

Ixia Phantom vTap™



Overview

The Ixia Phantom vTap™ is a software solution that supports all leading hypervisors (VMware vSphere, Microsoft Hyper-V, Citrix XenServer, and more), to provide customers 100 percent visibility of their virtual traffic.

Virtual Taps – Phantom Monitoring Solution

Security and performance monitoring tools in the market today are not capable of delivering a comprehensive, raw view of traffic traversing virtual switches. This is because they do not have access above the internal virtual switch layer within the hypervisor. The Ixia Phantom vTap deploys a Partner-Certified kernel module plugin that resides in the hypervisor kernel, passively monitoring all inter-VM traffic and capturing only traffic of interest – enabling the customer to forward the packets to any end-point tool of choice, whether physical or virtual; local or remote to achieve full visibility and verification across their networks.

With integration at the hypervisor kernel level, the Phantom vTap is an out-of-band monitoring solution that does not affect the production traffic flow, nor require any services or agents to be installed on the virtual machine or application layer. This approach eliminates the need to sacrifice any virtual resources such as vCPU, vRAM, and storage. The Phantom vTap is vSwitch agnostic, supporting the vSS, vDS, and third-party virtual switches, including Cisco Nexus 1000v, and IBM 5000v.

Key Benefits

- Enable proactive monitoring and security of virtual data centers
- Optimize user experience with improved troubleshooting
- Meet SLAs and compliance requirements (SOX, PCI, HIPAA)
- Resolve root causes and reduce mean time to resolution (MTTR)
- Increase ROI and lower TCO of existing tools
- Retain 100% of system resources
- Control multiple Phantom vTaps with centralized management





The Ixia Phantom vTap can mirror all traffic within the virtual switch, apply smart TapFlow™ filtering, and send only traffic of interest to any monitoring tools of choice. Virtual traffic is bridged to the physical wire in a GRE- or VLAN-encapsulated tunnel that can be terminated by an Ixia xFilter™ or any other capable end-point termination tool of your choosing. You also gain total access and control of your security and performance monitoring needs with the vTap's easy-to-use web UI. The Phantom vTap is an all-in-one solution providing unified, centralized management via a "single pane of glass."

The Virtual Monitoring Challenge

Enterprises have been utilizing tap solutions for network traffic access for many years. Traffic capture, analysis, replay, and logging are now part of every well-managed network environment. In recent years, the significant shift to virtualization, with penetration exceeding 50 percent, is yielding great efficiency benefits. However, today's virtualization-based deployments create challenges for network security, compliance, and performance monitoring. This is because Inter-VM traffic is optimized to speed up connections and minimize network use on the physical core network switches. Such optimization can make traffic invisible to physical tools unable to extend easily into the virtual environments. Costly new virtualization-specific tools plus training can affect the economic benefits and cost-savings of virtualizing. Currently, many tools suffer from limited throughput, hypervisor incompatibility, and excessive resource utilization.

Next-generation data centers use virtualization technology to deploy private/public cloud environments on a single physical server or across a clustered group of servers, local and remote. Traditional taps cannot see the traffic between VMs that reside on the same hypervisor (east-west traffic), nor can they "follow" VMs as they are migrated from one host to another.

Visibility is further reduced by the complexity of blade servers that have each blade running multiple VMs on a hypervisor. Traffic running on blade servers shares a common backplane and creates a network blind spot, since the physical network and its attached tools are unable to see traffic above the virtual switch layer or the blade chassis network modules.

