

# Brocade Virtual Packet Broker

## HIGHLIGHTS

- Provides comprehensive network visibility, helping to secure, monitor, optimize, and monetize virtualized networks
- Scales dynamically to meet compute capacity requirements during surges in network traffic
- Improves operational efficiency by automating resource provisioning and simplifying feature additions
- Enhances monitoring productivity by allowing the dynamic modification of flow definitions and traffic optimization functions within the Brocade virtual network visibility infrastructure

## Scalable Network Visibility for Virtualized Service Provider and Enterprise Networks

The virtualization of networking functions across service provider, data center, and enterprise networks has grown significantly as network operators embrace next-generation architectures to improve service agility and operational efficiency. While providing valuable benefits, network virtualization also presents a new set of operational challenges. Networking functions residing on Virtual Machines (VMs) are vulnerable to malicious attacks that can spread to other functions and services. In addition, monitoring virtualized network functions for performance, service quality, and user impact can be extremely challenging.

Network performance monitoring, dynamic resource orchestration, and issue remediation are critical to maintaining network health and performance in virtualized environments. Most network visibility solutions, however, are designed for hardware-centric networks. Today's network operators therefore need an effective, highly scalable network visibility and monitoring solution for virtual networks.

### A Comprehensive Network Visibility Solution for Virtualized Networks

Brocade® Virtual Packet Broker (Brocade vPacket Broker) delivers a full-featured network visibility solution for virtualized service provider and enterprise networks. It offers an end-to-

end set of capabilities—including traffic interception, filtering, load balancing, and optimization—to maximize the productivity of network monitoring and analytics tools.

### Dual Deployment Options

Brocade vPacket Broker can be deployed as a virtual tap or as a virtual broker (see Figure 1). As a virtual tap, it resides as a lightweight VM within the monitored VM environment, interacting with the overlay network to receive replicated east-west traffic. It then forwards the replicated traffic to physical or virtual network packet brokers, or to network monitoring tools, through GRE or VXLAN tunnels. A virtual tap deployment also supports traffic optimization capabilities, such as filtering and timestamping, to enhance the productivity of recipient network visibility and analytics tools.

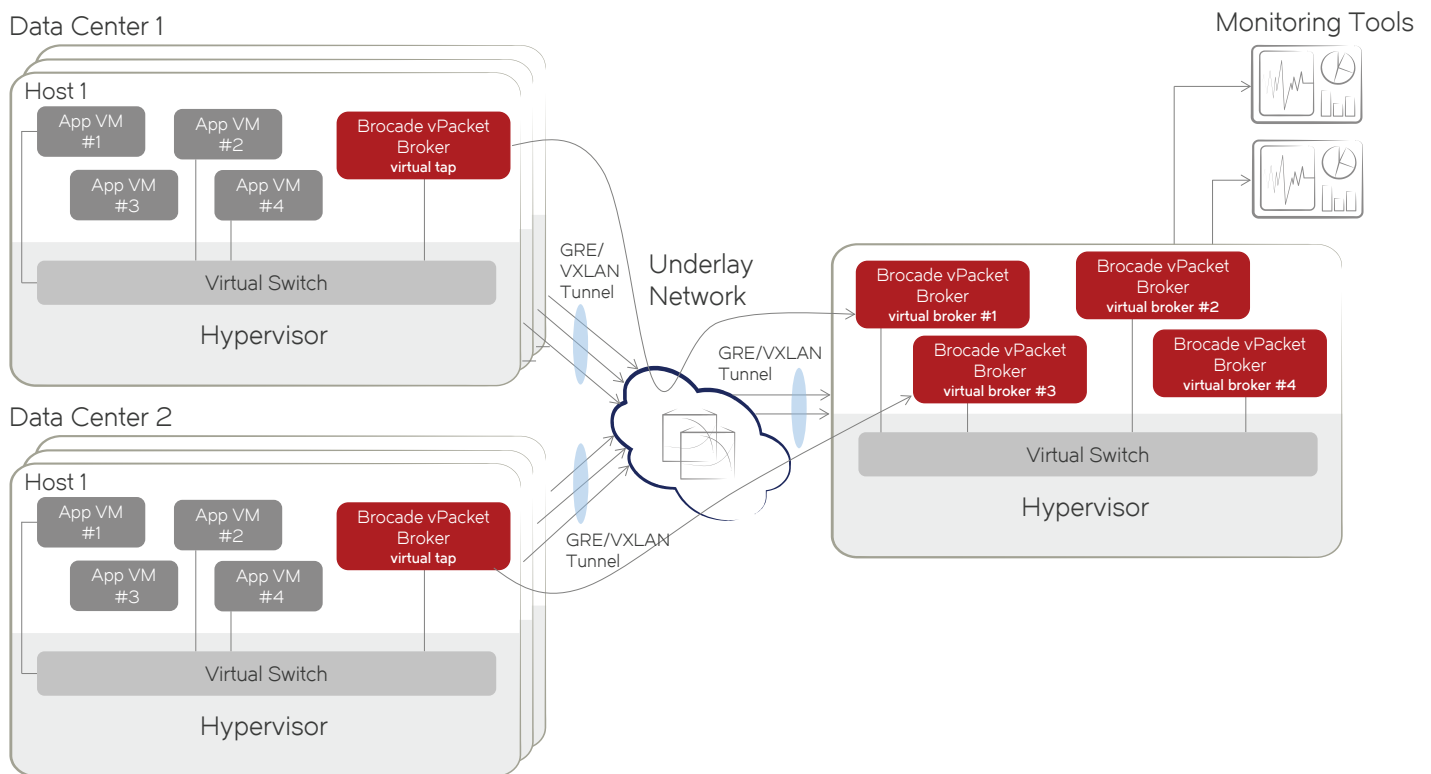


Figure 1: Brocade vPacket Broker deployment architectures.

