

Business and society are embracing work and lifestyles that are enhanced and enabled through access to networks at home, at work and while on the move. People and organizations are increasingly reliant upon the information on global communications networks—from social text messages to trading transactions, from medical health records to lectures delivered by video—all of which traverses across global backbones to residential wireless networks.

With the advent of this Network Era, the challenges of operating and managing networks have fundamentally changed:

- **Mobility:** The network is mobile and dynamic—enterprise connectivity is no longer limited to the four walls of an organization
- **Virtualization:** A single physical server can now support hundreds of discrete virtual machines with each one being dynamically created, moved or eliminated in line with business needs
- **Cloud:** Organizations are adopting private, public and hybrid cloud solutions in order to realize IT efficiency and agility. Applications that were owned are now leased.
- **Growth:** Data is experiencing exponential growth due to many factors including: rising video and IP traffic, mobile device proliferation as well as migration to the cloud.
- **Consumerization of IT:** Access devices that were purchased and deployed by IT are now provisioned, owned, and managed by the employee.

Even though the environment has changed, the need to provide an efficient, secure and stable network remains. A range of tools are available to help do this:

- Security Monitoring Systems
- Network and Application Performance Managers
- Forensic Systems
- Network Analytics

However, these tools are only as effective as the information and communications that they can see. Limit the visibility to the traffic and the value of the system is equally limited. Provide too much

unnecessary or irrelevant traffic and the system can be overwhelmed or rendered useless. This challenge is driving IT departments to look more closely at Traffic Visibility Networking Solutions to provide the visibility essential to manage, analyze, and secure their network.

Building a Traffic Visibility Networking Solution

There are a number of key considerations to keep in mind when building a Traffic Visibility Networking Solution:

- **Intelligence:** Can your solution determine what traffic is relevant and irrelevant, valuable and redundant? Does it offer advanced filtering features?
- **Scalability:** Will you be able to scale from single to multi-node deployments as your business grows? Does your solution support stacking and clustering? Is it standards-based, as well as tool and vendor agnostic to allow for best-of-breed solutions?
- **Manageability:** Are you able to easily configure and make changes as your business needs evolve?
- **Resiliency:** Is your solution designed for resiliency — with modular and hot-swappable modules or dual-redundant and hot-swappable power supplies and fans?
- **Proven:** Are you working with a recognized vendor with a proven history of providing a comprehensive, robust solution?

The Gigamon Traffic Visibility Fabric

With millions of traffic flows, thousands of events and hundreds of changes occurring within your infrastructure on a daily basis, visibility needs to be pervasive, it needs to be intelligent, and it needs to be dynamic. To that end, Gigamon[®] created the Traffic Visibility Fabric™.

The Visibility Fabric is able to see inside the network and understand the criticality and priority of traffic—one flow over another, one application over another, one packet over another. It is able to recognize when specific traffic is significant to more than just one management, analysis or security system. It can see across the boundary of physical and virtual and into the cloud providing the clarity needed to secure, maintain and support both physical and virtualized services and applications.

Visibility Fabric	Features	Business Benefits
Intelligence	<ul style="list-style-type: none"> • Flow Mapping™: Intelligently filters, forwards and replicates traffic across multiple management, monitoring and security tools • Filtering: Layer 2-4 with two levels of UDA filters for content inspection • Advanced Filtering Features: Packet Slicing, Data Masking, Port Labeling, MPLS & VLAN Header Stripping, VLAN Tagging and Time Stamping • Deduplication: Across a large time interval of up to 100 millisecond improves tool performance • IP Tunneling: Backhaul data from remote locations to centralized tools to reduce maintenance costs • GigaStream™: Combines 8 ports for load-sharing for 80Gb output/tool port connections • Collector: Deliver packets not included in a rule • Pass All: Unfiltered traffic passed from network ports to tools without disrupting existing filters 	<ul style="list-style-type: none"> • Realize Efficiency: Optimize traffic to the tools that secure, monitor and maintain your network • Maximize Investment: Get the right information to the right tools to realize their full value • Avoid Downtime: Prevent oversubscription which can render security, monitoring and management tools useless • Maintain Security and Remain Compliant: Protect sensitive data and provide access to critical traffic and information necessary to meet compliance requirements • Proactive Management: Move from reactive to proactive troubleshooting and anticipate issues • Pervasive Visibility: See what traffic is not being seen by your systems to be able to identify its significance • Mitigate Expensive Change Management: Add new tools without waiting for maintenance windows
Scalability	<ul style="list-style-type: none"> • Non-blocking architecture: Any-to-any port connectivity with zero packet loss at line rate across 1Gb, 10Gb and 40Gb • Stacking: Support up to 30 nodes • Range of Filters: Truly scalable—up to 8000 entries • Tool and Network Agnostic: Supports heterogeneous environments 	<ul style="list-style-type: none"> • Grow Your Organization: Scale your infrastructure when and as you need to • Achieve Pervasive Visibility: Enable security tools to see all unfiltered traffic for a comprehensive view • Build a Best-of-Breed Solution: Create an infrastructure based on best-of-breed solutions
Manageability	<ul style="list-style-type: none"> • Single Pane of Glass Management: Unified UI for multi-box management in stacked environments • CLI Configuration or GUI Automation: Support for large-scale environments with 1000s of address and filtering rules rather than managing per-port configurations • Cross Box Maps: Centralize tools by redirecting traffic to a monitoring tool connected to a different fabric node 	<ul style="list-style-type: none"> • Ease of Management: Easily configure and customize rules to tune and improve your network with a single UI • Streamline and Centralize Management: Free up network administrators time for other initiatives • Easily Troubleshoot: Change and adapt traffic to meet your evolving needs with an out-of-band solution
Resiliency	<ul style="list-style-type: none"> • Purpose Built for Resiliency: Hot-swappable, modular port modules and dual-redundant, hot-swappable power supplies and fans with front-to-back air flow • 5-year Hardware Warranty and Certified: Network Equipment Building Systems (NEBs) and Evaluation Assurance Level (EAL) 2+ 	<ul style="list-style-type: none"> • Avoid Downtime: Maintain network connectivity in the event of a failure or power outage • Peace of Mind: Rely on an industry-leading, 5-year warranty when the unexpected occurs
Proven	<ul style="list-style-type: none"> • History: Since 2004, Gigamon has served over 47 of the Fortune 100 Customers, 4 of the Top 10 U.S. Retailers, 3 of the Top 5 U.S. Healthcare Providers, 4 of the Top 5 U.S. Banks and 5 of the Top 10 U.S. Wireless Telcos • Award Winning: Including Frost & Sullivan's 2012 Global Product Differentiation Excellence and 2011 Red Herring Top 100 	<ul style="list-style-type: none"> • End-to-End Solution: Gain a robust Visibility Fabric solution with carrier-grade, high-port density, scalable and highly modular products augmented by external and internal taps, bypass filters and traffic distribution nodes • Confidence: Work with a recognized leader in the Traffic Visibility Networking industry

To learn more about the Gigamon Traffic Visibility Fabric, visit us at www.gigamon.com