

Accelerators for Network Analysis

# NAPATECH SOFTWARE SUITE

## **FAST, EASY INTEGRATION AND ON-THE-FLY CONFIGURATION**

Napatech Software Suite provides a well-defined application programming interface as well as support for the well-known, open-source interface libpcap and the Windows variant called WinPcap. This allows programmers to quickly integrate Napatech accelerators for network monitoring and security applications into their system.

In addition, Napatech Software Suite provides advanced features for data sharing and merging supporting multi-accelerator and multi-application integration.

A common API is provided for all Napatech accelerators allowing plug-and-play operation.

An intuitive, easy-to-learn, yet powerful programming language is also provided to allow dynamic, on-the-fly configuration of filtering and intelligent multi-CPU distribution on Napatech accelerators.

## **FEATURE HIGHLIGHTS**

- NTAPI: Common API for all Napatech accelerators
- Simple programming interface allowing fast integration
- Zero copy transfer of data to host
- Zero copy transfer of data between accelerators
- Packet-based interface providing abstraction of hardware details
- Advanced features including:
  - Data merging of port data from multiple accelerators into a single data stream
  - Data sharing of captured data between multiple customer applications without the need for replication

## **NAPATECH-SUPPORTED APPLICATIONS**

Napatech Software Suite is ideal for applications that require multiple high-speed ports and accelerators. Data merging functionality is provided to support accurate merging of data from multiple ports and accelerators into a single stream for analysis.

Data sharing functionality allows multiple applications to be hosted on the same server with data distributed to each application using the Napatech accelerators' intelligent flow distribution capabilities.

The ability to support all types of Napatech accelerators with a single API allowing OEM vendors to support a range of product variants using a single application development effort.

## ONE SOFTWARE SUITE FOR SEAMLESS INTEGRATION AND MIGRATION

Our comprehensive software suite ensures that our accelerators are widely compatible and easy to integrate.

From support for all major operating systems, to the common API for all products, we keep your learning curve to a minimum and provide an efficient migration path for next-generation network speeds. This can help you reduce time-to-market for new products, while reducing risk.

### Software development tools

Napatech provides a number of command line tools and application example source code to be used by customers for evaluation, prototyping, diagnostics or getting a head start in application software development.

### Customer Applications

Our customers can stay ahead of the data growth curve by creating high performance network management and security applications, based on Napatech accelerators.

### On the fly reconfiguration of features and capabilities

Designed for ease-of-use, the Napatech programming language (NTPL) can be used within application software, in configuration scripts (for hash values and filters) or it can be executed on the fly using the command line NTPL tool.

### One interface for quick and easy integration

We provide one application programming interface for all our accelerators to reduce integration time for new products. The hardware abstraction it provides also allows for migration to higher speeds by simply replacing the hardware.

### 3rd party software

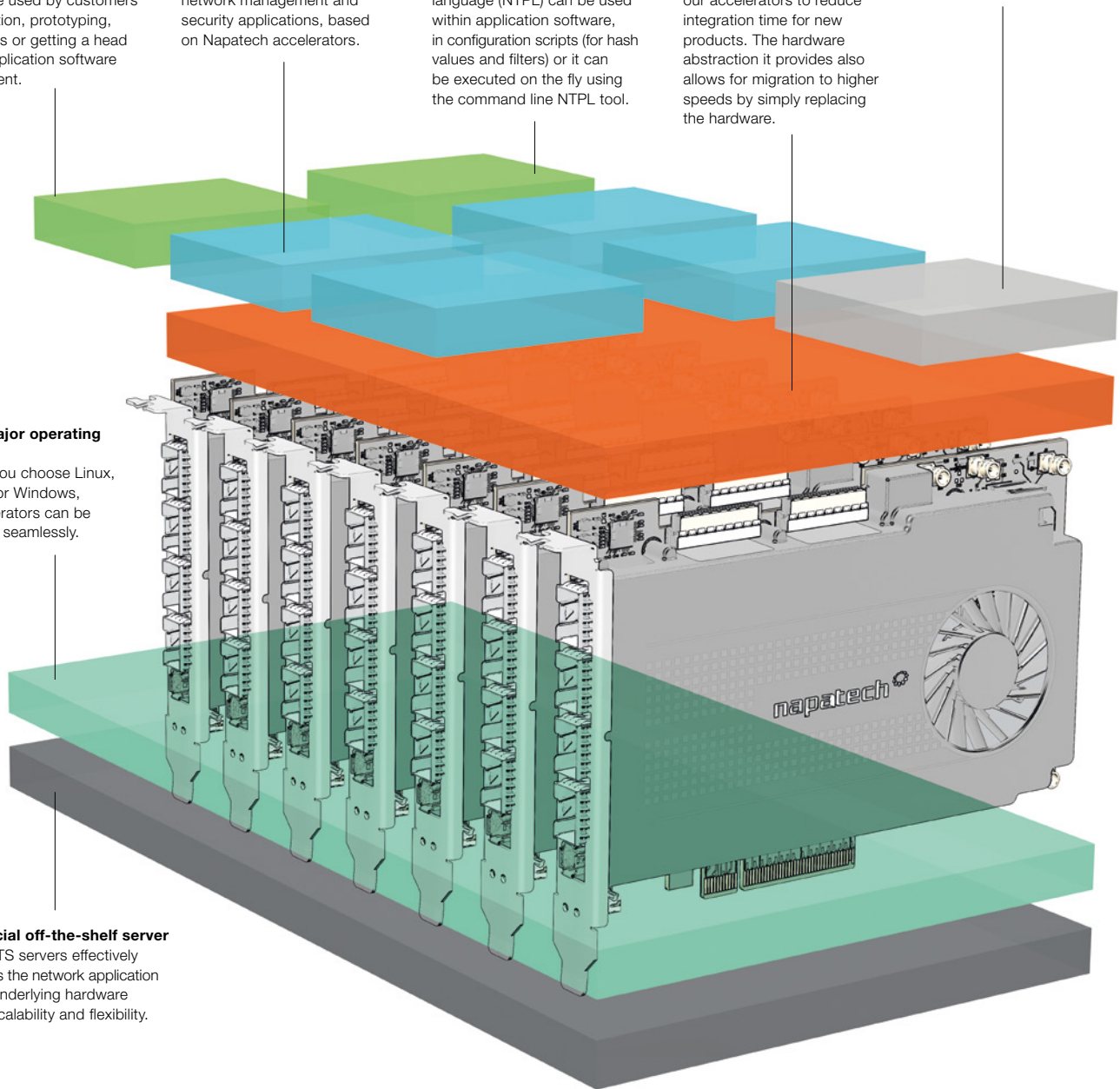
A growing range of partners provide value adding applications

