

SOLUTION DESCRIPTION

50% data reduction with built-in deduplication

Duplicate packets are a major burden for today's network monitoring and security applications. In worst cases, more than 50% of the received traffic is sheer replication.

This not only adds excessive pressure in terms of bandwidth, processing power, storage capacity and overall efficiency. It also places severe strain on operations and security teams as they end up wasting valuable time chasing false negatives.

Napatech's intelligent deduplication capabilities solve this by identifying and discarding any duplicate packets, thus enabling a 50% reduction in application data load.

More than 50% duplicates

For passive monitoring and security applications, duplicate packets can make up more than 50% of the total traffic volume. This is partly due to TAP and aggregation solutions collecting packets from multiple points in the network - and partly due to misconfigured SPAN ports; a much too common issue in today's datacenters.

Solution: intelligent deduplication

With deduplication built in via a SmartNIC in the appliance, it is possible to detect up to 99.99% of the duplicate packets. By analyzing and comparing incoming packets with previously received/stored data, deduplication algorithms discard any replicas, thus easing the burden on the system and greatly optimizing performance.

Significant cost benefits

By adding deduplication in hardware via a Napatech SmartNIC, significant cost

benefits can be achieved at various levels:

1. At a performance level

For the vast majority of capture deployments, deduplication will dramatically save system resources. By efficiently discarding redundant copies, deduplication can reduce the processing load, PCIe transfer, system memory and disk space requirements by as much as 50%.

2. At an operational level

At an operational level, the main issue with duplicate packets is that they distort the overview. But with deduplication, operations and security teams avoid wasting valuable time investigating false positives.

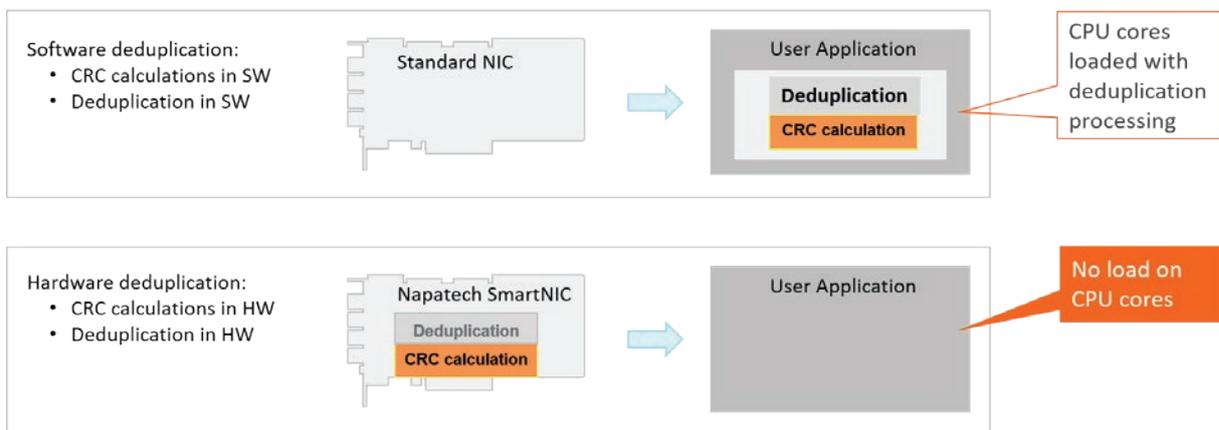
3. At an application level

Similar functionality is available on network packet brokers, but for a

sizeable extra license fee. On Napatech SmartNICs, this is just one of several powerful features delivered at no extra charge.

Key features

- Deduplication in hardware up to 2x100G
- Deduplication key calculated as a hash over configurable sections of the frame
- Dynamic header information (e.g. TTL) can be masked out from the key calculation
- Deduplication can be enabled / disabled per network port or network port group
- Configurable action per port group: Discard or pass duplicates / Duplicate counters per port group
- Configurable deduplication window: 10 microseconds – 2 seconds



Deduplication in hardware offloads all packet deduplication processing from the application