CPUs and provides high-performance memory with two 64-bit DDR3/4 channels with error correction code (ECC) for high reliability applications. The integrated SoC includes 10Gb KR Ethernet and PCI-Express® Gen 3 for high-speed network connectivity, making it ideal for control plane applications. The AMD Embedded R-Series SoC also provides enhanced security capability with support for ARM TrustZone® technology and a dedicated cryptographic security co-processor, aligning to the increased need for secure, networked systems. The AMD Embedded R-Series SoC is expected to ship in the first half of 2015.

Supporting Resources

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