NEXCOM Launches NSA 7146, a Verified Intel® Select Solution for vCDN

Background:

CDN, also known as Content Delivery Network, is a cache mechanism that shares and loads content, usually video services, from a data center to users' network edge. The worldwide popularity of the Internet has also resulted in the Internet carrying increasingly more services, especially the aforementioned video services. Users often watch Internet video content through platforms such as YouTube, STB, OTT, and smartphones. Traditionally, video content has been stored in a central data center, where global users flock to for video service requests. This creates massive data loads at the data center, as well as increased latency due to the distance between end users and the data center.

Viewer behavior patterns are often similar and occur at the same time, in the same area. For example, an area's users may simultaneously watch a live baseball game. If the service provider places the game's video content as close as possible to the area, this reduces transmission delay and loading from the data center. Only video content not provided by the local content server will be redirected to the data center.

This so-called CDN architecture, provides high quality video services and reduces latency and transmission. CDN is already quite popular in broadband, and the 5G mobile network will push CDNs to a new level of demand.

Challenge: 5G will create a burst of video streaming

According to Cisco's Visual Networking Index's forecast of global Internet traffic, the proportion of smartphone usage will increase to 50% in 2022 from 23% in 2017, with 79% of mobile traffic in video format. Deployment of 5G infrastructure will result in greater bandwidth, which will also trigger greater demand of high quality video services.

However, video services on mobile networks are somewhat different from broadband networks. First, a variety of mobile devices in use means a variety in video resolution playback. Video service providers need to transcode video resolution to fit target mobile devices. Second, the quantity of mobile devices is

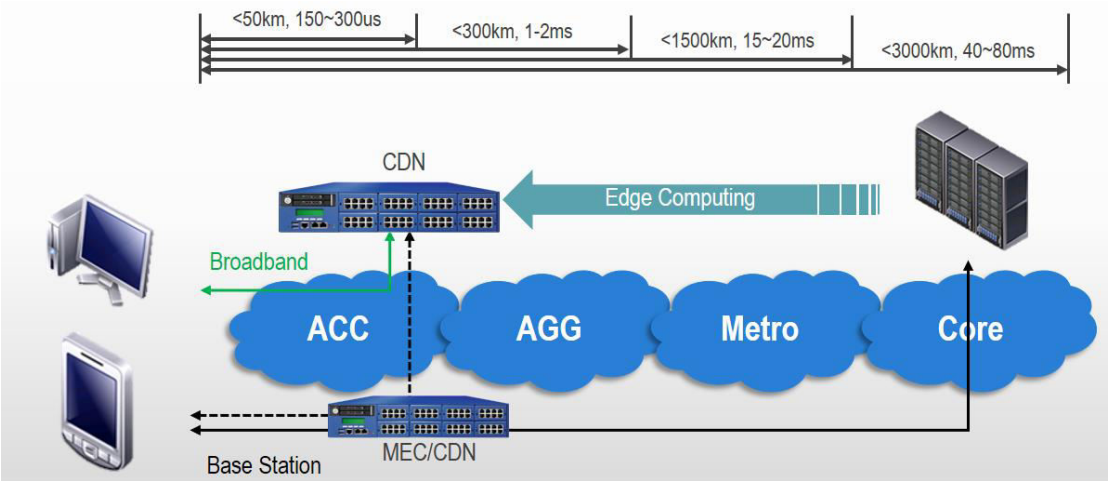
enormous and geographically spread, so providers will need efficient methods to distribute videos. Finally, conventional mobile networks still employ data centers to provide video content. In order to fulfill video demands in a 5G world, the 5G network infrastructure needs a CDN architecture that's able to provide high performance video transcoding and distribution with low latency.

Solution: vCDN provides video services with low latency

To meet these demands, Intel® has published a list of "Intel® Select Solutions for vCDN." All verified solutions have completed a list of CDN test sets and meet certain criteria, including OpenSSL speed benchmarks, video transcoding, and video distribution. This program helps users find suitable platforms to build their CDN infrastructure. NEXCOM has been a long-term partner of Intel® and is honored to announce the NEXCOM NSA 7146 was verified an Intel® Select Solution for vCDN.

The NSA 7146 offers a 2U rackmount network appliance based on the 2nd Generation Intel® Xeon® Scalable processor family and delivers a workload-optimized platform for CDNs. The NSA 7146 features enhancements to computing performance through its dual scalable processors and flexible NEXCOM Ethernet modules, with speeds of 1GbE to 100GbE. The embedded C627 chipset supports Intel® QuickAssist Technology (Intel® QAT) to accelerate heavy network encryption/decryption from the CPU. FFmpeg and NGINX provide quick media transcoding and video distribution. The NSA 7146 also includes IPMI 2.0 remote management and swappable system fans for simple operation and easy maintenance. In addition, the CRPS redundant power supply prevents service interruptions caused by single PSU failures.

Figure 1. CDN provides video services with low latency



Conclusion:

In committing to being customers' long-term supplier, NEXCOM focuses on powerful computing and network technology and helps customers build a superior infrastructure to face the rapid changes of a near-future 5G world.

NSA 7146 is a CDN platform that provides high performance video transcoding and video distribution capacity. By deploying at the edge, it also delivers video services with low latency. The NSA 7146 should be your choice for building a content delivery network infrastructure to meet the challenges of a 5G environment.

Table 1: Detailed vCDN configuration and specifications.

Item	**Specifications**
Server Name	NSA 7146
Processor	2xIntel® Xeon® Gold 6252 processors at 2.1 GHz
DRAM	12x32G DDR4 at 2666 MHz
Network Controllers	Intel® XXV710-AM2
Intel® QAT	C627
Intel SATA SSDs	2* 480GB intel SSD SATA
Intel® 3D NAND SSDs	4* 2.0T intel P4510 NVMe
LAN on Motherboard	4x10G SFP+
SOFTWARE	
Operating System	RHEL Server 7.6 https://access.redhat.com/ecosystem/hardware/4182101
Caching Frameworks	NGINX*, Apache Traffic Server (ATS)
Media Libraries	FFmpeg, Media Service Studio*, Scalable Video Technology

For more information, please click the following link:
http://www.nexcom.com/Products/network-and-communication-solutions/edge-cloud-solutions/datacenter-appliance/datacenter-appliance-nsa-7146