

# ACCELERATING TIME TO MARKET FOR HIGH-PERFORMANCE ANALYSIS APPLIANCES

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ntop, the renowned traffic monitoring software expert, and Napatech, the world's largest vendor of accelerators for network management and security applications, have identified a need for faster appliance development. By combining the strengths of Napatech accelerators with ntop's portfolio of network monitoring software, network equipment vendors can build analysis appliances that can gain insight into any Ethernet-based network at speeds up to 40 Gbps. These appliances can, at the same time, shorten development cycles, time to market and time to revenue.

## **FASTER APPLIANCE DEVELOPMENT**

The complexity of modern networks and the time critical nature of many applications require sophisticated network management and security solutions. This places pressure on vendors to assemble the necessary skills and expertise to keep abreast of the latest developments in hardware, software, networking and specifics of applications, such as security algorithms, protocol testing or vertical-specific standards.

Appliance vendors are seeking ways to accelerate their development processes while assuring customers can reliably increase the performance of their solutions. A process for building appliances must include all the critical components that are required, delivered in a manner that allows appliance vendors to focus on their core application.

## **NETWORK TRAFFIC GROWTH**

Gaining insight into how applications and network resources are being used has now become crucial. Changing traffic patterns make it harder to keep up using traditional network and service management methods.

In data centers, traffic patterns have changed from the traditional north-south communication from clients to servers to the east-west communication associated with server-to-server communication. Now, the same change in traffic patterns is emerging in carrier metropolitan networks.

According to a recent Bell Labs report, "Metro Network Traffic Growth: An Architecture Impact Study," video services will be cached deeper in the metro network to assure better Quality of Experience (QoE). This will mean that the vast majority of traffic will be terminated in the metro network rather than in the core backbone network. So, instead of the traditional north-south communication from subscriber to core, east-west traffic will increase within the metro network. Total metro traffic is expected to jump to 560% in 2017 with 75% of this traffic being terminated in the metro network.

Changing traffic patterns that break traditional north-south paradigms force a rethink on how networks are managed and secured. Comprehensive, real-time insight is the first important step in assuring network quality and security, as you cannot manage what you cannot see. The next important step is to understand what you have seen. For this, the ability to store information in real time becomes critical.

## **COMBINING DE FACTO INDUSTRY STANDARDS**

Both ntop and Napatech have addressed the need for faster appliance development and real-time insight independently over the last few years. ntop network monitoring software enables standard server hardware and network interface cards to be used for analysis applications. ntop provides software for zero-loss packet capture, capture-to-disk and traffic generation applications optimizing the performance of Commercial Off-The-Shelf (COTS) hardware. This has made ntop software and interfaces the de facto standard for packet capture applications in both commercial and open source communities.

Napatech accelerators for network management and security applications provide a guaranteed, reliable stream of data with off-load and acceleration capabilities. ntop software provides the critical building blocks required of modern appliances in a form and with interfaces that are recognizable and compatible with many commercial and open source tools. This combination

provides a high-performance, reliable platform for appliance development “out of the box,” greatly accelerating the development cycle for analysis appliance vendors.

### **CAPTURING, STORING AND REPLAYING REAL-TIME DATA**

By combining ntop’s n2disk solution with Napatech accelerators, it is possible to provide a capture-to-disk solution that can capture and store all packet data in real time at speeds of 10 Gbps. This is fast becoming a major requirement for regulatory and troubleshooting needs. But, storage of captured data is also important in solutions that need to compare real-time data with previously captured data to detect anomalies that can signal performance degradations or security breaches. Capture-to-disk is therefore becoming a critical requirement for many appliance applications.

Implementing capture-to-disk requires expertise and experience that is not always available to the appliance vendor. The ntop and Napatech solution will provide appliance vendors with a proven and tested capture-to-disk solution that can form a foundation for their appliance development. This will greatly accelerate their development efforts. They can now focus efforts and resources on their core application, rather than the critical components of the appliance platform.

In addition, with the ntop disk2n solution it is possible to replay captured traffic at full line-rate with complete control. This can be useful in troubleshooting scenarios where it is possible to replay traffic that could have caused a problem in the network or in servicing a customer complaint. For security applications, it is possible to capture a synthetic attack scenario, such as a Distributed Denial of Service (DDoS) attack and use disk2n to replay the attack for simulation purposes. When combined with Napatech’s capability to provide nanosecond precision synchronization of traffic generation at multiple locations, the disk2n solution provides a powerful simulation tool for both network management and security.



ntop was founded by Dr. Luca Deri in 1998 to address the need for solutions that could help accelerate the development of network traffic monitoring appliances.

The original ntop software was a web-based monitoring application, which has since been expanded upon to include the PF\_RING™ DNA, a widely used software API for accelerating packet capture performance on standard network interface cards.

PF\_RING is widely used in both commercial and open-source development communities making it a de-facto standard for analysis application development. It is also the foundation for additional software components that improve performance and provide additional capabilities, such as n2disk capture-to-disk and disk2n traffic generation software. ntop is headquartered in Mountain View, California.

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Napatech is the world leader in accelerating network management and security applications. As data volume and complexity grow, the performance of these applications needs to stay ahead of the speed of networks in order to do their jobs. We make this possible, for even the most demanding financial, telecom, corporate and government networks. Now and in the future, we enable our customers’ applications to run faster than the networks they need to manage and protect.

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