Lanner

Lanner NCA-6210

Solution Brief

Verified by Intel® Select Solutions for NFVI v2 with Canonical Ubuntu

Overview

Communications service providers (CommSPs) are in the process of virtualizing their service platforms to gain flexibility, agility, and scale. Virtualization can be challenging and add complexity and unpredictability to network services. The Lanner NCA-6210 is a verified Intel® Select Solution for NFVI v2 with Canonical Ubuntu, based on a reference design from Intel that eases interoperability, provides stability, and speeds deployment, thereby addressing the challenges faced when choosing the right infrastructure on which to implement NFV-based services.

Upon the verification, NCA-6210 is integrated with pre-configured hardware and software optimal for NFVI deployments that provide CommSP partners with a reference design up through the virtualization layer that can be used as a baseline for structural validation when establishing performance metrics. This NFVi ready appliance will also accelerate the process of researching and deploying the virtualization-optimized network solutions required for future service applications.

Lanner NFVi-ready Appliance NCA-6210

The NCA-6210 will be Lanner's first NFVI-ready network appliance verified as an Intel Select Solution for NFVI v2 for service providers to accelerate their time-to-market NFV deployments. Optimized as a NFVI platform for virtualized network function (NFV) software, the Lanner NCA-6210 is a 2U x86 rackmount network appliance powered by dual 2nd generation Intel Xeon Scalable processors that each supports 26 cores and 384GB DDR4 memory capacity for powerful network virtualization applications. It also includes fully featured accelerators to offload packet encryption, computing and processing, C627 chipset with native Intel® QuickAssist Technology (Intel® QAT), Intel® Turbo Boost Technology, Hyperscan and Data Plane Development Kit (DPDK).

Designed with flexibility for NFVI service deployment, NCA-6210 features up to 8 NIC modules slots and takes advantage of Lanner's F.A.S.T. purpose-built modular kits. Developed to work with Lanner's high-end network computing appliances, these offer flexibility, adaptability, scalability and transformability by enabling connectivity and functionality, spanning from 10 to 25G copper/fiber interface, WiFi/LTE connectivity, NVMe SSD storage, 4K video transcoding and PCI-E

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expansion capabilities.

Intel® Select Solutions for NFVI v2 with Canonical Ubuntu

HW Configuration – Lanner NCA-6210

There are three configurations in the Intel Select Solution for NFVI v2 reference designs. There are two cloud node designs and one controller node design. Hardware specification is listed as below:

HW Configuration	Cloud Node	Controller Node
Model	NCA-6210D	NCA-6210D
CPU	2x Intel(R) Xeon(R) Platinum 8270 CPU @ 2.70GHz	2x Intel(R) Xeon(R) Platinum 8270 CPU @ 2.70GHz
Memory	384 GB DDR4 2666 MHz,	384 GB DDR4 2666 MHz
NIC	2x Dual Port 25GbE XXV710	2x Dual Port 25GbE XXV710
Intel QAT	Intel C627 Chipset	Intel C627 Chipset
Storage	Boot Drive: 2x Intel SSD D3-S4610 SERIES at 480GB Capacity: 4x Intel SSD DC P4510 SERIES at 2TB"	Boot Drive: 2x Intel SSD D3-S4610 SERIES at 480GB

Table 1: HW Configuration

Benchmark Testing

Intel and its solution definition partners have set minimum performance benchmarks for the Intel Select Solutions for NFVI to ensure that the design and software configuration deliver expected performance. Performance testing is specified for the following areas:

The **Performance** baseline benchmark shows that applications running on Intel Select Solutions for NFVI will offer performance targets for latency, memory bandwidth, and jitter. These metrics will demonstrate that the BIOS, advanced technology configuration, and software stack are configured according to the reference design.

Data Plane Development Kit (DPDK) improves packet processing efficiency and is a core platform technology component of the Intel Select Solutions for NFVI for all configurations. Compliant platforms must implement DPDK software and meet benchmark performance metrics.

Intel QAT is essential for high performance encryption/ decryption acceleration for the SSL layer 7 application in public key exchange as well as bulk encryption and decryption applications. This benchmark is designed to demonstrate how Intel QAT can efficiently address the growing needs for compression and critical encryption operations that are a growing portion of network traffic.

Conclusion

As a verified Intel Select Solution for NFVI v2 with Canonical Ubuntu, Lanner's NCA-6210 integrates balanced networking and optimized compute and storage options which provide acceleration for demanding encryption and compression workloads. The solution is based on well-known BIOS configurations, current instances of the middleware from host OS providers, and driver combinations that are regularly integrated and performance-tested to assure optimal performance. This optimized solution will enable operators to address the challenges faced when choosing the right NFV infrastructure and speed time to deployment.

Learn More

Lanner Intel Select Solutions for NFVI v2 with Canonical Ubuntu:
https://www.intel.com.tw/content/www/tw/zh/products/solutions/select-solutions/network/nfvi.html
Intel Select Solutions web page: https://builders.intel.com/intelselectsolutions
Intel Xeon Scalable Processor Family:
https://www.intel.com/content/www/us/en/products/processors/xeon/scalable.html
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