

InfiniStream Appliance

InfiniStream Appliance for Intelligent Deep Packet Capture and Analysis

InfiniStream® appliance is an intelligent deep packet capture and analysis appliance that delivers dedicated, always on, monitoring and continuous capture capabilities for real-time and back-in-time analysis. The appliance is used as the foundation for nGeniusONE™ Service Assurance platform to analyze packets traversing the network for rapid problem isolation and service delivery assurance.

The InfiniStream appliance hosts Adaptive Service Intelligence™ (ASI) technology, a high-performance deep packet inspection engine that analyzes network traffic in real-time and generates highly scalable metadata that enables a comprehensive view of service, network, application, and server performance across complex multi-tier, multi-domain service delivery environments.

Using the patented ASI technology, the appliance performs local real-time granular Layer 2-7 data mining as traffic crosses the wire, eliminating the need for middleware and extensive backend processing while reducing management traffic loads. In addition, the appliance captures, indexes and stores packets crossing the wire for comprehensive deep-dive forensic analysis activities.

Problems Solved With InfiniStream Appliance

The InfiniStream appliance succeeds in delivering complete visibility into monitored traffic flows and packet data. The combination of two critical functions – real-time packet flow-based data monitoring integrated with back-in-time analysis accelerates problem resolution and helps protect overall service delivery quality and availability.

To be effective in meeting service levels and delivering high quality user experience, IT teams need to understand all the complexities involved in the service delivery environment with full visibility into all elements making up the service to truly understand how applications are performing. Resolving service performance problems often requires cross-domain expertise as performance issues can stem from any number of root causes.

The InfiniStream appliance passively and non-intrusively captures all network traffic and generates metrics to provide rich and detailed operational understanding of application and network performance in live production environments. It captures every transaction and session that makes up an application service in real-time and simultaneously extracts intelligence from Layer 2 through Layer 7. This information is used by the nGeniusONE platform to provide critical context so IT teams across network,

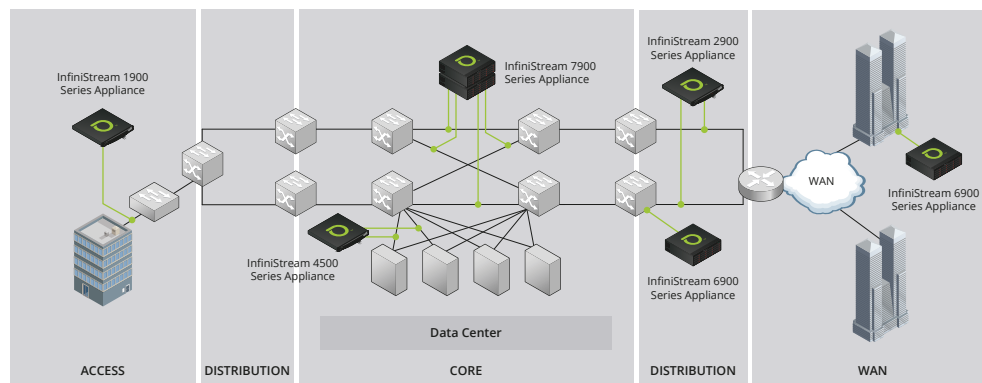


Figure 1: InfiniStream appliances strategically deployed in an enterprise network.

application, telecom, server and security domains can work collaboratively. The correlated data is used to spot network and application issues, understand the impact of enabling services on applications, distinguish application and network brownouts, identify server issues and security breaches, provide insights for infrastructure optimization and planning, and identify other significant service delivery problems.

Since most networks generate large amounts of traffic, the appliance delivers the performance capabilities and provides the scale needed to analyze network traffic generated by thousands of users using hundreds of applications with millions to billions of transactions.

The InfiniStream appliance features multi-CPU, multi-threaded architecture for delivering high performance DPI capabilities; multiple 10G Ethernet interfaces to capture huge amounts of data streams generated by large, high capacity networks; massive storage space with support of up to 144TB of disk capacity to store the performance metrics and packet data for long-term use.

While organizations benefit from end-to-end visibility for the entire enterprise, the challenge is to find a right-sized appliance that meets the needs of the traffic volume at a particular location in the network. InfiniStream appliances are available in different capacities and configurations suitable for deploying in multiple topologies to enable pervasive visibility supporting monitoring needs for different size installations from small offices to large enterprise data centers. As networks grow, achieving scale becomes a critical enterprise requirement. To solve monitoring needs of very large environments, multiple appliances can be deployed to provide virtually unlimited scalability. Finally, to reduce management complexity in large networks, all appliances are centrally managed through the nGeniusONE platform.