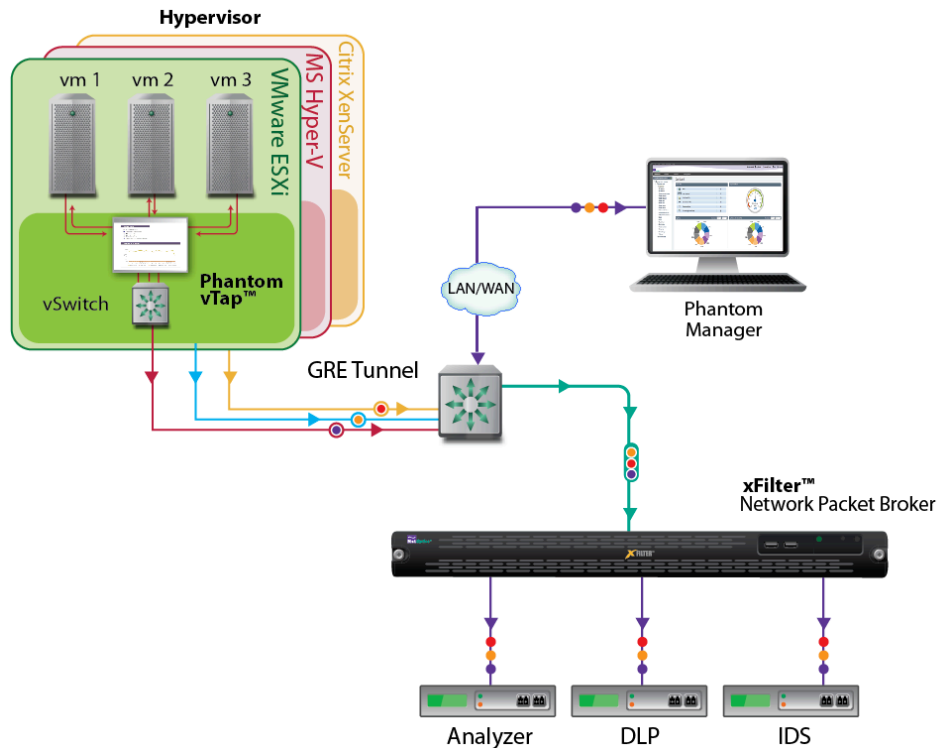


Figure 1 – Phantom vTap deployment scenario

Key Features

- Enables 100 percent visibility of east-west, inter-VM, and blade server mid-plane traffic
- Offers a Partner-Certified kernel module option solution with full access to network packets passing between VMs on hypervisor stack
- Provides TapFlow, multi-layer L2-L4 filtering engine
- Supports best-of-breed hypervisors – VMware vSphere, Microsoft Hyper-V, Citrix XenServer
- Supports vSS (virtual standard switch), vDS (virtual distributed switch), and third-party virtual switches (Cisco Nexus 1000v) for a switch-agnostic solution
- Sends traffic to any existing end-point appliance (tool agnostic)
- Follows UUID of VM for 100% visibility throughout migration (VM-level monitoring)
- Supports vMotion and DRS
- Enables proactive monitoring and security of virtual data centers
- Maximizes user experience by increasing troubleshooting capabilities
- Meets SLAs and compliance requirements (SOX, PCI, HIPPA)
- Helps resolve root causes to reduce MTTR through visibility and verification
- Allows retention of 100% of system resources by eliminating any need to install agents or services in the VM or application layer
- Increases ROI and lowers TCO of existing security and performance monitoring tools
- Allows control of multiple Phantom vTaps (included software component) for centralized management

Specifications	
Supported Hypervisors	<ul style="list-style-type: none"> VMware vSphere ESXi Server 5.0/5.1 Microsoft Hyper-V 2012 Citrix XenServer 5.6 KVM
Network Connectivity	<ul style="list-style-type: none"> Phantom Manager VM must be accessible via HTTP to access Web UI TCP port 80, 443, and 5989 must be open between Phantom Manager VM and VMware vCenter server
Disk Storage	<ul style="list-style-type: none"> Thin provision 3.1 GB Thick provision 60 GB
CPU	1 vCPU
Memory	<ul style="list-style-type: none"> 1 GB minimum 2 GB recommended
Web Browser	Google Chrome, Internet Explorer

Hypervisor Support Matrix				
	VMware vSphere	Microsoft Hyper-V	Citrix XenServer	KVM
GUI Support	X			
Centralized Mgmt	X			
vMotion Support	X			
Kernel Module	X	X	X	X
TapFlow Filtering	X	X	X	X
GRE Transport	X	X	X	X
VLAN Transport	X			
Version Support	5.0/5.1	2012	5.6.x	(Coming Soon)

Ordering Information

PT-1vTAP-1YR

954-4080. Phantom vTap, 1 year subscription

Software virtual tap solution includes Phantom vTap kernel module for VMware vSphere environments. 1 vTap license subscription required for each physical host. Must be renewed annually and expires exactly 12 months from initial install date.