### For all major operating systems

Whether you choose Linux, FreeBSD or Windows, our accelerators can be integrated seamlessly.

### Commercial off-the-shelf server

Using COTS servers effectively de-couples the network application from the underlying hardware allowing scalability and flexibility.



## APPLICATION PROGRAMMING INTERFACES

### PACKET CAPTURE INTERFACES

The libpcap and WinPcap packet capture interfaces are widely used interfaces in open-source applications, such as Wireshark, Ethereal, TCPdump, TCPReplay and more. libpcap is available on Linux and FreeBSD and WinPcap is available on Windows. They provide excellent starting points for development of network monitoring and analysis appliances.

libpcap and WinPcap are supported by the NTAPI interface allowing existing implementations using libpcap or WinPcap to quickly use Napatech accelerators. The NTAPI provides additional features that are not available via the libpcap or WinPcap interfaces, but can be configured using the Napatech Programming Language (NTPL).

### NAPATECH SOFTWARE SUITE NTAPI

Napatech Software Suite supports the Napatech Application Programming Interface (NTAPI), which is a packet-based interface designed to make programming and integration quicker and easier. While NTAPI is packet-based, it also supports a segment-based mode.

The NTAPI interface provides a hardware abstraction, so programmers do not need to know or manage details of the individual accelerators, which in turn reduces the complexity and potential for errors.

The NTAPI interface is thus ideal for system configurations where multiple accelerators are used. The accelerator ports can be treated individually or can be merged in groups, allowing more efficient data management and distribution.

### COMPARING APPLICATION PROGRAMMING INTERFACES

libpcap and WinPcap are widely used interfaces, which makes integration of Napatech accelerators quick and easy. However, to fully benefit from the acceleration and off-load features provided by Napatech accelerators, it is recommended that the Napatech NTAPI interface is used. In addition, NTAPI provides a simple interface where many of the details are managed by Napatech Software Suite and multi-accelerator configurations are easily supported including extra features for data merging of multiple ports and data sharing between multiple host applications.

The following table provides a brief overview of the differences between the interfaces.

Feature	libpcap and WinPcap	libpcap and WinPcap with NTPL	Napatech Software Suite NTAPI
Zero copy transfer to host (OS bypass)	✓	✓	✓
Zero copy transfer between accelerators			✓
Merging of port data from a single accelerator	✓	✓	✓
Merging of port data from multiple accelerators	✓	✓	✓*
Data sharing between multiple applications	✓	✓	✓
Packet classification		✓	✓
Advanced filters		✓	✓
Packet coloring / tagging			✓
Hash key generation			✓
Intelligent multi-CPU distribution		✓	✓
Deduplication		✓	✓
Local retransmit		✓	✓
Host-based transmit	✓	✓	✓
Statistics			✓

\* Best performance

### NAPTECH PROGRAMMING LANGUAGE (NTPL)

#### PROGRAMMING LANGUAGE FOR RAPID CONFIGURATION

NTPL is an easy-to-understand text-based configuration language, which abstracts the details of accelerator hardware implementation from the application developer allowing faster code development.

The NTPL language can be used for configuration of features on the accelerator, such as filters, hash key generation, deduplication and local retransmit.

### ON-THE-FLY CONFIGURATION

NTPL is designed for on-the-fly configuration of Napatech accelerator features. Commands can be sent using a tool provided by Napatech.

NTPL can also be used to configure filters when using a libpcap interface.

### OPERATING SYSTEM SUPPORT

The following operating systems are supported by Napatech Software Suite.

	Versions	Napatech Software Suite
Linux	2.6.18 or later 2.6.x releases inclusive 64-bit	✓
	3.0 to 3.16 inclusive 64-bit	✓
FreeBSD	8.x 64-bit	✓
	9.x 64-bit	✓
	10.x 64-bit	✓
Windows	Server 2003, 2003R2, 2008 32- and 64 bit	✓
	Server 2008R2, 2012, 2012R2 64 bit	✓
	7, 8, 8.1 and 10 32- and 64 bit	✓

Additional operating system support is constantly added. Contact your sales representative for more information on planned operating system support.

### COMPANY PROFILE

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.

### Napatech. FASTER THAN THE FUTURE

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