InfiniStream Appliance Capabilities

InfiniStream appliance, running on a customized Linux® operating system, is purpose-built for enabling pervasive visibility across enterprise networks and provides a foundation for extracting application and network performance metrics for the nGeniusONE platform. With support for 10/100/1000 Mbps and 10GbE interfaces and up to 144TB of disk storage space, this appliance provides configuration flexibility and an integrated approach to eliminating performance problems by delivering end-to-end visibility to accomplishing application, network, unified communications performance management and CyberSecurity monitoring and incident response.

The flexible, high-performance appliance features a robust deep packet inspection and analysis engine that has the ability to dynamically recognize different applications

and protocols behind each IP session and delivers detailed performance metrics in real-time to the nGeniusONE platform.

Some of the unique capabilities of the InfiniStream appliance include:

- High resolution visibility into packet data with deep packet analysis identifies thousands of protocols and applications associated with every network flow
- Generates real-time performance, traffic, and error metrics as well as session event records
- Packet recording capacity from 1TB and up to 144TB
- Interface speeds from 10 Mbps to 10 Gbps with RJ-45 copper or pluggable fiber/copper transceiver support
- Time synchronization based on either IETF NTP or IEEE 1588 (PTP v1/v2)
- Extensible software architecture enables support for new protocols and analysis metrics through software-based API adaptors
- Appliances with different levels of storage protection, up to RAID 6, and power supply redundancy
- Role-based access security for controlling access to sensitive data
- Intelligent packet recording with granular selection of protocols and packet recording slice size
- Highly secured platform built on a customized and hardened Linux operating system
- Certified for common criteria at protection profile for network devices

	1900 Series	2900 Series	4500 Series	6900 Series	7900 Series
Rack Unit	1 RU	1 RU	1 RU	3 RU	3 RU
Port configuration	<ul style="list-style-type: none"> • 2 x 10/100/1000 • 4 x 10/100/1000 • 4 x 1 GbE SFP 	<ul style="list-style-type: none"> • 4 x 1 GbE SFP • 2 x 10 GbE SFP+ • 4 x 10 GbE SFP+ 	<ul style="list-style-type: none"> • 4 x 1 GbE SFP • 2 x 10 GbE SFP+ • 4 x 10 GbE SFP+ 	<ul style="list-style-type: none"> • 4 x 1 GbE SFP • 8 x 1 GbE SFP • 2 x 10 GbE XFP • 4 x 10 GbE XFP 	<ul style="list-style-type: none"> • 2 x 10 GbE XFP • 2 x 10 GbE XFP and 4 x 1 GbE SFP • 4 x 10 GbE XFP
Storage	1 TB and 4 TB	12 TB	12 TB (expandable to 60 TB)	8TB and 16TB	48 TB (expandable to 144 TB)

All InfiniStream appliances share a common foundation of proven technology including continuous packet-flow data capture, simultaneous deep packet inspection and analysis, metadata creation and storage to disk. Customers who deploy a single InfiniStream appliance in their networks can take advantage of the highly specialized deep-dive packet analysis application included with every appliance. This application provides a direct-connect interface to an InfiniStream appliance to perform packet analysis activities for locally stored packets.

The family consists of 1900 series, 2900 series, 4500 series, 6900 series and 7900 series to achieve enterprise deployment flexibility covering data centers, headquarters, branch offices and small sites.

Benefits of InfiniStream Appliance

- Single appliance used with the nGeniusONE platform for data, voice and video packet-flow analysis
- Passive and non-intrusive appliance does not impact production networks
- Provides two critical functions – 1) Real-Time packet flow-based data monitoring; 2) Packet storage for forensics
- Powerful ASI technology for high-performance, deep packet inspection and analysis
- Plug and play deployment recognizes over 5000 common protocols and over 500 applications
- Flexible range of appliances support from 10 Mbps to 10 Gbps Ethernet monitoring interfaces with copper, SFP and XFP transceivers
- Scalable architecture enables enterprises to scale for any size deployment
- Built for high security environments with a hardened Linux operating system, role-based access controls, and data encryption

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