Solution Brief: CASwell CAR-3080 with ADVA Ensemble Connector

Verified Intel® Select Solution for Universal Customer Premises Equipment (uCPE) with leading ADVA Optical Networking Software Stack for Network Function Virtualization

Overview

ADVA Ensemble Connector is one of the world's leading high-performance NFVI software products (also described as an NFV network operating system) and currently in high demand by many industry sectors but especially by communication service providers (CoSP) to be deployed on the network edge or on customer premises (CPE). For this scenario, the CASwell CAR-3080 as Intel® Select Solution for uCPE with ADVA Ensemble Connector is the best solution because it's officially verified by both Intel and ADVA including guaranteed high performance and is preconfigured for quick and easy deployment.

ADVA Ensemble Connector

ADVA Ensemble Connector is a family of software applications that enables CoSPs and others to provide the virtual networking and virtual hosting functionality at the customer premises, in the gateway between network clouds, and in the data center. It enhances a standard Linux/KVM/OpenStack environment with an accelerated vSwitch, Carrier Ethernet and select Layer 3 functionality as well as carrier-class manageability and operationalization features.
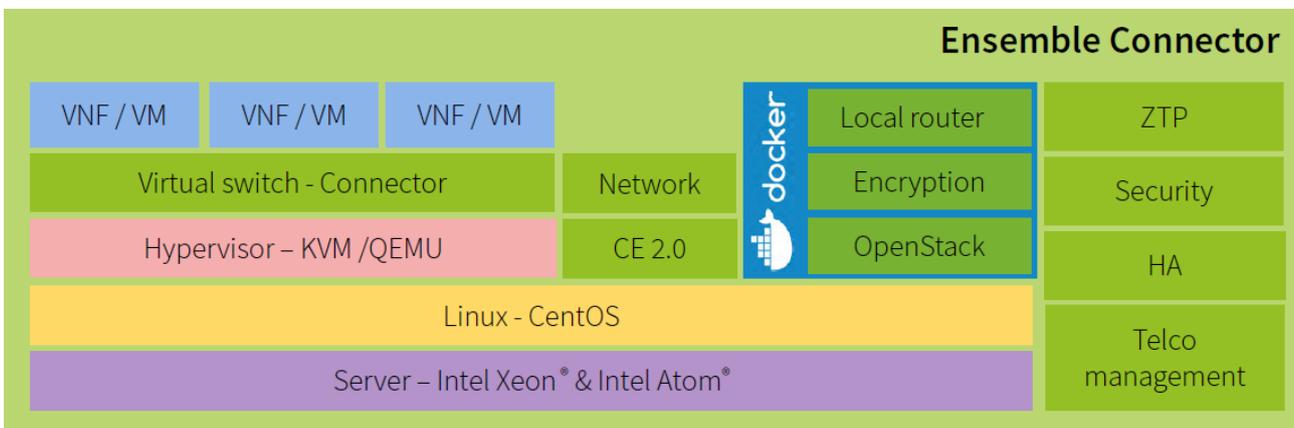
CoSPs know that virtualizing their network is key to enabling service revenue growth and operational agility and they need an enablement platform that provides high-throughput data path performance. The challenge for the CoSP is to provide a ubiquitous virtual networking platform that can host a variety of virtual network functions across different deployment configurations and ADVA Ensemble Connector is currently one of the best software solutions for this as it scales from small-footprint, edge applications to high-density, data center use cases.

Some competitive advantages of ADVA Ensemble Connector as NFVI software solution for uCPE applications include improved virtual switching with faster, more efficient and more consistent forwarding. Furthermore, with Ensemble Connector CoSPs are able to ship an un-configured server to a customer site and then provision it remotely and securely without the need for an onsite

technician.

One of the top use cases for ADVA Ensemble Connector is the deployment on customer premises as it enables uCPE applications with high performance, optimized cost and support for any virtual networking functionality. Operators can now reap the benefits of edge computing without the performance and cost penalties of the past.

