



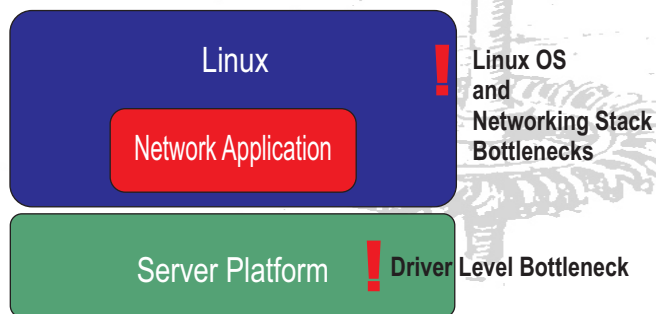
6WIND solves performance challenges for network application developers, enabling them to outpace the competition with a fast path architecture. 6WINDGate™ packet processing software is optimized for generic hardware with a choice of multicore processors to deliver a wide variety of networking and security protocols and features on top of standard Linux. 6WINDGate offers a cost-effective value proposition, enabling the transition to the future with Software-Defined Networks (SDN) and Network Functions Virtualization (NFV).

**Increase Data Plane Performance  
No Change To Linux Environments  
Available Across All Major Platforms  
Support Extensive Set Of Protocols**

L2-L4 Acceleration  
IPsec VPN Gateways  
TCP / UDP Termination  
Virtual Switching  
DPDK  
And More...



## Performance Bottlenecks



# Packet Processing Software

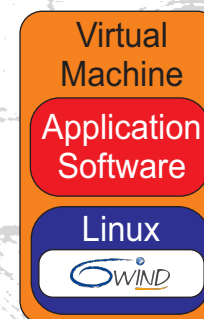
## 6WINDGate Deployment Options



**Non-virtualized environment**

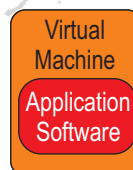


**Host OS for switching and other functions**

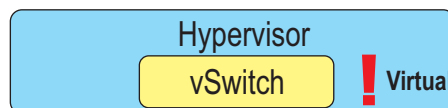


**Guest OS with application functions**

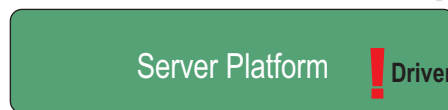
To provide maximum data plane performance, 6WINDGate implements a packet processing engine running on dedicated cores, isolated from the Linux operating system, called the fast path. The same source code supports heterogeneous multicore processor hardware from Broadcom, Cavium, Intel and Tilera. 6WINDGate leverages the processor SDK to process packets directly in the fast path without involving the Linux networking stack. As an example, on Intel platforms, it leverages the Data Plane Development Kit (DPDK). The fast path architecture is transparent to Linux, so that existing applications do not need to be modified. The fast path supports major networking protocols (VLAN, IPsec, NAT, TCP/UDP Termination and more), as well as Open vSwitch acceleration and Fast vNIC drivers.



**Virtual Machine Bottleneck**



**Communications Bottleneck  
Host vs Guest OS**



**Driver Level Bottleneck**

## Target Markets

### Service Provider

More products equal more revenues. 6WINDGate transparently accelerates Linux-based VM and hypervisor network environments to provide 10x network performance improvements compared to standard software architectures. This includes routing, IPsec, firewall, NAT, TCP/UDP Termination and more. Service Providers benefit from rapid product development with bare metal performance for NFV applications to deliver new services quickly.

### Cloud Provider

Cloud Providers with virtualized environments rely on 6WIND to unlock additional required performance. By providing Fast vNIC drivers and an over 10x performance improvement to standard Open vSwitch, 6WINDGate enables Cloud Providers to leverage their data center expertise to offer increased services and products, including enabling high performance SDN, NFV and virtualization implementations to automate and simplify operations, and quickly enable new services.

### Enterprise

6WINDGate packet processing software provides a high-performance data plane solution with all the networking protocols required for both software-based and virtual network appliances. The 6WINDGate protocols are optimized to fully leverage the performance features of commodity multicore processors, including support for on-chip security accelerators. Through these enhancements, enterprises are able to achieve the level of networking performance that is a critical enabler for the deployment of physical or virtual network appliances.



# At The Heart Of A Rich Ecosystem

## Smart NICs



## Ethernet NICs



## OS and Hypervisor



## Multicore Processors



## Hardware Platforms



## 6WINDGate Comprehensive Protocol Support Optimized For Multicore Fast Path Processing

Control Plane	Routing/Virtual Routing	OVS	Security
	BFD	SMR	L2TP PPPoE BRAS
	VRRP	LACP	VPN Monitoring

Fast Path	VLAN	Link Aggregation	GRE	MPLS/VPLS Encapsulation	Ethernet Bridging
	IPv4/IPv6 Forwarding	IPv4/IPv6 Multi-cast	Tunneling (IPinIP)	NAT	Filtering IPv4/IPv6
	IPsec IPv4/IPv6	IPsec SVTI	QoS	Flow Inspection	TCP/UDP Termination
	OVS Acceleration	VXLAN	L2TP/PPPoE BRAS	GTP-U	



Performance  
(Millions Of Packets Per Second)

Performance Benefits  
Scale With Number  
Of Cores

10X Performance

6WINDGate Accelerated

Standard Linux  
Becomes Unstable

Number Of  
Processor  
Cores

Accelerated Open vSwitch: **200 Gbps**  
IPv4 and IPv6 Forwarding: **10 Mpps per core**  
IPsec: **190 Gbps**  
TCP/UDP Termination: **5 million sockets per second**  
vBRAS Network Functions Virtualization (NFV):  
**256,000 PPP tunnels with 800 tunnels per second**

**Speed  
Specs**