When deployed as a virtual broker, Brocade vPacket Broker resides outside the monitored VM environment, aggregating traffic flows from multiple Brocade or third-party virtual tap instances. A virtual broker deployment supports numerous traffic optimization features, such as packet slicing, header stripping, and traffic correlation.

Brocade vPacket Broker leverages Intel DPDK for user plane traffic processing at carrier-grade scale in both of these deployment architectures.

### Improved Operational Efficiency and Scale

Brocade vPacket Broker eliminates the long purchase and deployment cycles associated with hardware via automated scale orchestration and simplified feature provisioning.

### Enhanced Monitoring Productivity

Brocade vPacket Broker allows tools to dynamically modify flow definitions and traffic optimization functions in the network visibility infrastructure when changes occur in the production network (such as the addition or removal of VMs, variations in traffic volume, and new flow patterns). This capability increases monitoring productivity while delivering greater agility.

## Key Features for Optimal Network Visibility

Brocade vPacket Broker supports three feature sets for comprehensive network visibility: Basic, Advanced, and Expert (see Table 1 for details).

Depending on how an organization deploys Brocade vPacket Broker, all or some of these features are available. When deployed as a virtual broker, Brocade vPacket Broker supports all three feature sets. When deployed as a virtual tap, it supports Basic and Advanced features only.

**Table 1:** Basic, Advanced, and Expert feature sets supported by Brocade vPacket Broker.

Basic Feature Set	Advanced Feature Set	Expert Feature Set <sup>1</sup>
<ul style="list-style-type: none"> <li>• Flow replication</li> <li>• Flow aggregation</li> <li>• Filtering based on 5-tuple criteria</li> <li>• Load balancing based on 5-tuple criteria</li> </ul>	Includes Basic features, plus: <ul style="list-style-type: none"> <li>• Header stripping (VXLAN, MPLS)</li> <li>• Packet slicing</li> <li>• Timestamping</li> </ul>	Includes Basic and Advanced features, plus: <ul style="list-style-type: none"> <li>• GTP correlation</li> <li>• RTP correlation</li> <li>• Mobility-aware filtering and load balancing (IMSI, APN, RAT)</li> <li>• Regex match-based filtering and load balancing</li> <li>• URL-based filtering and load balancing</li> </ul>

<sup>1</sup> Roadmap features.

## Brocade vPacket Broker Specifications

<b>Recommended minimum system configuration</b>	CPU: 4 vCPU RAM: 8 GB HDD: 128 GB Ports: 2×vNICs (1 RX+1 TX) 1×vNIC for management
<b>Hypervisor</b>	KVM, VMware vSphere
<b>Operating system</b>	CentOS release 7.0 Linux kernel version: 3.10.0-123.el7.x86_64 or higher

## Ordering Information: Brocade vPacket Broker Deployed as a Virtual Tap

Part Number	Description
BR-NVA-VTAP-BP125	Brocade Virtual Packet Broker deployed as a virtual tap, Basic feature bundle, perpetual 25-instance license
BR-NVA-VTAP-API25	Brocade Virtual Packet Broker deployed as a virtual tap, Advanced feature bundle (includes Basic features), perpetual 25-instance license
BR-NVA-VTAP1-E	Brocade Virtual Packet Broker deployed as a virtual tap, Advanced feature bundle (includes Basic features), 25-instance evaluation license

## Ordering Information: Brocade vPacket Broker Deployed as a Virtual Broker

Part Number	Description
BR-NVA-VPB-BP1	Brocade Virtual Packet Broker deployed as a virtual broker, Basic feature bundle, perpetual license aggregating up to 25 tap endpoints
BR-NVA-VPB-AP1	Brocade Virtual Packet Broker deployed as a virtual broker, Advanced feature bundle (includes Basic features), perpetual license aggregating up to 25 tap endpoints
BR-NVA-VPB-EP1	Brocade Virtual Packet Broker deployed as a virtual broker, Expert feature bundle (includes Basic and Advanced features), perpetual license aggregating up to 25 tap endpoints
BR-NVA-VPB1-E	Brocade Virtual Packet Broker deployed as a virtual broker, Expert feature bundle (includes Basic and Advanced features), evaluation license aggregating up to 25 tap endpoints

### Brocade Network Visibility Solutions

Brocade Network Visibility solutions help network operators monitor, secure, analyze, and monetize their physical and virtual networks. With programmable hardware packet brokers and the industry's first full-featured software packet broker, Brocade delivers a best-in-class network visibility solution built for the most demanding networks.

### Brocade Global Services

Brocade Global Services has the expertise to help organizations build scalable, efficient cloud infrastructures. Leveraging 20 years of expertise in storage, networking, and virtualization, Brocade Global Services delivers world-class professional services, technical support, and education services, enabling organizations to maximize their Brocade investments, accelerate new technology deployments, and optimize the performance of networking infrastructures.

### Affordable Acquisition Options

Brocade Capital Solutions helps organizations easily address their IT requirements by offering flexible network acquisition and support alternatives. Organizations can select from purchase, lease, Brocade Network Subscription, and Brocade Subscription Plus options to align network acquisition with their unique capital requirements and risk profiles. To learn more, visit [www.Brocade.com/CapitalSolutions](http://www.Brocade.com/CapitalSolutions).

### Maximizing Investments

To help optimize technology investments, Brocade and its partners offer complete solutions that include professional services, technical support, and education. For more information, contact a Brocade sales partner or visit [www.brocade.com](http://www.brocade.com).

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