CASwell CAR-3080 Intel Select Solution for uCPE with ADVA Ensemble Connector

The CASwell CAR-3080 rackmount appliance, a verified Intel Select Solution for uCPE with ADVA Ensemble Connector, was developed for the many aspects of multi-access edge computing and can be used for high-end computing with multiple virtual network functionality and software-defined networking. As an Intel Select Solution for uCPE with ADVA Ensemble Connector, the CASwell CAR-3080 brings the powerful performance of the Intel® Xeon® D processor to the network edge as part of a workload-optimized hardware and software stack that offers officially verified performance by Intel and ADVA. The compact 1U device platform easily fits into any rackmount cabinet and

includes PCI Express 3.0 slots for easy upgrades.

The CASwell CAR-3080 as an Intel Select Solution for uCPE with ADVA Ensemble Connector is based on the Intel® Xeon® D-2166NT processor with 12 CPU cores supporting Hyper-Threading for 24 parallel threads and is equipped with 32 GB DDR4-2133 main memory, Intel® Solid State Drive Data Center (Intel® SSD DC) S4510 with 480 GB and four 10-Gbit Ethernet ports by Intel X722 Dual-NIC. The Intel Xeon processor D-2166NT comes with integrated Intel® QuickAssist Technology (Intel® QAT) to accelerate encrypted data traffic in a secure network, reduce overall data size and lower storage demands by speeding real-time compression while at the same time offloading the CPU of some of the processing workloads.

Per customer choice the CASwell CAR-3080 can be enhanced almost endlessly with a standard NIC connected by PCIe x16 (can accommodate GPU or FPGA acceleration cards) and three patented NIPs that use PCIe x4/x8 for data transmission and packet acceleration. Each NIP and the NIC can offer up to eight Gigabit-Ethernet ports of their own but are also available in different configurations with 10-GbE, 25-GbE or even 40-GbE ports. Optional bypass switches ensure that the network keeps running even during maintenance or in case of power outages. PoE options are

also available when Power over Ethernet is needed besides delivering data - seemingly infinite possibilities of networking configurations!

Conclusion

The CASwell CAR-3080 high-end networking computing device as an Intel Select Solution for uCPE with the flexible and scalable ADVA Ensemble Connector software stack - globally deployed and carrying live services for more than 2 years - makes deploying easy and fast which is key for today's SDN/NFV applications. And due to its officially verified high performance when running multiple virtual network functions, testing and validation times are reduced so the time-to-market deployment is significantly accelerated.

The CASwell CAR-3080 is an Intel Select Solution for uCPE with ADVA Ensemble Connector is the ideal system for every CoSP, network operator or enterprise of almost all industry sectors who are looking for officially verified high performance with virtual network functionality on customer premises or on the network edge as it provides a winning combination of proven high-end hardware with the leading framework for network connectivity.

Find out more

CASwell CAR-3080 Intel Select Solution for uCPE with ADVA Ensemble Connector product page including ordering options:
https://www.cas-well.com/products/edge-fog-computing/nfv-servers/car3080-adva.html

Intel Select Solutions for uCPE:
https://builders.intel.com/intelselectsolutions/intelselectsolutionsforucpe

Intel Xeon D processor series:
https://www.intel.com/content/www/us/en/products/processors/xeon/d-processors.html

Intel Network Builders Ecosystem: https://networkbuilders.intel.com/

About CASwell

CASwell, Inc. was founded in 2007 by a group of engineers with a desire to create dynamic system solutions for embedded applications. While CASwell is a young company, it has proved itself to its customers with advanced technology, professional service and superior design and manufacturing capability by delivering a great portfolio of solutions based on Linux®. In 2014, the well-known IPC manufacturer Ennoconn Corporation (subsidiary of Foxconn Technology Group) decided to invest in CASwell, becoming the largest shareholder. CASwell has since become the subsidiary of Ennoconn, a member of Foxconn Technology Group. CASwell is dedicated to providing its customers with an unparalleled one-stop shopping experience for their network security and management needs. Find out more on the official website: https://www.cas-well.com/

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